



TECHNICAL WORKING PAPER

LAND REFORM, RURAL DEVELOPMENT, AND POVERTY IN THE PHILIPPINES: REVISITING THE AGENDA



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FINAL REPORT

**LAND REFORM, RURAL
DEVELOPMENT, AND POVERTY
IN THE PHILIPPINES:
REVISITING THE AGENDA**



THE WORLD BANK GROUP

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ABBREVIATIONS AND ACRONYMS

A&D	Alienable and Disposable
ABD	Area Based Development
ADB	Asian Development Bank
AFMA	Agriculture and Fisheries Modernization Act of 1997 (Republic Act 8435)
AIDA	Agro-Industrial Development Area
AJD	Agrarian Justice Delivery
ALDA	Agrarian Reform Community Level of Development Assessment
ALI	Agrarian Law Implementation
APIS	Annual Poverty Indicators Survey
APPC	Asia Pacific Policy Center
APT	Asset Privatization Trust
ARB	Agrarian Reform Beneficiary
ARC	Agrarian Reform Community
ARCDP2	Second Agrarian Reform Communities Development Project
ARF	Agrarian Reform Fund
ARIE	Agrarian Reform Information and Education
ARMM	Autonomous Region of Muslim Mindanao
ARZones	Agrarian Reform Zones
ASEAN	Association of South East Asian Nations
ASFP	Autonomous Region of Muslim Mindanao Social Fund Program
ATA	Agro-Tourism Area
AusAID	Australian Agency for International Development
AVA	Alternative Venture Agreement
BALA	Bureau of Agrarian Legal Assistance
BARBD	Bureau of Agrarian Reform Beneficiaries Development
BARC	Barangay Agrarian Reform Council
BARIE	Bureau of Agrarian Reform Information and Education
BAS	Bureau of Agricultural Statistics
BIT	Barangay Implementing Team
BLD	Bureau of Land Development
C-CLOA	Collective Certificate of Land Ownership Award
CA	Compulsory Acquisition
CADP	Comprehensive Area Development Plan
CARL	Comprehensive Agrarian Reform Law of 1988 (Republic Act 6657)
CARP	Comprehensive Agrarian Reform Program
CB-IEM	Community-Based Integrated Ecosystems Management
CBC	CARP Beneficiaries Certificate
CBEM	Community-Based Ecosystems Management
CDA	Cooperatives Development Authority
CDD	Community-Driven Development
CEPT	Common Effective Preferential Tariff
CF	Claimfolder

CIA	CARP Implementing Agency
CIT	CARP Implementing Team
CLOA	Certificate of Land Ownership Award
CLT	Certificate of Land Transfer
CMARPRP	Community Managed Agrarian Reform and Poverty Reduction Project
CPA	Calamity Prone Area
CSO	Civil Society Organization
DA	Department of Agriculture
DAR	Department of Agrarian Reform
DARAB	DAR Adjudication Board
DBM	Department of Budget and Management
DD	Difference-in-Difference
DENR	Department of Environment and Natural Resources
DILG	Department of the Interior and Local Government
DOF	Department of Finance
DOJ	Department of Justice
DOLE	Department of Labor and Employment
DOST	Department of Science and Technology
DPS	Direct Payment Scheme
DPWH	Department of Public Works and Highways
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
ECOPISS	Economic and Physical Infrastructure Support Services
EO	Executive Order
EP	Emancipation Patent
FAO	Food and Agriculture Organization
FAP	Foreign Assisted Project
FAPsO	Foreign Assisted Projects Office
FFA	First Farmer's Association
FIES	Family Income and Expenditure Survey
FMR	Farm Management Recordkeeping
FPI	Farm Productivity and Income
GAA	General Appropriations Act
GAD	Gender and Development
GDP	Gross Domestic Product
GFI	Government Financing Institution
GIA	Geographically Isolated Area
GOL	Government-Owned Land
GOP	Government of the Philippines
GVA	Gross Value Added
I-CLOA	Individual Certificate of Land Ownership Award
IAD	Integrated Area Development
IARDS	Institute of Agrarian and Rural Development Studies
IAS	Internal Affairs Staff
IBP	Individual Farm Business Plan
IOMG	Infrastructure Operation and Maintenance Group

IRR	Implementing Rules and Regulations
IRSP	Inverse Relationship between Farm Size and Productivity
ISF/CBFM	Integrated Social Forestry/Community-Based Forest Management
JBIC	Japan Bank of International Cooperation
KALAHI-CIDSS	Kapit-bisig Laban sa Kahirapan-Comprehensive and Integrated Delivery of Social Services
KKK	Kilusang Kabuhayan at Kaunlaran
LAD	Land Acquisition and Distribution
LAM	Land Administration and Management
LAMP	Land Administration and Management Project
LBP	Land Bank of the Philippines
LEVIM	Luzon, Eastern Visayas, and Mindanao
LGU	Local Government Unit
LIM	Low Income Municipality
LRA	Land Registration Authority
LTI	Land Tenure Improvement
MARO	Municipal Agrarian Reform Officer
MC	Memorandum Circular
MFI	Microfinance Institution
MFO	Major Final Output
MRDP	Mindanao Rural Development Program
MRDP	Mindanao Rural Development Program
NAPC	National Anti-Poverty Commission
NBB	National Biofuels Board
NCRFW	National Commission on the Role of Filipino Women
NEDA	National Economic and Development Authority
NG	National Government
NGO	Nongovernment Organization
NIA	National Irrigation Administration
NPS-ENRM	National Program Support for the Environment and Natural Resources Management Project
NSO	National Statistics Office
ODA	Official Development Assistance
OFW	Overseas Filipino Worker
OLT	Operation Land Transfer
PAL	Private Agricultural Land
PARAD	Provincial Agrarian Reform Adjudicator
PARC	Presidential Agrarian Reform Council
PARCOM	Provincial Agrarian Reform Coordinating Committee
PAS	Public Affairs Staff
PBD	Program Beneficiaries Development
PCGG	Presidential Commission on Good Government
PD	Presidential Decree
PDMS	Project Development And Management Service
PDZ	Peace Development Zone
PO	Peoples Organization

PS	Planning Service
PSGC	Philippine Standard Geographic Code
PSRS	Policy and Strategic Research Service
RA	Republic Act
ROD	Registry of Deeds
SAFDZ	Strategic Agriculture and Fishery Development Zone
SARC	Special Agrarian Reform Community
SCS	Special Concerns Staff
SILCAB	Social Infrastructure and Local Capacity Building
SO	Sugar Order
SOP	Strategic Operation Province
SPO-AIDA	Special Projects Office Agro-Industrial Development Area
SRA	Sugar Regulatory Administration
STA	Special Tribal Area
TCT	Transfer Certificate of Title
UNDP	United Nations Development Programme
UPLB	University of the Philippines, Los Baños
VLT	Voluntary Land Transfer
VOS	Voluntary Offer to Sell
WB	World Bank
WTO	World Trade Organization

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EXECUTIVE SUMMARY

I. What Worked and What Did Not Work—Key Findings

1 - CARP had a positive impact on poverty and growth. However, the available empirical evidence¹ shows that the impact on poverty has been quite modest.² There are two main reasons for this outcome. First, the program's inability to prioritize the acquisition of private lands through compulsory acquisition has led to an imperfect targeting of the poor by its land acquisition and distribution (LAD) component. Second, while the Agrarian Reform Community (ARC) strategy's design has been effective in addressing the challenge of raising agricultural productivity, it has at the same time resulted to an under-targeting of the poorest agrarian reform beneficiaries (ARBs).

2 - Compulsory acquisition remains a strategic tool for a pro-poor CARP but at the same time an obstacle in its implementation. CARP has contributed most to poverty reduction in those areas where compulsory acquisition has advanced most. Compulsory acquisition, as a mode of land distribution, is more frequently applied in higher productivity areas, either where opposition to CARP by landowners is strongest or where the price of land exceeds what is justified in terms of potential profitability from its use. However, in those areas where most lands are targeted for compulsory acquisition and where CARP's impact on poverty would be maximized, progress in land distribution has been slowest. This constitutes a key *dilemma* given the primary role compulsory acquisition would have in an extended CARP under a business-as-usual scenario. **In its current set-up and given the budgetary resources that would be allocated, it is highly unlikely that CARP will be able to complete the distribution of private lands within the proposed 5/7 (and perhaps even 10) years extension.**

3 - The ARC strategy has been successful in raising farm incomes and farm productivity in areas with medium to high agricultural growth potential where small-scale farming held the promise of becoming commercially viable.³ CARP's Program Beneficiaries Development (PBD) component, implemented through the ARCs, has effectively targeted communities located in peri-urban areas. These areas were characterized by: a favorable natural resource base, progress in terms of land distribution and social capital formation, and gaps in infrastructure that could be eliminated within a fairly short time with small scale interventions (e.g., farm to market roads). In such relatively favorable areas, CARP's package of interventions has proved adequate in raising agricultural productivity

¹ See Balisacan and Fuwa (2004), Balisacan (2007), APPC (2007). The report reviews and summarizes these and other studies focusing on CARP's poverty impact. In addition, using Family Income and Expenditure Survey (FIES) data at provincial level, the report shows CARP's poverty impact has been positive only during the 1998-2006 decade with CARP accounting for 10% to 30% of the overall rate of poverty reduction. Compulsory acquisition doubles CARP's average impact on the rate of poverty reduction.

² On the other hand, APPC (2007) recently demonstrated that the internal rate of return on the committed public funds has been quite satisfactory from an economic point of view.

³ The study finds that farms located in ARCs and involved in the production of traditional crops (i.e., corn, land, and coconut) display a 15% higher level of profitability per hectare, after controlling for land quality and farmers' skills.

and in ensuring positive gains in the fight against rural poverty. This seems to be consistent with the experience of the Second Agrarian Reform Communities Development Project (ARCDP2) and that of other foreign-assisted projects supporting the ARC strategy.

4 - Failure to fully link and integrate land reform and support services has been a key factor in limiting the poverty reduction effect of CARP. CARP's impact was not as favorable in those areas where land distribution has advanced least and where the delivery of support services has been limited. Slow progress in land distribution in these areas has hampered the delivery of support services to the poorest communities. A relatively small density of ARBs, a low level of social capital, and a large infrastructural gap have worked against the expansion and deepening of the ARC strategy in these areas. For instance, Negros' sugarcane lands have been particularly exposed to such policy failure since a large number of ARBs have either illegally sold or released their awarded lands.

The consequences of this delinking are particularly negative in those rural areas marked by high poverty. In these areas, agriculture continues to represent a key pathway out of poverty and nonfarm income opportunities remain under-developed. This failure is among the main reasons for CARP's limited impact on poverty. Today, it constitutes one of the main challenges in bringing the agrarian reform process to a successful and prompt completion.

5 - Critical conditions must be developed before redistributing lands in the sugarcane and plantation sectors. Although potentially favoring a redistribution of income, land distribution in the sugarcane sector will hardly lead to an increase in productivity given the existence of economies of size in production (albeit mild) and of coordination costs at the mill-level. Both lack of managerial experience and limited access to input and output markets diminish the chances of success for ARBs in the plantations. On the other hand, production and management agreements between beneficiaries and agribusiness management firms have proved in many instances to be quite successful models of land reform. In sugarlands, the protectionist policies and regulations of the sugar industry constitute an important factor that negatively affects the pace of CARP implementation. These policies are capitalized in the value of land. This results in strengthened opposition to land reform and in a further straining of the financial resources earmarked for CARP.

6 - Existing legal restrictions on land transfers hamper land and credit markets, while tenure security of the program's beneficiaries has been addressed to a very limited extent given the widespread transfer of land through collective CLOAs. The functioning of land rental markets precludes farms from adjusting their operations beyond the size of the land holdings. As a result, access to land by the land-poor and by ARBs has been made more difficult. Moreover, the Department of Agrarian Reform (DAR) has resorted to collective CLOAs for distributing more than 1.7 million hectares of land, mostly without a clear efficiency rationale for this type of arrangement. This has substantially impaired the program's achievements in terms of tenure security and development of ARBs through improved access to credit⁴.

⁴ As shown in the study, being an ARB reduces the probability of accessing formal credit by about 4.5%, in an environment where up to 70% of households are credit rationed. Substituting a hectare of titled land for one of untitled land increases the probability of not being rationed by 1.4%. On a 2-hectare farm, this effect amounts to almost an additional 3%. Becoming

7 - Alternative models of land reform have been experienced with success, notably the Community Managed Agrarian Reform Project (CMARP) and some forms of Alternative Venture Agreements (AVAs)⁵. Their common distinguishing feature is that they minimize the risk of breaking-up the existing relationship (or bond) between beneficiaries and landowners. In several cases, this relationship has been an important asset in the successful transfer of land ownership and should be regarded as an important opportunity for ARBs to progressively develop their entrepreneurial skills. Moreover, as shown under the Community Managed Agrarian Reform Project, LGUs have proved capable of assuming an effective mediating and bridging role during negotiations between landowners and beneficiaries.

In all of the above instances, the degree of empowerment of the beneficiaries is magnified by their enhanced role in the transfer of land rights and by fully incorporating land reform in local development dynamics. In Negros, there are recent experiences of beneficiary cooperatives that enter into management contracts with established agribusiness firms. The experiences show that a sustainable process of beneficiary empowerment is possible⁶. While lands are typically rented back to the agribusiness firms, beneficiaries receive in addition to the rent a regular source of employment, access to social security benefits, access to output and credit markets and technology, and a share of the business revenues. These arrangements substantially reduce the many uncertainties that farm workers face when becoming ARBs, particularly the limited capacity of CARP to provide support services.

8 - The current system of agrarian conflict resolution represents one of the major bottlenecks to CARP completion. The system is cumbersome and inefficient and works to the advantage of landowners. The reforms currently proposed to reinforce the current system of agrarian justice, based on the concept of mediation, will not solve the problem. They might actually complicate it further by adding an additional layer of bureaucracy in an already too cumbersome process of dispute resolution. Lack of career paths among involved staff and weak incentives reduce the effectiveness of the current tools for conflict resolution. A bolder approach is necessary to tackle this complicated yet vital issue.

member of a credit cooperative greatly improves access to formal credit (10%), while being in an ARC increases it by almost 4%.

⁵ The CMARP was a pilot project carried out under the Agrarian Reform Community Development Project 2. The distinguishing feature of CMARP is that it complements the Voluntary Land Transfer modality of land distribution with a closer participation by LGUs and local communities in the negotiation between landowners and beneficiaries. The volume and composition of support services delivered will depend on the degree of success of the negotiations. The pilot was carried out in 10 different communities across the Philippines and it involved an area of approximately 1,000 has. All indicators were more than satisfactory at the end of the project, including the timeliness of repayment of agrarian debt by beneficiaries, the lower cost of the transferred land, and the greater sense of security and empowerment displayed by beneficiaries.

⁶ Good examples are the sugarcane cooperative managed by the Hermanos Gamboa company in San Carlos and the KWASI Cooperative in Kabankalan.

II. “Mission Accomplished!”—How to Get There

9 - The extension of CARP should be conditional on creating enough innovations in the program’s implementation to ensure that it will be accomplished in the shortest time possible and will provide a strong stimulus to long-term rural growth and poverty reduction. The recommendations in the report are designed in such a way as to ensure that: (i) the program advances as swiftly as possible; (ii) the distortions affecting the efficiency of land markets and the incentives in land-related investments will be minimized; (iii) agrarian reform beneficiaries will be empowered to the maximum extent possible; (iv) the bulk of budgetary resources earmarked for CARP would be directed toward the provision of support services; and (v) resources would be allocated in such a way as to maximize the overall rural development effort in terms of growth and equity.

10 - From a more strategic point of view, land reform in the Philippines should not continue being regarded as a panacea for rural development. Agriculture continues to be a key driver of rural growth in the Philippines, although its importance tends to decline over time, albeit in a spatially uneven way depending on various natural and other socioeconomic endowments. Pathways out of rural poverty differ across regions due to variations in productive, agro-climatic endowments, and infrastructural development. Thus a “one size fits all” approach will not allow allocating efficiently development resources across the rural landscape. **A differentiated, modulated, adaptable, and area-based approach is required.**

11 - Decentralized and community managed approaches, such as CMARP, have been successfully tested and should be scaled-up in rice, corn, and coconut areas and be mainly targeted to medium-sized landholdings. The CMARP approach will help setting CARP on a fiscally sustainable path by allowing money earmarked for compulsory acquisition to be redirected to fund support services. By simultaneously implementing support services and land reform, a closer link between land reform and poverty reduction will be ensured.

12 - In the plantation sector, while beneficiaries should be vested with the right to decide whether to join cooperatives, flexible contractual arrangements offering the opportunity to avoid fragmentation should be supported. For instance, while contracts for land transfer could be defined within one year after the approval of CARP extension, the transfer of land itself could take place over a longer period of time at a pace consistent with the managerial skills acquired by beneficiaries, improvements in their financial capabilities, general market conditions, and so on.

13 - Compulsory acquisition needs to be retained as a last resort solution in those instances in which negotiations fail. Framing compulsory acquisition in the context of a negotiated and community managed approach to land reform will minimize recourse to it. Large landholdings represent a challenge to a fair and balanced negotiation. While offering an initial limited window of opportunity for accessing negotiations, DAR should focus its compulsory acquisition efforts on these lands once such a window is closed. In the case of mid-sized landowners, the window should be opened for a longer time. DAR would

guide and assist the negotiated approach in collaboration with LGUs, civil society organizations (CSOs), and other stakeholders.

14 - Compulsory arbitration needs to be introduced in negotiations over land transfers to address disputes that concern private parties. This will ensure prompt resolution and reduce the scope for tactics aimed at delaying program implementation. Recourse to the court system will continue for cases related to disputes over land valuation between the State and the landowners, in particular when land is compulsory acquired. Scaling up the negotiated and decentralized approach will reduce conflicts over land adjudication. A reform of the arbitration system would further reduce the backlog of cases currently pending resolution and would significantly contribute to a more efficient agrarian justice system.

15 - CARL legal restrictions on land transfers need be substantially reformed to improve the efficiency of land markets, in particular the one for rentals. The period of time within which beneficiaries would not be allowed to sell their lands should be reduced to a maximum of three years, while land rental should be allowed immediately after the award. The rapid modernization that agriculture is undergoing in a globalized economy poses serious challenges to the Philippines, where the excessive fragmentation of the farm sector is leading to a loss of competitiveness.

These issues need to be addressed when designing CARP's extension. More efficient land markets would favor the reallocation and operational consolidation of farms toward farmers with better productive and management skills. At the same time, beneficiaries that prefer to switch to a different occupation to increase their incomes should be allowed to do so without risk of losing their land assets. These provisions would reduce the extent of illegal land markets and expand the tax base for LGUs.

16 - Collective CLOAs need to be subdivided in order to promote tenure security and complete the process of land right transfers. Operational guidelines for the subdivision should be drafted in order to grant individual rights to exclusion from the collective CLOAs. **Legal provisions in the CARL that award DAR the right to decide on the issuance of collective CLOAs should be revisited and reformed in order to ensure that these are issued only when there is a clear economic rationale.**

17 - An area-based, territorial, and diversified approach to rural development is necessary to reflect the different local conditions. This approach is proving to be a rewarding one (e.g., Mindanao Rural Development Program⁷) and can certainly build on DAR's experience in implementing its ARC strategy. LGUs have the ability to lead the process. In those instances when an LGU lacks the capacity to lead, timely technical assistance supported by appropriate financial incentives can make the difference.

⁷ The MRDP is a long-term 15-year program of the Department of Agriculture started in 2000. It aims to alleviate rural poverty in Mindanao. Now on its second phase and implemented in all 26 provinces and 225 municipalities in Mindanao, the program institutionalizes mechanisms and processes to decentralize delivery of frontline agricultural support services from the DA to the LGUs, in order to respond to priority community needs related to attaining food security and higher incomes.

18 - The provision of support services should be community (i.e., LGU) driven to the extent possible, embedded in the local development planning, and supported through the participation of civil society organizations. The interventions should be coordinated at three levels: (1) beneficiaries should be given an incentive-based combination of loans and productive grants to buy land and basic production inputs and implements (similarly to what was done in Brazil under the *Crédito Fundiario* program⁸); (2) local associations formed by beneficiaries, farmers cooperatives, LGUs, and CSOs should be relied upon for the screening of beneficiaries, supporting individual business plans, extending support during negotiations, and for coordinating together with the national government the delivery of support services; and (3) the national government should retain the role through DAR of supervising the correct use of funds and screening of beneficiaries by local associations.

19 - Because of the need to adopt an area-based perspective, **agrarian reform needs to be seen as complementary to other initiatives aimed at supporting rural development, reflecting the local productive endowments and opportunities for growth. It should focus on areas where the small farm sector is competitive** or where its competitiveness can be achieved by rural infrastructure investments with high returns, appropriate provision of support services, and the ability to link to markets for inputs, outputs, and credit. Where infrastructure and market conditions can be improved in the medium run, **land reform can be a major factor in local development, provided it is clearly integrated and coordinated with the broader framework of local and regional interventions.**

20 - In peri-urban areas the urban economy has become the main driver of growth through its linkages to rural industries. In these areas farm income growth would still have some leeway in lifting poor households out of poverty. However, improving access to nonfarm income opportunities in these areas might reduce rural poverty just as well. Consumption and production linkages between agriculture and the local economy would not be as strong as in other rural areas. In dynamic areas with agricultural potential it would still make sense to favor access to land by small farmers, but the key priority would be to develop efficient land markets and strengthen tenure security. Relying on compulsory acquisition and on the issuance of collective CLOAs in such areas would therefore be highly counter-productive with regard to the broader objective of raising productivity growth in agriculture.

21 - In those **areas where agriculture has the potential of being the main engine of growth**, land distribution also needs to be coupled with efforts at making land markets more efficient, improving access to credit, developing input and output markets, and creating the right incentive framework leading to higher investments in land and farm productivity. **It is in these areas where the risk of overlapping activities between the DAR and the Department of Agriculture (DA) is highest.** Given the overall effectiveness demonstrated by the ARC-strategy in integrating agricultural support services with the development of social capital, it appears that DAR's comparative advantage in these areas should be in

⁸ *Credito Fundiario* covered a significant portion of poor States in North-East Brazil. An important component of *Crédito* was redistribution of land through negotiations assisted by community organizations, including the Catholic Church. Beneficiaries were screened through such organizations and were provided loans to buy land and grants to establish farms, including a portion for subsistence during the first year of installment. The program is considered very successful by the Brazilian Government. It was recently adopted by President Lula and the legislature as the country's flagship rural poverty program.

targeting communities with low to medium level of social capital, creating the pre-conditions for sustained growth in agriculture.

22 - On the other hand, the DA would take the lead in those farmers' communities with a sufficient level of social development and productivity and where the key challenge would be represented by their integration in dynamic supply chains. Development of key provincial and regional infrastructure will be a key precondition for the take-off of these areas, and this will require anchoring DAR's and DA's intervention in coherent area development efforts in coordination with other key national government agencies. The failure to develop the Strategic Agriculture and Fishery Development Zones (SAFDZ) as poles of agribusiness development suggests this will not be an easy task. Yet, addressing this particular institutional failure will be critical for CARP's success in these challenging areas.

23 - Lagging areas that lack basic infrastructure and have low agricultural potential (e.g., remote upland areas) pose a particular challenge to CARP's ability to link land distribution with sustained poverty reduction. In these areas, migration will progressively leave behind poor households. These households are relatively immobile and segregated from urban labor markets due to age, cultural factors, and lack of basic skills. Although access to land is important in securing the poor's basic livelihood base, in such areas nonfarm occupations and migration represent the only realistic pathways out of poverty. On average agriculture does not have a clear comparative advantage over the nonfarm sector in reducing rural poverty. Agricultural productivity is low so that infrastructure investments are not a viable solution. It is in these extremely challenging areas where DAR will face the need to diversify its package of interventions. DAR needs to focus on strengthening subsistence agriculture, while working to develop those basic services and skill-enhancing activities that would create the pre-conditions for a successful migration to the more dynamic urban and rural labor markets. While a negotiated approach to land distribution will still be possible even in these areas, it is clear that agrarian reform beneficiaries in these areas will need access to mortgages at concessional rates.

24 - The completion and consolidation of CARP will necessarily imply the demobilization of DAR. **But until then a dedicated agency will be needed to speed up the closure of CARP.** This agency will have to be very different from the current one as there is **substantial scope for re-organization** given the adoption of a decentralized, negotiated and community managed approach to land reform. Ultimately, DAR's experience and technical capabilities in promoting rural development will need to be incorporated into the final institutional set-up that will emerge in a post-CARP scenario. While it is too early to state precisely how that institutional set-up should look like, it appears quite clear that rural development will be more a cross-sectoral challenge and that a single agency mainly geared towards agricultural growth will fall short of the task. An approach based on a strong policy-coordinating body might hold the best promise for success. It suggests a new role for a re-structured Presidential Agrarian Reform Council (PARC) at the end of the CARP, given its ample experience in coordinating a large number of agencies.

1. OVERVIEW

I. Introduction

The goal of this report is to take stock of the existing evidence on the impact of the Comprehensive Agrarian Reform Program on poverty, to examine the current challenges that an extension of CARP would face, and to suggest directions toward achieving progress on land reform given the financial and policy constraints faced by the program. CARP has now ended its twentieth year since its launch and the eleventh since its first extension. There is need to redefine the strategy given the limited achievements of the current agrarian reform program even though it has had important successes in terms of land distribution. The challenges faced and the cost of prolonged action are both too great for the “business as usual” scenario to be a realistic option.

Agrarian reform in the Philippines has not been an easy process, and so continues to be. Designing a strategy that would overcome existing difficulties, while complying with the reasonable goal of efficiently allocating limited resources for rural development, is a major task. Given the currently lesser role played by the Philippine agricultural sector in poverty reduction and the marked differences in the modalities of land access across the country, land reform as a poverty-reduction strategy will hardly be uniformly effective across the rural landscape. In addition to investigating the link between land reform and poverty reduction, the report examines the prospects for land reform in view of two key basic constraints: financial budget constraints and the limited development of the land administration system. The combination of these factors leads to a number of relevant conclusions concerning the way forward.

The report starts by examining the nature and relevance of the challenges that an extension of the land reform program will face. It then addresses the role of land reform in rural development and poverty reduction. The impact of agrarian reform on land markets, access to credit and, more broadly, on the competitiveness of small farms is then examined, separating the case of rice and corn lands from that of sugarcane plantations, the latter taken as an important “case-study” of the broader plantation sector. Implications for redesigning the program are then drawn, focusing in particular on the need to more closely involve important actors in the current process of rural development. The report finally considers the institutional changes that will be required.

Although the report does not give detailed recommendations on how to proceed in reforming CARP toward greater sustainability and better impact, it does contain a significant number of policy implications and guidance for reforming the agrarian reform process. Although many significant reforms would not require legislative changes, many others do. Indeed the report traces a challenging yet entirely feasible reform path that can gain momentum during the first year of the extension. This will entail a very different view of the role played by agrarian reform and its actors in today’s Philippine rural society. The key criteria driving the report’s analysis are the need to strengthen the link between CARP implementation and poverty

reduction, enhance the fundamentals for sustained growth in agriculture, and support rural development by fostering new productive alliances and strengthening neglected structures of governance.

II. Looking Back: Achievements and Impacts

The main goal of the report is to define possible avenues for reforming CARP into a more effective force for poverty alleviation and sustained rural growth. In doing this, it is necessary to take stock of what the program has achieved during the past 20 years of implementation. A stock-taking is not only necessary but also directly touches the heart of the land reform issue, which in the Philippine context is intimately tied to aspirations for social justice.

a. Twenty years later: Assessing CARP's implementation.

- Land distribution

At the beginning of its implementation, CARP expected to cover about 9.8 million hectares. Subsequent re-assessments of potential areas led to a downward revision of program scope to 8.2 million hectares. Of the revised scope, the DAR is tasked to distribute 4.4 million hectares of private agricultural and government-owned lands to some 3 million farmers, while the Department of Environment and Natural Resources (DENR) is tasked to distribute 3.7 million hectares of public agricultural and Integrated Social Forestry/Community-Based Forest Management (ISF/CBFM) lands to some 2 million farmers.

About 90% of the DAR scope of 4.4 million hectares has been distributed to farmer beneficiaries (Table 1-1). In general, RA 6657 prescribes the conveyance of individual land ownership titles, which are expected to be instrumental in raising farm household welfare through the incentive effects that these bring to short and long run investments in agriculture. However, as elaborated below, instead of individual titles, about 2.1 million hectares representing 71% of the distributed land titles under land acquisition and distribution (LAD) are still collective titles. The program's performance system has not distinguished between land areas under individual titles and those under collective titles.

Table 1-1 CARP scope and accomplishment, 2007

Land Type/Mode of Acquisition	Scope (ha)	% Accomplishment
<i>DAR</i> ^a	4,428,357	89.4
Private Agricultural Lands	3,093,251	72.5
Operation Land Transfer	616,233	91.9
Government Financing Institutions	243,434	66.7
Voluntary Offer to Sell	437,970	133.4
Compulsory Acquisition	1,507,122	18.4
Voluntary Land Transfer	288,492	225.6
Non-Private Agricultural Lands	1,335,106	128.8
Settlements	604,116	120.8
Landed Estates	70,173	115.2
Government Owned Lands	660,817	137.5
<i>DENR</i> ^b	3,771,411	81.0
Public Alienable and Disposable Lands	2,502,000	68.7
Integrated Social Forestry/Community Based Forest Management	1,269,411	105.2
Total	8,199,768	85.6

Note: ^a Scope pertains to 2006 figures. DAR recently revised this to 2007, though breakdown by program type is not available. ^b Accomplishment is as of 2006.

Land distribution has been particularly slow for private agricultural lands (other than rice and corn lands) under compulsory acquisition, which total 1.5 million hectares or roughly one-fifth of the program scope. The accomplishment for this program component is only about 18%. The main constraints have included the inadequate technical capacity and budgetary support of implementing agencies, lengthy legal disputes relating to coverage and land valuation, landowners' resistance, and peace and order problems. Interestingly, it is in these lands—particularly lands planted to sugarcane, coconut and other tree crops, and nontraditional export crops—where most of the remaining problems with landholding inequality exist.

In the case of public A&D lands, where accomplishment was only 80% of target after 20 years of CARP implementation, the bottlenecks have usually involved delays in undertaking land surveys, slow reconstitution of land records, and sluggish resolution of land conflicts among competing claimants. It is to be noted that public A&D lands and forested lands are not vacant lands; they are being tilled by farmer “squatters” who only need to be given security of tenure.

- Transfer of land rights

As noted above, an important issue in the LAD accomplishment of DAR is the substantial proportion of collective titles or CLOAs (Certificates of Land Ownership Award) issued to areas covered under the program. This issue touches on the very essence of the objective of

agrarian reform. Asset redistribution is never complete without the proper assignation of property rights. With this, the farmers, who are now owners, will have the incentive to increase both short- and long-term investments on the land. Moreover, the underlying rationale of the CARP is the establishment of owner-cultivatorship of economic-sized farms as the basis of Philippine agriculture.

RA 6657 allows for collective ownership only for specific circumstances. In particular, if it is not economically feasible and sound to divide the land, then it shall be collectively owned by the workers' cooperative or association comprised of worker-beneficiaries. This provides an appropriate ownership structure for cases where the current farm management system does not particularly require the parcelarization of the land. For other types of landholdings, the collective title is supposed to be only a transition mechanism to expedite the land acquisition process. The subdivision survey and generation of individual titles would follow afterwards. However, what was supposed to be a special case became the norm in the acquisition and distribution of landholdings. About 71% of all lands distributed under CLOA are collective CLOAs. This translates to more than 2 million hectares (see Table 1-2).

Table 1-2 CLOAs distributed under CARP, by land type

Type	No. of Titles ^a	Percentage	Area (Ha) ^a	Percentage
Individual CLOA	693,969	79	850,201	29
Collective CLOA	180,749	21	2,082,765	71
Total	874,718	100	2,932,967	100

^a As of October 2007.

Note: The total excludes Emancipation Patents (EPs) that are issued for P.D. 27 areas.

Source: DAR Management Information Service.

The overwhelming majority of collective CLOAs are those under co-ownership (i.e., 90% of all CLOA titles, representing 79% of total CLOA area). This is the case where the CLOA is in the name of all beneficiaries. Cooperative CLOAs and Farmers' Organization CLOAs are issued to those beneficiaries who are already organized upon the generation of the CLOA. In this case, the CLOA is in the name of the organization and the names of all beneficiaries are usually annotated at the back of the title. Collective CLOAs awarded to beneficiaries of commercial farms and lands held by multinational corporations fall under these types of CLOA.

Aside from commercial and agribusiness farms, lands that are not tenanted and those that are idle (but deemed arable) are most likely distributed under the co-ownership type of collective CLOA, since potential beneficiaries are not yet tilling specific parcels of land. In fact, for idle lands without prior claimants, the DAR would screen landless residents within the barangay and adjacent barangays as possible beneficiaries. In contrast, on lands that are tenanted or those that have farmworkers working on specific plots of land, the potential beneficiaries will opt (and even insist) for individual titles.

The breakdown of collective CLOAs by program type seems to confirm this observation. The GOL and the GFI lands have the highest proportion of collective CLOAs (86% and 83%, respectively). On the other hand, CA and landed estate lands have the lowest proportion of collective CLOAs. As indicated earlier, CA lands are the most contentious lands and are probably the most productive lands.

Table 1-3 Breakdown of Collective CLOAs by program type, as of Oct. 2007

Program Type	Collective CLOA (ha)	Total CLOA (Collective+Individual) (ha)	Percent Collective CLOA
Government Financial Institutions	117,418	141,225	83
Voluntary Offer to Sell	371,092	534,458	69
Compulsory Acquisition	141,430	242,710	58
Voluntary Land Transfer	362,971	557,950	65
Settlement Areas	380,175	606,970	63
Landed Estates	35,897	66,777	54
Government-Owned Lands	673,779	782,875	86
Total	2,082,765	2,932,967	71

Source: DAR Management Information Service

CARP lands that are under collective CLOA, particularly those that are not commercial farms, are rather handicapped in terms of their development and sustainability. The incentive effects expected to arise from land redistribution, i.e., increases in investment and farm productivity might not be realized. The situation likewise jeopardizes the ability of farmer beneficiaries to access credit and modern farming technologies, as well as to smooth consumption in the event of adverse income shocks.

- The cost of transferring land under CARP

DAR's cost for administering the transfer of land under CARP is substantial. The study estimates CARP's 'overhead' cost by assuming that administrative costs (personnel, MOOE, and capital outlay) under CARP Funds 101 and 158 are distributed across programs in the same proportion as the staffing across DAR's key functions, including land distribution. For the period 2003-07, the average cost was more than PhP36,000 per hectare. These estimates include all types of land and are likely to underestimate the cost of transferring private land under compulsory acquisition, which among the various types of land in CARP's scope is the most expensive in view of the legal (and social) conflicts normally associated with this type of land transfer modality. It is therefore of interest to normalize the cost of land transfer by the cost of land acquisition.

As the cost of land transferred under OLT is artificially low due to the legal provisions regulating the valuation of such land, the study focuses only on private lands valued

according to the prescriptions of the Comprehensive Agrarian Reform Law. The latter has ranged between PhP86,076 and PhP101,857 per hectare during 2003-07, which translates into an average overhead cost to DAR of about 38% during the same period. The relatively high overhead cost suggests that alternative means for redistributing land could be achieved with the goal of improving the returns to the CARP. Savings could in fact be redirected toward funding of support services as these are shown below to be critical to the program's success.

- Achievements in the ARC strategy

CARP is quite distinct from previous agrarian initiatives in another major respect: it provides a comprehensive program of beneficiary development, especially the delivery of basic services (capacity building, credit and marketing assistance, farm infrastructure, etc.) needed to transform the beneficiaries into efficient agricultural producers and entrepreneurs. However, because the funds available to support the program had been very limited, the government, through DAR, launched in 1993 the Agrarian Reform Community (ARC) approach to beneficiary development. The approach involves focusing the delivery of support services to selected areas, rather than dispersing the delivery to all areas covered by CARP. It is also a mechanism to fast-track investment in basic social infrastructure, such as water, power supply, education, and health.

As of end of December 2007, about 1,874 ARCs have been established since the program's launch. They cover roughly 45% of total agricultural lands distributed under the program and 43% of the total ARBs nationwide. These ARCs are spread over 8,147 barangays in 1,237 municipalities.

Foreign-assisted projects (FAPs) for the agrarian reform program have been concentrated in the ARCs. These projects have provided support to 58% of the ARCs, covering 62% of the ARBs in all ARCs, or roughly 30% of all ARBs nationwide. As expected, given the fiscal constraint noted above, ARCs receiving support services through FAPs are found to be economically better off than those without FAPs.

- Efficiency of the system of agrarian justice

The DAR, through its agrarian legal system program, has the mandate to provide free legal assistance to ARBs through the process of mediation, conciliation and representation of ARBs in quasi-judicial and judicial courts. Matters related to implementation of agrarian reform laws, landowner's retention, exemption from CARP coverage, and land use conversion are resolved by DAR administratively. DAR's Adjudication Board (DARAB) is vested with quasi-judicial powers and primary jurisdiction to determine and adjudicate agrarian reform matters. These functions represent a huge task within the agrarian reform bureaucracy and CARP's management. This has been a traditionally sensitive area. It is often claimed that landowners resort systematically to legal arguments as a way of delaying and thwarting the implementation of the agrarian reform process and of increasing the compensation for compulsory acquired lands.

The process of dispute resolution in the agrarian sector has indeed become problematic to manage. In spite of recent improvements in the rate of resolution, the overall trend in the caseload has been increasing. While in 2004 the balance of cases relative to Agrarian Law Implementation (ALI) was 3,817, in 2007 it amounted to 38,419. The caseload of quasi-judicial cases under the DARAB's responsibility increased from 12,515 in 2004 to 12,918 in 2007. Finally, the caseload in regular courts increased from 2,616 to 3,398 during the same period. These trends reflect the limited amount of specialized personnel in DAR handling the increasing cases. As CARP will start covering private lands subject to compulsory acquisition, it will be almost impossible for the current system of agrarian justice to manage the surge in disputes and legal conflicts.

- Poverty trends in rural and urban areas

As in most of Asia's developing countries, and despite rapid urbanization in the past 20 years, poverty in the Philippines is still largely a rural phenomenon (Table 1-4). Three of every four poor persons in the country are located in rural areas and dependent on agricultural employment and incomes.

Table 1-4 Poverty incidence in rural and urban areas, 1985-2006

	1985	1988	1991	1994	1997	2000	2003	2006
Philippines	40.9	34.4	34.3	32.1	25.0	27.5	26.0	28.1
Urban	21.7	16.0	20.1	18.6	11.9	13.2	12.1	14.4
Rural	53.1	45.7	48.6	45.4	36.9	41.3	39.5	41.5
<i>Contribution to total poverty</i>								
Urban	20.5	17.7	29.3	28.8	22.6	23.5	22.7	25.2
Rural	79.5	82.3	70.7	71.2	77.4	76.5	77.3	74.8

Note: Poverty estimates are based on per capita consumption expenditures adjusted for differences in provincial cost of living. Source of basic data: Family Income and Expenditures Survey, various year.

Evidence in this report indicates that rural growth, more than urban growth, significantly reduces *rural and overall* poverty and that rural-urban migration does *not* appear to play a minor role in rural poverty reduction. Yet, while agriculture has significant roles to play in rural poverty reduction, its relative importance has shrunk substantially over the past two decades and the relative role of non-agricultural and non-farm sectors grew correspondingly. Indeed, spells of poverty reduction occur far more often in provinces where growth rates of non-agricultural incomes exceed those of agricultural incomes (Table 1-5).

Table 1-5 Province-growth spells by change in poverty incidence and by relative sectoral growth

	Number of Province-growth Spells	
	Agri income> Non-agri income 1991-2006	Agri income< Non-agri income 1991-2006
Poverty reduction	64	154
Poverty increase	66	81

Source: FIES provincial panel 1991-2006 (every 3 years)

Evidently, whatever its impact on agricultural incomes, land reform should not be regarded as a panacea for rural poverty reduction in the Philippines. Pathways out of rural poverty, especially in agriculture, differ across the regions and provinces due to variations in productive, agro-climatic endowments and infrastructural development. A “one size fits all” approach will not allow efficient allocation of scarce development resource across the rural landscape. Rural nonfarm occupations and rural-urban migration might represent the main pathways out of poverty in several marginal areas, with fewer infrastructures and low agricultural potential.

b. CARP design and pro-poor targeting.

A thorough assessment of the pro-poor targeting of CARP’s two key components, i.e., land distribution and program beneficiaries’ development, is a very difficult exercise in view of the significant absence of suitable data. Nevertheless, by combining data from several sources and drawing results from existing studies important findings emerge about how far CARP has successfully integrated efficiency and equity concerns in its design.

- Land distribution

CARP’s ex-post targeting in land distribution has been weakly pro-poor and inconsistent through time. Over the period 1988-2006, combining provincial-level data on poverty from the Family Income and Expenditure Surveys (FIES) with DAR-generated information on accomplishments in land distribution suggests that there has been no correlation between the initial poverty incidence in 1988 and CARP implementation. This result holds whether one looks at total accomplishments in land distribution, at distribution of privately owned lands, or at land transferred as part of the compulsory acquisition process. When the first (1988-1997) and second (1998-2006) ten years of CARP implementation are considered separately, however, there is some evidence of targeting toward poorer provinces during the latter period. A statistically significant albeit modest positive correlation (0.25) between the provincial poverty incidence in 1997 and the total CARP accomplishments during 1998-2006 is observed.

In contrast, the most contentious compulsory acquisition (CA) component follows a different pattern. While the CA component of CARP progressed more or less independently of the initial level of poverty incidence in 1988 over the period 1988-1997, the correlation turned to *weak negative* during the more recent decade though the correlation is below the usual level

of statistical significance (18% to 19% level), suggesting the possibility that progress in the CA components have become relatively slower in poorer provinces during the more recent decade.

Imperfect design and implementation underlie CARP's weak pro-poor targeting. It is revealing to look at the correlation coefficients of the ratio of the *scope* of LAD program types to total provincial A&D land against two provincial level variables: (a) the ratio of landless farmers to total farmers in 1991, and (b) the provincial agricultural landholding Gini in 1991, in which the latter is a summary measure of the inequality in the distribution of agricultural landholding, with a value ranging from zero (perfect equality) to 100 (perfect inequality). Ideally, provinces with relatively large numbers of landless farmers or those with high inequality in the distribution of agricultural landholdings should also display larger CARP LAD scopes. Table 1-6 indicates that the agricultural landholding Gini and the share of landless farmers were positively correlated to the ratio of CA scope to total A&D, suggesting that at the start of CARP implementation, the provincial targets for CA lands were in fact sensitive to addressing inequities in land access and ownership across all provinces. On the other hand, the study does not see this correlation with the over-all CARP scope, suggesting that the overall CARP scope was not particularly sensitive to landholding inequities.

Table 1-6 CARP scope vis-à-vis landlessness and landholding inequality

	GINI of Agricultural Landholding		Share of landless farmers		
Pearson correlation coefficient					
	Pearson's Correlation Coefficient	Prob > r under H0: Rho=0		Pearson's Correlation Coefficient	Prob > r under H0: Rho=0
Total	-0.0901	0.4516		0.1066	0.3696
OLT	-0.2519	0.0328	**	0.3828	0.0008 ***
GFI	-0.0095	0.9368		0.1089	0.3589
VOS	-0.2245	0.058	*	0.052	0.6621
CA	0.2795	0.0183	**	0.4263	0.0002 ***
VLT	0.0214	0.8583		-0.4013	0.0004 ***
Settlement	-0.2346	0.0473	**	-0.0823	0.4889
Landed estates	-0.1101	0.3605		0.3289	0.0048 ***
GOL/KKK	0.0873	0.4661		-0.3004	0.0098 ***

Note: *** significant at 1% ** significant at 5%, * significant at 10%.

Interestingly, OLT scope shows a negative correlation with the Gini of landholdings and a positive one with the share of landless farmers. OLT was targeted to rice and corn areas, where tenancy was very widespread but overall land inequality was somewhat smaller

compared to the plantation sector. Finally, the evidence shows that both the scope for VLT and the government-owned land/Kilusang Kabuhayan at Kaunlaran (GOL/KKK) was poorly related to land inequality. However, it is in these areas that DAR even went beyond the original scope having accomplishment rates beyond 100% and as high as 226% for VLT (see Table 1-1). This shows that a substantial proportion of DAR's reported LAD accomplishment was not targeted to where it matters most.

- The ARC strategy and the delivery of support services

The ARC strategy has proved to be an operationally valid approach to rural development interventions. After an initial project-based approach to the delivery of support services (1988-1993), DAR has since adopted the ARC strategy, which carries out integrated area development (IAD) within a resource-constrained environment. The strategy was largely a resource-maximization, resource-allocation and resource-mobilization strategy for program beneficiaries' development. By identifying *barangays* or clusters of *barangays* with the highest concentration of ARBs and distributed lands, resources were pooled and channeled to where they could have the greatest impact. By using the ARC as a working unit or convergence point, it was possible to more effectively synchronize the delivery of support services to a defined area or target group and to access more easily official development assistance (ODA) funds. A specific, well-defined, and manageable area, like an ARC, with a wide menu of possible development interventions (e.g., community organizing, infrastructure, enterprise development) has proved to be attractive to bilateral and multi-lateral agencies providing development assistance.

DAR's institutional mandate limited the pro-poor targeting of the ARC strategy. Similar to the case of land distribution in the CARP scope, by design the geographical distribution of ARC interventions did not hold much potential for pro-poor targeting. With the inclusion of larger numbers of (actual and potential) ARBs being the top priority in selecting ARC *barangays*, the distribution of ARC interventions across provinces and across program components followed closely those of LAD implementation. There was no indication, *ex post*, of targeting areas with high inequality or with high incidence of landlessness, or of targeting the CA component (which would have been pro-poor). The selection of ARC *barangays* was predominantly based on the density of ARBs and CARP areas to maximize the program's reach and coverage among ARBs and CARP areas. However, there was no targeting in terms of the type of lands covered by the ARC program as this mirrors the national LAD profile, in spite of the fact that differences across land types and ownership structures will affect the potential outcomes of the interventions.

ARC selection favored areas with highest agricultural potential. DAR formulated an ARC typology framework based on the community's ecological, economic, and socio-political attributes to facilitate program design and implementation. As a result ARCs were classified as:

- (i) Prime agricultural ARCs—characterized by a cluster of more than five contiguous *barangays*, with huge tracts of agricultural lands and a significant number of farmers and small agricultural workers, and with potential to become key production centers for various crops or agro-industrial centers;

- (ii) Semi-prime ARCs—with substantial agricultural lands and small farmers, but where the scale of agricultural production cannot support agro-industrial development; and,
- (iii) Satellite agricultural ARCs—relatively small communities with limited agricultural land and small farmers, and characterized by low soil fertility and low level of agricultural production.

Overall, it appears that ARC interventions were targeted to areas with high or relatively high potential in agricultural production (e.g., irrigation development, access to formal financial institutions). Thus, the data suggest that, on average, ARCs are not particularly worse-off communities compared with non-ARC barangays.

ARCs interventions do not appear to reflect heterogeneity in local endowments. After clustering ARCs by agricultural production potential, proxied by the location’s potential for irrigation development (low, medium, high), and degree of urbanization (rural, peri-urban, urban) to reflect different development opportunities, the study considers the type and magnitude of the interventions across communities. Ideally, interventions framed in a community-driven development (CDD)-type of approach will deliver different packages of support services reflecting heterogeneity in local conditions and endowments. Although comprehensive data on the composition of packages are not available, there are bits of information about the types of interventions carried out as part of foreign assisted projects for the period 2004-2006. Using the total CARP scope¹, the study computed the average cost per hectare for every cluster (Table 1-7).

¹ To make the intervention cost across clusters comparable, the study uses the average cost per hectare of CARP working scope in the ARC. The CARP working scope of the ARC is a proxy for the coverage of the ARC in terms of area and farmer beneficiaries. Since the main focus of interventions are farmer-beneficiaries of the program, the study deems it as an appropriate indicator of unit cost of ARC interventions.

Table 1-7 Provincial typology cluster showing total number of ARCs, total CARP scope, total cost of interventions, and cost per ha (using LAD working scope)

		Urbanization		
		Low (highly rural)	Mid (peri-urban)	High (urban)
Geo-physical endowment (irrigation potential)	Low	109 ARCs	35 ARCs	8 ARCs
		122,837 ha	26,862 ha	9,763 ha
		P2,430,660,000	P643,989,000	P169,492,000
		P19,788/ha	P23,974/ha	P17,360/ha
	Mid	451 ARCs	389 ARCs	45 ARCs
		500,784 ha	421,619 ha	29,369 ha
		P18,213,629,000	P14,141,520,000	P1,543,247,000
		P36,370/ha	P33,541/ha	P52,547/ha
	High	112 ARCs	140 ARCs	75 ARCs
176,226 ha		82,113 ha	49,691 ha	
P3,469,890,000		P2,708,609,000	P1,090,453,000	
	P19,690/ha	P32,986/ha	P21,945/ha	

The High Urban-Low Irrigation cluster had the lowest cost per hectare (Php17,360/ha). At Php52,547/ha, the High Urban-Mid Agricultural Potential cluster had the highest average cost, three times that Low Urban-Low Irrigation cluster. Offhand, one would expect to see cost variation across clusters since these are likely to have different development requirements. At the very least, such variation is an indication of some level of strategizing in the provision of interventions. The report's findings indicate very little differentiation in the intervention types across the provincial typologies. Given heterogeneity in geo-physical and socioeconomic conditions, it is expected that some clusters receive more resources for certain interventions compared with others. The study does not see that in the ARC development program, except in the case of interventions relating to off-farm livelihood and enterprise development. These interventions are appropriately concentrated in the High/High and High/Mid clusters. These are highly urbanized provinces lending well to non-farm rural industry activities (Table 1-8).

Table 1-8 Provincial typology cluster showing intervention types that derived the highest cost per ha of intervention

		Urbanization		
		Low (highly rural)	Mid (peri-urban)	High (urban)
Geo-physical endowment	Low			Roads and bridges Irrigation Economic establishments Utilities
	Mid	Irrigation Economic establishments Social infrastructure Other Input Support and Tech. Assistance Social capacity building	Utilities Social infrastructure Public establishments and facilities	Public establishments and facilities Farm equipment Agricultural Production, Post-harvest and Marketing projects Off-farm Livelihood and Enterprise Development Projects Social capacity building
	High		Roads and bridges Farm equipment Agricultural Production, Post-harvest and Marketing projects	Off-farm Livelihood and Enterprise Development Projects Other Input Support and Tech. Assistance

- Implications of CARP’s targeting for its poverty reduction impact

Available household and village level data show positive but modest impacts of CARP on poverty. Notwithstanding significant constraints in DAR’s approach to collecting data for monitoring and evaluation, recent studies have been able to analyze CARP’s impact on poverty. One such study (APPC, 2007) uses household-level cross-section data. It estimates that among households gaining access to land through land tenure improvement (LTI) under CARP, without additional support services (such as ARC interventions), average *per capita* consumption tend to be roughly 15% higher on average than that of landless (non-beneficiary) households. Benefiting from ARC interventions, in addition to the LTI intervention, is associated with *additional* 8% higher per capita consumption (thus 23% increase from both LTI and ARC), which, if taken at face value, appears to imply that there exist ‘synergy’ effects. The quantitative magnitude of the impact of LTI interventions is twice that of the (additional) impact of ARC interventions. Crude difference-in-difference estimates (Reyes, 2003) based on the Institute of Agrarian and Rural Development Studies (IARDS) panel data (1990-2000) also indicate positive—though marginally significant—CARP impact. Roughly half of CARP beneficiaries in the IARDS panel during 1990-2000 escaped from poverty (but roughly half of non-CARP beneficiaries also escaped poverty!). Double difference estimates of the impact of ARC interventions at the barangay-level, combined with the propensity score matching technique, also suggest quantitatively modest impact of CARP (APPC, 2007).

Previous work by Balisacan and Fuwa (2003, 2004) based on provincial-level analyses, finds that during the period 1988-1997, CARP implementation has had a positive and significant impact on provincial growth—and thus indirectly on poverty—but a very limited direct impact on poverty itself. A later replication of the same analysis based on the data period 1988-2000 and regional data finds, however, that CARP might have growth effects but not any significant re-distributive effect (Balisacan 2007).

Land reform's impact on poverty has been positive but modest. The report extends this line of research utilizing more recent provincial panel data on CARP implementation, on the one hand, and on the change in poverty, on the other. Analyses are conducted for two separate data periods, namely, 1988-1997 and 1998-2006, taking into account the initial income level, the initial level of infrastructure (road density, electricity and irrigation), and initial level of income inequality. The total increase in 'CARP implementation' (as defined by the amount of area covered by CARP divided by the 'scope') is significantly (though marginally) negatively associated with the rate of change in poverty incidence only for the data period during 1988-2006 but not for the data period 1988-1997. The results further suggest that it is the re-distribution of privately owned land but not that of non-privately-owned land that has significant positive effects on poverty reduction.

Land reform's impact on poverty reduction critically related to access of private land. The increase in CARP accomplishments in private lands, and in particular lands under CA is significantly associated with poverty reduction for both data periods. The coefficient estimates suggest that a 10% increase in the accomplishments in private land re-distribution is associated with a 3-percentage point increase in the annual rate of poverty reduction. During the data period 1988-1997, among the redistribution programs of privately-owned land, increased accomplishments in the GFI, CA and VLT components are significantly associated with poverty reduction, but the size of the effects appears to be the largest with the CA component. A 10% increase in the CA accomplishment rate is associated with an 8-percentage point increase in annual rate of poverty reduction. For the data period 1988-2006, in contrast, the VOS component is found to be the only component significantly (though marginally) associated with poverty reduction.

Overall results suggest that CARP's impact on poverty has been positive but modest. Despite all the caveats in the available data, however, the existing evidence suggests that CARP implementation had statistically significant positive welfare impacts on its beneficiaries. It is difficult to fix the quantitative magnitude of its impact, however. Since the average rate of change in poverty incidence across all provinces during 1991-2006 was roughly 40%, the magnitude of the poverty reduction impact of CARP implementation could account for up to 8% of the average rate of poverty reduction over the period. The actual impact of CARP on the rural poor might therefore not have been as large as its proponents would have liked to see, but CARP has not been as ineffective as some of its fiercest critics have claimed either. The analysis also shows that DAR's failure to fast track the acquisition of private lands of better quality, coupled with the targeting design of ARCs, has been one of the main reasons for the modest impact of CARP on poverty.

c. Tenure security, credit and land markets, and small farm productivity: implications of land reform for the small farm sector in rice and corn lands.

In traditional rice and corn areas, CARP has led to a substantial fragmentation of farm operations. Only 4% of palay farms are above 7 hectares. For corn farms, 49% are below 2 hectares. This contrasts with the situation in sugarcane lands and other plantations, where poverty continues to be concentrated due to CARP's modest advances in these areas and where agrarian reform appears as unfinished business. The underlying rationale of the CARP was the establishment of owner cultivatorship of economic-sized farms. The development of a competitive small-farm sector was consistent with a policy of self-sufficiency in key staple crops such as rice and corn. After more than 30 years of land reform in rice and corn sectors, farmland fragmentation raises concerns about the viability of small farms and the rationale for further land distribution. According to DAR, the average beneficiary will receive 1.7 hectares of land, well below the 3 hectares originally conceived in the law as the optimal size for direct cultivation.

CARP has fallen short of achieving a full redistribution of land rights and tenure security in redistributed lands. First, CARP has been implemented in an environment of weak land policy and poor land administration. These institutional weaknesses are reflected on the many problems that have confronted and continue to challenge CARP. The scope of coverage for land reform has been poorly identified and targeted given the dearth of information on land in terms of ownership and physical attributes. Moreover, poorly defined property rights have favored landowner opposition to issues of ownership, coverage, and valuation, causing major setbacks in the completion of land redistribution. This resulted in "unperfected" titles or transfers and hindered the installation of beneficiaries on distributed lands.

Second, the effects of poor land policy and land administration do not end in the land redistribution phase but have evolved into second-generation issues. This has further affected the functioning of rural land markets, security of land tenure, and access of the poor to land. The agrarian reform law has prohibited the conveyance and transfer of awarded lands through market transactions but government has "allowed" sale and other forms of transfers to take place in the informal market. The sale of "imperfect" titles through informal transactions has increased documentation problems and weakened property rights in the rural lands.

Land rights have only partially been redistributed and incentives to invest in land and farm productivity improvements have been substantially weakened. As noted earlier, although CARL allows for land to be distributed under collective forms of land ownership only when subdivision is not economically justified, over 71% of the distributed land took the form of collective CLOAs (hereafter C-CLOAs). These titles represent 21% of total titles issued. The overwhelming majority of C-CLOAs has been issued under co-ownership and only 10% was issued under farmers' organizations and cooperatives.

Issuance of C-CLOAs was particularly intensive for lands where no prior tillers were established, i.e., government-owned lands and lands owned by GFIs. Issuance of individual

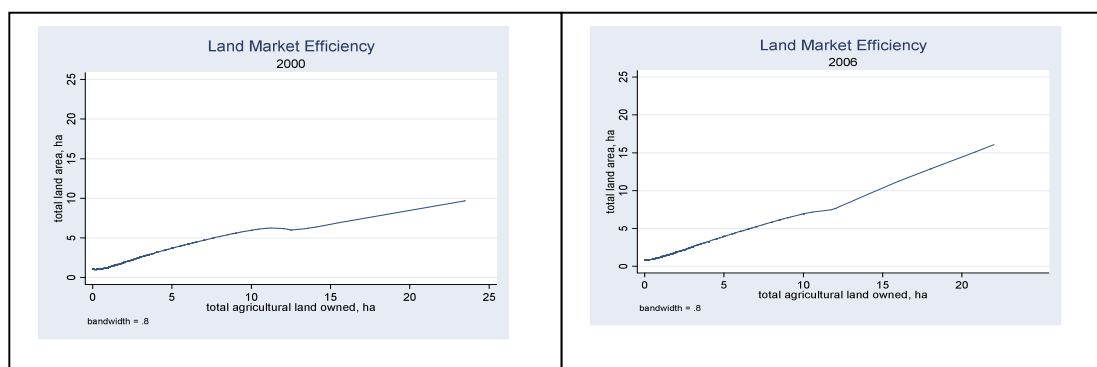
CLOAs (I-CLOA) has instead dominated in the case of compulsory acquisition of private lands, where the aspiration of the beneficiaries to individually own the land was clear from the start. DAR's progress in subdividing C-CLOAs has been minimal given the structure of incentives and the lack of guidelines that would allow overcoming resistance to subdivision by blocking coalitions among beneficiaries. The over 2 million of hectares covered by C-CLOAs represent one of the major challenges for the future of CARP.

Weak property rights and overall tenure insecurity affect the functioning of land and credit markets. Access to capital is a key factor in modernizing farm operations and in coping with adverse income shocks. In rice and corn areas the data suggests that almost 70% of households are rationed in the credit market. The study analyzes the determinants of access to credit among farmers in rice and corn lands, focusing in particular on the role of land, tenure security and property rights, and cooperative membership. Ownership of titled land is found to have an effect on access to formal lending in rural areas, but the magnitude of that impact is not large. An additional hectare of titled land is estimated to increase the probability of access to formal credit by almost 1.4%. For a 3-hectare farm, this implies that an individual title would increase the probability of accessing formal credit by 4.2%. Although this effect is smaller than that attributable to membership in a cooperative it is still noticeable. ARBs typically have access to cooperatives when they belong to ARCs. For ARBs not located in ARCs, the lack of a clear title to their land represents a clear disadvantage in terms of access to credit.

Interestingly, the analysis suggests that being an agrarian reform beneficiary is a negative signal for formal lenders, once titling, land size, and cooperative membership are controlled. ARB status signals to the lender the existence of legal restrictions on land transferability and hence a limited use of land as collateral. The borrower is also deemed poor, given CARP's targeting in principle of poor households. Both factors contribute to make an ARB a risky borrower. Moreover, an ARB that has not yet secured full ownership of his land and acquired full property rights over it is less inclined to invest in land improvements. Failure to access formal sources of credit doubles the cost of capital when this is obtained from informal sources. These findings identify an important aspect of the shallowness of rural credit markets in the Philippines.

Land rental markets are becoming increasingly more inefficient and more difficult to access by the land-poor. The report validates the warnings in previous reports (e.g. World Bank 2001) on the possibility that CARP would be affecting the functioning of land markets, but the influence of CARP is a complex one. Rental markets are of a particular concern in this regard, as they are an important medium for upward mobility in agrarian societies (World Bank, 2003). Legal restrictions on renting land out are substantial and CARP's confiscatory nature further compounds the effect on larger farms. The available evidence, synthesized in Figure 1-1, suggests that between 2000 and 2006, land markets have become increasingly constrained, especially for larger farms.

Figure 1-1 Relationship between farm-size and landholdings



Source: staff computations based on IARDS 2000-06 data

Although a substantial amount of land leasing takes place, either as renting or as sharecropping, there is evidence that farms are limited in their ability to fully adjust to an optimal size, particularly for land holdings above the 5-hectare legal ceiling. Larger farms are in fact less likely to lease out land. Conversely, land markets seem to be more fluid among small farmers, once the effect of credit restrictions are taken into consideration. CARP implementation plays an indirect role through the credit market and in areas with higher concentration of ARBs. Farm fragmentation is reflected in smaller plots of land being transacted and a lower probability of leasing land.

Land cultivation becomes less intensive and profitable as farm size grows. Despite the combined effects of land and credit market imperfections, analysis of panel data on farm households shows that the inverse farm size/productivity relationship continues to hold in rice and corn lands. Irrespective of whether output is measured in revenues or profits net of shadow cost of labor, the study found evidence of a mild but statistically significant inverse relationship between farm size and productivity in rice and corn areas, even after controlling for land quality. Small farms have a traditional advantage in relying on a motivated labor force; evidence shows that labor supervision costs increase with farm size (De Silva et al. 2006). In a context of imperfect rural factor markets, this advantage outweighs the one of improved access to capital enjoyed by larger farms. In addition, the report shows that, consistently findings in other studies, that farmers' productivity has benefited from the delivery of support services, mainly targeted by CARP in agrarian reform communities even after controlling for proximity to urban areas. Based on the empirical results and theory, it can be concluded that eliminating the impediments to the efficient functioning of land markets is unlikely to eliminate the inverse relationship between productivity and farm size, although it may weaken it to some degree, provided other market imperfections are maintained.

d. The challenges of CARP in sugarcane lands.

The report addresses the sensitive issue of which prospects exist for CARP's implementation under the current modalities in sugarcane plantation areas. Sugarlands are considered to be the most problematic in terms of land distribution. Sugarcane has been and remains to be

among the major crops in Philippine agriculture. The sugar industry produces the country's largest non-cereal crop; it is third in terms of planted area and production value. On average, sugarcane contributes 3.2% to the annual gross value added by agriculture and about 0.5% to the annual Gross Domestic Product (GDP). Sugar growing employs almost half a million workers. Amid these significant economic contributions, the industry has yet to regain its position as a significant player in the world economy. Despite recent efforts to revitalize the industry in bio-fuel and electricity, several factors still adversely affect its level of productivity, competitiveness, and viability.

After 20 years of implementing CARP, the Philippine government has yet to break up and distribute to potential program beneficiaries relatively large tracks of sugarcane farms. The industry's largest sugar-producing province, Negros Occidental, has only implemented the program in 60% of total farm lands to be distributed and accounts for 8% of the total farm lands yet to be acquired and distributed as of December 2007. The usual explanation analysts cite for the lackluster performance is that sugarcane owners belong to the country's elite, who oppose the program. Opponents of program extension point to disadvantages of small scale farming, in terms of forfeited scale economies, higher coordination cost, and unstable supplies due to the preference for diversifying away from sugarcane by land reform beneficiaries once land is redistributed. On the other hand, this opposition could be viewed as motivated by preservation of industry rent.

These controversial issues are evaluated empirically in the report using a combination of approaches: (i) a desk review provides the socioeconomic and institutional context of agrarian reform in the sugarcane industry; (ii) a rapid field appraisal, covering the provinces Negros Occidental (with the biggest sugarcane area and one of the lowest LAD accomplishments) and Bukidnon (a center of sugar industry growth and one of the highest LAD accomplishments), generates stakeholder information and perspectives about the impact and prospects of land reform implementation on the sugar lands; (iii) economies of size are estimated using Sugar Regulatory Administration (SRA) data from their Farm Management Record-keeping survey (FMR); (iv) coordination cost are analyzed based on information from the rapid appraisal and SRA data on mill recovery together with indicators of farm size concentration; (v) finally, diversification of cropland and sugarcane area trends are analyzed using farm size concentration as a key explanatory variable; (vi) finally, for the rent hypothesis, the returns to land (profit) are estimated and then a land price is computed based on the assumption of capitalization. The computed land values are then compared to the prices obtained from rapid appraisal.

The lack of adequate accomplishment of the program in sugarcane industry might have a technical and economic policy origin. The study finds that sugarcane farming differs markedly from the farming of other major crops under tenanted cultivation. Specifically:

- Significant impediments to competition due to protection and regulation of the sugar industry are in place, and more are forthcoming owing to the biofuels mandate; these ultimately lead to persistently high land values;
- There are moderate scale economies in sugarcane farming;
- Small scale farming is associated with higher coordination cost; and,
- Small-scale farming does not reduce the share of sugarcane farming in agricultural area.

The higher value of land explains part of the resistance to CARP and makes program implementation slower and more expensive. The agro-economic peculiarity of the sugarcane industry, which exhibits mild economies of size and the vertical integration in farming and milling, also makes it difficult for CARP to achieve its second goal, that is, to promote development among agrarian reform communities and transform beneficiaries into agribusiness entrepreneurs and responsible landowners. When inducing a breakdown of operations, CARP's implementation introduces transaction costs in sugarcane farming. Smaller parcels of sugarcane farms will have less to the mechanization needed to reach their yield potential. This is because rental markets for machinery do not provide sufficient assurance to access machinery at the required time and in the desired modality. In addition, millers' coordination costs increase with smaller farm sizes, risking loss in harvested sugarcane or milled sugar.

Agrarian reform in sugarcane lands will require pragmatic use of models adapted to specific local socioeconomic, institutional, and agronomic conditions. The transaction costs that the potential implementation of program induces, however, are sufficient but not necessary to reduce overall productivity and incomes in sugarcane farming. With economies of size in the sugarcane business, plausible paths for agrarian reform in the industry are stacked with added costs, which have the potential of deforming the program's objectives. However, these added costs fail to form a compelling argument to stop implementing the program in the industry. Alternative modalities of organizing sugarcane farming in a post-agrarian reform regime exist to minimize transaction costs. Instead, the program objectives need to be tailored to the technology of the sugarcane business.

The apparent need for adequate progress of CARP in sugarcane farmlands compels program managers to look for viable ways to implement it more effectively. The analysis suggests that there are no "one size fits all" solutions to the problem of declining productivity and increasing costs brought about by the distribution program. One has to consider geographic-specific peculiarities in order to attain an appropriate modality that will specifically cater to the needs of the ARBs.

Tailored partnerships between beneficiaries and landowners offer substantial prospects for achieving equity with productivity in the development of the sugarcane sector. Collective titling of sugarcane plantations under CARP has brought under-investment, less value, and low productivity to the capital. Converting these group-owned lands could solve the problem. Nevertheless, one has to consider the pre-CARP tenorial status of the beneficiaries before subdividing the capital in order to fully understand the capabilities of beneficiaries in managing their lands. Because of the difference in land tenure systems, farmer beneficiaries have different managerial and entrepreneurial skills. The modality for the implementation of CARP should consider this.

Regardless of whether property rights in land are collective or individual in nature, ARBs need to be systematically and economically organized to attain leverage and at the same time decrease the cost of coordination. The initiative might incur transaction costs as a result of imperfect information. If significantly high, it will make the goal unachievable. This

underscores the need for a third-party organization to manage the transaction cost and lead farmer beneficiaries to undertake collective and cooperative action. Recent experience in Negros Occidental based on developing contractual arrangements between beneficiaries and former landowners (e.g., the Hermanos Gamboa hacienda) or between beneficiaries and agribusiness companies (e.g. the Kasuco Workers Agricultural Cooperative) suggest that alternative models of agrarian reform are possible, sustainable, and even desirable. Recent developments in the biofuel industry further reinforce the viability of such new approaches.

The viability of resorting to rental markets in pursuit of attaining size economies should also be considered in devising a modality for an improved sugar industry. Similar to property rights, the modality in this area lies in the differences in the agronomic systems in each geographic area. The presence of mono-cropping, in particular, would dictate whether rental markets would exist in the area or whether it would be more appropriate for the organized beneficiaries to acquire the sizeable investments themselves through resource pooling. Overall, crop diversification is still highly recommended among program beneficiaries to increase their resilience to industry-based risks.

Finally, efforts to fully revitalize the sugar industry are still being hampered by the current regulatory and institutional framework where the free-riding problem is prevalent. The inherent quedan sharing has become obsolete with the introduction of the core sampler. Quedan sharing was formulated in the past mainly as insurance to farmers of the amount of milled sugar he partially owned with the miller. More importantly, quedan sharing has resulted in under-investments in the milling sector, thereby depriving the Philippine sugar industry of the chance to be on par with foreign competitors, despite the relatively high farm productivity. Prospects for the industry therefore anticipate a gradual shift to a cane purchase system, instead of the recurring quedan sharing scheme.

III. Looking to the Future: Options for Program Redesign

Progress in CARP implementation in the past two decades has been extremely slow, especially in re-distributing privately owned lands. CARP has been only mildly successful at reducing rural poverty. This suggests that CARP extension with the same implementation scheme and modality would be likely to result in similarly disappointing results. This means, in turn, that an extended CARP would likely require new and innovative implementation schemes and modalities, possibly with new targeting approaches.

a. The role of agriculture in poverty reduction and alternative ‘pathways’ out of rural poverty.

Before discussing innovative approaches to land reform in the Philippines, a key question to address is: What is today’s role of agriculture in the Philippines? How relevant is agricultural and rural growth in poverty reduction? The answer to these questions provides a first basic hint as to how land reform should be framed and how targeting issues for CARP extension should be addressed. The basic thrust of the arguments is that while agriculture has significant roles to play in rural poverty reduction, its relative importance has shrunk

substantially over the past few decades and the relative role of non-agricultural and non-farm sectors has grown correspondingly.

There are multiple “pathways out of rural poverty” (including those through non-agricultural wage employment, non-farm enterprise, and international migration, to name only a few), of which the traditional pathway of climbing the “agricultural ladder” is only one. This suggests that it is important to identify the areas (or the types/characteristics of households) for which agricultural growth still constitutes the primary and optimal pathway out of rural poverty. Accordingly, the implementation of the extended CARP, with its relatively limited resources, should arguably also focus on those areas.

While studies documenting the changes in the relative importance of alternative pathways out of rural poverty are rather rare—mainly due to the lack of household-level panel data covering sufficiently long periods of time appropriate for such purposes—recent such studies, based on micro-data from rice-growing villages in Luzon and Panay, all point to the crucial role played by non-agricultural income growth in poverty reduction and the increase in the relative returns to education vis-à-vis agricultural land. Furthermore, provincial panel data show that in most of the provinces (46 out of 50) where poverty incidence declined during 1988 and 2006, the rate of growth in non-agricultural income was higher than that of agricultural income.

Following the seminal approach taken by Ravallion and Datt (1996) (and also Christiansen and Demery, 2007), the report estimates the relationship between the change in poverty and the change in the sectoral income at the level of the provincial aggregate during the period 1991-2006. The ‘growth elasticity of poverty reduction’ is disaggregated by income sources using provincial-aggregates of FIES income data. For each household, reported incomes from different sources are aggregated into primary (agricultural), secondary (industrial) and tertiary (service) sectors. Unearned incomes (including transfers, rents, etc., but excluding foreign remittances) cannot be assigned into any of the industrial sectors and so treated as a separate category. Given its importance in the Philippine context, the portion of the income from remittances coming from overseas Filipino workers (OFW) is also treated as a separate category.

Those incomes from different sources are aggregated into the provincial averages, which constitute the unit of analysis. In addition, as an alternative measure of sectoral incomes, the total household consumption expenditure is used as a proxy measure for the total household income and then relative shares of primary, secondary and tertiary incomes are applied to estimate sectoral incomes. In the latter measure, the total income is decomposed into three sectoral compositions. In addition to the two alternative measures of ‘sectoral incomes,’ two separate analyses were conducted:

- First, in an attempt to examine long-run dynamics, the change between 1991 and 2006 is used as the unit of analysis in a cross-section analysis.
- Second, in order to fully utilize the provincial panel data, all the FIES rounds, conducted in every three years between 1991 and 2006, are used as a panel data using fixed-effects regression analyses.

Rural nonfarm income growth has become the key driver of poverty reduction. The report finds that, not surprisingly, rural growth is more important relative to urban growth in reducing *rural* and total (i.e., rural plus urban) poverty (by a factor of 2 and 1.4, respectively). Urban growth is more important than rural growth in reducing urban poverty (by a factor of 2.5)—see Table 1-9. Overall, rural growth contributes more to overall poverty reduction than urban growth. On the other hand, the urbanization process (differential population growth rate between urban and rural areas) has a statistically insignificant negative impact on rural and total poverty reduction. In the case of urban poverty the impact is positive but still not statistically significant.

The regression analyses confirm that agricultural growth does not dominate the process of poverty reduction at a national *and* rural level and that growth in the nonfarm sector plays an equally important role (see Table 10). As a consequence of the relatively small share of agricultural incomes, however, the unconditional growth elasticity of non-agricultural sector growth is found to be significantly larger than that of agricultural income growth during the period 1991-2006. This follows from the smaller share of agriculture in total household income. This conclusion applies to rural poverty, as well as to total provincial poverty. The same basic conclusion also holds based on similar analyses using the region-level aggregates rather than provincial-level aggregates. Finally, the analysis does not find any statistically significant evidence linking inequality in farm-size distribution with a higher contribution of agricultural growth to poverty reduction. It is possible that the Gini coefficient of farm size distribution imperfectly proxies the Gini coefficient of landholdings. On the other hand, the imperfect functioning of land markets noted above casts doubts on the validity of such an interpretation.

Agrarian reform's impact on poverty will be maximized in key agricultural areas. The main findings of the growth elasticity estimates suggest that targeting land reform implementation at areas with relatively higher shares of agricultural incomes might be worth serious consideration. Such a targeting strategy could have a few potential advantages. First, the higher income share from agriculture would ensure larger impacts on poverty reduction given the same rate of agricultural income growth. Second, reducing inequality in land distribution might possibly raise the elasticity itself.

But to achieve full pro-poor potential, land redistribution requires complementary reforms to improve the efficiency of land rental markets and tenure security. As the results of the analysis of land rental markets suggest, it is quite clear that CARP will not be able to substantially solve the problem of poverty by simply redistributing farmland, except in the more agriculturally dynamic areas and provided land rental markets will be allowed to function properly so that more productive farmers can optimally adjust the size of their operations and maximize productivity. Improvement in credit access will continue to be an important condition for achieving sustainable outcome in equity with efficiency. Microfinance institutions and innovative approaches to lending to small farmers are rapidly spreading in the Philippines' rural areas.

Table 1-9 Poverty elasticities of rural vs urban income growth

	1991-2006	1991-2003	1991-2000
Change in provincial poverty (rural and urban)			
Contribution Effect: Elasticity of Poverty to Growth (conditional on sector share)			
Rural growth	-1.515 (5.95)	-1.448 (4.86)	-1.374 (4.33)
Urban growth	-1.120 (4.57)	-1.256 (4.43)	-1.218 (4.16)
Population growth	-0.042 (0.70)	-0.044 (0.52)	-0.024 (0.23)
Constant	0.016 (0.50)	-0.091 (1.80)	-0.036 (0.79)
Participation Effect: Elasticity of Poverty to Sectoral Growth (unconditional on sector share)			
Elasticity rural growth ²	-0.850	-0.807	-0.772
Elasticity urban growth ²	-0.499	-0.560	-0.539
R ²	-0.471	-0.496	-0.545
# of obs.	357	287	217
Change in rural poverty			
Contribution Effect: Elasticity of Poverty to Growth (conditional on sector share)			
Rural growth	-1.333 (6.25)	-1.266 (5.07)	-1.251 (4.67)
Urban growth	-0.657 (3.90)	-0.746 (3.69)	-0.649 (3.86)
Population growth	-0.062 (1.16)	-0.050 (0.74)	-0.044 (0.59)
Constant	-0.003 (0.11)	-0.059 (1.48)	-0.028 (0.90)
Participation Effect: Elasticity of Poverty to Sectoral Growth (unconditional on sector share)			
Elasticity rural growth ²	-0.981	-0.928	-0.931
Elasticity urban growth ²	-0.384	-0.438	-0.380
R ²	0.466	0.488	0.550
# of obs.	357	287	217
Change in urban poverty			
Contribution Effect: Elasticity of Poverty to Growth (conditional on sector share)			
Rural growth	-0.182 (2.60)	-0.182 (2.48)	-0.122 (1.35)
Urban growth	-0.463 (3.63)	-0.511 (3.72)	-0.569 (3.21)
Population growth	0.020 (0.79)	0.006 (0.21)	0.021 (0.46)
Constant	0.018 (1.25)	-0.031 (1.81)	-0.008 (0.37)
Participation Effect: Elasticity of Poverty to Sectoral Growth (unconditional on sector share)			
Elasticity rural growth ²	-0.422	-0.419	-0.278
Elasticity urban growth ²	-0.853	-0.942	-1.018
R ²	0.321	0.356	0.372
# of obs.	357	287	217

Source: Land Reform, Rural Development, and Poverty Reduction: Revisiting the Agenda, Chapter 7.

Table 1-10 Poverty elasticities of farm vs nonfarm income growth, provincial level with fixed effects

Sector	Contribution Effect			Participation Effect		
	Rural & Urban	Rural	Urban	Rural & Urban	Rural	Urban
Data period: 1991-2006						
Agricultural income	-1.613 (7.80)	-1.264 (6.77)	-0.355 (4.95)	-0.526	-0.541	-0.479
Non-agric. income	-1.338 (9.90)	-1.058 (8.91)	-0.291 (5.08)	-0.902	-0.936	-0.811
p-value for the difference between agricultural vs. non-agricultural						
	0.14	0.20	0.18	0.00	0.00	0.00
Data period: 1991-2003						
Agricultural income	-1.561 (6.83)	-1.182 (5.70)	-0.372 (4.85)	-0.527	-0.526	-0.520
Non-agric. income	-1.275 (8.88)	-0.965 (8.14)	-0.311 (4.61)	-0.844	-0.841	-0.851
p-value for the difference between agricultural vs. non-agricultural						
	0.12	0.17	0.26	0.00	0.00	0.01
Data period: 1991-2000						
Agricultural income	-1.559 (7.06)	-1.134 (5.56)	-0.423 (4.77)	-0.554	-0.533	-0.608
Non-agric. income	-1.318 (6.88)	-0.958 (6.57)	-0.360 (3.53)	-0.850	-0.818	-0.940
p-value for the difference between agricultural vs. non-agricultural						
	0.16	0.26	0.35	0.00	0.00	0.08

Source: Land Reform, Rural Development, and Poverty Reduction: Revisiting the Agenda, Chapter 7.

Nevertheless, in addition to reforming legal restrictions affecting land transfers, reforms aimed at strengthening tenure security and property rights will also play a relevant role. Subdivision of C-CLOAs and improvement of land management and administration services are imperative actions for rural land being regarded by formal lenders as credible collateral. This should of course not minimize the importance of strengthening rural cooperatives, which have an important role to play in the viability of the small farm sector. It is important to remark that higher land productivity does not imply that further redistribution will make an indent on poverty, in particular in the least productive areas of the country. The contribution of nonfarm income opportunities and migration to poverty reduction cannot be emphasized enough, as argued in other parts of the report. Poverty rate is consistently higher among ARBs and more so among non-ARBs, in particular those without land.

b. Toward a decentralized, community-managed agrarian reform program.

Land reform could still represent an important policy for poverty reduction and rural growth in the Philippines, provided CARP's pitfalls are properly addressed. The three critical areas for reform are:

- (i) Designing more expeditious methods for transferring remaining private lands, in particular those targeted for compulsory acquisitions;
- (ii) Supporting the adoption of flexible schemes for transferring lands in the plantation sector, where breakdown of operations is not warranted; and,
- (iii) Strengthening the link between land distribution and the delivery of support services.

Reform in these areas would allow securing three key goals: complete CARP within a 7-year final extension; strengthen the sustainability of the reform's achievements; and maximize the productivity gains.

How would CARP, reformed along the previous lines, look like? Previous experience through the pilot Community Managed Agrarian Reform Project suggests that a decentralized approach to agrarian reform in the Philippines is possible and holds significant promises for success. This community-based approach was piloted in rice and corn areas and targeted to mid-sized landholdings. Its extension to larger holdings would presumably pose serious challenges given the multiplicity of non-economic factors and transaction costs affecting markets for large landholdings, although it should not be discarded.

As in the case of VLTs, the CMARP supported direct negotiations between landowners and beneficiaries. Differently from the VLT approach, though, the CMARP proved that with an appropriate system of incentives LGUs could play a key role in facilitating negotiations and in redistributing land. A key aspect was the provision that financing of major sub-projects, such as farm-to-market roads, potable water systems and multipurpose centers would be conditioned on negotiations being successfully completed. The impact of such investments on the welfare of recipient communities has been found to be substantial. Notably, in several instances, LGUs have provided bridge financing to beneficiaries, allowing these to successfully negotiate the land transactions.

CMARP's results compare very favorably with the alternative of CA or common VLT. First, negotiated land prices were 30% to 50% below those initially estimated by the Land Bank. Quite interestingly, the price of land has been observed to increase substantially following the investments in farm-to-market roads and other public services in most of the communities involved in the pilot, signaling major wealth effects for the beneficiaries and their communities. Second, the rate of amortization of the agrarian debt has been on average almost 100% on schedule and in some instances repaid ahead of schedule. Third, the process of land transfer has been without conflict. This does not mean that negotiations were easy. Indeed, the training in negotiation skills provided through DAR to the ARBs has proved effective. But also LGUs have played an important role by using a mix of moral suasion and fiscal tools to bridge the gap between the parties. Moreover, communities were extremely interested in the investments in public goods that a successful end to the negotiations would have triggered. The sum of these effects proved to be a major leverage in securing the final agreements. Fourth, participation by LGUs has led to the full incorporation of the community development plans into the local development plans, thus strengthening the sustainability of the intervention. Fifth and last, only 11% of ARBs is associated with or related to landowners. This was well below the incidence of such transfers observed in the case of VLTs and VOSs at the national level.

Scaling up CMARP is a promising approach for advancing land reform in the next phase and offers potential for a post-CARP model of agrarian reform. It holds the promise of focusing the limited resources under the Agrarian Reform Fund toward financing the provision of sub-projects, public goods, including the development of social capital, and farm level support services. Moreover, with the proper support to negotiations and incentive schemes for community and LGUs' participation, a decentralized and negotiated approach to agrarian reform offers a concrete alternative for a more rapid conclusion of the land reform process. By limiting the recourse to courts and the incentive to tamper with titles, it would enhance rather than thwart the effort of strengthening land administration. Finally, by strengthening the link between land distribution and the delivery of support services, the CMARP approach will drastically increase the sustainability of the land reform achievements.

A differentiated approach based on a combination of CMARP backed by compulsory acquisition offers good prospects for bringing CARP to a closure within a limited time frame. The different challenges that mid-sized and large landowners pose to a negotiated approach to land reform, suggest a differentiated and phased approach. During a first phase of the extension, mid-sized landowners would be covered through a systematic scaling-up of a negotiated and decentralized model in which LGUs and beneficiaries' associations, in collaboration with other civil society organizations, would take the lead in land distribution and provision of support services according to their capacity. Mid-sized landowners would be systematically targeted for a negotiated approach like CMARP, involving associations of beneficiaries and LGUs with appropriate schemes of grants and subsidized loans through the LBP.

This decentralized and negotiated approach would cover the bulk of the LAD balance and of the landowners. The recourse to compulsory acquisition at the end of a prolonged first phase (during which the issue of large landowners would be addressed) would be triggered by a failure of the negotiations. The LBP valuation of land should not be considered in this instance as the ceiling price during the negotiations. Large landowners would instead be targeted through a more conventional approach with some modifications ensured to provide enough flexibility at entry. A very brief moratorium period would be declared during which owners of large holdings would be offered the opportunity to declare their willingness to negotiate the sale of their lands. A possible definition of large holdings could be 25 hectares and above, which would represent about one third of the CARP balance but only 6% of the total affected landowners. Starting price for the negotiations for the willing landlords would be set near in the neighborhood of the LBP estimates. Once the moratorium period is closed, compulsory acquisition would be implemented on large non-participating holdings and, successively, on large holdings for which negotiations over land transfers would fail after a predefined period of time has lapsed (e.g., one year).

The CMARP model will require original modifications to work out of the rice and corn areas. In spite of the advantages that a decentralized and negotiated approach to land reform that the CMARP has successfully tested, there are important caveats to consider.

- First, the CMARP was developed in the context of rice and corn areas, where beneficiaries were established tenants. Its extension to sugarcane lands and plantation areas would entail a quite different social environment and structure of incentives. In those areas the influence of landowners on LGUs is stronger than in the typical rice and corn areas.
- Second, in the plantation areas basic infrastructures such as farm-to-market roads have already been developed, often by very same plantations.
- Third, the beneficiaries hardly possess the entrepreneurial skills and networks that facilitate access to markets. Thus, the mix of support services and public goods that would be demanded in these areas will be quite different from those in the CMARP areas.
- Fourth and last, other factors might hinder the willingness of landowners to negotiate the sale of their lands. Thus, a different approach will be needed for a negotiated and decentralized land reform program in those more difficult areas, which at the moment represent the bulk of the CARP balance.

To achieve the above mentioned principles for extending CARP in sugarcane areas the following appear to be appropriate:

- Facilitate direct negotiations between beneficiaries and landowners and rely on more efficient methods of conflict resolution where negotiations fail, such as compulsory arbitration (see below), and resorting to CA as a last recourse;

- Expand the range of flexible mechanisms for land distribution beyond the current ‘Alternative Venture Agreements’ (AVA). An interesting possibility would be to include the option of gradually transferring land on the basis of contracts stipulated within six months to one year after CARP’s extension is approved. Transfer of ownership would then progress on the basis of the financial capacity of beneficiaries while these develop management skills and secure access to input, output, and credit markets;
- Tie with clearly defined rules the delivery of support services to land access. To make such a process more effective, it is important to distinguish between private and public (or club) goods. Access to productive assets whose impact would be limited to the farm and of inputs such as fertilizers, seeds and farm implements should be *driven by beneficiaries* on the basis of previously elaborated business plans coupled with the endowment of productive grants. Public goods and services such as technical extension, farm-to-market roads, irrigation schemes, should be delivered by LGUs and/or associations of local users;
- Enrich the mix of services and support services beyond those more directly related to agricultural production to include those related to improving access and quality of education, health services, and vocational training. This will allow strengthening the interest and commitment to land reform also of those LGUs and communities for which agriculture is not perceived to be the key pathway out of poverty.

Coupling incentives for voluntary land transfers with compulsory acquisition will be key for speeding the finalization of CARP. A decentralized and negotiated approach offers the potential for a successful completion of CARP within a 7-year period. Nevertheless, it is essential that an approach based on direct negotiations between perspective beneficiaries and participation by LGUs and local communities be complemented by a terminal clause that makes compulsory acquisition obligatory if negotiations fail. Moreover, the very spirit of negotiation suggests that the adoption of compulsory arbitration would further strengthen the negotiation process, facilitating the resolution of disputes and differences between parties for the interpretation of contracts.

In synthesis, the essence of the proposal is that while the option of exercising compulsory acquisition should be retained, its use should be minimized to make the process of land transfer speedier. The savings obtained by a negotiated approach in terms of reduced expenditures in land acquisition and DAR administrative costs can then be directed to fund support services, which the report shows as having a substantial impact on poverty reduction.

To facilitate the gradual phasing-out of CARP, financial resources for land acquisition and productive development could be transferred to beneficiaries, LGUs and local associations, similar to the model of *Cedula de Terra* and *Crédito Fondiario* tested in Brazil with the support of the World Bank. In the case of land reform beneficiaries, out of a pre-determined amount of resources assigned to them depending on the size of the land targeted for transfer, the portion used for the purchase of land would be transformed into a loan, while the remaining portion would be considered as a grant. Support services that are of a ‘public good’ nature would be provided by LGUs, which in turn would be financially assisted

through a system of grants or concessional loans tied to the scale and breadth of their locally managed land reform effort.

This approach could very well be tested in the Philippines for future scaling up without the need of legal amendments to the CARL. As discussed above, DAR overhead represents a substantial share of the cost of transferring the average hectare of land. A leaner and more strategically focused DAR, structured to support a more decentralized approach to agrarian reform, will result in significant cost savings. The CMARP experience shows that beneficiaries also benefit from significant reductions in the price of land, thereby reducing their financial burden. The reduction in administrative costs and in the price of negotiated land transfer suggest that a decentralized approach will substantially reduce the overall cost of CARP while achieving overall reform goals in a shorter span of time.

To face the possible tendency for re-concentration of land, long-run models of agrarian reform need to be devised during the final extension phase. In the long-run models such as the CMARP and those proposed in the report for application in the sugarcane lands could evolve into a more sustainable model for agrarian reform driven by LGUs and local associations of farmers and other civil society organizations, along the lines of the *Cedula de Terra* in Brazil. Since CARP will be phased out, the need to sustain access to land by the land poor will continue to exist. This is because a tendency to land concentration might resurface in those areas in which the small farm sector is not competitive and because of the recurrence of distress sales of land. Graduating the CMARP into a model of decentralized agrarian reform managed with the support of LGUs and—where required—with technical assistance either provided by the government or sourced from the private sector, will offer the potential of addressing the reconciling productivity with equity on a more sustainable basis.

c. New models of agrarian justice: The role of compulsory arbitration and Special Agrarian Courts.

Conflicts within the agrarian sector are categorized in the report into six types. Type 1 conflicts involve disputes between the landowners and the farmer beneficiary. Type 2 conflicts involve conflicts between the landowner and the State. Type 3 conflicts involve those between the farmer beneficiary and the State. Type 4 conflicts involve conflicts between farmer beneficiaries. Type 5 conflicts are disputes between putative landowners that delay or affect the implementation of any part of the agrarian reform program. Type 6 conflicts, finally, cover disputes involving participants in the agrarian reform program and third parties.

Under the current set up, all these conflicts are generally resolved through adjudication. That is, a public officer on government salary is relied upon to decide a conflict submitted to it for decision. The adjudication process is layered. Decisions made by the Provincial Agrarian Reform Adjudicatory Officer (PARAD) is reviewed by the central Department of Agrarian Reform Adjudicatory Board (DARAB). This may then be reviewed by the Court of Appeals, or in special cases involving jurisdiction, by the Supreme Court. Special Agrarian Courts, which are basically Regional Trial Courts given special assignments, have jurisdiction over criminal actions arising from the implementation of the Comprehensive Agrarian Reform

Law as well as just compensation cases. However in the latter, the Supreme Court has ruled that the DARAB may “preliminarily determine” the value and modality of payment to be given to the landowner.

The quasi-adjudicatory process also suffers from the same problems as the purely judicial process. That is, the requirement for the appearance of lawyers, delays in the presentation of evidence, crowded dockets and the potential for abuse and corruption. The Alternative Dispute Resolution Law of 2004 however and the current openness of the Supreme Court for alternative modes of dispute processing should provide some creative solutions for agrarian reform conflicts.

Conflicts between landowners and farmer beneficiaries, between farmer beneficiaries, and those involving alleged landowners (which tend to delay CARP’s implementation) should primarily be processed through *arbitration*. This will remove some of the cases from DARAB’s docket, address the problem of delay, reduce the possibility for corruption and will allow better internalization of costs of the dispute on the parties (with special provisions for addressing capability to pay on the part of the farmer beneficiaries and some landowners). Rather than permanent adjudicators, the DAR can maintain a pool of arbitrators specially trained in agrarian issues and coming from various constituencies (lawyers, academics, agrarian reform advocates, land specialists).

Under models currently applied in other sectors, parties choose one arbitrator each. The arbitrators chosen then choose a third arbitrator. Costs should be shared between the parties. Should the farmer or farmer beneficiary be a pauper litigant, the State should pay for her or his costs. Compulsory time periods can therefore be more likely met. The DARAB and the Bureau of Agrarian Legal Assistance (BALA) should be restructured to allow compulsory arbitration. Hence, the statute that will extend the CARP should allow for a one-year transition period to capacitate its personnel.

Arbitration will cover issues relating to tenancy, terms and conditions of work, leasehold contracts within areas, exercise of pre-emption and redemption rights of tenants, and correction and cancellation of CLOAs. Arbitration, rather than adjudication, should also be the principal means for settling conflicts among farmers and farmer beneficiaries. Arbitration should also be the principal means of settlement between alleged or conflicting agricultural landowners if such conflict delays implementation of the agrarian reform program.

Conflicts between the landowner and the state usually involve issues such as coverage, retention limits and valuation of covered agricultural land. The first two issues should remain within the DARAB’s jurisdiction. The efficiency of solving contested valuation of agricultural land can be improved by removing the authority of the DARAB to preliminarily determine just compensation since, constitutionally, it is the regular courts that will determine its value. Immediately, this will remove two layers of decision-making and thus address delays in the payment of landowners and also the transfer of titles to the farmer beneficiaries.

The filing of ejectment cases in courts against occupants, tenants or other farmer beneficiaries have recently received much attention as it they are regarded as strategic lawsuits to prevent farmer beneficiary participation in the implementation of the agrarian reform program. Currently, the landowner has the privilege of filing a civil complaint in the Municipal Trial court for ejectment if his pleading does not allege tenancy. The respondent may allege tenancy in his answer. However, the civil complaint cannot be dismissed because of the current procedural rules on how a court can acquire jurisdiction. It is therefore necessary for legislation to provide that courts should make a preliminary determination of the issue of tenancy when it is alleged in a responsive pleading. If it can be shown that tenancy exists, then the case should be dismissed and immediately referred to agrarian arbitration.

Ambiguity in law has clearly invited more disputes, in turn creating more litigation, which translates to costs for the parties as well as delays in the administration of justice. Hence, no effort should be spared to clarify the content of the rules when there are opportunities to craft new legislation. In agrarian reform, the Comprehensive Agrarian Reform Law (RA 6657) governs alongside some provisions in the Agricultural Land Reform Code (RA 3844), the Public Land Act (Commonwealth Act 141) and the Property Registration Decree (PD 1529). The amount of conflict therefore going through the quasi-judicial as well as court processes can be reduced with better-crafted legislation. Hence the statute to extend agrarian reform should clearly specify which provisions in all these laws will be reenacted.

d. Emerging institutional approaches to rural development: Implications for CARP's reform.

The report's findings point to the conclusion that CARP has a weak pro-poor design. This is because CARP considers only to a limited extent the heterogeneity of communities in terms of productive endowments and the pathways out of poverty when it targeted, packaged, and implemented support services. Since density of ARBs in a given cluster of barangays is DAR's primary criteria in defining an ARC, there are limits to the number of ARCs that can be identified or the barangays that can be covered by the ARC development program. Barangays or clusters of barangays with a limited number of ARBs might not be covered under the program, unless a new approach is adopted.

The main constraint for expansion is that DAR has to focus on its primary beneficiaries, which are the EP/CLOA holders and leaseholders. Moreover, in DAR's perspective, it is not cost-effective to provide a package of development interventions to a farmer-dense barangay but with only five to ten ARBs. Within the perspective of an agency like the Department of Agriculture or an LGU, this might be considered a worthwhile intervention, since their beneficiary base is larger. Here lies the dilemma of DAR in expanding its development interventions.

Generally, as commonly accepted, a locally driven area based development (ABD) approach is a development paradigm that deliberately and systematically tailors its strategies and interventions to the unique socioeconomic, physical and geographical characteristics and endowments, and the development aspirations of either a target community or community cluster. The basic elements of the ABD approach to development include:

- (i) A distinct geo-physical target;
- (ii) A generally homogenous socio-cultural profile of the target beneficiaries;
- (iii) A multi-dimensional approach to development that explicitly takes into consideration the linkages of the various sectors of the local seconomy; and,
- (iv) The empowerment of the target community in the planning and implementation of the development interventions.

In a fully decentralized and locally-driven ABD approach to land reform, support services for the small farm sector would only represent part of a wider multi-sector menu of development interventions. These interventions are offered for the informed consideration of target-beneficiaries and communities whose socioeconomic profile and aspirations are congruent with such interventions.

As a result of the decentralization process started in 1991, applications of the ABD approach have multiplied. However, given the fragmented system of governance underlying the rural sector, a number of models of community driven or community based development have emerged and been tested under different circumstances. This report recommends a move toward a fully decentralized and negotiated process of land reform involving a larger number of stakeholders and gravitating around LGUs for the provision of key infrastructural and key productive services. A key question is whether such new experiments do show a consistent progress toward the implementation of a new rural development paradigm that is consistent with a decentralized and negotiated approach to land reform in which LGUs and local associations would take the lead. A related issue is also the extent to which the current institutional set up should be reformed in order to deliver a more decentralized CARP in which negotiations would be the dominant modality of land acquisition.

A review of recent rural development models pursued by government agencies (i.e., DA, DAR, and DENR) reveals substantial differences in approaches and scope with mixed results. Local rural development approaches models range from pilot-testing (DA, DSWD, DOF, ARMM) to sub-sector implementation (DENR) to mainstreaming (DAR). The DA, DSWD, DOF and ARMM initiatives are pilot projects and, thus, are not part of these agencies' regular operations. The DENR implements ABD-like initiatives exclusively in their "green" sector through their community-based ecosystems management programs.

Only the DAR has systematically integrated an area based approach in the delivery of support services through their ARC program. This might very well be the consequence of the fact that many of DAR's function are not listed among those devolved to LGUs in the Local Government Code. Yet, several other functions are offered in competition with the DA. The institutional set-up and arrangement of the CARP do indeed provide a wide leeway for de-concentrated and to some extent decentralized implementation as well as for the participation of LGUs, ARBs, and other stakeholders. Nevertheless, decision-making and service delivery are still significantly national government-centric and its development interventions are

mostly agricultural in nature. The local sector-based “ABD” models, therefore, provided limited rural development options and do not fully empower their clients.

The degree of involvement of LGUs in rural development remains one of the major institutional challenges in the effort to decentralize the provision of services since the enactment of the 1991 Local Government Code. The experience coming from the various rural development models that have been piloted shows that LGUs, if properly supported, are able to satisfactorily deliver devolved support services. A case in point is the Mindanao Rural Development Project (MRDP), a 12- to 15-year World Bank-funded program implemented by the DA. MRDP’s first phase was deemed successful in achieving its objectives of capacitating target LGUs to deliver devolved agricultural support services. This was despite some initial shortcomings in further decentralizing the planning process and in building local capacities for monitoring and evaluation. Following the successful completion of the first phase, there is now an expansion in program coverage.

Meanwhile, local non-sector agency-led programs (DSWD-KALAHI) and the international models provide a closer approximation of the ABD approach to development and teach useful lessons. These programs offer a more varied menu of interventions and services. In addition, the target beneficiaries have a wider selection of service providers. The sample international ABD models reviewed are those found in Mexico and Brazil (national government-led) and in Thailand (private sector-led).

In the long-term, given the increasing heterogeneity of the rural sector and diversification of income, it appears advisable to consolidate and restructure the country’s rural development agencies toward the establishment of a rural development department or agency that will:

- (i) Perform mainly “steering” and coordinating functions, which will include fund matching to promote locally driven ABD, impact monitoring, and R&D;
- (ii) Promote and fund a multi-sector and area-based menu of development programs and services for the target-beneficiaries to choose from—agriculture and land reform will only be part of this menu;
- (iii) Undertake a fully demand-driven development process where LGUs, rural communities, and local association of beneficiaries are empowered to choose the development package and service provider they prefer—the NG agencies and the LGUs will have to compete with NGOs and the private sector for community contracts;
- (iv) Coordinate with the LGUs for fund-matching and the provision of technical and financial assistance to the target communities; and,
- (v) Encourage the private sector and civil society not only to provide technical services to target communities but also to complement government’s rural development initiatives by promoting and facilitating ABD, especially in areas where the government are unable to reach.

In the short-to-medium term, when restructuring is not feasible, what can be undertaken is the establishment of a coordination mechanism for rural development at the policy and oversight level. With regard to CARP's implementation, its management can be reformed to make it more LGU- and ARB- driven along the lines of the CMARP. These immediate reforms can lay the ground for the establishment of a national rural development agency.

Various local and international models of rural development management exhibit varying degrees and depths of coordination. On one end, there is policy proofing that ensures an area-based rural development thrust only at the policy level among national agencies. On the other end, inter-ministerial coordination also involves program coordination and resource sharing agreements at national and sub-national levels. The Philippine Government might wish to first try policy-proofing then work its way toward inter-ministerial coordination. Ideally, the focal agency of this coordinating body should have a multi-sector orientation with strong links to the academe and research institutions. This will provide strong technical support and minimize sector biases. It also will relieve the DAR of its coordinating functions, leaving it free to focus on its remaining core functions during the extension period.

Effective horizontal and vertical coordinating mechanisms exhibit the following characteristics:

- Clear focal agency or body with sufficient political authority and backing—e.g., headed by the Chief Executive or by a Cabinet Secretary;
- Effective influence over policymaking and budgetary processes;
- Clear strategic and operational guidelines—e.g., prioritized lists of projects, implementing and funding responsibilities, conflict resolution process—all within a clear, strategic development framework;
- Formal coordinating platforms and instruments— e.g., working groups, institutional and program agreements;
- Effective monitoring and feedback mechanisms; and,
- Competent technical support, including research, especially from the coordinating secretariat.

Adriano (2008) has two recommendations worth considering. First, in the short-to-medium term, is to convert the PARC into a Joint Commission on Rural Development, which will provide the policy direction and exercise oversight function of rural development-related agencies, is worth considering. Second, in the long-term, is to convert the DA to the Department of Agriculture and Rural Development or DARD to expand the Department's role in countryside development, particularly in supporting small farmers and ARBs, and to facilitate the absorption of some DAR personnel to the DARD.

Regarding reforms in CARP implementation management, the findings of this study underscore the need for the LGUs and the ARBs to assume a more pro-active and driving

role during the CARP extension period. The DAR should undertake a more facilitative and focused function. In terms of Major Final Outputs (MFOs), it was recommended that:

- (i) The adjudication functions of the DAR be more circumscribed leaving a significant portion to either be privatized, under compulsory arbitration or given to the regular courts;
- (ii) the LAD be more bottom-up driven and led by ARBs even while the DAR retains its LTI functions; and,
- (iii) the LGUs take a more leading role in a fully demand-driven PBD service.

On the second recommendation, it was suggested that CMARP be up-scaled and replicated so that voluntary negotiations between farmer beneficiaries and landowners—with facilitation by LGUs and the CARP implementing agency—be the default mode for LAD. Compulsory acquisition by the government will only be triggered if this fails. In addition, Brazil's *Cedula de Terra* program should also be pilot-tested among LGUs and ARBs with manifest capacities, such as those in the MRDP sites, to more fully take the lead in program implementation. In this model, ARBs are given direct control over program resources and LGUs are more active in the delivery of public support services. This model should be the direction for the up-scaled and replicated CMARP.

2. THE RURAL ECONOMY AND AGRARIAN REFORM

I. Introduction

Access to land and tenant-landowner relations are central policy issues in Philippine rural development. The widely held view is that long-standing unfairness in land ownership and weak production arrangements lie at the root of the rural economy's underperformance, especially in terms of investment, productivity and income growth, and poverty reduction. After World War II, the Philippines launched various land reform initiatives to alter production relations and, ultimately, win the war against rural poverty and social injustice.

Since the late 1980s, the Comprehensive Agrarian Reform Program (CARP) has been the landmark initiative to win this war. Initially intended for a 10-year implementation, the program was extended for another 10 years. That extension ended in 2008. Congress is currently debating on still another extension. In her 2007 and 2008 State of the Nation Addresses, Philippine President Gloria Macapagal Arroyo said her administration wants to amend Republic Act 6657 or the Comprehensive Agrarian Reform Law, which is the backbone of CARP, as a condition for the program's extension. President Arroyo wants the law to continue pursuing equity and social stability goals but also wants it to give more support to agribusiness and rural development. The Department of Agrarian Reform (DAR) recommends another 10-year extension—the first seven years to complete land distribution and the final three years to address second-generation land problems and mainstream support services.

The debate on CARP extension coincides with observations that productivity growth in agriculture has been low by the standards of the country's neighbors. Poverty and hunger continue to plague rural areas, and rural development remains elusive. CARP is, of course, not the only factor that has shaped poverty and rural development outcomes. The policy and institutional environment in the Philippines has changed quite significantly in the course of the program. Various policy reforms¹ and the environment for global agricultural trade have likely affected rural welfare and income distribution outside of any effects that agrarian reform might have had on equity and poverty reduction. In other words, that rural poverty and inequity have endured is not sufficient evidence that CARP is a failure. Indeed, as shown in this report, the impact of CARP has been positive, though far below expectations.

This chapter provides a background for the analyses in the subsequent chapters. It first briefly characterizes the overall agricultural policy environment and the performance of the rural economy during the past two decades. It then examines the performance of the agrarian reform program in relation to its objectives, and highlights the key drivers and constraints to its implementation. The chapter also introduces the policy issues to be addressed and the hypotheses to be analyzed and empirically tested in the next chapters.

¹ Involving international trade and finance, local-national fiscal relations, and public investment and regulations.

II. The Agricultural and Rural Economy: Performance and Policies

Development experience shows that rural development fueled by rapid growth in agricultural productivity holds the key to sustained poverty reduction (Rosegrant and Hazell 1999; World Bank 2007; Timmer and Akkus 2008). In low-income countries where agricultural growth was rapid, sustained, and *broadly based*, farm incomes grew despite declines in global agricultural terms of trade, domestic food prices remained low, rural employment diversified, and rural wages rose. Consequently, the worst dimensions of absolute poverty decreased significantly. Broadly based rural growth requires, among others, equitable access to the means of production, including land. Quite paradoxically, the relative importance of agriculture in terms of output and employment declines with rural growth. This is because growth stimulates faster expansion of industry and services and migration of workers from the rural to the urban economy.

As agriculture steadily declines in relative importance, the key driver to poverty reduction increasingly shifts from agriculture to the other sectors of the economy. Although rural poverty will continue to account for most of overall poverty even at the current pace of urbanization and industrialization in most developing countries of Asia (Ravallion et al. 2007), the transformation of the economy will allow the poor in economically lagging rural areas—in which agriculture might be dominant—to be absorbed increasingly in industrializing and urbanizing areas.

This will happen especially if there are no significant barriers to factor mobility, particularly that of labor, and if the economic climate encourages investment and wealth accumulation. Rigidities in the labor market might stifle this process. Such rigidities might arise, for example, from high transport costs (e.g., poor connectivity between rapidly industrializing areas and economically lagging areas), low levels of human capital formation (e.g., lack of health and education services in rural areas), and certain institutional arrangements in the labor market (e.g., setting wages by legislation).

In the Philippine case, this might suggest other pathways out of rural poverty that are not overly pegged to agricultural growth. These other pathways could include non-agricultural wage employment, non-farm enterprises, and migration. This report (see Chapter 7) shows that agriculture continues to play significant roles in reducing rural poverty. However, the report also shows that agriculture's relative importance shrank substantially over the past few decades. In the same period, the importance of non-agricultural and non-farm sectors grew correspondingly.

It should be pointed out that the material conditions of agriculture vary enormously across the Philippines because of different land quality, infrastructure, and other bio-physical and economic attributes. Consequently, the relative potential of agriculture as a pathway to reduce rural poverty varies accordingly. It is important to identify those areas where agricultural growth still constitutes the main, optimal pathway. The implementation of an extended CARP, which will probably have limited resources, should arguably also focus on those areas. The report examines this issue empirically, particularly in Chapter 3.

Within the region, the performance of Philippine agriculture in the past 27 years has been weaker than most of its East Asian neighbors (Table 2-1). While the pace accelerated in the current decade (3.7% a year in 2000-2007, compared with 1.6% a year in 1980-2000), growth was still way below those in the region's major food-producing countries (except Indonesia). Moreover, it evidently came not from growth in productivity but simply from growth in production inputs driven in part by an increasingly protectionist policy. During this period, the Philippines did reduce its tariff levels in agriculture in order to comply with WTO commitments. However, in the same period, marketing interventions and other non-tariff barriers in agriculture (especially in cereals, sugar, poultry, and livestock) have raised the nominal assistance rates in agriculture relative to those in non-agriculture (Table 2-2). Nominal assistance rates in agriculture rose almost twofold from 14% in the second half of the 1980s and early 1990s to about 26% in the early 2000s. The increases were comparatively higher for import-competing agricultural commodities (mainly rice, corn, and sugar) than for exportable commodities.

Table 2-1 Agricultural growth rates in East Asia, 1980-2007 (% per year)

	1980-2000	2000-2007
Indonesia	3.04	3.51
Philippines	1.65	3.67
Thailand	2.80	6.24
Vietnam	3.74	5.57
China	4.71	6.26

Note: Data for Vietnam start only in 1986. Source: World Bank, *World Development Indicators 2008*

Sustained growth of output can come only from increases in productivity, especially in countries where the land frontier has been virtually closed - the case in the Philippines. A comprehensive measure of productivity is total factor productivity or TFP, which is simply the growth rate of output net of the contribution from the growth rate of all production inputs. On this measure, Philippine agriculture again performed poorly. In the 1970s, the country's TFP growth compared favorably well with those of Thailand and Indonesia. The next two decades saw productivity stagnating in the Philippines to 0.2% a year. In contrast, productivity continued to grow robustly in Thailand (1.0% a year) and in Indonesia (1.5% a year) (Mundlak et al. 2004). The contrast is even sharper when viewed in the context of China's agricultural development experience: China's grain sector enjoyed a very high TFP growth rate of 4.7% per year during this period. At this rate, even as China steadily reduced tariff levels for grains a decade before its accession to the WTO, Chinese grain farmers could easily compete with their counterparts in the Philippines and elsewhere.

Table 2-2 Nominal rates of assistance (NRA) to agricultural relative to non-agricultural industries, 1980-2004

	1980-84	1985-89	1990-94	1995-99	2000-04
Agriculture NRA ^a	-3.6	14.4	15.4	33.0	26.0
All agricultural tradables	-4.0	15.8	16.7	35.7	27.9
All non-agricultural tradables	12.9	11.0	9.9	8.6	7.3
Agriculture RRA (agriculture relative to non-agriculture) ^b	-14.9	4.3	6.1	24.9	19.1

^a NRAs including product-specific input subsidies and non-product-specific assistance. Total of assistance to primary factors and intermediate inputs divided to total value of primary agriculture production at undistorted prices (%).

^b The RRA is defined as $100 \cdot [(100 + \text{NRA}_{\text{ag}}) / (100 + \text{NRA}_{\text{nonag}}) - 1]$, where NRA_{ag} and $\text{NRA}_{\text{nonag}}$ are the percentage NRAs for the tradables parts of the agricultural and non-agricultural sectors, respectively.

Source: David, Intal, and Balisacan (2008).

Food self-sufficiency, especially in rice, has been a long-standing government goal since the 1960s. Various programs and policies—price supports, input subsidies, credit programs, irrigation development, import controls, and the like—have made incentives virtually permanent fixtures in the rice sector. Yet, they have not brought about rice self-sufficiency. There was a brief time in the 1970s during the diffusion of the Green Revolution when rice production benefited from significant investments in technology development, irrigation, and extension, along with favorable trade policies and initial promising conditions in transport and education. Except for that spell, production has always fallen short. Rice consumption continues to grow rapidly mainly due to the country’s population growth rate, high compared with those of its Southeast Asian neighbors. In recent years, the government intensified its intervention in the rice sector to prop up local production. Nominal assistance rates for rice increased from about 15% in the second half of the 1980s, to about 50% in the second half of the 1990s and in the early 2000s (David et al. 2008).

The country’s strategy to achieve rice self-sufficiency has been very costly to the general population and to the local economy because it stifles efficient resource allocation and impedes the diversification of rural incomes (Balisacan et al. 2007; David et al. 2008, Balisacan et al. 200). Although fiscal assistance from the government brings short-term relief to select groups (not necessarily the professed target groups), it fails to sustain growth in productivity and farm incomes. Instead, government interventions—mainly in the form of tariff and non-tariff import restrictions, output price supports, and material input subsidies—have increased the opportunity for rent-seeking at the expense of poor urban consumers, landless workers, small farmers, and the general public.

The goal of rice self-sufficiency is linked, if indirectly, to land reform. CARP’s intention is to redistribute lands in such a way that farm sizes are economically viable. CARP beneficiaries are limited to receiving a maximum three hectares of land, a size presumed to be economically viable with adequate policy and support services.² The government’s rice self-sufficiency program is intended to provide such services to the rice sector, which consists largely of small farms. Presidential Decree 27, the predecessor of CARP, made significant

² Yet, DAR (2007) suggests that perspective beneficiaries will be able to receive no more than 1.7 hectares of land on average. See also section 2.4.

headway in reducing inequity in land distribution and in changing tenure relations in the rice sector.

III. Rural Poverty Profile

As in most of Asia's developing countries, and despite rapid urbanization in the past 20 years, poverty in the Philippines is still largely rural (Table 2-3). Three of every four poor persons in the country are found in rural areas. They depend predominantly on agricultural employment and incomes.³

Table 2-3 Poverty incidence in rural and urban areas, 1985-2006

	1985	1988	1991	1994	1997	2000	2003	2006
Philippines	40.9	34.4	34.3	32.1	25.0	27.5	26.0	28.1
Urban	21.7	16.0	20.1	18.6	11.9	13.2	12.1	14.4
Rural	53.1	45.7	48.6	45.4	36.9	41.3	39.5	41.5
<i>Contribution to total poverty</i>								
Urban	20.5	17.7	29.3	28.8	22.6	23.5	22.7	25.2
Rural	79.5	82.3	70.7	71.2	77.4	76.5	77.3	74.8

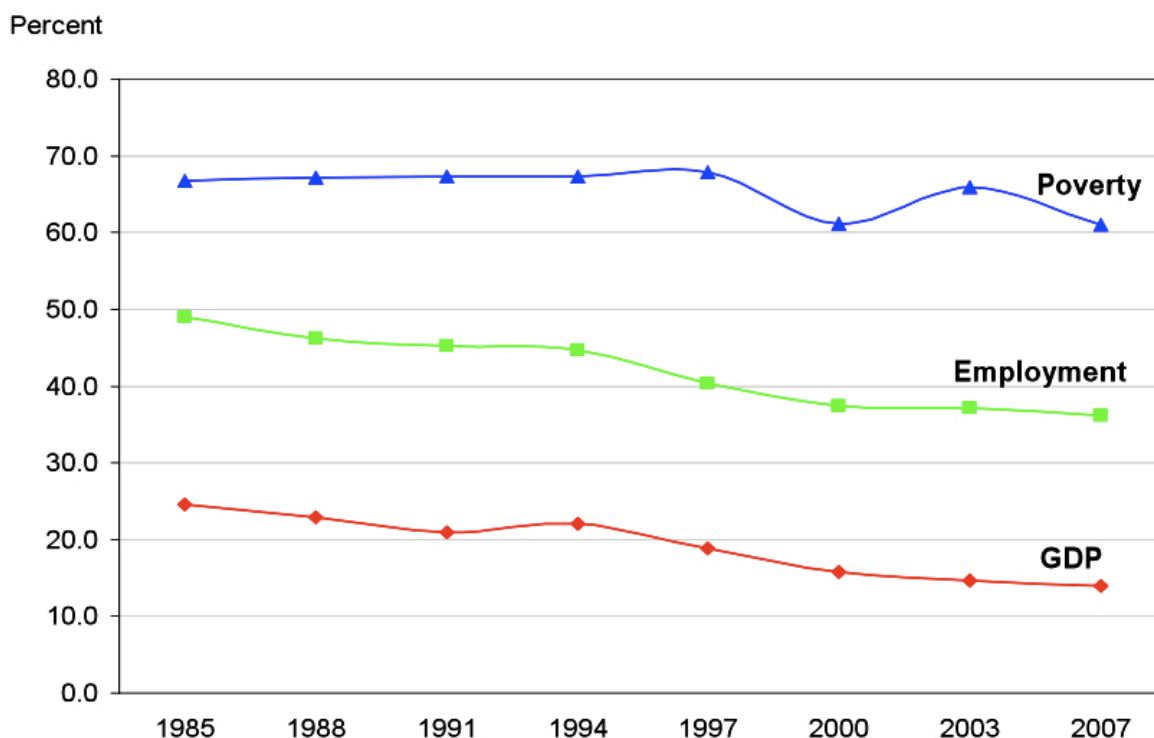
Note: Poverty estimates are based on per capita consumption expenditures adjusted for differences in provincial cost of living. See Balisacan (2008) for details of estimation.

Source of basic data: Family Income and Expenditures Survey, various year.

Although the share of agriculture in the total labor force has gone down from about one-half in the late 1980s to only a little more than just one-third by the mid-2000s, agriculture still accounts for the greater proportion of total poverty (Figure 2-1). In 2006, the sector had 60% of the total number of the poor nationally. Its high share is driven by the comparatively high incidence of poverty in agriculture—roughly three times that in the rest of the population. The share is actually higher if the poverty measure took into account either the income shortfall of the poor or the severity of poverty among the poor (not shown).

³ Rural poverty indicators constructed from the FIES for the 1980s are not comparable with those for the 1990s and 2000s owing to the urban-rural reclassification problem. The classification into urban or rural areas is based on population density and the presence and number of public infrastructure, facilities, and establishments. As population grows and/or economic activity expands, an initially rural area will be classified as urban, sooner or later. While this may not be problematical for purposes of measuring, say, urbanization trends, it tends to create a systematic upward (downward) bias on urban (rural) performance indicators. Substantial reclassification of villages occurred between the 1980 and the 1990 population censuses, though not much between the 1990 and 1995 censuses. Thus, when disaggregating by urbanity, the only strictly comparable FIES years are 1985 with 1988, 1991 with 1994, 1997 with 2000, and 2003 with 2006 since, for each pair, the classification (i.e., the sampling frame used) is based on the same census.

Figure 2-1 Share of agriculture in poverty, employment, GDP (1985–2007)



Source: Author's estimates, based on FIES, various years

Much of what the public sees in the news media on the state of social development in the Philippines is the poverty in Metro Manila's slums. Yet, the poor in Metro Manila account for only 4% of the country's total poor population (Table 2-4). Metro Manila's poverty incidence is also the lowest among the regions. The four regions with the highest poverty incidences are the Autonomous Region of Muslim Mindanao (ARMM), Western Mindanao, Bicol, and Eastern Visayas. In 2006, rates of poverty incidence in these regions were roughly four times that of Metro Manila's. These poorest regions account for about one-third of the country's total number of the poor.

Quite remarkable is the very highly disparate situations of poverty and poverty reduction in different parts of the Philippines. In recent periods, some regions have done quite well in attaining high per capita income growth and reducing poverty. Others have experienced disturbing falls in per capita income and increases in poverty. Note, for example, the substantial increase in poverty in ARMM between 1985 and 2006. In recent years, particularly between 2000 and 2006, poverty also increased in Northern and Central Mindanao and Caraga provinces. Such inequality could breed regional unrest, armed conflicts, and political upheavals, thereby undermining the progress in securing sustained economic growth and national development.

The *Philippine Human Development Report 2005* shows that measures of poverty – such as lack of access to reliable water supply, electricity, and especially education – predict well the

occurrence of armed conflicts (HDN 2005). The provincial panel data employed in Chapter 3 of this report also indicate that provinces (other than Metro Manila) with comparatively high incidences of rural poverty tend to have comparatively high inequalities in landholding. Earlier evidence also shows that differences in land distribution accomplishment by CARP also partly explain the disparities in provincial income growth and poverty reduction (Balisacan and Fuwa 2004).

Table 2-4 Poverty incidence, by region, 1985-2006

Region	1985	1988	1991	1994	1997	2000	2003	2006	Contribution to Total Poverty	
									1985	2006
<i>Philippines</i>	40.9	34.4	34.3	32.1	25	27.5	26.0	28.1	100.0	100.0
NCR	11.6	9.5	5.9	5.6	3.5	5.5	4.9	8.5	4.0	4.0
CAR	34.1	39.1	46.5	26.6	22.1	19.8	15.3	20.4	1.7	1.3
Ilocos	33.2	25.5	24.3	26.4	20.8	20.3	16.9	20.9	4.7	4.0
Cagayan	46.3	39.2	39.1	41.8	30.1	29.9	26.2	30.4	4.5	3.6
Central Luzon	19.1	15.3	15.4	24.3	13.2	16.1	13.6	16.1	4.6	6.2
Southern Luzon	35.4	31.7	22.9	28.6	19.6	19.5	20.8	23.4	10.9	13.3
Bicol	67.0	60.9	62.2	50.2	45.6	53.3	45.7	47.1	11.1	10.3
Western Visayas	49.4	34.4	31.6	34.5	21.8	28.1	26.7	26.3	10.7	7.2
Central Visayas	66.5	55.2	53.2	42.8	35.2	39.4	36.6	38.6	12.4	10.2
Eastern Visayas	59.3	53.7	54.4	51.5	50.6	46.8	45.0	43.0	7.8	7.3
Western Mindanao	58.3	47.6	47.1	47.1	35.2	47.0	49.7	47.2	5.8	6.7
Northern Mindanao	54.7	44.9	55.7	34.4	26.0	27.3	29.8	30.0	5.2	3.9
Southern Mindanao	53.9	46.9	56.8	30.4	26.7	25.4	26.8	25.5	8.7	6.2
Central Mindanao	46.5	35.8	46.9	45.2	33.1	38.0	34.1	40.7	3.2	4.2
ARMM	23.3	23.4	34.0	48.7	50.5	60.7	63.4	69.3	1.6	8.2
Caraga	45.0	30.1	45.7	41.0	37.0	33.8	36.9	35.2	3.3	3.3

Note: The provincial composition of the regions has changed over the years. For comparability over time, the provinces are grouped consistently according to the 2000 regional classification. Estimates are not comparable with official figures.

Source: Authors' estimates based on data from the NSO *Family Income and Expenditure Survey* (various years).

Evidently, local area conditions (i.e., land quality, rural infrastructure, distance from centers of trade, land distribution, and local institutions) influence poverty reduction across the country's rural areas. These conditions might well determine the "optimal pathways" out of rural poverty. Rural areas tightly linked to rapidly industrializing growth centers and with local institutions that facilitate efficient transactions in the marketplace—including the use of land resources—are likely to be less dependent on agricultural incomes. For such areas, non-agricultural employment and enterprise development might well be major pathways out of rural poverty. On the other hand, rural areas with good quality farmland but located far from growth centers likely need to continue relying on agricultural growth to reduce rural poverty.

This would be so especially if land ownership is sufficiently equitable (since this would favor a broader distribution of the benefits of such growth).

A way of mapping locations where agricultural growth might or might not be the pathway to rural poverty reduction is to form production area clusters. The clusters would be marked by geo-physical attributes associated with potential for agricultural growth and by access to markets and development opportunities. This report attempts to form such clusters, given the constraints on available data. The report focuses on the following characteristics:

- Potential for irrigation development (low, medium, high) as proxy for the location's potential for agricultural growth, and,
- Degree of urbanization (rural, peri-urban, urban) as indicator of non-farm development opportunities.

The potential for irrigation development is given simply by the unit cost of irrigation investment, which is assumed positively related to land slope. A geographic unit is defined here as either urban if at least 60% of its population live in urban areas, or highly rural if only 30% at most of its population live in urban areas. All other units are defined as peri-urban. Table 2-5 summarizes the clustering of the country's 77 provinces in terms of these two location attributes. The set of five figures in each cell represents (i) the number of provinces, (ii) share in total population, (iii) poverty incidence, (iv) share in total poverty, and (v) share of non-agriculture in total household income. All data pertain to 2000 or adjoining years.

Table 2-5 Provincial population, poverty, and non-agricultural income by agricultural resource endowment and urbanization

		Urbanization (level of commercialization)		
		Low (highly rural)	Mid (Peri-urban)	High (urban)
Geo-physical endowments (Irrigation potential)	Low	# of provinces: 11 Pop'n share: 3.9% Poverty incidence: 23.5% Share to total poverty: 3.6% Share of non-Ag income: 75.1%	3 0.9% 18.5% 0.6% 70.2%	1 1.0% 11.5% 0.4% 92.1%
	Mid	25 22.3% 32.4% 28.3% 76.0%	17 29.1% 25.2% 28.7% 80.3%	3 9.3% 22.9% 8.3% 95.2%
	High	8 10.2% 41.0% 16.3% 72.8%	6 11.0% 24.6% 10.6% 82.4%	5 12.4% 6.6% 3.2% 94.5%

Table 2-5 shows at least three key observations, as follows:

- First, as expected, high levels of urbanization are associated with low levels of poverty and high dependence of households on non-agricultural sources of incomes, even in areas with high potential for agricultural development. For the 35 provinces characterized by semi- to high levels of urbanization, agricultural development might not be as powerful a stimulus to rural poverty reduction.
- Second, the potential for agricultural development as a pathway out of poverty is high to semi-high in 33 highly rural provinces. Accounting for roughly one-third of the population, these provinces represent about 44% of poor people in 2000.
- Third, of the 44 highly rural provinces, 11 have low potential for agricultural development owing to poor quality of agricultural land. For these provinces, the pathway out of rural poverty might have to lead out of rural areas altogether.

These observations have significant implications for land reform. In areas with high potential for agricultural development, and to the extent that land reform has been designed to allocate resources efficiently, then land reform might represent a key pathway out of rural poverty. However, in areas where urbanization and industrialization are becoming powerful stimulants for generating jobs and creating wealth outside farming, land reform might not be as important as other tools available to policymakers. This issue is examined in greater detail in Chapter 7 of this report.

IV. CARP Performance

As noted earlier, land reform has been driven partly by equity and social stability concerns. The size of land distributed under land reform is a crucial determinant of access to land. By East Asian standards, land inequality in the Philippines is comparatively high. This is gauged from indicative estimates of Gini coefficient⁴ for operational landholding (Balisacan 2007). The median Gini for East Asia is 0.41, while that for the Philippines is 0.57.

Despite the country's three decades of land reform, overall landholding inequality has hardly changed (Table 2-6). For most of the postwar period, rapid population growth and slow expansion of productive employment outside of agriculture have put pressure on average farm size.

CARP has been the government's landmark agrarian initiative since the late 1980s. At its inception, expectations were high that CARP would serve not only as a social program to reduce rural income disparities but also as a component of the government's counter-insurgency campaign. Congress enacted what was to become the Comprehensive Agrarian Reform Law in 1988 to govern CARP's implementation.

⁴ The Gini coefficient is one of the principal indicators used by economists to measure inequality. It varies between 0 (total equality, where each individual or household has the same income or expenditure) and 1 (total inequality, where only one person has everything).

Table 2-6 Average farm size and landholding distribution

Year	Ave. Farm Size (ha)	Land-labor ratio	Percent of Farms		Percent of Area		Gini Ratio
			Above 10 ha	Above 25 ha	Above 10 ha	Above 25 ha	
1960	3.6	1.34	5.5	0.5	38.3	15.4	0.53
1971	3.5	1.16	4.8	0.6	33.8	17.1	0.54
1980	2.8	1.08	3.5	...	26	...	0.54
1991	2.2	0.88	2.3	0.3	23.5	10.6	0.57
2002	2.0	0.69	1.8	0.2	19.4	8.1	0.57

... not available

Sources: Balisacan (2008), based on Philippine Census of Agriculture, various years.

CARP departs from all previous land reform initiatives in two important ways. First, it includes all agricultural lands. Second, it goes beyond tenancy arrangements to include other alternative production arrangements, such as production or profit-sharing, labor administration, and distribution of shares of stock.

a. Land redistribution.

At the start of implementation, CARP expected to cover about 9.77 million hectares. Subsequent re-assessments of potential areas reduced the program scope to 8.2 million hectares. Of the revised scope, the Department of Agrarian Reform was tasked to distribute 4.4 million hectares of private agricultural and government-owned lands to some 3 million farmers. The Department of Environment and Natural Resources (DENR) was assigned to distribute 3.7 million hectares of public agricultural and Integrated Social Forestry/Community-Based Forest Management lands to some 2 million farmers. In early 2009, DAR revised its scope upward to 5.16 million hectares.⁵

As of December 2007, the DAR has distributed a total of 3.96 million hectares—about 77% of its latest revised scope of 5.16 million hectares (see Table 2-7). Some 1.2 million hectares remain to be distributed. According to DAR, these lands are mostly privately-owned agricultural lands subject to compulsory acquisition. However, as discussed later in this section, even for much of what has been distributed, assigning of property rights to beneficiaries is actually still incomplete. Since this completion is CARP's end goal, the reported accomplishment in land distribution is highly overestimated

⁵ See Chapter 8 for a description of the process followed by DAR in determining CARP's scope.

Table 2-7 CARP accomplishment in hectares, as of December 2007

Type of Land	Size in Ha
Private Agricultural Lands	2,241,192
Tenanted rice and corn lands under P.D. 27	566,610
Lands from government financial institutions (GFI)	162,406
Voluntary offer to sell (VOS) scheme	584,303
Compulsory acquisition (CA)	276,963
Voluntary land transfer (VLT) scheme	650,910
Other Lands	1,719,063
Settlements	729,567
Landed Estates	80,811
Government-owned lands	908,684
Total	3,960,255

Source: DAR Planning Service

Land distribution has been particularly slow for private agricultural lands (other than rice and corn lands) under compulsory acquisition. These total 1.5 million hectares or roughly one-fifth of the program scope. The accomplishment for this program component is only about 18%. Major constraints include the inadequate technical capacity and budgetary support of implementing agencies, lengthy legal disputes relating to coverage and land valuation, landowners' resistance, and peace and order problems. Interestingly, it is in these lands—particularly lands planted to sugarcane, coconut and other tree crops, and nontraditional export crops—where most of the remaining problems with landholding inequality exist.

In the case of public alienable and disposable (A&D) lands, where accomplishment was only 69% of target after 20 years of CARP implementation, the bottlenecks were in delays in undertaking land surveys, slow reconstitution of land records, and sluggish resolution of land conflicts among competing claimants. Public A&D lands and forested lands are not vacant lands. They are tilled by farmer "squatters" who only need to be given security of tenure. Frequent changes in the leadership of implementing agencies, especially DAR and DENR, have also hampered the program's smooth implementation.

Financing the program also has been a major bottleneck. At the beginning of program implementation in 1989, funding requirement was estimated at Php221 billion. The average annual budget represented about 30% of the national government's total appropriations for 1987. The total budget was subsequently pared down to about Php153.07 billion. Funds were to be drawn from proceeds of the government's sale of non-performing assets. This was poorly realized. CARP's extension to 2008 came with an additional General Appropriation Allocation of Php50 billion. Likewise, the additional budget requirement was poorly realized. The report will get back to the financing issue below in this chapter.

The funding problem, together with the limited technical capacity of the agencies in charge of the program, has bred uncertainty on the effective scope of CARP. Invariably, it lagged far behind successful land reform programs elsewhere, especially in East Asia. Uncertainty over

the program is magnified by persistent efforts of special interest groups to lobby in Congress for exemption from the program. In early 1995, Congress exempted fishery and prawn farms from CARP coverage. The uncertainty, together with legal restrictions in the transferability and use of awarded lands, has discouraged the flow of investments into agriculture. Instead, agricultural lands have been kept idle or prematurely converted into non-agricultural uses. Put differently, the program might be to blame for effectively weakening land and land rental markets, thereby resulting in farms that are below optimum size, blunting farm productivity growth, and, ultimately, undermining poverty reduction.

b. Transfer of land ownership titles.

Land redistribution is never complete if property rights are incorrectly assigned. With correctly assigned property rights, farmers—who are now owners—will have the incentive to increase both short- and long-term investments on the land. The underlying rationale of CARP is to create a new class of owners-cultivators of small farms as the basis of Philippine agriculture. The distribution limit of three hectares is seen as the minimum, economically viable size. Small farms are considered efficient because they require only family labor, which is cheaper than hired labor and requires minimum supervision.⁶ In other words, the goal of social justice actually factors in farm efficiency.

Surprisingly, the bulk of lands that DAR reports to have distributed consists of collectively titled lands. The agrarian reform law does allow collective ownership but only under specific circumstances. In particular, land can be collectively owned either by a workers' cooperative or association of worker-beneficiaries if it is not economically feasible and sound to divide the land. This provides for an appropriate type of ownership of farmland that is more productive if not subdivided into small family size farms, e.g., commercial crops like banana, pineapple, and rubber.⁷ For other types of landholdings, the collective title is allowed as a transition mechanism to expedite land acquisition. The subdivision survey and generation of individual titles are supposed to follow afterwards.

By issuing collective titles (the DAR term is collective CLOAs or Certificates of Landownership Award), DAR field offices accelerated their accomplishments in land redistribution. Collective CLOAs considerably shortened land acquisition and distribution by bypassing several processes: conduct of parcellary survey, approval of the segregation plan, and the generation-approval-registration of individual CLOAs. The cost of generating a single collective CLOA is substantially less than for a large number of individual CLOAs, especially if the landholding in question is large. Based on the DAR's Management Information Service database, 71% of all lands distributed under CLOA are collective CLOAs. This translates into more than 2 million hectares (Table 2-8).

⁶ Assuming that access to credit market is size neutral.

⁷ This does not imply that collective farming is the only viable form of farm management for these crops. Contract farming, for example, has proven to be a viable production arrangement in Mindanao.

Table 2-8 CLOAs distributed under CARP, by land type

Type	No. of Titles ^a	Percent	Area (Ha) ^a	Percent
Individual CLOA	693,969	79	850,201	29
Collective CLOA	180,749	21	2,082,765	71
Total	874,718	100	2,932,967	100

^a As of October 2007.

Note: The total excludes Emancipation Patents (EPs) that are issued for P.D. 27 areas.

Source: DAR Management Information Service.

Majority (90%) of collective CLOAs is under co-ownership. This is the case where the CLOA is in the name of all beneficiaries. Cooperative CLOAs and Farmers' Organization CLOAs are issued to those beneficiaries who are already organized upon the generation of the CLOA. In such a case, the CLOA is in the name of the organization and the names of all beneficiaries are usually annotated at the back of the title. Collective CLOAs awarded to beneficiaries of commercial farms and lands held by multinational corporations fall under these types of CLOA (Table 2-9).

Table 2-9 Breakdown of collective CLOAs, as of October 2007

Type of Collective CLOA	No. of Titles	Percent	Area (Ha)	Percent
Co-ownership	162,035	90	1,654,173	79
Farmers' Organization	16,999	9	328,222	16
Cooperative	1,715	1	100,370	5
Total	180,749	100	2,082,766	100

Source: DAR Management Information Service.

Aside from commercial and agribusiness farms, lands that are not tenanted and those that are idle (but deemed arable) are most likely distributed under the co-ownership type of collective CLOA, since potential beneficiaries are not yet tilling specific parcels of land. In fact, for idle lands without prior claimants, the DAR would screen landless residents within the barangay and adjacent barangays as possible beneficiaries. In contrast, on lands that are tenanted or those that have farmworkers working on specific plots of land, the potential beneficiaries will opt for—and even insist on—individual titles.

The breakdown of collective CLOAs by program type seems to confirm this observation. Government-owned lands and government financing institution lands have the highest proportion of collective CLOAs (86% and 83%, respectively). A large proportion of government-owned lands consists of large blocks of A&D lands released in the name of government entities like the *Kilusang Kabuhayan at Kaunlaran* program and turned over to DAR for distribution. Government financing institution lands include foreclosed properties of government financing institutions that were part of their non-performing asset portfolios. On the other hand, compulsory acquisition and landed estate lands have the lowest proportion

of collective CLOAs. Considered the most contentious, compulsory acquisition lands are probably the most productive lands in the country. Landed estates are privately-owned rice lands that have been expropriated (prior to CARP) for distribution to qualified farmers (Table 2-10).

Table 2-10 Breakdown of collective CLOAs by program type, as of October 2007

Program Type	Collective CLOA (ha)	Total (Collective + Individual) (ha)	Percent
Government Financial Institutions	117,418	141,225	83
Voluntary Offer to Sell	371,092	534,458	69
Compulsory Acquisition	141,430	242,710	58
Voluntary Land Transfer	362,971	557,950	65
Settlement Areas	380,175	606,970	63
Landed Estates	35,897	66,777	54
Government-Owned Lands	673,779	782,875	86
Total	2,082,765	2,932,967	71

Source: DAR Management Information Service

Subdividing collective CLOAs into family farm-size parcels does not appear to be a DAR priority. There are several possible explanations for this, as follows:

- As noted earlier, the DAR's performance appraisal system does not distinguish between lands distributed either under individual CLOAs or under collective CLOAs.
- There are limited or no funds to conduct segregation surveys for lands yet to be covered or for existing collective CLOAs.
- DAR senior management does not see subdivision (or parcelization) as a priority activity, opting to focus the agency's human and other resources to cover more lands under the program.

To be fair, indications are that the DAR has recognized this concern. It has started to address the subdivision of collective CLOAs. DAR allocated funds for subdividing 50,000 hectares in 2007, and another 100,000 hectares in 2008, even though it will take more than two decades to complete parcelization at this pace.

In terms of upholding the rationale for agrarian reform and achieving CARP's goals, the effect of this is far-reaching. For those collective CLOAs that are awaiting subdivision, land redistribution is essentially incomplete; this renders inaccurate the announced accomplishment for land distribution. The ownership and incentive effects expected to arise from clear land titles are therefore not realized. As argued in Chapter 6, incomplete land titling shuts out beneficiaries from formal credit sources; this hinders their chances of boosting both their farm productivity and household income. This also affects the collection of amortization by the Land Bank of the Philippines and even of real property taxes by the LGUs. It all goes back to unclear assigning of property rights.

c. Beneficiary development.

CARP is distinct from previous agrarian initiatives in another major respect: it provides a comprehensive Program of Beneficiary Development. In particular, it is designed to deliver basic services (capacity building, credit and marketing assistance, farm infrastructure, etc.) needed to transform beneficiaries into efficient agricultural producers and entrepreneurs. However, limited program funds called for a more strategic line of action, inspiring the DAR to launch Agrarian Reform Communities or ARCs in 1993 as an alternative approach to beneficiary development. An ARC focuses the delivery of support services on selected areas, rather than dispersing the delivery to all areas covered by CARP. It is also a mechanism to fast-track investment in basic social infrastructure, such as water, power supply, education, and health.

As of December 2007, some 1,874 ARCs have been established since the program's launch. They cover roughly 45% of total agricultural lands distributed under the program and 43% of the total agrarian reform beneficiaries nationwide. These ARCs are spread over 8,147 barangays in 1,237 municipalities.

As discussed in Chapter 3, foreign-assisted projects (FAPs) for the agrarian reform program have been concentrated in the ARCs. These projects have provided support to 58% of the ARCs, covering 62% of agrarian reform beneficiaries in all ARCs - roughly 30% of all agrarian reform beneficiaries nationwide. As expected, given the program's funding limitations, ARCs receiving support services through FAPs tend to be economically better off than those without FAPs.

Ideally, community-driven development approaches should deliver varying packages of support services that take into account differences in local conditions. Comprehensive data on the composition of support packages for ARCs are not available. However, there are bits of information about the types of intervention carried out with FAP support for the period 2004 to 2006. Using this information, Chapter 3 examines whether there is evidence to show that support packages reflected the characteristics of targeted ARCs.

d. Key issues on extending CARP.

Clearly, a new extension of CARP should be informed by a clearer understanding of a number of issues that have an important bearing on poverty reduction and equity goals. The most fundamental include:

- (i) The degree to which the strategy followed by the DAR in delivering support services to ARCs is consistent with a pro-poor rural development strategy that focuses on poverty reduction and on what alternate paths can be pursued to close the gap;
- (ii) The extent to which the present legal framework, most importantly the Comprehensive Agrarian Reform Law, affects land markets, farm productivity, the investment climate in rural areas, and the viability of the small farm sector;

- (iii) Under which conditions will extending CARP meet the challenges of land distribution in sugar plantations and other large private lands; and,
- (iv) Whether other approaches to land reform would also effectively strengthen the link between equity and efficiency gains.

Underlying these specific issues is the fundamental question of what role agricultural growth performs in reducing poverty in the Philippines today. This question—discussed in Chapter 7—is an important one since CARP was conceived at a time when the role of agriculture in economic development could not be disputed (based on agriculture’s share in the economy and its weight as a provider of jobs for unskilled labor). Because CARP has dominated the overall design and policies of rural development in the Philippines, a related question is whether CARP should be modified according to the possibly changed role of agrarian reform in rural development. Chapter 10 discusses this concern.

- **ARC as a pro-poor rural development strategy.**

Available evidence on the poverty impact of agrarian reform is mixed. The program has succeeded in extending the transfer of income and wealth from landlords to tenants (Balisacan, 2007, Otsuka, 1991). Yet, the benefits of the reform have bypassed landless agricultural laborers by limiting their ability to ascend the agricultural ladder (see Hayami *et al.* 1990). The impact of the 1988 agrarian reform on poverty did not arise exclusively out of land transfer and tenancy regulations. As noted above, one fundamental component of CARP was Program Beneficiaries Development through the delivery of support services.

Program Beneficiary Development includes technical assistance programs, feeder roads, community capacity building, land titling and several other services intended to raise farm productivity and ensure the sustainability of the agrarian reform process. On this account, CARP has fallen short of its goals. Less than 30% of agrarian beneficiaries have received support services from DAR. Moreover, those who received support under the Program Beneficiaries Development component were already among the most productive communities. As a result, while poverty has been reduced in these communities, the overall impact appears to have been quite limited since Program Beneficiaries Development targeted only a third of all CARP beneficiaries.

Agrarian reform has not had significant impact on reducing rural poverty overall (Balisacan, 2007). Poverty has gone down through time only for program beneficiaries; among non-agrarian reform beneficiaries, poverty incidence has stayed higher. Thus, a major concern is whether CARP’s twin goals of improving farm productivity and reducing rural poverty might be difficult to achieve with one instrument only. A key challenge for the future sustainability of agrarian reform will therefore be to strengthen the link between rural development and poverty reduction. Chapter 3 examines whether the present ARC approach in delivering support services offers scope for strengthening further the link between improving farm productivity and reducing rural poverty.

- **Effects of CARL restrictions on investment climate, farm productivity, and the viability of the small-farm sector.**

There are several restrictions on the sale and rental of awarded lands. As a result, land markets, both sales and rentals, are distorted. In addition, as a result of demographic pressure and of land distribution under CARP, the average farm size has been continuously declining. Land distribution in the future is expected to lead to the creation of millions of farms of about 1.7 hectares (DAR, 2007) each. There are two opposing views on the viability of small farms.

- One view holds that land fragmentation increases the transaction costs for prospective investors that would like to achieve a minimum scale of operations in agro-processing. Deregulation of land rentals and sales would be required in order to attract new businesses in non-traditional crops.
- The opposing view is that deregulation of land markets will ultimately lead to a reversion of the gains achieved by agrarian reform.

These views raise several questions. First, given present laws, how do imperfections in key rural factor markets (land and credit) interact to shape the relationship between farm size and farm productivity? Second, within the commercial farming sector, mainly in areas devoted to traditional crops, is there any indication that the landless poor's access to land would be facilitated through land rentals? If that is the case, would progressively liberalizing current ceilings on land ownership result in more efficiency while preserving equity? These issues are at the center of the analysis in Chapter 5.

- **Land distribution in sugar and other large private lands.**

Chapter 6 discusses the nearly 1.2 million hectares of private lands eligible for redistribution under CARP that remain undistributed. Most of these lands belong to sugar cane (and coconut) plantations. Since opposition from landlords can be expected, completing CARP will be extremely expensive and substantially prolonged. In addition to the more traditional argument of economies of scale at the processing stage, owners of sugar cane plantations oppose CARP because sugar cane is becoming a strategic crop for ethanol production. The passage in 2006 of the Biofuel Act is expected to increase the demand for ethanol. For plantation owners, breaking up sugar cane plantations will reduce sugar cane supply and, in the end, raise the cost of producing ethanol domestically. They oppose CARP on the following grounds:

- (i) CARP would increase coordination costs of smoothening the procurement of sugar cane for producers of ethanol;
- (ii) It would hinder economies of scale in sugar cane production; and,
- (iii) Agrarian reform beneficiaries would convert production from sugar cane to rice.

- **Developing new models of decentralized and negotiated land reform.**

Centrally-driven, top-down land reform programs are known to suffer from several problems, including imperfect information, transaction costs, and inappropriate incentives among stakeholders. CARP is no exception. Among the major obstacles are extremely weak land administration and agrarian justice systems. These make it possible to resist and distort program implementation.

This study shows that there is a case for advancing land reform in the country because of the potential to bring about higher productivity in the small farm sector. However, the land reform program needs to be redesigned in order to realign incentives across stakeholders, become more cost-efficient, and strengthen the link between agricultural growth and poverty reduction.

Recent evidence on the suitability of a more decentralized and negotiated approach to agrarian reform are reviewed in Chapter 8 and contrasted to the current approach followed by CARP. The possibility of up-scaling this particular approach is discussed. The report also argues that involvement of local governments and associations of beneficiaries could be expanded further. Chapter 10 analyzes whether this kind of involvement is consistent with the institutions engaged in carrying out rural development policy.

3. ARC AS A STRATEGY FOR POVERTY REDUCTION

I. Overview

Previous studies (Reyes 2003, APPC 2007) have established the effectiveness of the ARC strategy for poverty reduction. In particular, the recent Asia Pacific Policy Center (APPC) study shows that when Agrarian Reform Community (ARC) barangays are compared against similar non-ARC barangays, the ARC barangays tend to show better performance than comparable non-ARC barangays. However, the difference is quite minimal, with the estimated improvement in welfare being only 6% higher. This leads to the conclusion that the impact of the ARC strategy is slightly significant among households who own agricultural land. With an integrated, area-focused, multi-component development approach in the ARC barangays, there is intuitive expectation of a more substantial difference against the non-ARC counterparts.

Poverty is a complex problem that requires a comprehensive solution. The solution should promote sustained economic growth, enable the poor to benefit from growth, and address vulnerability to poverty. This requires proper targeting, which means under-coverage and leakage are kept to a minimum. If possible, there should be a conscious effort to “link” the beneficiaries to the growing sector, that is, if the growth strategy is unbalanced. Lastly, the gains of the strategy should be sustained.

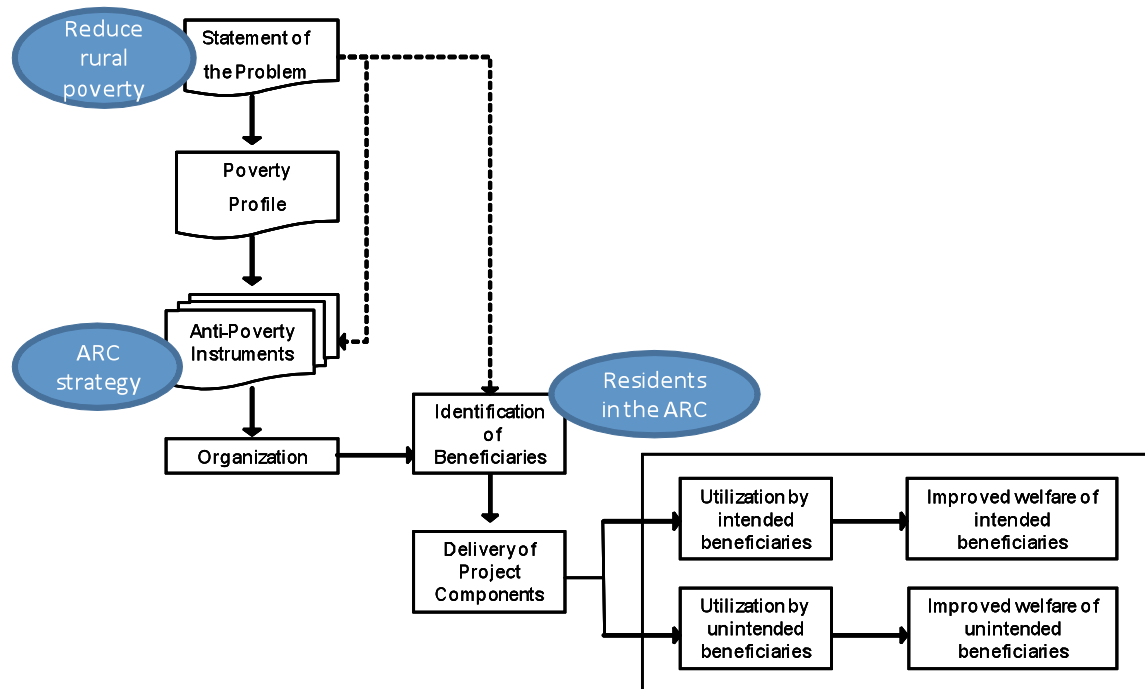
Keeping under-coverage and leakage to a minimum is tantamount to improving the efficiency of the targeting mechanism. But this is easier said than done. At the very least, it requires the identification of the “leaky valve”. For instance, the selection criteria are rather restrictive and are primarily intended not to compromise CARP accomplishment.

There are also several models of the ARC strategy that can be distinguished according to how the instruments are chosen. Some utilize participatory approaches; others are simply provided a package of support services. Still others do not receive support services other than organizational capability building.

The flowchart in Figure 3-1 will be used to identify the “leaky valve.” This was first used by Balisacan, et al. (2000) to evaluate several anti-poverty projects.

The impact of a strategy is dependent on the use of the outputs by the intended beneficiaries. An output that is relevant to the need will most probably be used. This chapter plots the portfolio of ARC strategies against a profile of the rural sector (using the typology of provinces discussed previously). This can establish if the intervention was filling a gap in provision and if there was consideration of the development potential of the provinces.

Figure 3-1 Delivery of anti-poverty projects



The ARC strategy was a conscious effort of the Department of Agrarian Reform (DAR) to operationalize an integrated area development (IAD) approach within a resource-constrained environment. The IAD approach calls for carrying out a multi-sectoral or multi-component package of interventions within a distinct geographical area. This requires substantial resources within the control of the implementing agency since the mix of interventions and their timely delivery determines the all-important *synergy*—the *raison d'être* of any IAD approach.

The key research question for the sub-study is whether the ARC strategy is an effective and efficient strategy for rural development and poverty alleviation. It will focus on the implementation mechanisms and targeting approaches, particularly on whether there was a conscious effort to account for the differences across provinces and properly match the interventions with the requirements and potentials of the ARC barangays. Specifically, the chapter will:

- (1) Review the evolution and implementation of the ARC strategy;
- (2) Assess identification and selection of ARCs;
- (3) assess ARC program interventions within the context of a community-driven, development approach; and,
- (4) Identify areas of improvement and recommendations to scale-up the ARC development strategy for rural development and poverty reduction.

II. Evolution of the ARC Strategy

a. Mandate for support services delivery.

The ARC strategy of the Department of Agrarian Reform (DAR) was launched in 1993 as the overriding strategy for program beneficiaries' development and support services delivery. The strategy is anchored on the support services provisions of RA 6657. Section 35 of the law mandated the creation of the Office of Support Services in the DAR to be headed by an Undersecretary. The Office provides general support and coordinative services for the program particularly the following services to farmer-beneficiaries and affected landowners:

- (1) Irrigation facilities, especially second crop or dry season irrigation facilities;
- (2) Infrastructure development and public works projects in areas and settlements that come under agrarian reform;
- (3) Government subsidies for the use of irrigation facilities;
- (4) Price support and guarantee for all agricultural produce;
- (5) Necessary credit to small landowners and farmers' organizations, such as concessional and collateral-free loans, for agro industrialization based on social collaterals like the guarantees of farmers' organization;
- (6) Financial assistance to small-and medium-scale industries in agrarian reform areas;
- (7) Assignment of adequate numbers of agricultural extension workers to farmers' organizations;
- (8) Research, development and dissemination of information on agrarian reform and low-cost and ecologically sound farm inputs and technologies to minimize reliance on expensive and imported agricultural inputs;
- (9) Development of cooperative management skills through intensive training;
- (10) Assistance in identifying ready markets for agricultural produce and training in other various prospects of marketing; and,
- (11) Administration, operation, management and funding of support services, programs and projects including pilot projects and models related to agrarian reform as developed by the DAR.

b. Initial strategies for support services delivery.

The initial strategy (1988 to 1993) was a project-based, sectoral approach. Different CARP Implementing Agencies (CIAs) were provided with supplemental budgets from the Agrarian

Reform Fund (ARF) specifically to implement CARP projects. The following agencies and their respective support service delivery interventions include:

DEPARTMENT OF AGRICULTURE (DA)

- Animals/Seeds/Seedlings
- Production/Post Harvest Facilities
- Small Water Impounding Projects
- Rice Production Enhancement Program
- Rice Price Support Program
- Other Support Activities

DEPARTMENT OF TRADE AND INDUSTRY (DTI)

- Skills/Entrepreneurial Training
- Common Service Facilities

NATIONAL IRRIGATION ADMINISTRATION (NIA)

- Communal Irrigation Projects and Systems
- Organizing and Strengthening of Irrigators' Association

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH)

- Roads
- Bridges
- Multi-purpose pavements

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (DENR)

- Soil Conservation Structures

LAND BANK OF THE PHILIPPINES (LBP)

- Credit

DEPARTMENT OF LABOR AND EMPLOYMENT (DOLE)

- Organization of Plantation Workers

DAR, DA, NIA, DTI, and DOLE

- Training

DA, DENR and DTI

- Technical Assistance and Marketing Assistance

The different line agencies set up specific CARP units to manage the supplemental CARP budget and to coordinate with the DAR. The DTI even fielded Provincial DTI CARP Coordinators to handle CARP projects at the provincial level.

The criteria for beneficiary selection or locating the CARP-funded projects of the CIAs were quite general. DAR used a simple validation system in confirming projects of other agencies. Infrastructure projects like roads and bridges required that the area of influence of the project

should include areas covered by CARP. Common service facilities, input support, and technical assistance projects required that the beneficiaries should be either actual or potential CARP beneficiaries.

The support services projects were implemented in all provinces. Within the provinces, there was no prioritization in terms of barangays or municipalities and there was no conscious attempt to integrate or cluster the different projects in priority areas. This tended to disperse the projects all over the province. Projects were independently implemented by the different CIAs. Since the CARP supplemental budget was allocated and released directly to the agencies, DAR had limited control of these funds or the projects implemented. These resulted in coordination problems especially in the early years of CARP implementation when specific guidelines for identifying, validating and confirming these projects were not yet formulated.

By 1990, DAR noted the absence of an over-all strategy for CARP implementation and the lack of coordination among the different CIAs, particularly in support services delivery. With a “coordinative” role in support services delivery, DAR did not have funds to implement support services projects since funds were allocated to the CIAs. The only funds that DAR had were for program coordination and piloting of organizing and institutional development approaches. DAR felt that CARP projects were relegated as second priority by the partner agencies since they often would give greater priority to their principal clients or to their flagship programs.

c. The SOP and AIDA strategy.

Given these concerns, DAR sought the issuance of Executive Order 406, Series of 1990, “mandating certain departments and agencies to align their respective programs and projects with the CARP, directing the DAR to accelerate agrarian reform beneficiaries development through the provision of economic and social infrastructure support.” EO 406 embodied an operating strategy for CARP implementation and provided DAR with the authority and funds to directly pursue support services projects.

The Executive Order provided for the following:

- (1) Mandated the Departments of Agriculture, Environment and Natural Resources, Public Works and Highways, Transportation and Communication, National Defense, Justice, Budget and Management, Trade and Industry, Land Bank of the Philippines, and Land Registration Authority to align their respective programs and projects with the major thrusts of CARP.
- (2) Created an inter-agency CARP Implementing Team composed of representatives of these agencies and chaired by a DAR representative at the national, regional, provincial, and municipal levels, with a mandate to undertake the following measures:

- To promote, integrate and harmonize the working relationship between and among the participating government agencies, non-government organizations (NGOs) and the agrarian reform beneficiaries themselves;
 - To hasten the generation, development and execution of CARP programs and projects;
 - To consolidate and maximize the utilization of available resources of government for the program;
 - Recommend measures to improve, increase and accelerate the delivery capacity of agencies for the implementation of CARP program and projects;
- (3) The DAR to adopt a strategic and area-focused operations approach to accelerate CARP implementation, by concentrating its land distribution and beneficiaries development activities in 24 identified Strategic Operation Provinces (SOPs) which account for 70% of the land distribution workload. These include the provinces of Pangasinan, Kalinga Apayao, Ifugao, Isabela, Nueva Ecija, Pampanga, Batangas, Quezon, Mindoro Occidental, Sorsogon, Camarines Sur, Antique, Negros Occidental, Bohol, Negros Oriental, Leyte, Western Samar, Zamboanga del Sur, Bukidnon, Agusan del Sur, Lanao del Norte, South Cotabato, North Cotabato and Maguindanao, without prejudice to the implementation in the remaining provinces of the country.

Specifically for beneficiary development, EO 406 provides for the following:

- (1) DAR to implement viable agrarian reform areas development pilot projects in the 24 SOPs particularly in the low income municipalities (LIMs) identified under the Pro-Poor Program of the government and in DAR-administered settlement areas.
- (2) Fifteen (15%) percent of the CARP 1990 budget (Php1.3 billion out of the Php8.9 billion) and in the succeeding years CARP budget (as approved by the PARC) shall be allocated, released to, and administered by DAR for the promotion, development, and organization of ARB associations and cooperatives and the implementation of pilot projects. This fund will come from the budget allocations of CARP agencies for extension infrastructure, research and development, database, and other support services.

To implement the above provisions and utilize the Php1.3 billion allocation, DAR pursued an Agro-Industrial Development Area (AIDA) approach. AIDA involved large agro-processing and integrated post-production projects, mostly for rice and corn, and were located in the 24 SOPs. This was DAR's counterpoint to the stand-alone infrastructure projects of DPWH and NIA, and the common service and post-harvest facilities provided by DTI and DA. These projects were intended to cover a larger influence area, thus covering more beneficiaries. A Special Projects Office known as SPO-AIDA was created to oversee the program. DAR provincial offices facilitated project development and took of charge of project implementation. Beneficiary groups (farmers associations and cooperatives) were the project

holders or the recipients of the project facilities and working capital. These inputs were considered as subsidized loans.

There were start-up difficulties in implementing AIDA projects since the office to oversee the program had to be set up and project development activities such as feasibility study preparation had to be undertaken. When Secretary Ernesto Garilao was appointed to the post in 1992 by President Fidel Ramos, he called for a review of DAR's implementation strategy. The effectiveness of the SOP approach was questioned mainly because there was no 'fit' between the existing administrative structure and financial administration system of DAR, on one hand, and the SOP strategy on the other. Note that DAR has field offices in all regions, provinces and municipalities. The manpower complement of each regional, provincial, and municipal office was relatively uniform across units and not based on target areas and beneficiaries to be covered. To effectively implement the SOP approach, it follows that resources should be concentrated in the SOPs. This would require organizational restructuring. In addition, the budgeting approach was not particularly flexible. The current year's budget was based on ceilings usually determined based on the previous year's budget. Since it was difficult to substantially re-allocate manpower and financial resources across provinces, the SOP approach did not yield the intended results. It was also not clear how to approach CARP implementation in the non-SOP provinces.

With regard to beneficiary development, it was observed that the project-based sectoral approach to the delivery of support services by different CIAs tended to disperse critical resources and yielded very little impact. In addition, there were many problems encountered with the implementation of DAR's own SPO-AIDA projects. There were issues on DAR's capacity to utilize the PhP1.3 billion budget allocation. Many of the integrated projects were not achieving the desired results as contemplated in their respective project proposals due to design problems or gaps in project management and administration. These problems could be traced to the lack of social preparation among the farmer beneficiaries and to the level of technical competence of DAR implementers in project development. Some farmers' organizations had to be hurriedly organized or federated in order to qualify as project proponents of complex, multi-component projects. The DAR field personnel on the other hand did not have the experience in conceptualizing and designing these types of projects.

The projects implemented by the CIAs and DAR's SPO-AIDA projects demonstrated the limitations of a project-based approach in terms of reach, sustainability, and impact. This was a looming concern given the increasing number of landholdings covered under the CARP and the corresponding number of actual ARBs in these landholdings. DAR, in particular, had to showcase that agrarian reform worked. Clearly, there was a need to shift strategy, to one that would maximize resources and result into small victories and successes within a shorter time period.

The key issue in defining a strategy for beneficiaries development and support services delivery was the scale and mix of interventions. A project-level intervention had limited impact, while a provincial-level intervention framework dispersed resources and resulted in problems in terms of the manageable area. The mix of interventions had to complement each other to ensure synergy and maximization of resources.

After developing the initial conceptual framework and conducting a series of consultations with NGOs, POs, and other stakeholders, DAR launched the ARC Development Strategy in 1993. In order to optimize the allocation and use of limited resources and create impact, DAR re-focused its geographical approach in support service delivery from the provincial/municipal level to clusters of contiguous barangays. In these areas, DAR intensified its interventions to increase farm production, improve household income, and promote sustainable development (BARBD 1995).

d. The ARC strategy.

Through the ARCs, DAR intended to showcase that agrarian reform worked. DAR initially defined an ARC as a barangay at the minimum or a cluster of contiguous barangays where there was a critical mass of farmers and farmworkers awaiting the full implementation of agrarian reform. The tone of DAR's definition highlighted agrarian reform as a holistic intervention where land tenure improvement could not be divorced from support service delivery.

The strategy was largely a resource-maximization, resource-allocation, and resource-mobilization strategy for program beneficiaries development. By identifying barangays or clusters of barangays with the highest concentration of ARBs and distributed lands, resources were pooled and channeled to where they could have the greatest impact. The ARC became the common area where CARP funds for support services were channeled. By using the ARC as a working unit or convergence point, it was possible to more effectively synchronize the delivery of support services to a defined area or target group.

DAR identified seven elements of a viable ARC. The following elements were the bases of the integrated set of interventions to be provided by DAR and other agencies:

- (1) Tenurial improvement
- (2) Physical infrastructure development
- (3) Agricultural productivity and farm income improvement
- (4) Agri-based rural industrialization
- (5) Provision of basic social services
- (6) Balanced ecosystem development
- (7) Gender and population and development concerns

The ARC development process was anchored on the community organizing process, which was already being employed by DAR at that time in several of its pilot projects, particularly in organizing cooperatives and farmers associations. The development process had four phases:

- Phase I : Social Preparation
- Phase II : Organizational Building
- Phase III : Capability Building
- Phase IV : Enterprise Development and Alliance Building

The Operations Manual on Agrarian Reform Communities Development (BARBD 1995) identified the output indicators and key intervention activities of each of the seven viable ARC elements per phase. This became the general guide in ARC program planning, implementation, and monitoring at different levels by DAR and other stakeholders.

The ARC strategy became a workable platform for DAR in coordinating support services delivery and facilitating resource mobilization. With specific “communities” (or cluster of barangays) to focus on, it became easier for DAR to encourage other agencies to provide services in the ARCs, even from their regular funds. DAR likewise exerted efforts to mainstream the ARCs in programs and priorities of the government. Foremost of these was the inclusion of ARCs in the priority areas under the Social Reform Agenda of the Ramos administration. The ARCs were likewise identified as a factor in defining strategic agricultural and fisheries development zones (SAFDZ) in the Agriculture and Fisheries Modernization Act or AFMA (RA 8435).

The ARC strategy made it easier for DAR to access official development assistance (ODA) funds for support services delivery. At this point donors were veering away from sectoral and programmatic projects to area-based integrated development projects. A specific, well-defined, and manageable area, like an ARC, with a wide menu of possible development interventions (e.g., organizing, infrastructure, enterprise development) made it attractive to bilateral and multi-lateral agencies. A fit between the donor’s priorities or biases could be easily established with DAR’s ARC program, whether it be a specific bias for infrastructure, capacity building, or for a specific region or province. Coupled with an aggressive resource mobilization effort on the part of DAR, the strategy rekindled interest among foreign donors to develop projects with the Department. It eventually spawned a substantial number of foreign assisted projects for ARC development from donors like the European Union, Food and Agriculture Organization, United Nations Development Programme, World Bank, Asian Development Bank, and the governments of Belgium, Japan, Italy, Spain, and Canada.

To further enhance support services delivery and provide legal cover for the ARCs RA 7905 was issued in 1995. Note that before RA 7905, the ARC strategy was only a Departmental strategy that drew criticisms from other government agencies, particularly those that questioned DAR’s mandate to implement the program. The law mandated that for the next five years, a minimum of one ARC shall be established by DAR in each legislative district with a predominantly agricultural population. The law operationally defined an ARC as

a barangay or a cluster of barangays primarily composed and managed by Agrarian Reform Beneficiaries who shall be willing to be organized and undertake the integrated development of an area and/or their organizations/cooperative. In each community, the DAR, together with the agencies and organizations abovementioned, shall identify the farmers association, cooperative or their respective federation approved by the farmers-beneficiaries that shall take the lead in the agricultural development of the area.

The law likewise authorized DAR to package proposals and receive grants, aid and other forms of financial assistance from any source.

III. Status of ARC Development Program

The initial target in 1993 was to develop 1,000 ARCs. With the passage of RA 8532 in February 13, 1998 (extending the implementation of the CARP for another 10 years) and with the installation of the Estrada Administration, the original target of 1,000 ARCs was expanded to cover 2,000 ARCs by the end of year 2004.

As of end of December 2007, there are 1,874 ARCs¹ in all provinces of the Philippines. Table 3-1 shows the number of ARCs launched annually since 1993.

Table 3-1 ARCs launched, by year

Year	No. of ARCs Launched	Cumulative
1993	349	349
1994	256	605
1995	162	767
1996	100	867
1997	54	921
1998	48	969
1999	62	1,031
2000	277	1,308
2001	107	1,415
2002	128	1,543
2003	44	1,587
2004	30	1,617
2005	87	1,704
2006	73	1,777
2007	97	1,874

Source: BARBD-DAR

These ARCs cover 1.76 million hectares of distributed agricultural lands representing 44.84% of the total distributed lands under the program. There are 980,962 beneficiaries of distributed lands (LAD) or 42.71% of the total LAD ARBs. These ARCs are spread over 8,147 barangays in 1,237 municipalities. Table 3-2 shows the regional breakdown of ARCs and the corresponding CARP coverage.

¹ This excludes ARCs in the Autonomous Region of Muslim Mindanao. DAR's ARC Level of Development Assessment (ALDA) database does not include ARMM ARCs, as the DAR does not have administrative jurisdiction over DAR-ARMM.

Table 3-2 Distribution of ARCs by region, CARP scope, and ARBs, 2007

Region	No. of ARCs	Working Scope (ha.)	Accomplishment (ha.)	%	No. of ARBs
Ilocos Region	140	56,431	56,000	99.2	49,215
Cagayan Valley	142	155,921	134,108	86.0	80,029
Northern Luzon	184	176,583	174,124	98.6	104,883
Southern Luzon	200	190,006	180,477	95.0	109,588
Bicol Region	131	134,397	105,391	78.4	58,059
Western Visayas	162	148,547	121,118	81.5	70,298
Central Visayas	106	112,129	95,410	85.1	63,998
Eastern Visayas	150	182,537	170,131	93.2	73,024
Western Mindanao	149	150,523	144,071	95.7	64,067
Northern Mindanao	149	118,102	110,474	93.5	57,589
Southern Mindanao	108	137,066	132,328	96.5	76,207
Central Mindanao	73	168,773	157,704	93.4	64,737
CARAGA	109	129,229	126,731	98.1	58,018
CAR	71	80,608	67,892	84.2	51,250
Total	1,874	1,940,852	1,775,958	91.5	980,962

Source: DAR-BARBD

a. Foreign donor assistance in ARC development.

A multi-component and holistic development approach like the ARC strategy requires substantial resources. The annual allocations for beneficiaries development for DAR and the other CIAs are limited and cannot cover the requirements of all the ARCs. In addition to coordination with other agencies and local resource mobilization, DAR vigorously pursues bilateral and multi-lateral donor support for ARC development.

There are two general types of foreign-assisted projects (FAPs) for ARC development. The first type covers integrated and multi-component community development projects. These projects covers specific ARCs and provide a package of services. This package usually consists of infrastructure projects such as roads, bridges and irrigation systems; agri-economic development interventions such as input support and capacity building, organizing and institutional developments support; and even social services development such as health, education, and sanitation. The World Bank-assisted Agrarian Reform Communities Development Project and the Japan Bank of International Cooperation (JBIC)-assisted Agrarian Reform Infrastructure Support Project are examples of this type of assistance. The second type is a sub-set of the first type. This covers technical and institutional development support to ARCs without infrastructure support. Examples of this type are United Nations Development Programme (UNDP)'s Support to Asset Reform and Development of Indigenous Communities and AusAID/Food and Agriculture Organization (FAO)'s Philippines-Australia Technical Support to Agrarian Reform and Rural Development.

DAR's ODA portfolio is quite significant and has increased substantially since the ARC strategy was implemented. The Foreign Assisted Projects Office has reported that ODA assistance has directly benefited more than 1,078 ARCs and delivered support services to 649,420 ARBs. These development interventions focus on five major areas: physical infrastructure, community and institutional development, productivity and rural enterprise, basic social services, and land tenure improvement.

As of end of 2007, an aggregate amount of Php57.823 billion covering a total of 56 projects was generated. Of these, 42 projects are already completed while 14 projects are still ongoing implementation. On the other hand, the non-FAP ARCs have to rely on the regular Agrarian Reform Fund (ARF) appropriations of DAR and other agencies for financing development interventions. The funding is quite limited considering the scope and coverage of the non-FAP ARCs. Unlike its FAP counterparts, these ARCs did not receive the complete package of hardware and software interventions needed to ensure sustainable development. On DAR's part, the bulk of interventions for these ARCs were technical assistance and facilitation for credit, infrastructure development, and social services delivery.

Owing to the fiscal constraint noted above, ARCs receiving support services through FAPs are expected to be better off than those without FAPs.

b. Expansion strategies.

In addition to difficulties in providing adequate assistance to existing ARCs, DAR faces the issue of addressing the concerns of ARBs in the non-ARC barangays. Over the years, it has been confronted with this issue and some key strategies were adopted to increase the reach of developmental interventions to ARBs, whether through the ARC strategy or otherwise. Among these are an ARC expansion strategy and a zonal strategy.

By the end of 1998, only 28% of total ARBs were covered by ARCs. This low reach of the ARC program prompted DAR to assess its current ARC strategy, particularly in the identification and selection of barangays to be launched as ARCs. In response to this, DAR issued Memorandum Circular (MC) No. 5, Series of 1999, rationalizing the selection of ARCs based on a scale intervention approach. This takes into consideration economic, ecosystem, and socio-political attributes in clustering barangays and determining the size of an ARC. Some key concepts of the ARC strategy were likewise revised based on DAR's experience in implementing ARC development. DAR realized that a barangay does not provide the sufficient scale to be able to generate impact. In addition, the influence area of some key interventions like roads, bridges, and irrigation systems go beyond the ARC barangay. With this in mind, subsequent ARCs to be launched should range from a cluster of barangays, at the minimum, to at most, one entire municipality.

Likewise, ARC typologies or models were identified (prime, semi-prime, satellite) to align the development interventions to the attributes of these ARCs. The existing ARCs (a substantial number of them covering only one barangay) were expanded based on a set of criteria that takes into consideration the ARC typologies, their development potentials, and management control of DAR over the development process.

This approach increased the reach of the ARC program by substantially increasing the number of barangays and CARP areas covered by the program. In 1998 the average number of barangays per ARC was 2.5. After initial operationalization of MC No. 5, the average number of barangays increased to 3.4 per ARC. Since then, there has been an increasing trend in the average size of the ARC. As of 2007, this has further increased to 4.3 barangays per ARC.

The expanded ARC framework likewise provided a framework for varying interventions based on the scale and potentials of the ARC. DAR formulated an ARC typology framework that classifies ARCs into typologies or modalities that will determine their respective development potentials and guide program managers in providing relevant interventions. The classification was done after a thorough assessment of the ecological, economic, and socio-political attributes of the ARC. The main ARC modalities are the following:

- (1) Prime agricultural ARCs—these ARCs are characterized by a cluster of more than five contiguous barangays, with huge tracts of agricultural lands and a significant number of farmers and small agricultural workers. The volume of production and land utilization rate can support market demands. These ARCs have the potential to become key production centers for various crops or agro-industrial centers.
- (2) Semi-prime ARCs—these ARCs have substantial agricultural lands and small farmers, but the scale of agricultural production cannot support agro-industrial development. Hence, these communities can function as production support to Prime ARCs or a mid-processing and market-link to Satellite ARCs.
- (3) Satellite agricultural ARCs—these are relatively small communities with limited agricultural land and small farmers, and characterized by low soil fertility and low level of agricultural production. These areas produce mainly for subsistence agriculture since critical infrastructure is absent or limited.

This typology would facilitate planning and program implementation, particularly in ensuring that interventions to the communities are relevant and appropriate to their respective needs and potentials. It would avoid a cookie-cutter approach in ARC scaling up by differentiating the ARCs according to their development potentials and identifying which would require different interventions. Table 3-3 shows the distribution of ARCs by region and typology.

Table 3-3 Distribution of ARCs by region and typology, 2006

Region	Typology			Total
	Prime	Semi-Prime	Satellite	
Ilocos Region	42	61	33	136
Cagayan Valley	17	67	54	138
Northern Luzon	32	61	42	135
Southern Luzon	70	92	55	217
Bicol Region	29	68	25	122
Western Visayas	84	48	21	153
Central Visayas	22	55	14	91
Eastern Visayas	35	58	49	142
Western Mindanao	69	41	34	144
Northern Mindanao	35	57	23	115
Southern Mindanao	23	38	67	128
Central Mindanao	17	29	20	66
CARAGA	13	42	44	99
CAR	41	18	6	65
Total	529	735	487	1,751

Source: DAR-BARBD

To delineate further the different interventions for ARC development, DAR recently issued MC No. 2, Series of 2007 on “Guidelines Governing the Identification/Selection/Confirmation of Special Agrarian Reform Communities”. These special ARCs are CARP areas with distinct characteristics and would require a different approach in development. DAR delineated five types of Special ARCs (SARCs):

- (1) Geographically Isolated Areas (GIA)—those accessible only through special forms of transportation due to absence of road networks such as islands or mountainous areas.
- (2) Calamity Prone Areas (CPA)—these are areas frequently affected by typhoons, earthquakes, volcanic eruptions, and environment-related man-made calamities such as flash floods, landslide, fish kill, siltation and chemical poisoning.
- (3) Special Tribal Areas. (STA)—these are areas where members of the indigenous cultural communities are awarded CLOA, EP, leasehold contract, CBC, etc.
- (4) Peace Development Zone (PDZ)—these areas are envisioned as sanctuaries for ARBs who are affected/displaced by armed conflicts.
- (5) Agro-Tourism Areas (ATA)—these are areas with potential for tourism due to its natural or cultural attractions, or agricultural features such as demo-farms or processed agricultural products.

DAR launched a total of 43 Special ARCs in 2007. The key intervention components for the development of these SARCs are spelled-out in MC No. 2, Series of 2007.

Since density of ARBs in a given cluster of barangays is DAR's primary criteria in defining an ARC, there are limits to the number of ARCs that can be identified or the barangays that can be covered by the ARC development program. As it is designed, barangays or a cluster of barangays with limited number of ARBs may not be covered under the program, unless a new approach is adopted. The main constraint for expansion is that DAR has to focus on its primary beneficiaries, which are the EP/CLOA holders and leaseholders. In DAR's perspective, it is not cost-effective to provide a package of development interventions to a farmer-dense barangay but with only five to ten ARBs. Within the perspective of an agency like the DA or an LGU, this might be considered a worthwhile intervention, since their beneficiary base is larger. Here lies the dilemma of DAR in expanding its development interventions.

Given this concern, DAR has since made several attempts to expand the reach of its program beneficiaries development by introducing complementary strategies aimed at expanding the areas of coverage of the existing ARCs. In 2003, DAR came out with the framework for Agrarian Reform Zones or ARZones strategy. The main intent of the strategy was to expand ARC reach by identifying "zones" that would cover a cluster of municipalities that have high density of ARBs (and where the ARCs are most likely situated). There were different typologies or models for the proposed ARZones depending on the respective attributes and basis of development. Among these are: nucleus zones, network of specialized production zones, and integrated production-postproduction-marketing zones.

Implementation of the ARZone strategy would require a convergence approach among different government agencies. Hence, in identifying the ARZones, due consideration shall be given to the presence of the KALAHI-CIDSS areas of DSWD, the SAFDZ areas of DA and the National Research and Development Program priority areas of DOST. The zones shall serve as the common planning area for DAR, DA, DSWD and DOST, plus other CARP implementing agencies like DENR, DTI, NAPC, CDA and the LGUs.

The ARZone strategy did not fully take-off as envisioned in 2003. The initial planning exercises by the different provinces resulted in the formulation of ARZone plans. However, given the scale and scope of the ARZones (municipal clusters), the financial and resource requirements for the development of the zones were quite staggering. At the same time, it was difficult to get the support of other agencies and LGUs, especially if the areas did not specifically fall under any of their respective priority or focus areas.

The DAR has lately shifted focus from the development of ARZones to ARC connectivity. As a development approach, the former requires more investments while the latter can just capitalize on the initial investment already in place in the ARCs. The ARC connectivity strategy will cluster existing ARCs to serve as convergence points for optimum utilization of resources and expertise of partner government agencies, LGUs, the business sector, and civil society, which includes non-government organizations. This will take advantage of

economies of scale and build on the gains of ARCs with high level of development. This pragmatic strategy is seen to boost the achievement of DAR's commitment in the medium-term plan to develop two million hectares of new agri-business land.

The connectivity concept can be operationalized in different perspectives: First is by clustering adjacent ARCs for a more focused and manageable approach and for convergence of resources among development stakeholders. Second is by identifying clusters that are economically viable, notwithstanding administrative and geographic boundaries. Third is by improving access to physical, social, economic, and information intervention. Fourth and last is by optimizing access to FAPS by ARCs/ARC clusters/Special Agrarian Areas (SACs). The DAR 2007 Accomplishment Report indicates that a total of 82 ARC clusters covering 1,912,065 hectares have been identified that will benefit some 597,835 ARBs and non-ARBs. These ARC clusters will be devoted for the production of rice, corn, coconut, palm oil, and vegetables, among others. These areas will also be the center of convergence initiatives primarily among DAR, DA, and DENR.

c. ARC selection and identification.

Critical in the ARC development strategy is the selection criteria for ARCs. DAR came up with "Must" and "Want" criteria in ARC identification and selection. The "Must" or basic criteria are the following:

The area has a large land tenure improvement or LTI scope whether under land transfer or leasehold program. For land transfer, the area must have been distributed or has a high potential for land distribution within two years.

- (1) The area has a high density of potential and actual ARBs.
- (2) The area is economically depressed.
- (3) NGOs or peoples' organizations are presently operating in the area.
- (4) The key concern for the basic criteria is the density of ARBs. Since this is a CARP intervention, it should cover as much ARBs as possible. This will assure cost-effectiveness in providing the infrastructure and other development interventions in the community.

The "Want" criteria was used to prioritize those areas that have already hurdled the "Must" criteria. These are:

- (1) The farmers and farm-workers clamor for agrarian reform and are willing to participate in CARP implementation
- (2) Support services (i.e., trainings, organizing, credit, irrigation, post harvest facilities) have been initially provided

- (3) The local government units (LGUs) and other institutions in the area support CARP implementation.

These “Want” criteria ensure that there is demand for DAR’s intervention among the intended beneficiaries. It will also capitalize on the CARP interventions previously provided by DAR and the other agencies.

Since LAD (in terms of area and beneficiaries) coverage is the basic criteria in identifying and selecting the ARCs, this chapter will first assess how effectively the DAR targeted its land acquisition and distribution. It will then focus on the LAD profile of the ARCs to determine whether there was effective targeting of CARP barangays, particularly if the ARCs indeed covered those barangays with the most number of ARCs and those in most need of interventions.

d. Was LAD effectively targeted?

The heart of CARP is asset reform. This means that land distribution is the primary intervention under the program. The transfer of ownership and control of the agricultural land to the farmer is intended to unleash the productive capacities of the farmers through the incentive effects of land ownership. It is within this principle that the CARP was designed and eventually mandated into law. It specifically intended the redistribution of agricultural land, regardless of crops planted and tenurial arrangements, to farmers and farmworkers who are landless. This is consistent with economic literature on addressing inequities in asset distribution to improve prospects for long-term economic growth.

The initial scope for CARP was estimated by DAR to cover 4,290,450 hectares, with an estimated number of 2,756,219 ARBs. This target, particularly the number of ARBs was consistent with the total number of 2,448,936 landless farmers in 1989². If CARP would be effectively implemented then it would be able to address the problem of landlessness in the country.

However, mere access to land by the landless would not automatically lift the farmer out of poverty. The productivity of the land should be enhanced (or at least maintained, in the case of highly productive landholdings), and this was to be done through the provision of support services to beneficiaries. As such, CARP was designed to have two major components: land tenure improvement (mainly through redistribution) and support services delivery.

Given the substantial target of agricultural lands to be covered by the CARP, one would ask if there was an underlying strategy in the implementation of land acquisition and distribution. As the CARP was instituted primarily to provide landless farmers and agricultural workers ownership and control of the lands they operate or work on, the coverage of the program should be a conscious effort to target areas with the most number of landless farmers as this would be the main priority of CARP coverage and implementation.

² Author’s estimates from 1989 rounds of the Labor Force Surveys.

The agricultural landholdings that comprise the scope of CARP are of different program types. These program types are basically the implementation modes and the type of lands that were covered, processed, and eventually distributed to farmer-beneficiaries. The main distinction is private agricultural lands (PAL) and non-private agricultural lands (Non-PAL).

PAL lands are broken down as follows:

Operation Land Transfer (OLT)—these areas were already covered under the Marcos land reform program or PD 27. These form a substantial part of the coverage of CARP. Since the initiation of OLT in 1972 until 1986, the accomplishment was very limited. Accomplishment in this sense would mean the generation and approval of titles in the name of the beneficiary. The scope of OLT is 616,233 hectares, but the accomplishment as of 1986 was only 15,061 hectares or a little over 2%. Executive Order 228, issued by President Corazon Aquino in 1987, mandated that all qualified farmer beneficiaries are now deemed full owners as of October 21, 1972 of the land they acquired by virtue of PD 27. It likewise provided explicit provisions for the valuation of the lands, payment by beneficiaries, and compensation to landowners. This facilitated the processing, titling, and distribution of OLT landholdings. Accomplishment in 1987 was 42,811 hectares—way above the cumulative accomplishment of 15,061 hectares from 1972 to 1986. In fact, the bulk of DAR's LAD accomplishment from 1987 to 1989 was OLT areas.

Government Financing Institutions (GFI)—these are agricultural lands in the hands of government banks and financing institutions, mostly foreclosed properties of the Philippine National Bank and Development Bank of the Philippines. Since these properties belong to government financial institutions, they are considered as compensable lands. They are valued accordingly and the banks are duly compensated.

Voluntary Offer to Sell (VOS)—this is an option for landowners to have their properties covered under CARP by the DAR. The CARP law provides for this option, which gives the landowners the incentive of having a larger cash portion of the compensation for the land.

Compulsory Acquisition (CA)—these are the more difficult landholdings covered by CARP, as these are privately owned agricultural lands. These landholdings were placed under the Phase 3 of CARP implementation, to wit:

Phase Three: All other private agricultural lands commencing with large landholdings and proceeding to medium and small landholdings under the following schedule:

- i. Landholdings above twenty-four (24) hectares up to fifty (50) hectares, to begin on the fourth (4th) year from the effectivity of this Act and to be completed within three (3) years; and
- ii. Landholdings from the retention limit up to twenty-four (24) hectares, to begin on the sixth (6th) year from the effectivity of this Act and to be completed within four (4) years; to implement principally the right of farmers and regular farm workers who are landless, to own directly or collectively the lands they till. (Section 7, RA 6657)

Voluntary Land Transfer (VLT)—this is another option provided for in CARL. Landowners may enter into a voluntary arrangement for direct transfer of their land to qualified beneficiaries, given certain safeguards. Under this scheme, the DAR will facilitate the negotiation, documentation, and issuance of CLOAs to the beneficiaries.

Non-PAL areas consist of the following:

Settlement Areas—these are areas covered by 47 settlement projects administered by DAR. Most of these areas are carried over from the post-war land reform initiatives that provided frontier lands to the landless. At the time that the CARP was instituted, a substantial number of the allocated areas in settlements had not yet been titled in the name of the beneficiaries. Hence, these areas were included in the scope.

Landed Estates—these areas were also carried-over from the past land reform initiatives. Landed estates were large privately owned agricultural landholdings that were expropriated or acquired through negotiation by the government for redistribution to the farmers therein. Since these lands were already acquired by the government, they are considered as non-PAL.

Government-Owned Lands and Kilusang Kabuhayan at Kaunlaran (GOL/KKK) Lands—these lands are those owned by government agencies and instrumentalities, including all lands or portions reserved by virtue of Presidential proclamations for specific public uses by the government but are no longer actually, directly and exclusively used or necessary for the purposes for which they have been reserved.

Table 3-4 shows the breakdown of DAR's scope by program type. Seventy (70%) percent of the scope³ covers PAL and half of it consists of compulsory acquisition lands. The 30% covering non-PAL lands consists mostly of settlements and GOL/KKK lands.

³ The initial scope of 4.29 million hectares was adjusted to 4.43 million hectares in 1990 and again to 5.16 million hectares in 2007.

Table 3-4 CARP scope, by program type

Program Type	Scope	Percentage
<i>Private Agricultural Lands</i>	3,093,251	69.9
OLT	616,233	13.9
GFI	243,434	5.5
VOS	437,970	9.9
CA	1,507,122	34.0
VLT	288,492	6.5
<i>Non-PAL</i>	1,335,106	30.1
Settlements	604,116	13.6
Landed Estates	70,173	1.6
GOL/KKK	660,817	14.9
Total	4,428,357	100.0

Source: DAR Planning Service

After 19 years of implementation, DAR's reported accomplishment is 3.96 million hectares of lands covered by the program. Using the scope of 4.29 million hectares, this should represent an accomplishment of 90%. However, the scope was recently adjusted to 5,163,751 hectares, hence lowering the accomplishment rate to 77%. Table 3-5 shows the breakdown of DAR's accomplishment by program type. This chapter uses the original scope of 4,428,357 hectares, since the revised scope of 5.16 million hectares does not have a breakdown by program type. The table shows that accomplishment on VLT and GOL/KKK are substantially above the estimated target. On the other hand, the accomplishment on compulsory acquisition lands is way below target or a measly 18% of the CARP scope.

Table 3-5 LAD scope and accomplishment (EO 2007), by program type

Program Type	Scope	Accomplishment	%
<i>Private Agr'l Lands</i>	3,093,251	2,241,192	72
OLT	616,233	566,610	92
GFI	243,434	162,406	67
VOS	437,970	584,303	133
CA	1,507,122	276,963	18
VLT	288,492	650,910	226
<i>Non-PAL</i>	1,335,106	1,719,063	129
Settlements	604,116	729,567	121
Landed Estates	70,173	80,811	115
GOL/KKK	660,817	908,684	138
Total	4,428,357	3,960,255	89

Source: DAR Planning Service

Note that program type can be used as a proxy for the quality or value of lands covered under CARP. The Non-PAL areas, particularly the GOL/KKK lands are the lands that were easiest for DAR to cover and distribute. These lands were turned-over by different government agencies to DAR and were distributed by DAR to beneficiaries with no obligation for them to pay for the land. A significant portion of the GOL/KKK lands were reservations mandated by Presidential Proclamations. These areas were not yet developed and might not be easily accessible. This could explain why GOL/KKK lands comprise the highest accomplishment of DAR for LAD. Settlement areas are quite similar to GOL/KKK lands since they were delineated from public domain lands through Presidential Proclamations. Among the non-PAL lands, the Landed Estate areas would represent relatively better quality lands since these were existing agricultural estates petitioned by the tenants and farmers to be expropriated or acquired by government and re-sold to them. Most of these were rice lands located in Regions 3 and 4.

PAL landholdings would indicate a relatively higher quality and value compared with GOL/KKK lands and settlement areas. Among the PAL lands, CA land would intuitively be of higher quality and value, since these lands post the greatest resistance to CARP coverage. It is not easy to assess the rest of the PAL lands in terms of their quality and value.

On the earlier question of whether DAR had a strategy for LAD, this study's ex-post assessment would tend to indicate that the relatively easier lands, i.e., no compensation and no resistance, were those that were initially and even fully covered by DAR. This would not matter if the lands were uniform across program types. However, as indicated earlier, these lands vary in terms of quality and their potential for agricultural production. This study will illustrate this point by assessing how responsive DAR's LAD scope is in addressing landlessness. As indicated earlier, DAR's scope was broken down by province and by land type. We computed the correlation coefficients of the ratio of the scope of LAD program types to total provincial A&D land against two provincial level variables: (a) the ratio of landless farmers to total farmers in 1991, and (b) the provincial agricultural landholding Gini in 1991. Ideally, the study would like to see that provinces with relatively large number of landless farmers or those with high inequality in the distribution of agricultural landholdings are also the ones with large CARP LAD scope.

Results indicate that the agricultural landholding Gini is positively correlated to the ratio of CA scope to total A&D. It is, however, negatively correlated to the OLT scope, settlement scope, and VOS scope. This suggests that at the start of CARP implementation, the provincial targets for CA lands were sensitive to addressing inequities in agricultural landholding across all provinces. The high Gini provinces had relatively high CA scope. We do not find this correlation with the over-all CARP scope, suggesting that the CARP scope of the provinces were not particularly sensitive to landholding inequities. Ideally, one would like to see high LAD scope in provinces with high Gini ratios (see Table 3-6).

On the other hand, the negative correlation of OLT, settlement and VOS indicate that across provinces, the targets of these LAD types were not particularly sensitive to the landholding distribution structure.

Table 3-6 Correlation between 1991 provincial agricultural landholding Gini and provincial CARP scope

	Pearson correlation coefficient	Prob > r under H0: Rho=0	
Total	-0.0901	0.4516	
OLT	-0.2519	0.0328	**
GFI	-0.0095	0.9368	
VOS	-0.2245	0.0580	*
CA	0.2795	0.0183	**
VLT	0.0214	0.8583	
Settlement	-0.2346	0.0473	**
Landed estates	-0.1101	0.3605	
GOL/KKK	0.0873	0.4661	

Note: ** significant at 5%, * significant at 10%. Author's estimate

Correlation of the ratio of landless farmers to total farmers against the Provincial LAD scope shows the same positive relationship with the CA scope (Table 3-7). This again indicates that the CA targets were sensitive to the number of landless farmers across provinces. OLT scope this time shows a positive correlation, along with landed estate scope. On the other hand, VLT scope and GOL/KKK scope are negatively correlated with landless farmers in the province, indicating that their respective provincial targets are not consistent with the number of landless farmers. Again, the over-all LAD scope is not correlated with the number of landless farmers.

Table 3-7 Correlation between landless farmers and provincial CARP Scope

	Pearson correlation coefficient	Prob > r under H0: Rho=0	
Total	0.1066	0.3696	
OLT	0.3828	0.0008	***
GFI	0.1089	0.3589	
VOS	0.0520	0.6621	
CA	0.4263	0.0002	***
VLT	-0.4013	0.0004	***
Settlement	-0.0823	0.4889	
Landed estates	0.3289	0.0048	***
GOL/KKK	-0.3004	0.0098	***

Note: ** significant at 1%. Author's estimate

The overall targets of DAR across provinces were not particularly consistent with key indicators like the landholding Gini and number of landless farmers. However, the scope of compulsory acquisition consistently shows a positive and significant correlation with the two variables. This shows the importance of CA among the different program types. Given an ideal situation, the concentration of DAR's efforts should have gone to CA. On the other hand, land types like GOL/KKK, VLT, and Settlement are not particularly sensitive to either one of the two variables studied. However, because of the legal, financial and operational difficulties faced by DAR in covering CA lands, it re-directed its efforts toward these areas. In fact, DAR even went beyond the estimated scope, having accomplishment rates beyond 100% and as high as 226% for VLT. While this strategy enabled DAR to report rather substantial accomplishments in LAD, the fact remains that a substantial portion of CA lands, which have shown to be sensitive to inequality and landlessness, have yet to be distributed after almost two decades of CARP implementation.

Another important issue in the LAD accomplishment of DAR is the substantial proportion of collective titles or CLOAs issued to areas covered under the program. This issue touches on the very essence of the objective of agrarian reform. Asset redistribution is never complete without the proper assignation of property rights. With this, the farmers, who are now owners, will have the incentive to increase both short- and long-term investments on the land. Moreover, the underlying rationale of CARP is the establishment of owner-cultivatorship of economic-sized farms as the basis of Philippine agriculture. A collective title essentially dulls the incentive of the farmer to invest in the land and limits the farmer's access to credit.

The positive effect on credit is derived from the improved collateral status of farmers. This credit effect has been observed in econometric analysis using the IARDS survey data. Results indicate that land ownership increased access to credit from formal institutions, especially for beneficiaries with registered and individual titles. Individually titled and registered land—primarily the EPs and individual CLOAs—is a significant predictor of access to the formal credit market. It improves access by 3.6 percentage points. Moreover, when titled land is

fully paid for (i.e., fully amortized), the probability of access increases by 2.6 percentage points. These effects are not displayed in the case of lands awarded under CARP either with no individual titles or untitled as in the case of collective CLOAs and CLTs.

RA 6657 allows for collective ownership only for specific circumstances. In particular, if it is not economically feasible and sound to divide the land, then it will be collectively owned by the workers' cooperative or association of worker-beneficiaries. This provides an appropriate ownership structure for cases where the current farm management system does not particularly require the parcelization of the land. For other types of landholdings, the collective title is supposed to be only a transition mechanism to expedite land acquisition. The subdivision survey and generation of individual titles would follow afterwards. However, what was supposed to be a special case became the norm in the acquisition and distribution of landholdings. As of October 2007, 71% of all lands distributed under CLOA are collective CLOAs. This translates to more than 2 million hectares (see Table 3-8).

Table 3-8 Cross section of CLOAs distributed, as of Oct. 2007

Type	No. of Titles	Percentage	Area (Ha)	Percentage
Individual CLOA	693,969	79	850,201	29
Collective CLOA	180,749	21	2,082,765	71
Total	874,718	100	2,932,967	100

Note: The total excludes Emancipation Patents (EPs) that are issued for P.D. 27 areas. All EPs issued are individual titles. As of October 2007, the total number of EPs distributed is 671,097 covering a total area of 555,629 hectares

Source: DAR Management Information Service

The overwhelming majority of collective CLOAs are those under co-ownership (i.e., 90% of all CLOA titles, representing 79% of total CLOA area). This is the case where the CLOA is in the name of all beneficiaries. Cooperative CLOAs and Farmers' Organization CLOAs are issued to those beneficiaries who are already organized upon the generation of the CLOA. In this case, the CLOA is in the name of the organization and the names of all beneficiaries are usually annotated at the back of the title. Collective CLOAs awarded to beneficiaries of commercial farms and lands held by multinational corporations fall under these types of CLOA (see Table 3-9).

Table 3-9 Breakdown of collective CLOAs, as of Oct. 2007

Type of Collective CLOA	No. of Titles	Percentage	Area (Ha)	Percentage
Co-ownership	162,035	90	1,654,173	79
Farmers' Organization	16,999	9	328,222	16
Cooperative	1,715	1	100,370	5
Total	180,749	100	2,082,766	100

Source: DAR Management Information Service

Aside from commercial and agribusiness farms, lands that are not tenanted and those that are idle (but deemed arable) are most likely distributed under the co-ownership type of collective CLOA, since potential beneficiaries are not yet tilling specific parcels of land. In fact, for idle lands without prior claimants, the DAR would screen landless residents within the barangay and adjacent barangays as possible beneficiaries. In contrast, on lands that are tenanted or those that have farmworkers working on specific plots of land, the potential beneficiaries will opt (and even insist) on individual titles.

The breakdown of collective CLOAs by program type seems to confirm this observation (Table 3-10). The GOL and the GFI lands have the highest proportion of collective CLOAs (86% and 83%, respectively). On the other hand, CA and landed estate lands have the lowest proportion of collective CLOAs. As indicated earlier, CA lands are the most contentious lands and probably are the most productive lands.

Table 3-10 Breakdown of collective CLOAs by program type, as of Oct. 2007

Program Type	Collective CLOA (ha)	Total (Collective+Individual) (ha)	%
Government Financial Institutions	117,418	141,225	83
Voluntary Offer to Sell	371,092	534,458	69
Compulsory Acquisition	141,430	242,710	58
Voluntary Land Transfer	362,971	557,950	65
Settlement Areas	380,175	606,970	63
Landed Estates	35,897	66,777	54
Government-Owned Lands	673,779	782,875	86
Total	2,082,765	2,932,967	71

Source: DAR Management Information Service

CARP lands that are under collective CLOA, particularly those that are not commercial farms, are rather handicapped in terms of their development and sustainability. The incentive effects expected to arise from land redistribution, i.e., increases in investment and farm productivity, might not be realized. The situation likewise jeopardizes the ability of farmer beneficiaries to access credit and modern farming technologies, as well as to smooth consumption in the event of adverse income shocks.

e. Was ARC selection better targeted?

At this point the study aims to look into whether the ARC strategy performed better in targeting or in prioritizing the areas and farmers that would matter most as far as the objectives of CARP are concerned. The ARC strategy intended to focus on those barangays with a relatively high concentration of ARBs and CARP lands. The study first seeks to

determine if indeed the ARCs cover a substantial number of farmers/CARP area. Second, it will assess if these farmers or areas covered were those that matter most.

- ARC program coverage and reach.

Coverage of the ARC program is 45% of over-all CARP accomplishment and 38% of the CARP scope. This basically confirms the selection criteria for the ARCs giving priority to barangays with high LAD accomplishment. The ARCs cover 8,147 barangays representing only 30% of total CARP barangays⁴. This shows that indeed the ARC program targeted barangays with high density of ARBs. Hence, while the ARC covers only 30% of total CARP barangays, they represent 45% of all lands distributed under CARP. The leasehold coverage is quite low, but this might not show the true picture. Note that the leasehold program of DAR covers farmers within the retention areas and farmers in CARPable areas but have not yet been distributed. Eventually, the latter type of leaseholder will receive an EP or a CLOA and become a LAD beneficiary. This “graduation” is not corrected in DAR’s leasehold accomplishment report. Hence, the leasehold area and leasehold ARB accomplishment of CARP will be an overestimate.

ARBs (EP and CLOA holders) in ARCs total to 980,962, representing 43% of total ARBs reported. Leaseholders total to 183,503. These figures mirror the same trend as that of the LAD accomplishment in ARCs.

Table 3-11 Coverage of the ARC Development Program

Coverage	ARC Program	CARP	% of CARP
No. of Communities	1,874	*	
Barangays covered	8,147	27,218	30
Municipalities	1,237	1,559	79
Total Farmers			
ARBs (LAD+LH)	1,164,465		
EP/CLOA Holders	980,962	2,296,741	43
Leaseholders	183,503	1,181,028	16
Total Agri Area (ha)			
LAD Scope	1,940,852	5,163,751	38
CARP Area (LAD+LH)	2,045,599		
LAD Accomplishment	1,775,958	3,960,255	45
Leasehold	269,641	1,659,714	16

*The global target is 2,000 ARCs

The operational target of DAR is to launch 2,000 ARCs. So far, it has already reached 1,874 communities. However, even if DAR achieves its global target of 2,000 ARCs, this will not

⁴ These are barangays with at least one CLOA or EP issued

substantially increase the reach of the ARC program. To date, there are 1,874 ARCs covering 1.76 million hectares of distributed CARP lands. Assuming DAR launches the remaining 126 ARCs in 2008 with the same average CARP area per ARC, this will increase the reach to only 1.9 million hectares—less than half of total LAD accomplishment.

The reach and coverage of ARCs has been a lingering issue since the program was launched in 1993. However, the program, as conceived in 1993, was not intended to cover the entire CARP area and beneficiary scope. The Operations Manual for ARC Development (BARBD, 1995) indicates that the target of the program is to cover an area of 2 million hectares or an average of 2,000 hectares per ARC. With two hectares average per beneficiary, the program will cover 1 million ARBs or a farming population of 5 million. The main objective was to maximize resources to create impact. It likewise operationalized, in an expanded scale, the integrated area development or IAD strategy, the ‘buzz’ word at the time, particularly among NGOs and CSOs⁵.

Within this context, the program has achieved its global targets of 2 million hectares and 1 million ARBs. Combined LAD and leasehold area is 2.05 million hectares and combined LAD and leasehold beneficiaries is almost 1.2 million farmers.

Looking at DAR’s mandate, the ARC program seems to have reached its limits as to the areas and beneficiaries it could effectively cover. The main focus of the ARC program is on “ARB-dense” barangays. In most cases, these barangays are composed of both ARBs and non-ARB farmers. However, there might be agricultural barangays that are generally composed of small farmers who are technically not ARBs. Strictly speaking, DAR may not cover these barangays as ARCs⁶. Hence, the ARCs, as they are currently defined, is only a sub-set of all barangays with high density of small farmers.

Given the positive impact of the ARC strategy, it might be adopted as a general strategy for rural development to cover all barangays with predominantly small farmers. The ARC experience of DAR would be instructive in pursuing this IAD approach. However, if this is the case, DAR might not be the appropriate agency to manage or oversee this undertaking as this scaling up will cover communities that are not CARP areas or with predominantly ARB populations.

- LAD profile of ARCs.

The earlier section on DAR’s LAD accomplishment shows that certain LAD types were more sensitive to addressing the problem of landlessness and inequity in agricultural landholding distribution, particularly landholdings under CA. The reverse can be said for GOL/KKK, settlement, and VLT areas. Likewise, a distinction can be made between areas covered by individual titles and those covered by collective CLOAs.

⁵ Before his appointment to DAR, Secretary Ernesto D. Garilao was Executive Director of the Philippine Business for Social Progress, a prominent development NGO.

⁶ Unless the definition of an ARC in RA 7805 is correspondingly revised.

A detailed LAD breakdown of the ARCs was not readily available from DAR. The ARC Monitoring Forms (Forms 1 to 11) and the ALDA database only had the total LAD and leasehold scope and accomplishment and the number of ARBs covered. There was no breakdown as to the different LAD program types of the CARP area covered by ARCs. Neither was there any information on the type of titles issued to beneficiaries, whether individual titles or collective CLOAs.

To derive the information, this study utilizes the EP-IS and CLOA-IS from DAR's MIS database. The process was quite painstaking since the barangay names in the ARC database cannot be readily matched with the barangay names in the EP-IS and the CLOA-IS due to different IDs used. Hence, the barangay names in the ARC database and those in the EP-IS/CLOA-IS were first matched with the Philippine Standard Geographic Code (PSGC) and the resulting matched barangays were merged. A minimal number of barangays from both databases did not match, since they were not listed in the PSGC.

The merged database can now provide a detailed LAD breakdown for every CARP barangay, whether ARC or non-ARC, and can likewise distinguish between individual and collective titles. It is interesting to note that program codes used by DAR's MIS are not consistent with that used by the Planning Service and Operations Office. The CLOA-IS does not have the GFI category, but has categories for: (a) Sequestered land, (b) Idle and Abandoned land, and (c) Undefined/Unclassified.

Table 3-12 shows only slight differences in the distribution of CARP areas by LAD types of ARCs against the total figures. At most there is only a 2% difference in the proportion of LAD accomplishment by category. For CA lands (which earlier showed to be positively correlated with the agri-landholding Gini and number of landless farmers), the proportion to total CARP accomplishment is 7.1%. Among ARC barangays, the proportion to total CARP accomplishment is only slightly higher at 9%. The same is true for all other LAD categories.

Table 3-12 Breakdown of EPs and CLOAs by program type (total and ARC)

Program Type	ALL		ARCs	
	Area (ha)	%	Area (ha)	%
VOS	544,034	15.8	185,846	16.8
VLТ	565,836	16.4	161,975	14.6
CA	244,767	7.1	99,245	9.0
Sequestered land	1,434	0.0	42	0.0
Idle and abandoned	660	0.0	344	0.0
Settlement	613,909	17.8	202,265	18.3
GOL	780,400	22.6	227,801	20.6
Land estate	66,449	1.9	26,032	2.3
Undefined/unclassified	145,269	4.2	38,339	3.5
EP(OLT)	488,298	14.1	166,340	15.0
Total	3,451,057	100.0	1,108,229	100.0

Table 3-13 indicates that 71% of areas covered by CLOA are collectively titled. The profile of the CLOAs covered by ARC barangays shows 68% are collectively titles, which is a slight difference compared with the total figure.

The foregoing figures indicate that there is a slight difference in the ARC coverage by LAD type and by beneficiary type. It covered a slightly higher proportion of CA, VOS, and OLT lands, and lands with individual titles. As discussed earlier, the CA lands are particularly sensitive to addressing land inequality and landlessness, and individual titles provide more incentives to make the land productive. However, the bulk of the ARC lands are still composed of settlement, GOL, VLT, and VOS lands, which are not particularly sensitive to addressing inequality and landlessness.

Table 3-13 Breakdown of CLOAs by farmer beneficiary type (total and ARC)

FB type	All		ARCs	
	Area (ha)	%	Area (ha)	%
Collective	2,098,909	71.0	644,074	68.0
Individual	863,865	29.0	297,817	32.0
Total*	2,962,775	100.0	941,891	100.0

*This excludes EP (OLT) areas as all EPs issued are individual titles

Since specific program targets were pegged during the launching of the ARC Strategy in 1993 (1,000 communities covering 2 million hectares and 1 million ARBs), and given the criteria that distributed lands should form the bulk of an ARC, it was rather inevitable that DAR covered these types of land in ARC selection. The focus in ARC selection was mainly on barangays with the most number of ARB and CARP areas without considering the LAD types and the type of beneficiary. The potential impact of the ARC interventions might have been larger if the interventions were focused on CA areas and on barangays with a high concentration of individual titles.

IV. ARC Program Interventions

The previous sections indicate that selection of ARC barangays was predominantly based on the density of ARBs and CARP areas. This ensured that the ARC program was able to maximize its reach and coverage among ARBs and CARP areas. However, there was no discrimination in terms of the type of lands covered by the ARC program as this mirrors the national LAD profile. This could have been another layer of targeting, since there are differences across land types and ownership structures that affect the potential outcomes of the interventions.

However, despite this constraint, the expected outcomes of the ARC intervention might readily be achieved if interventions provided to these communities address their requirements, gaps and potentials, and are delivered in a timely manner. Given the ARCs selected by DAR, the crucial factor would be the mix of interventions provided. The profile of the ARCs and their development potentials vary across geo-physical and socio-economic characteristics of a given area. Hence, interventions should be differentiated along these areas.

DAR formulated the ARC typology framework to facilitate planning and program implementation, particularly in ensuring that interventions to the communities are relevant and appropriate. This framework is generally similar to the provincial typology described in the introductory section of the study. They might differ in scale, but they both describe the areas (ARCs, provinces) in terms of their potential to agricultural development and access to markets. The provincial typology has nine provincial clusters, generated from a 3x3 matrix, each cluster a combination of two attributes: urbanization (rural, peri-urban, urban) and geo-physical or agri-potential (high, mid, low). Each of the nine clusters will have its particular development constraints and potentials. Following this frame of thought, we could say that the pathways out of poverty will be different across the provincial clusters.

There are parallels between ARC typologies and the provincial typologies. Provinces with predominantly Prime and Semi-Prime ARCs have high potential for agricultural and enterprise development and the communities therein have access to market and processing centers. These provinces will be similar to those belonging to the urban/peri-urban and high/mid geo-physical endowment clusters. Provinces with predominantly Satellite ARCs are characterized by marginal agricultural areas (low fertility, low agricultural production) with most of the communities located far from market centers. These provinces are similar to those belonging to the rural and low geo-physical endowment clusters.

We will assess the interventions provided by DAR and other agencies within the context of a community-driven development framework. Intrinsic in the CDD approach is that the community determines its required interventions through an area planning process. This will result in differentiated interventions across the communities in terms of the mix and scale of interventions. As such, some communities will primarily need infrastructure development, while others will require more agricultural production enhancement interventions. In the provincial typology framework, the different clusters will require differentiated interventions. Ideally, there should be different types and a mix of interventions for the different clusters. This will give an indication of whether or not the ARC interventions were targeted and strategizing was done in the planning and provision of interventions.

The analysis requires plotting the comprehensive profile of ARC interventions in the nine provincial clusters. There are, however, severe data constraints. The ARC Monitoring Forms (Forms 1 to 11) and the ALDA database feature output and outcome indicators of the ARCs. They do not track the different inputs provided to the ARCs. The budget and expenditures for ARCs are not disaggregated. Hence, the study cannot get a profile of the inputs provided by the different DAR offices.

The only available dataset that tracks all interventions provided to ARCs is the Foreign Assisted Projects Office (FAPSO) database on FAPs interventions. The FAPSO created this database in 2004 and updated it quarterly until 2006. The database contains information on the interventions in 1,370 ARCs that have been provided by support services through FAPs. The figure of 1,370 ARCs (or 77% of all ARCs in 2006) is higher than the 1,078 FAPs-assisted ARCs reported earlier. The former includes ARCs that were given minor assistance through the FAPs, like area planning and training support. The database contains a raw list of interventions provided by the FAPS and also interventions provided by other agencies and institutions. Hence, it gives a fairly good account of the mix of interventions and the priority types of interventions.

From the database, APPC prepared a coding system and a coding manual to classify all the interventions by project and sub-project types. This gives an indication of the mix of interventions provided to the ARCs. Table 3-14 provides a breakdown of the type and number of projects implemented in FAPs ARCs, including the average cost of the projects. The table shows that the most common types of project interventions are capacity building interventions on organizational management (16.6%), agricultural production enhancement projects (15.7%), and road construction/rehabilitation projects (13.7%).

It is not surprising that these three types of projects came up as the most common projects. Social Infrastructure and Local Capacity Building (SILCAB) is a basic ARC development intervention targeting formal and informal farmers' organizations. The main activities in this area are capacity building to organize and strengthen these organizations. Farm Productivity and Income (FPI) improvement is another basic key result area of ARC development. The basic interventions in this area are input support and technical assistance for agricultural production enhancement of farmers. Finally, Economic and Physical Infrastructure Support Services (ECOPISS) provides the basic infrastructural requirements in the ARCs. Most of the interventions in this area are to improve access through the construction and rehabilitation of roads that connect ARCs to the market.

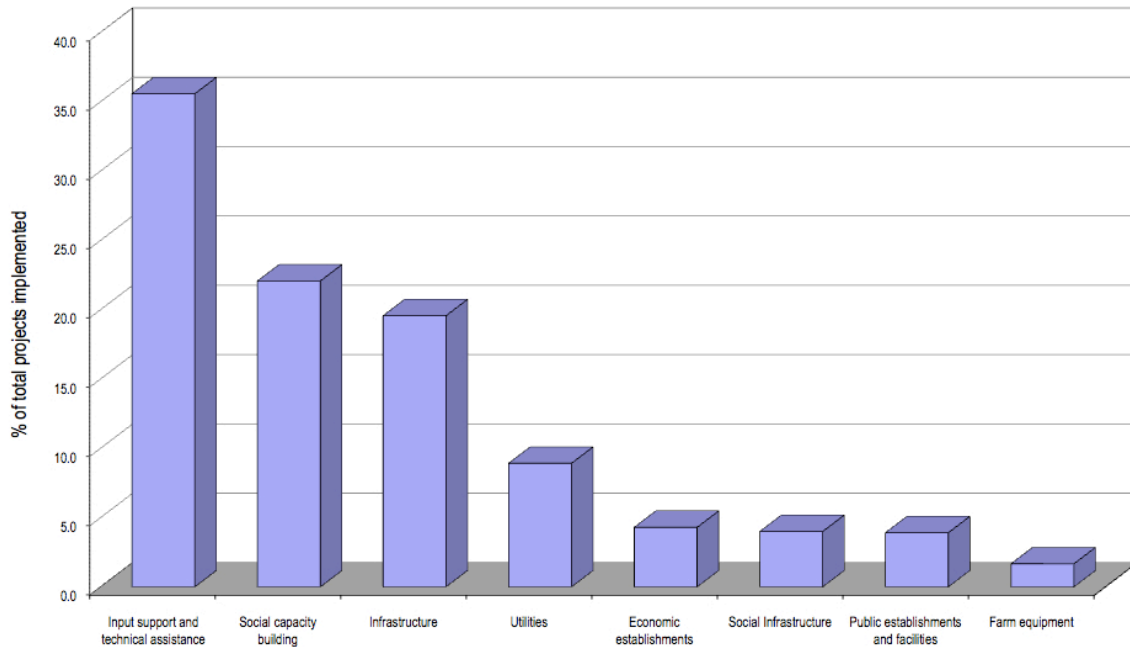
Table 3-14 Foreign Assisted Projects implemented in ARCs, 2004-2006

Project type	Number of projects	Percent to total	Average cost ('000 pesos)
<i>Infrastructure</i>			
Roads	4,691	13.7	5,034
Bridges	681	2.0	5,064
Irrigation facilities	1,343	3.9	10,316
<i>Economic establishments</i>			
Warehouse and storage	162	0.5	682
Post-harvest facilities	1,266	3.7	727
Market	27	0.1	2,331
Cooperative building	22	0.1	573
<i>Utilities</i>			
Water supply	2,147	6.3	1,219
Power supply/ electrification	756	2.2	1,399
Sanitation and sewerage	161	0.5	1,832
<i>Social Infrastructure</i>			
School buildings	684	2.0	1,455
Health center	425	1.2	692
Daycare/Youth center	247	0.7	441
Training center	10	0.0	6,192
Library	6	0.0	238
<i>Public establishments and facilities</i>			
Plaza	164	0.5	919
Church	4	0.0	78
Barangay hall	135	0.4	906
Cemetery	1	0.0	150
Multi-purpose center	967	2.8	716
Barangay terminal	4	0.0	269
Public facilities	70	0.2	1,396
<i>Farm equipment</i>			
Planting	279	0.8	438
Harvesting	224	0.7	226
Transport	71	0.2	470
<i>Input support and technical assistance</i>			
Agricultural production enhancement projects	5,381	15.7	417
Off-farm livelihood and enterprise dev't projects	2,959	8.6	135
Post-harvest and marketing projects	575	1.7	461
Ecological/environment projects	748	2.2	721
Savings/financial intermediation projects	1,175	3.4	75
Cooperative and organizational dev't	1,368	4.0	169
<i>Social capacity building</i>			
Education	186	0.5	1,221
Health and nutrition	606	1.8	1,146
Organizational management	5,680	16.6	157
Alliance building	449	1.3	128
Operation and management of rural infrastructure	296	0.9	28
Gender and development trainings	346	1.0	40
Planning/assessment/consultation/monitoring	12	0.0	2,759

Source: FAPSO, Department of Agrarian Reform

On the type of projects implemented in the ARCs, the most common are input support and technical assistance (see Figure 3-2). These consist of capacity building interventions like training and advisory services on agricultural production and enterprise development. This is followed by social capacity building interventions like organizational management, health, nutrition, and education. Infrastructure support projects only ranks number three. This is not surprising as infrastructure projects cost relatively more than software type of interventions.

Figure 3-2 Distribution of ARC interventions by project type



Using the provincial typology clusters, we classify the different FAPs ARCs, including the total CARP scope and the total cost of interventions. The matrix in Table 3-15 gives a breakdown using the same matrix in the introductory chapter. Most of the ARCs fall in the Mid Geo-physical endowment clusters, particularly in the low and medium urbanization clusters. The number of ARCs follows the general pattern of the provincial profile of the clusters. The same two clusters contain the most number of provinces (42 out of 79 provinces). It likewise follows that these clusters recorded the largest hectareage and the highest cost in terms of ARC interventions. The Low/Mid Cluster has a total expenditure of Php18.2 billion, while the Mid/Mid Cluster had Php14.1 billion in expenditures. However, it has to be pointed out that given the differences in number of ARCs across clusters we cannot compare one cluster with another.

Table 3-15 Provincial typology cluster showing total number of ARCs, total CARP scope and total cost of interventions

		Urbanization		
		Low (highly rural)	Mid (peri-urban)	High (urban)
Geo-physical endowment	Low	109 ARCs 122,837 ha P2,430,660,000	35 ARCs 26,862 ha P643,989,000	8 ARCs 9,763 ha P169,492,000
	Mid	451 ARCs 500,784 ha P18,213,629,000	389 ARCs 421,619 ha P14,141,520,000	45 ARCs 29,369 ha P1,543,247,000
	High	112 ARCs 176,226 ha P3,469,890,000	140 ARCs 82,113 ha P2,708,609,000	75 ARCs 49,691 ha P1,090,453,000

To make the intervention cost across clusters comparable, we use the average cost per hectare of CARP working scope in the ARC. The CARP working scope of the ARC is a proxy for the coverage of the ARC in terms of area and farmer beneficiaries. Since the main focus of interventions are the ARBs, the study deems it as an appropriate indicator of unit cost of ARC interventions. Using the total CARP scope, the average cost per hectare was computed for every cluster (Table 3-16). The lowest total cost per hectare is for the High Urban-Low Geo-Physical cluster with Php17,360/ha. The highest total cost per hectare is for the High Urban-Mid Geo-Physical cluster with Php52,547/ha, three times the average expenditure of the lowest cluster. Offhand, it would be good to see some variations in costs in different clusters, since the clusters would have different development requirements. It is an indication of some level of strategizing in the provision of interventions.

The breakdown of cost per ha of the different interventions across provincial cluster is shown in Table 3-16. The cost per ha across clusters show wide variability. The highest per hectare cost is that of roads and bridges in the High/Mid cluster costing Php25,589 per ha (Table 3-17).

Table 3-16. Provincial typology cluster showing total intervention cost per ha (using LAD working scope)

		Urbanization		
		Low (highly rural)	Mid (peri-urban)	High (urban)
Geo-physical endowment	Low	P19,788/ha	P23,974/ha	P17,360/ha
	Mid	P36,370/ha	P33,541/ha	P52,547/ha
	High	P19,690/ha	P32,986/ha	P21,945/ha

To gauge the different priorities and determine which cluster received the highest cost per ha, we plot the clusters with the two highest cost per ha of each intervention type. An example would be intervention on irrigation: the Low/Mid cluster and the High/Mid cluster recorded the highest average cost at Php12,759/ha and Php11,395/ha respectively. The results indicate that the interventions tend to be concentrated in particular clusters—predominantly the provinces with medium and high level of geo-physical endowments (across all degrees of urbanization). The High/Mid cluster provinces were the most favored provinces because, on average, they received the most interventions across all types. Those provinces belonging to the Low geo-physical endowment clusters (across all degrees of urbanization) receive low levels of intervention (see Table 3-17).

Table 3-17 Cost/ha of intervention types by provincial cluster

Intervention Type	Low/ Low	Low/ Mid	Low/ High	Mid/ Low	Mid/ Mid	Mid/ High	High/ Low	High/ Mid	High/ High
Roads and bridges	7,813	14,480	9,644	10,395	14,887	15,646	9,529	25,589	11,851
Irrigation	9,205	12,759	3,743	9,601	10,215	8,674	5,834	11,395	5,832
Economic establishments	811	2,170	484	877	567	577	352	1,364	439
Utilities	247	2,109	1,286	617	3,020	2,132	661	6,039	913
Social infrastructure	445	882	854	594	1,167	201	0	849	217
Public establishments and facilities	287	649	692	429	763	356	35	1,198	210
Farm equipment	13	152	41	138	120	344	11	222	144
Agricultural Production, Post-harvest & Marketing projects	205	1,645	2,064	899	1,191	3,980	116	2,776	1,076
Off-farm Livelihood & Enterprise Development Projects	223	213	130	67	273	182	42	660	534
Other Input Support and Tech. Assistance	449	705	515	53	308	452	671	89	581
Social capacity building	91	2,012	237	303	1,029	442	108	2,364	147

The results indicate that there was very little differentiation in the intervention types across the provincial typologies. Ideally two things should be seen.. First, we would like to see differences in the dominant type of interventions received by clusters as this would indicate that interventions were indeed differentiated based on the characteristics and potential of the cluster. Second, the bulk of interventions are spread across different clusters as this would indicate that resources were effectively programmed at the national level, based on provincial priorities.

Table 3-18 shows that the interventions were not differentiated by cluster. We see only five of the nine clusters having the two most dominant (highest cost per ha) interventions. This would indicate that the interventions in the four empty clusters are of smaller scale across the board. However, in the case of interventions relating to off-farm livelihood and enterprise development, we see that these interventions are appropriately concentrated in the High/High and High/Mid clusters. These are highly urbanized provinces lending well to non-farm rural industry activities. However, over-all, we may say that there was little differentiation in the degree of interventions provided across the clusters.

Table 3-18 Provincial typology cluster showing intervention types that received the highest cost per ha of intervention

		Urbanization		
		Low (highly rural)	Mid (peri-urban)	High (urban)
Geo-physical endowment	Low			
	Mid	Irrigation Economic establishments Social infrastructure Other Input Support and Tech. Assistance Social capacity building	Utilities Social infrastructure Public establishments and facilities	Roads and bridges Irrigation Economic establishments Utilities Public establishments and facilities Farm equipment Agricultural Production, Post-harvest and Marketing projects Off-farm Livelihood and Enterprise Development Projects Social capacity building
	High		Roads and bridges Farm equipment Agricultural Production, Post- harvest and Marketing projects	Off-farm Livelihood and Enterprise Development Projects Other Input Support and Tech. Assistance

Table 3-18 likewise shows that the resources (in cost per ha terms) were concentrated in specific provinces, particularly in the High/Mid cluster. Essentially, these province got the

bulk of ODA funding for ARCs. On average, an ARC in this cluster received more resources than ARCs in the other clusters, especially those belonging to the empty clusters in Table 3-18. It can be inferred that the interventions in these ARCs were “package type” interventions. This seems consistent with most of the ODA schemes in DAR. Donors select specific provinces and provide the ARCs in these provinces with a pre-determined set of interventions or sub-projects. Substantial resources are channeled to these provinces, resulting in some provinces getting the lion’s share of ODA funds. Since the funds are allocated only for specific ARCs, they cannot be used to fund other ARCs. This makes it difficult for DAR to provide the appropriate differential interventions as needed by the communities since donors have pre-determined and specific ARCs in mind. The danger here is that resources are not maximized. They cannot be channeled to areas where they are deemed most needed.

V. Conclusions and Recommendations

The ARC strategy of DAR has been implemented for the past 15 years and has gone through three Presidential administrations and six DAR administrations. This is a record of sorts, since no other IAD program of national scope has survived this long. Similar attempts by other agencies have not been sustained⁷. The closest attempt to match (or even go beyond) the scope of the ARC program is the Strategic Agriculture and Fishery Development Zones (SAFDZ) under the Agriculture and Fisheries Modernization Act. Unfortunately, the Department of Agriculture experienced difficulties in identifying and delineating the zones. Likewise, there was a change of administration in the DA before the strategy could fully take-off. Since the strategy was closely identified with the previous DA administration, its implementation did not get the necessary support⁸. This makes the ARC strategy instructive in terms of the design and implementation of an IAD-based rural development strategy utilizing community-driven development approaches.

Previous impact assessment studies conducted on the ARC program indicate that there are positive net benefits compared to the traditional development approaches, but the difference, particularly improvement in household welfare, is minimal.

This study attempts to explain this by assessing the implementation of the program from the selection of ARC barangays to the mix and degree of interventions provided to the ARCs. This has yielded the following findings:

- (1) To begin with, there was a relative lack of geographical targeting in the coverage of lands under DAR’s land acquisition and distribution. The provincial LAD targets (scope) did not match the relative number of landless farmers or the extent of land inequality in the said province. Only the scope of Compulsory Acquisition lands was

⁷ Except for the KALAHYON-CIDSS program of the DSWD, which was launched in 2003 based on the initial gains of its CIDSS program and Indonesia’s Kecamatan Development Program

⁸ Note that with DAR’s ARC strategy, Secretary Garilao remained as DAR Secretary for the entire six years of the Ramos presidency, allowing DAR to implement the ARC strategy for five full years before a new Secretary took over DAR. By that time, the ARC strategy was in full implementation mode.

found to be sensitive to the respective number of landless farmers and the agricultural landholding Gini of the provinces.

- (2) The LAD profile of the ARCs indicate that most of the CARP lands covered by ARCs are GOL, settlement, VOS, and VLT lands, that are covered by collective CLOAs. While DAR managed to cover a substantial area and number of ARBs, these areas were not particularly sensitive to addressing inequality and landlessness. The collective titles would also have an effect in the transformation process of the ARBs, as they would impact in the ability of the farmer to access credit, among others.
- (3) ARC interventions, particularly from the FAPs (which form the bulk of ARC financing) were concentrated in specific provinces, indicating an imbalance in the allocation of development resources. We see very little differentiation in the type of interventions provided across provincial clusters, indicating that interventions were mostly “package type” with a set menu of projects/activities. This would limit DAR’s ability to provide the differential interventions needed to address the differences in the respective characteristics and potential of the ARCs within the clusters.

Taken together, the findings indicate the importance of proper selection and targeting of ARC barangays and the interventions provided therein. Had this been the case, there might have been better outcomes in the ARCs and larger gains compared with non-ARC counterparts.

The provincial typology used in the analysis indicates that the configuration of the interventions provided to the ARCs should be consistent with the character and development potentials of the provinces. Pathways out of poverty will differ across the different clusters. This will largely determine the mix and degree of interventions to be provided. Indeed, a “package” of interventions is needed for ARC development, but the “package” should differ in terms of the size and mix of its contents. These should be carefully considered in program level planning and in proposing for ODA programs.

The number of foreign donors and the amount of grants and loans they have provided for ARC development is a welcome prospect. However, there are several caveats to this. First, donor biases in terms of the geographical focus and the mix of interventions might result in sub-optimal allocation of resources. Second, ODA financing crowds out local resources since counterpart funds are required. Hence, while DAR was able to raise almost Php50 billion in ODA funds, it also had to allocate P18.7 billion in counterpart funds. This money could have been used to fund the non-FAPs ARCs that were not provided with generous ODA funds. Instead, the money was used in the same ARCs that were covered by FAPs. This would further lessen the funds available for the already resource-constrained non-FAPs ARCs. This ultimately might result in a perverse situation since the objective of ODA is to complement limited local resources for ARC development.

Annex Table 3-1 Profile of FAPs intervention by provincial typology

Type of project	Indicator	Typology (level of urbanization and geo-physical endowment)								
		Low/Low	Low/Mid	Low/High	Mid/Low	Mid/Mid	Mid/High	High/Low	High/Mid	High/High
<u>Infrastructure</u>	# of projects	215	1392	336	73	1206	332	12	186	147
	Total cost of projects ('000)	959,675	7,251,554	1,699,514	279,238	6,276,478	1,284,734	93,033	751,531	588,877
	Average cost per LAD scope	7,813	14,480	9,644	10,395	14,887	15,646	9,529	25,589	11,851
<u>Roads and bridges</u>	# of projects	115	686	105	29	434	100	9	60	71
	Total cost of projects	1,130,687	6,389,695	659,643	257,909	4,306,834	712,289	56,957	334,661	289,778
	Average cost per LAD scope	9,205	12,759	3,743	9,601	10,215	8,674	5,834	11,395	5,832
<u>Irrigation</u>	# of projects	35	553	79	18	344	149	5	27	34
	Total cost of projects ('000)	99,650	382,497	85,300	23,569	239,128	47,380	3,441	40,058	21,798
	Average cost per LAD scope	811	2,170	484	877	567	577	352	1,364	439
<u>Economic establishments</u>	# of projects	73	854	118	22	889	163	15	184	88
	Total cost of projects ('000)	30,375	1,056,152	226,643	16,574	1,273,486	175,037	6,457	177,352	45,369
	Average cost per LAD scope	247	2,109	1,286	617	3,020	2,132	661	6,039	913
<u>Utilities</u>	# of projects	19	469	72	8	462	45		23	26
	Total cost of projects ('000)	54,611	441,592	150,537	15,952	492,176	16,505		24,947	10,807
	Average cost per LAD scope	445	882	854	594	1,167	201	0	849	217
<u>Social infrastructure</u>	# of projects	45	362	140	16	389	81	3	69	28
	Total cost of projects ('000)	35,202	324,862	121,952	11,529	321,881	29,261	340	35,196	10,447
	Average cost per LAD scope	287	649	692	429	763	356	35	1,198	210
<u>Public establishments and facilities</u>	# of projects	13	187	11	5	174	83	2	9	17
	Total cost of projects ('000)	1,566	76,101	7,236	3,708	50,651	28,234	109	6,522	7,176
	Average cost per LAD scope	13	152	41	138	120	344	11	222	144
<u>Farm equipment</u>	# of projects	243	1979	512	68	1526	482	21	214	211
	Total cost of projects ('000)	25,213	823,739	363,688	24,150	502,218	326,807	1,135	81,538	53,477
	Average cost per LAD scope	205	1,645	2,064	899	1,191	3,980	116	2,776	1,076
<u>Input support and technical assistance</u>	# of projects	146	908	123	24	926	132	17	98	110
	Total cost of projects ('000)	27,359	106,770	22,900	1,804	115,144	14,981	413	19,391	26,542
	Average cost per LAD scope	223	213	130	67	273	182	42	660	534
<u>Off-farm Livelihood and Enterprise Development Projects</u>	# of projects	175	1015	187	37	873	203	13	55	114
	Total cost of projects ('000)	55,116	353,219	90,758	1,428	129,727	37,078	6,553	2,616	28,880
	Average cost per LAD scope	449	705	515	53	308	452	671	89	581
<u>Others</u>	# of projects	386	2453	250	125	2209	394	54	295	250
	Total cost of projects ('000)	11,205	1,007,448	41,719	8,127	433,797	36,303	1,054	69,435	7,303
	Average cost per LAD scope	91	2,012	237	303	1,029	442	108	2,364	147
<u>Social capacity building</u>	# of projects									
	Total cost of projects ('000)									
	Average cost per LAD scope									

4. HOW PRO-POOR HAS CARP BEEN?

I. Introduction

Relatively few efforts have been made in the past to examine empirically the *causal* impact of agrarian reform policies on rural poverty. It seems to have long been taken for granted that CARP implementation would benefit the rural poor and thus contribute to rural poverty reduction. Given the long history of agrarian reform policy implementation in the Philippines, this is not surprising.

Agrarian reform in the country dates back to the early 20th century under United States colonial rule (e.g., Hayami et al. 1990, Putzel 1992, Reidinger 1995, Fuwa 2000, etc.). The basic goal of ‘land to the tiller’ was mostly in place on paper by the 1960s, although the 1988 Comprehensive Agrarian Reform Law significantly expanded its scope. The focus up to the 1960s was that of the poor tenant farmer, and intermittent rural peasant unrest of the period provided the main driving force for the series of agrarian reform legislations (e.g., Hayami et al. 1990, Takigawa 1976, Fuwa 2000). In those days, there existed land frontiers in the South, where landless households migrated from more densely populated areas, such as Luzon.¹

With the closure of such frontiers in the 1960s, the proportion of the rural landless increased rapidly after the 1970s (e.g., Balisacan 1993, Hayami and Kikuchi 1982, 2000, Fuwa 1999). At the same time, economic activities in rural areas diversified rapidly, with an equally rapid increase in the proportion of non-agricultural activities available for rural landless workers (construction, plumbing, tricycle driving, local shops, etc.). As a result, tenant farmers and farm workers are neither the only rural poor nor the majority of the rural poor in some areas. The types of economic activities supporting poor households in rural areas have become increasingly diverse in the past few decades. It has become an increasingly open question whether agricultural development alone (including land reform) is the best policy instrument to reduce rural poverty. To what extent has CARP actually benefited the rural poor?

This chapter addresses the issue of how much impact CARP implementation has had on rural poverty. There is no definitive study that can provide a conclusive assessment. However, the study will attempt to re-interpret existing evidence, taking into account various advantages and shortcomings of each study. Furthermore, additional data analysis is conducted to supplement the existing literature. The study then examines the extent to which CARP implementation has been pro-poor.

¹ There were such documented cases, for example, from a Northern Luzon village to Mindanao until the 1960s. Anderson (1975).

II. Review of Existing Evidence

Few studies demonstrate whether - and to what extent - CARP beneficiaries have actually been poor households. There are also few studies that look into whether agrarian reform beneficiary (ARB) households (if they were indeed poor households) were able to escape from poverty *as a result of* CARP. This chapter reviews the existing studies that quantitatively examine the impact of CARP implementation and also presents some additional, original results. The discussion is organized along the types of dataset used, starting with household-level analyses and moving progressively toward more aggregated levels, such as the village and province levels. Those studies, which use different levels and units of observations, constitute mutually complementary empirical evidence for the magnitudes of impact of CARP in the past two decades.

a. Household-level analysis: cross-section.

A few studies have examined the relationships between the ARB status of a household and welfare outcomes such as household consumption expenditures or incomes, based on household-level cross-section data. Reyes (2003), for example, uses the 2000 University of the Philippines, Los Baños, Institute of Agrarian and Rural Development Studies (IARDS) household data. The IARDS data initially collected household-level data on the sample of 8,932 farm households across 342 barangays in 43 provinces in 1990. The sample excluded non-farm households, such as landless laborers and other households not engaged in farming. A subset of 1,854 households in 40 provinces was re-surveyed in 2000.

Reyes (2003) finds, among others, that being an ARB household is associated with per-capita income higher by Php4,000 (about 20% of the average income), after controlling for other household characteristics, such as household size, schooling of the household head, access to irrigated land, ‘access to credit’ and whether or not residing in an Agrarian Reform Community (ARC), based on the 2000 cross-section regression analysis.² Similarly an additional year of being an ARB is found (in a slightly different specification estimated separately) to be associated with higher *per capita* income by Php1,400 (7% of the average). Reyes (2003) also finds that “being a government service beneficiary” (which could perhaps be interpreted as a close proxy for ‘being in an ARC’?) is associated with an additional Php4,000 increase in *per capita* household income.³ Since the dummy variables for ‘being an

² She also finds positive correlations between the ARB status of a household and household-level outcomes, such as household income, years of schooling, the type of house, ownership of household appliances, larger farm sizes, etc., by examining cross-section correlations in 2000 and 1990 conducted separately. In addition, the 2000 data also suggest that 44% of ARBs perceived themselves as ‘poor’ households, based on the subjective (and qualitative) perception of the respondent (rather than ‘objective’ and quantitative measures such as income, consumption etc.). It should be noted that a substantially higher percentage (57%) of non-ARBs rated themselves as “poor” households.

³ Reyes (2003) conducts separate regressions using, as the dependent variable, the *per capita* household income (Tables 36 and 37) and the “probability of being non-poor” (Table 34). The sets of control variables (as reported in Tables 34-37) are somewhat different between the two models although there is no reason that the right-hand-side variables should be different. In theory at least, they must be identical. Most critically, ARC status is controlled in one specification while the variable ‘ARC status’ is apparently substituted with a variable called ‘government services’ in the other. Furthermore, the names of the variables found in the main text (p. 55) do not correspond to those found in Tables 36 and 37, to which the text refers. This chapter follows the variable names

ARB' and for 'being a government service beneficiary' are entered separately in the regression specifications, the impacts of land tenure improvements (LTI) and ARC interventions are assumed to be independent of each other with no 'synergy' effects between them.

A major limitation of Reyes (2003)'s results is that she defines 'ARB' status broadly to include not only CARP beneficiaries but also those of earlier land reform laws such as PD 27 under President Marcos. It has been well documented by many micro-level studies (Hayami and Kikuchi, 1982, 2000; Otsuka 1990, Mangahas 1985, Umehara 1997, etc.) that land reform beneficiaries during the 1970s (prior to or simultaneously with the spread of high yielding rice varieties) gained massively owing to the rapid increase in rice yield made possible by 'green revolution' technology. The value of land rental in the case of leaseholders and the amortization payments in the case of Operation Land Transfer beneficiaries stayed relatively low because the values were based on the yields of traditional rice varieties. However, it is unlikely that similarly favorable conditions were present in the case of CARP beneficiaries (Fuwa 2000). Indeed, the IARDS data suggest that CARP beneficiaries constitute only a small minority of the "ARBs" (14%) in the data.

APPC (2007) uses an alternative dataset, namely, the 2004 round of Annual Poverty Indicators Survey (APIS), which is "about the only survey of the [National Statistics Office or NSO] that puts together information on land ownership, acquisition through CARP, incomes and expenditure." A major advantage of NSO datasets is their large and nationally representative samples. Unlike the IARDS panel data, NSO data includes landless and non-farm households, with relatively large numbers of observations and variations at the community level. Furthermore, in the APIS dataset, "ARBs" are limited only to CARP beneficiaries.⁴

A disadvantage with NSO data, on the other hand, is the absence of panel observation at the household level, which IARDS can provide (see below). Like Reyes (2003), APPC (2007) finds that, after controlling for a number of household and community-level characteristics (which do *not* include the size of landholdings), the *per capita* household consumption expenditure (as well as *per capita* income, net farm income and the probability of being non-poor) is significantly and positively correlated with both the ARB and ARC status of the households.

Based on the regression coefficients obtained by APPC (2007), the *per capita* household consumption expenditures of landowning households are 15% to 17% higher, on average, than those of landless households who benefited from neither LTI or ARC components of CARP, after controlling for other household characteristics. The *per capita* consumption expenditures among ARBs (but without ARC interventions) are similarly higher by 15% on

found in the main text, rather than in the Tables. In addition, this chapter does not see much point in conducting separate regressions using *per capita* income (or consumption expenditure), on one hand, and the poor/non-poor dummy, on the other. The underlying model is identical between the two specifications and the latter approach (using the poor/non-poor dummy) only involves throwing away information as the continuous variable (*per capita* income or consumption) is converted into a binary one.

⁴ This is how the APIS questionnaire is designed although it does not exclude the possibility of errors in respondents' answers.

average compared to those of landless households. Such results suggest, therefore, that having access to land has the same magnitude of welfare impact, whether it is obtained through CARP or through other means (through inheritance or through purchase). Note, however, that since the size of landholdings is not controlled for in the regression this does not rule out a possibility that landholding size might be larger among non-ARB landowners than among ARB landowners. This implies that larger positive impacts on *per capita* consumption of being an ARB are partially cancelled out by such differences in landholding sizes.⁵

On the other hand, the regression coefficients for the dummy variables representing ARC interventions among landless households or among non-ARB landowners are not significantly different from zero. It appears that ARC intervention *alone* has negligible effects on both landless households and non-ARB landowning households. In contrast, being an ARB residing in an ARC is associated with a 7% to 8% increase in *per capita* consumption expenditures compared with those of non-ARB landowners residing in ARCs. This suggests that the additional 7%–8% increase could be interpreted as ‘synergy’ effects of combining land tenure improvement (ARB status) and ARC interventions. The *per capita* consumption expenditures of the households benefiting from the combined effects of simultaneous LTI and ARC interventions are about 23% higher than those of the landless households benefiting from neither intervention.⁶ These results suggest that the land acquisition and distribution component of CARP should continue to be the core operation and a top priority. However, stronger synergy with the provision of support services should be incorporated in the program’s design.

While such evidence at the household-level is suggestive, typically it is not immediately clear whether cross-section *correlations* can be interpreted as representing *causal relationships* in the sense that higher welfare measures (e.g., *per capita* income or higher probability of being non-poor) are a direct consequence of becoming agrarian reform beneficiaries, as pointed out by many⁷. It is potentially possible that the income of ARBs tend to be higher because, due to various factors that are not (or cannot be) controlled in the regression analysis, ARBs tend to have higher income on average than those non-ARBs *even without* becoming CARP beneficiaries. For example, if some ‘unobserved’ factors (e.g., being endowed with lands with better soil quality; having higher farm management skills, etc.) are directly related to both CARP implementation and household welfare outcomes, positive statistical correlations could emerge even if there is no direct causal relationship between the ARB status and higher income.⁸

⁵ For that matter, it does not theoretically exclude the opposite possibility where landholding sizes among ARB landowners tend to be larger than those of non-ARB landowners so that possibly smaller impact of being an ARB is partially and seemingly inflated by such differences in landholding sizes. Since CARP beneficiaries are not likely to be large landowners, however, such possibility would appear to be unlikely.

⁶ Again, however, this does not necessarily exclude the possibility that the average landholding size of ARBs in ARCs could be larger, or be better endowed in other unobserved ways, and such effects are erroneously interpreted as the ‘synergy’ effects.

⁷ See, for example, Balisacan’s comments on Reyes, 2003, found in DAR CARP-IA Vol. 1,2003.

⁸ The kind of difficulties in interpreting observed statistical correlations as causal relationships in the context of econometric analyses is broadly referred to as ‘endogeneity problems’ within the economics profession. See, for example, Wooldridge (2002), esp. Chapter 4.

Furthermore, it has been pointed out that some CARP beneficiaries were heirs of landowners whose land would have been redistributed under the law (e.g., Borras; World Bank). While it is not clear what the proportion is of such heirs among ARBs (based on a small scale study on World Bank's pilot project, such proportion was 10%(?) of all ARBs), to the extent that those heirs constitute a part of ARBs, their presence could be a source of spurious correlations.

b. Household-level analysis: household-panel data.

Potentially more informative and interesting than cross-section analyses is to look at IARDS panel data (i.e., the observations on the same households in different points in time). Reyes (2003) reports that the real *per capita* household income (expressed in 1994 pesos) increased by 12% among ARBs but declined by 8% among non-ARBs. Note, again, that 'ARB' status here is defined broadly as those who benefited from CARP as well as earlier land reform programs. Similarly, the headcount poverty ratio declined from 47.6% to 45.2% during 1990-2000 among ARBs but increased from 55.1% to 56.4% among non-ARBs. Among the ARB households living under the poverty line as of 1990, 38% of them became non-poor by 2000 while somewhat lower 30% of the non-ARBs living below the poverty line in 1990 became *non-poor* during the same period. Similarly, 30% of the non-poor ARBs as of 1990 fell into poverty by 2000 and substantially higher 39% of non-ARBs who were not poor as of 1990 became poor by 2000.

This divergence between ARBs and non-ARBs seems to suggest the positive impact of CARP implementation. However, Gordoncillo et al (2003; 18) find in the same dataset that the average household size among ARBs declined from 6(6.3) to 5(5.3) during 1990-2000 while the average household size declined more slowly from 5.7 to 5.3 - and there was no change in average household size at 5 - among non-ARBs. Therefore, it appears that the different patterns of change in *per capita* income and poverty incidence is driven mainly by a faster rate of decline in ARB household size. There could be a reasonable explanation of why household size declined much faster among ARBs than among non-ARBs. Without such an explanation, however, it would be difficult to interpret the divergent patterns in both *per capita* income and poverty incidence changes between ARBs and non-ARBs. It also would be difficult to attribute it to the agrarian reform program.

An additional limitation of the IARDS dataset is that CARP beneficiaries constitute a small minority of the 'ARBs'. So it is difficult to assess the impact of CARP, which is the focus of this report. For that reason, an attempt has been made to re-examine the IARDS panel data (1990-2000) by redefining 'ARB' status to include only CARP beneficiaries. Table 4-1 summarizes preliminary findings. Incidentally, the change in household size does not differ dramatically between CARP beneficiaries and non-beneficiaries. Average household size declined from 6.1 to 5.5 among CARP beneficiaries and from 5.9 to 5.2 among non-beneficiaries. The average real *per capita* income among those households that gained access to land through CARP after 1990 increased from Php14,625 in 1990 to Php21,903 in 2000, while that of non-beneficiaries increased from Php18,025 in 1990 to Php21,575 in 2000.

As a result, the average growth over 1990-2000 in real *per capita* income among ARBs was Php7,300 while that of non-ARB households was Php3,600. The difference at 15% was marginally significant. In addition, poverty dynamics among the IARDS sample households between 1990 and 2000 reveal that 52% of CARP beneficiaries who were poor in 1990 became non-poor by 2000. Among non-ARBs, 51% of the poor as of 1990 became non-poor by 2000. On the other hand, 15% of CARP beneficiaries who were not poor in 1990 fell into poverty by 2000 while 22% of non-poor, non-ARB households during the same year became poor by 2000. Those results appear to be consistent with the possibility of positive impact of CARP implementation during the 1990s although the magnitude of such impacts seems quite modest.

It is worth reiterating the major limitations of the IARDS panel dataset. Although the survey was meant to be nationally representative, the survey population was limited only to farm households at the time of the 1990 baseline survey. Landless worker households, including those that subsequently became farm households because of CARP, and other non-farm households, were excluded. Furthermore, and more importantly, a reliable and consistently defined measure of living standard across different survey rounds (in 1990 and 2000) is absent. Although, ideally, a comprehensive consumption expenditure survey module using the identical questionnaires could have been conducted in both 1990 and 2000, no such module was included. This survey could have been of the type included in typical Living Standard Measurement Studies (LSMS) surveys often conducted by the World Bank⁹.

Reasonably comprehensive household incomes are obtained in both survey rounds, instead. While incomes are usually considered as less desirable than consumption expenditures as a measure of living standards, as far as measured incomes are comprehensive and comparable over time, they still serve useful purposes. It has been found, however, that the measured incomes might not be strictly comparable between the 1990 and 2000 rounds, as pointed out by many (e.g., Habito et al, 2003). A casual examination of the survey questionnaires used in 1990 and 2000 suggests, for example—

- that the itemized labor inputs in farm production are not strictly comparable (leading to potentially non-comparable labor expenses in the calculation of net farm incomes),
- that information on livestock production was taken much more in details in 1990 than in 2000 (potentially leading to non-comparable livestock incomes), and
- that the crude questionnaires used to elicit annual non-farm and off-farm incomes (a process that could be quite complicated) make one wonder whether the procedures for eliciting income information can be controlled between survey rounds (as well as among survey enumerators within the same survey round).¹⁰

In the end, however, it is not immediately clear how serious the problem of non-comparable incomes are between survey rounds, or whether incomes are likely to be systematically

⁹ See Deaton and Grosh (2000) for details.

¹⁰ Fuwa (2007) discusses some examples of how measurement errors can arise in eliciting off-farm labor incomes in the context of rural Philippines.

overestimated in one round than in the other. In the absence of any other proxy measures of household welfare levels measured over time in the IARDS panel, there is no other alternative but to utilize the income data, hence the analysis conducted above. Having said that, it is quite unfortunate that the powerful features inherent in the use household-level panel data, such as the possibility of directly observing welfare trajectories of each household as well as of controlling for (time-invariant) unobserved heterogeneity among households, cannot be fully exploited with the existing datasets.

c. Barangay level analyses.

In addition to the cross-section household-level analysis as summarized above, APPC (2007) also reports the results of a barangay-level analysis focusing on the impact of ARC interventions on the average level of household welfare. Unlike the household-level cross-section regression results reported earlier, APPC (2007)'s barangay-level study attempts to control for the potential endogeneity biases with the propensity score matching technique. In this approach, for each ARC barangay, a "control barangay" is selected among non-ARC barangays by searching for a barangay that is the most similar to the ARC barangay in terms of the likelihood of ARC coverage, which, in turn, is estimated using observable village-level characteristics. The impact of ARC interventions can be inferred as the average differences in the village-level welfare measures between the paired ARC and non-ARC barangays.

The matched comparison of 2,934 barangays with 1,467 ARCs and non-ARCs reveals that the average *per capita* consumption expenditures in ARCs increased by 19.5%, from Php12,157 in 1990 to Php14,525 in 2000, while the average *per capita* consumption expenditures in the matched non-ARCs increased by a slightly lower 18.3% from Php12,189 in 1990 to Php14,422 in 2000 (APPC, 2007).¹¹ Similarly, the headcount poverty ratio in ARCs declined from 39.8% in 1990 to 24.2% while the poverty ratio in matched non-ARCs fell from 39% in 1990 to 24.6% in 2000. The village-level average *per capita* consumption expenditures thus grew faster in ARCs than in non-ARCs even after the effects of ARC targeting are partially controlled for.¹² The quantitative magnitudes of the differences are quite modest, however.

The relatively small difference found in the average *per capita* consumption expenditures between ARCs and non-ARCs (less than 1% in 2000) at the barangay-aggregate level here is not directly comparable with the household-level cross-section regression results implying a 7% higher *per capita* consumption among *land-owning* ARB households in ARCs compared to ARBs in non-ARCs, after controlling for other household and community characteristics. This is in part because the former is the average across all households in the barangay including those households without land (and other non-ARBs) who tend to gain little from ARC interventions. Another possible reason for the small impact of ARC interventions on

¹¹ In fact, the *per capita* consumption expenditures used here are not the actual figures that do not exist in the Census of Population and Housing, but rather predicted ones; they are obtained by first estimating the parameters of an income generating function using FIES (where consumption expenditures are observed) and then predicting *per capita* consumption using the Census data by plugging the right hand side variables (i.e., household and barangay characteristics) into the estimated income generating function.

¹² Estimated standard errors of *per capita* consumption are not reported, however, and thus the test of statistical significance in the observed differences between ARCs and non-ARCs cannot be carried out.

average village-level consumption expenditures: ARC interventions merely substituted for similar interventions, such as infrastructure development, to be carried out by conventional line agencies.

Having said that, both approaches (i.e., the regression and the matched comparison) of comparing cross-section differences in the level of *per capita* consumption expenditures at one point in time rely on the same basic assumption. There exists no additional, unobserved factors affecting ARC status (as well as of the ARB, for that matter, in the case of the regression analysis) once the effects of observed factors are accounted for (by including those variables as regressors in the regression, or by including those variables as the right-hand-side variables in the model estimating the propensity scores in the process of forming the ‘matching’ sample). Both approaches are potentially vulnerable to the presence of any unobserved factors affecting both the ARC status and the outcome variables (*per capita* consumption, income, etc.). There has been an argument found in the literature, however, that “with good data, propensity score matching can greatly reduce the overall bias and outperforms regression-based methods (Ravallion, 2001, 126).”

It is unlikely, however, that the above assumption - the absence of unobserved factors affecting both ARC status and outcome variables - is strictly met in practice. Taking the difference between the 1990 and 2000 observations can at least eliminate the effects of all the unobserved factors that are time-invariant (no change over the period 1990 and 2000), which could include soil quality of farmers’ plots, various abilities of farmers (e.g. physical, managerial, learning, etc.), and preferences. Such difference-in-difference (DD) type estimates based on the IARDS household panel suggest only marginally significant difference in the growth in *per capita* incomes between CARP beneficiaries and non-beneficiaries as well as very small difference in the pattern in poverty dynamics between CARP beneficiaries and non-beneficiaries. Similarly, DD estimates of the growth in *per capita* consumption expenditures between ARCs and matched non-ARCs turn out to be very small. Those observations suggest that the relatively larger correlations observed at the cross-section household-level analyses might indeed contain some biases due to unobserved heterogeneity across households and across communities.

d. Regional/provincial level analyses.

Apart from the micro-level evidence, Balisacan and Fuwa (2003, 2004) conducted provincial-level analyses. They investigated the relationship between provincial-level poverty outcomes and regional-level accomplishments in CARP implementation. They find that during the period 1988-1997, the increase in CARP implementation is positively and significantly associated with both provincial growth and poverty reduction, and also that CARP might have effects of both improving production efficiency (raising income growth) and equity (reducing poverty, even after controlling for the average income growth). Their regression analysis implies that a 10% increase in CARP accomplishment is associated with a 0.2 percentage point increase in the annual rate of provincial poverty reduction. A later replication of the same analysis based on the data period 1988-2000 finds, however, that CARP might have growth effects but not any significant re-distributive effect (Balisacan 2007). His result implies that a 10% increase in CARP accomplishment is associated with a

0.4 percentage point increase in the annual rate of provincial poverty reduction. Due to data availability at the time, those results were based on region-level (instead of provincial-level) variations in CARP implementation.

III. Assessing the Impact of CARP on Poverty

Further attempts have been made to examine the impact of CARP on poverty based on the same empirical modeling strategy as Balisacan and Fuwa (2004) but utilizing more recent provincial panel data on CARP implementation, on the one hand, and on the change in poverty, on the other. Analyses are conducted for two separate data periods, namely, 1991-1997 and 1991-2006. The first data period corresponds to the initial 10 years of CARP implementation and the second period roughly corresponds to the entire two decades since the enactment of CARP in 1988. Given that CARP was enacted in 1988, the 1988 round of FIES could be included. However, the sample sizes of FIES were substantially smaller prior to its 1991 round. As a result, this study excludes the 1988 round from its analysis in the following. In fact, as it turns out, the main qualitative inference on CARP impact on provincial poverty is not affected, regardless of whether the 1988 round is included or not.¹³

The conceptual framework underlying the empirical specification used by Balisacan and Fuwa (2004) and followed here is based on the neoclassical growth theory where the rate of growth (and thus poverty reduction) at the provincial level is determined by initial conditions, including the level of initial income (which controls for the process of conditional convergence) and by policy variables that include the implementation of CARP. This is a reduced form model. In this model, the coefficient of a variable representing a policy lever measures the net effects of the particular policy on poverty, taking into account both direct and indirect effects. In the case of CARP implementation, the net effects include both growth effects and re-distributive effects arising from CARP.

Preliminary data analyses using the 1991-1997 panel revealed (not reported here) that time-varying policy ‘levers’ (mortality, education, road, and electricity) were not significantly associated with the rate of poverty reduction once the initial conditions were controlled for. Also, neither the initial level nor their changes over time in human capital (education or mortality) were found to be significant. Consequently, the empirical specifications reported here consist of the initial income level, the initial level of infrastructure (road density, electricity, and irrigation), the initial level of income inequality and the change during the data period in CARP implementation and the change in agricultural terms of trade (the 1988-1997 data period only). The coefficients on the change in CARP implementation in the regression estimates can be interpreted as provincial-level ‘difference-in-difference’ estimates (controlling for time-invariant unobserved heterogeneity in determining the level of poverty incidence) of the impact of CARP implementation on poverty incidence.

Results are summarized in Table 4-2. The total increase in ‘CARP implementation’ (as defined by the amount of area covered by CARP divided by the ‘scope’) is significantly

¹³ The results of the analysis including the 1988 FIES round are not reported here, but are available from the author.

negatively associated with the rate of change in poverty incidence for the data period during 1991-2006, but not for the data period 1991-1997. For the period 1991-1997, however, it is the re-distribution of privately owned land and not that of publicly-owned land that has significant positive effects on poverty reduction. The increase in CARP accomplishments in private lands is significantly associated with poverty reduction.

For the period 1991-2006, on the other hand, although the magnitude of the coefficient is much larger for CARP accomplishments in the distribution of privately-owned land than for public land, the standard error of the former coefficient is quite large so that it is not significantly different from zero while the coefficient of publicly owned land distribution is small but marginally significant. Coefficient estimates suggest that a 10% increase in the accomplishments in CARP implementation as a whole (1991-2006) or in private land re-distribution (1991-1997) is associated with a roughly 3 or 2 percentage point *increase*, respectively, in the rate of poverty *reduction*. Since the average rate of change in poverty incidence across all provinces during 1991-2006 was roughly 40%, the magnitude of the poverty reduction impact of CARP implementation could account for up to 8% of the average rate of poverty reduction over the period.

Additional attempts have been made to further disaggregate CARP accomplishments to examine which components of CARP re-distribution had the largest impact on poverty reduction. The results are somewhat mixed. During the data period 1991-1997, most of the CARP subcomponents appear to have had statistically significant impact on poverty reduction. The impact is found to be quantitatively large for Operation Land Transfer and compulsory acquisition programs. Rather surprisingly, for the data period 1991-2006, none of the program subcomponents, when evaluated separately, is found to be significantly associated with poverty reduction.

Also, attempts have been made to examine the potential ‘synergy’ effects of CARP implementation and infrastructure development (which could be considered as a test for the effectiveness of the idea behind the ARC strategy). The study does this by introducing interaction terms between CARP implementation and the change in infrastructure. None of the estimated coefficients for those interaction terms has been found to be significantly different from zero, however.

a. Conclusions.

This subsection has reviewed empirical evidence on the impact of CARP on rural poverty. It is unfortunate that a program of CARP’s magnitude has been plagued by a lack of systematic data suitable for proper impact evaluation based on scientific standards. A main obstacle is the absence of household-level panel data containing reliable welfare measures (such as detailed consumption expenditures) that are comparable over time. While IARDS data contain household-level panel observations and thus are potentially useful, the sample excludes non-farm households so that the impact of CARP on initially landless households cannot be assessed. The definition and comparability over time of household incomes, which are not the best measure of the level of household welfare but still the only available measure in the dataset, are both questionable. The consumption expenditure data are too crude to be

used for a welfare measure and the construction of a panel over time (including the extent of attrition) is unclear. Investing in a scientifically sound system of M&E should be at the top of the agenda in case CARP were to be extended.

Other data sources, notably the censuses of population and housing, and of agriculture and FIES, are nationally representative and have sufficiently large samples but none of them contains household-level panel observation. Consequently, data need to be analyzed either cross-section wise, with all the potential endogeneity problems inhibiting rigorous causal inferences, or with the construction of panel observations of higher-levels of aggregation, such as the barangay or the province level. The statistical analyses based on household-level cross-section data suggest that the average *per capita* consumption among households gaining access to land through land tenure improvement) interventions under CARP, without additional support services, are about 15% higher than that of landless, non-beneficiary households. Benefiting from ARC interventions, in addition to the LTI intervention, appears to be associated with *additional* 8% higher *per capita* consumption (thus 23% increase from both LTI and ARC interventions).

As discussed earlier, however, such cross-section statistical correlations might not necessarily be interpreted as causal impact, due to unobserved heterogeneity and non-random program placement. In fact, it appears that the results of the analyses containing attempts to control for potential endogeneity biases, such as propensity score matching (e.g., APPC 2007) and DD estimates based on panel data, tend to find quantitatively smaller magnitudes of CARP impact. This observation suggests that cross-section results might be biased.

At the end, however, despite all the caveats in the available data, the existing evidence collectively suggests that CARP implementation had *some* significantly positive welfare impacts on its beneficiaries. It is difficult to fix the quantitative magnitude of its impact, however. Perhaps, a safe conclusion to draw is that, on the one hand, the actual impact of CARP on the rural poor might not have been as dramatic as its proponents would have liked to see, but that, on the other hand, CARP has not been as ineffective as some of its most fierce critics have claimed either. The review also suggests that land tenure improvement interventions should remain the core operation of CARP.

Table 4-1 Impact of CARP implementation on poverty: IARDS Panel 1990-2000

Δ 1990-2000	Among CARP beneficiaries* (arb1990b)	Among Non-CARP Beneficiaries	Difference ARBs vs. Non-ARBs t-ratio (p-value)
<i>Real per capita income (pesos)</i>			
1990	P14,625	P18,025	1.59 (0.11)
2000	P21,903	P21,575	0.16 (0.88)
Δ per capita income	P7,279	P3,621	1.45 (0.15)
<i>Δpoverty status (# of households)</i>			
<i>among the poor in 1990</i>	155	1,315	
<i>poor(1990)-poor(2000)</i>	75 (48.4%)	649 (49.4%)	
<i>poor(1990)-non-poor(2000)</i>	80 (51.6%)	666 (50.6%)	
<i>among the non-poor in 1990</i>	26	337	
<i>nonpoor(1990)-poor(2000)</i>	4 (15.4%)	74 (22.0%)	
<i>nonpoor(1990)-nonpoor(2000)</i>	22 (84.6%)	263 (78.0%)	

*Those households who reported gaining access to land through CARP after 1990

Table 4-2A Impact of CARP implementation on poverty: FIES Provincial Panel 1991-1997

Dependent variable = Annual rate of change in poverty incidence					
<i>Initial conditions</i>	1	2	3	4	5
Log(<i>per capita_exp_1991</i>)	0.546*** (2.20)	0.484* (1.99)	0.023 (0.11)	0.329 (1.38)	0.422* (1.78)
Gini p _{exp} .1991	-16.93364** (2.01)	-14.646* (1.86)	-11.811 (1.47)	-14.511** (2.08)	-16.011** (2.07)
Gini p _{exp} .1991 squared	21.564* (1.90)	18.796* (1.77)	16.578 (1.51)	18.710* (1.98)	20.747* (2.00)
Road density 1988	-0.717 (1.29)	-0.639 (1.09)	-0.411 (0.70)	-1.154 (1.46)	-0.548 (0.89)
Irrigation 1991	-0.307 (1.38)	-0.242 (1.19)	-0.040 (0.16)	0.111 (0.27)	-0.230 (1.02)
Electricity 1991	-0.732** (2.25)	-0.733** (2.20)	-0.509 (1.47)	-0.497 (1.50)	-0.753** (2.17)
<i>Policy levers (time variant)</i>					
Δag. terms of trade	-0.324 (1.05)	-0.339 (1.03)	-0.330 (1.19)		
ΔCARP accomplishment					
Total (all categories)	-0.165 (1.28)				
Private land total		-0.266** (2.65)		-0.098 (0.40)	-0.243 (1.38)
OLT			-0.681** (2.41)		
GFI			-0.023*** (3.54)		
VOS			-0.108** (2.15)		
CA			-0.430** (2.31)		
VLT			-0.003 (1.33)		
Non-private land total		-0.041 (1.60)	-0.079*** (2.93)		-0.060 (2.64)
Constant	-1.816 (0.83)	-1.640 (0.71)	2.099 (0.83)	-0.349 (0.18)	-0.755 (0.35)
<i>Testing for 'synergy' (interaction terms)</i>					
ΔCARP*initial irrigation				-0.832 (1.35)	
ΔCARP*initial road density				0.861 (0.49)	
ΔCARP*Δroad density					-0.261 (0.09)
R-squared	0.396	0.464	0.571	0.427	0.450
No. of obs.	66	66	66	66	66

Table 4-2B Impact of CARP implementation on poverty: FIES Provincial Panel 1991-2006

Dependent variable =Annual rate of change in poverty incidence			
<i>Initial conditions</i>	6	7	8
Log(<i>per capita_exp_1991</i>)	0.956*** (3.18)	0.909*** (2.83)	0.389 (1.10)
Gini p _{exp} .1991	-27.731*** (2.68)	-26.517** (2.23)	-8.008 (0.52)
Gini p _{exp} .1991 squared	36.784*** (2.66)	34.955** (2.31)	11.730 (0.56)
Road density 1988	-0.887* (1.82)	-0.739 (1.13)	-0.554 (0.76)
Irrigation 1991	-0.240** (0.69)	-0.201 (0.53)	-0.237 (0.75)
Electricity 1991	-1.026*** (2.72)	-1.029** (2.16)	-0.555 (1.37)
<i>Policy levers (time variant)</i>			
Δ ag. terms of trade			
Δ CARP accomplishment			
Total (all categories)	-0.269*** (3.17)		
Private land total 2		-0.174 (1.23)	
OLT			-0.494 (1.35)
GFI			-0.001 (0.07)
VOS			-0.042 (0.43)
CA			0.0003 (0.01)
VLT			-0.001 (0.20)
Non public land total		-0.032* (1.74)	0.036 (1.20)
Constant	3.603 (1.52)	-3.427 (1.41)	-2.183** (0.51)
<i>Testing for 'synergy' (interaction terms)</i>			
Δ CARP*initial irrigation			
Δ CARP*initial road density			
Δ CARP* Δ road density			
R-squared	0.360	0.337	0.295
No. of obs.	66	66	66

5. LAND MARKETS, TENURE SECURITY AND SMALL FARM PRODUCTIVITY: IMPLICATIONS OF CARP FOR EQUITY AND PRODUCTIVITY

A popular criticism against CARP is of its adverse impact on investments in agriculture. A big part of the problem is CARP's slow implementation and the uncertainty it has brought to the sector. As a result, investments have been postponed, if not cancelled altogether. In instances, however, where CARP succeeded in redistributing land, it is said that beneficiaries have not been equipped for their new role as farmer-owner-decision maker. They are generally risk-averse and not too keen on participating in the market. Needless to say, these results are farthest from the minds of the proponents of the CARP. This chapter will carefully examine these trends and determine if these effects can be directly or indirectly attributed to CARP.

I. Profile of Farmholdings

The 2002 Census of Agriculture estimates that there are 4.82 million farmholdings covering 9.67 million hectares. Almost 4 million hectares are planted to rice, 2.4 million to corn, and 345,000 to sugarcane. These three crops make up almost 70% of total agricultural lands but contribute only 33.5% of Gross Value Added (GVA) in agriculture.

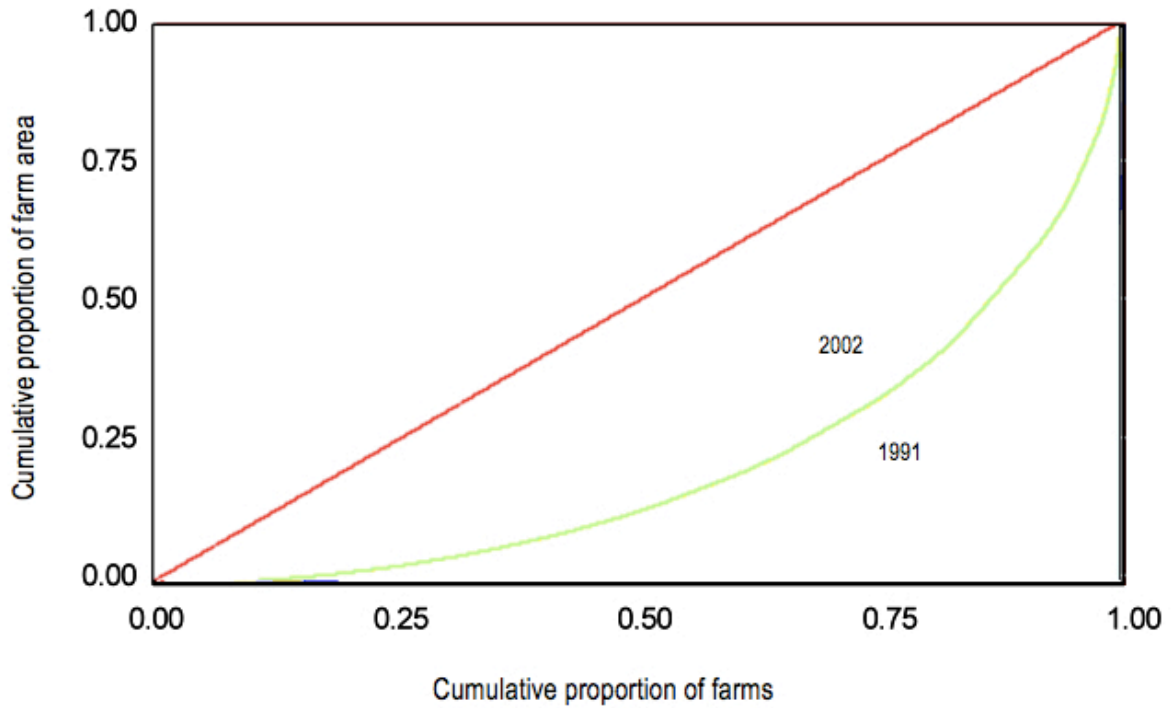
Palay farms number 2.15 million. Of these, about 40% consists of farms less than 1 hectare in size; one-third is between 1 to 2 hectares. About 4% is above the retention limit of 7 hectares. Note that for CARP beneficiaries, the area awarded can be up to 3 hectares. The proliferation of smaller-sized farms could be a reflection of how CARP is understood, even by its implementers. The emphasis is on the retention limit and not the principle of having "economic-sized" farms. In fact, there are a number of farmholdings covered under the VLT/VOS modes that are actually within the retention limit. These number to about 86,000 or 37% of landholdings covered.

There are 1.46 million corn farms in 2002. Similar to palay farms, these are small farms, 31% less than 1 hectare and 38% between 1 to 2 hectares. Only 4% is beyond the CARP retention limit. About 12% of farms planted to sugarcane are beyond the retention limit of 5 hectares. However, if only fully owned farms are considered, this proportion goes down to 6.5% covering 239,151 hectares. The inequality is very high, though. The study finds that while only 1% of farms are greater than 25 hectares, these farms already cover 34.5% of total area planted to sugar. As seen in Figure 5-1, the land distribution in 2002 is a replica of the distribution in 1991. Gini coefficient stagnated to 0.58 (from 0.577 in 1991 to 0.575 in 2002).¹

¹ Note that the survey frame used in the 2002 Census of Agriculture is the same frame used in 1991. The Census of Agriculture is a survey census. Total enumeration was done in only five provinces.

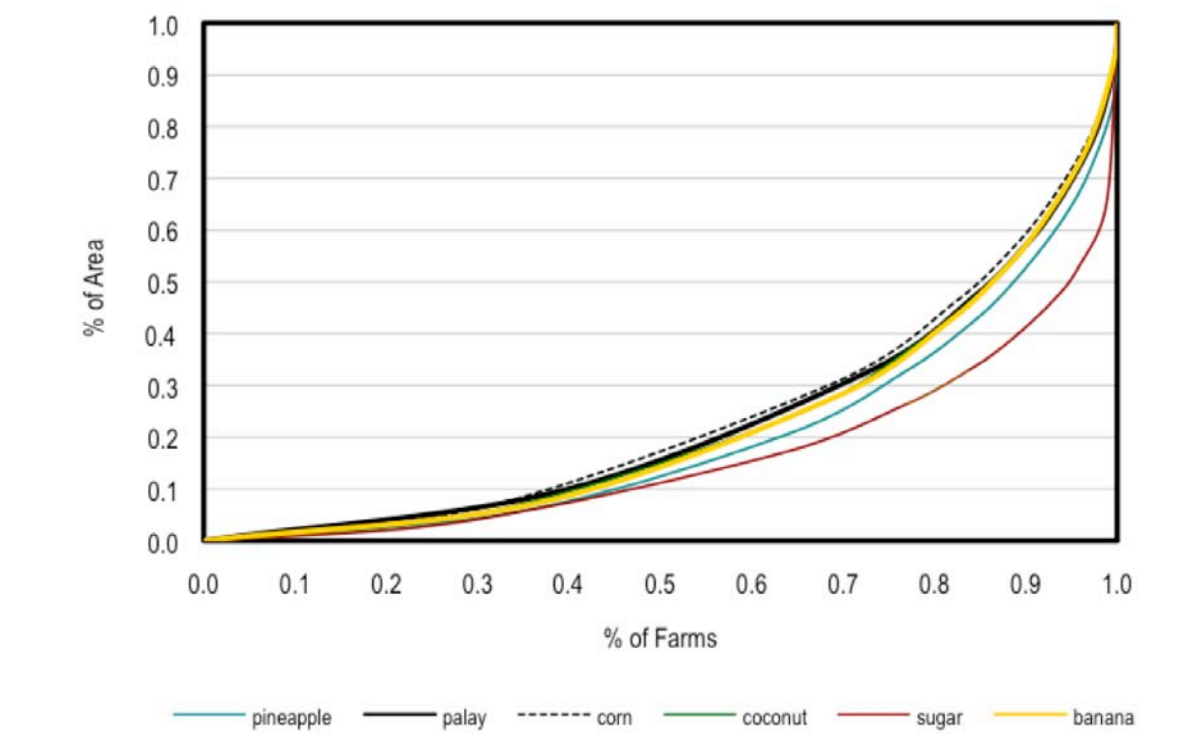
Chart 5-2 plots the Lorenz curve of the distribution of farms according to major crop planted—palay, corn, coconut, sugar, banana, and pineapple. The plots support the popular perception of unfinished CARP coverage in sugar farms, and to some extent, in pineapple farms. Of course, this assumes invariance in the choice of crops.

Figure 5-1 Land distribution in 1991 and 2002



Source: Author's estimates based on the 1991 and 2002 Census of Agriculture.

Figure 5-2 Lorenz curve of selected crops, 2002



Majority of operators of palay farms up to 3 hectares do not own these farms (Table 5-1). Owner-cultivatorship becomes the dominant mode only in palay farms greater than 3 hectares. Corn farms at least 1 hectare in size are more likely to be operated by the owners themselves. The same holds for farms planted to banana, cassava, camote, onion, and tomato that measure at least 1 hectare (complete listing is in Annex Table 5-1). Interestingly, operator-cultivatorship is the preferred mode in sugar farms measuring at least 2 hectares.

Table 5-1 Distribution of farms by tenure status of major crops planted, 2002 (in %)

Tenure status of farms	Farm size (ha)								
	Less than 1	1.001 to 2.000	2.001 to 3.000	3.001 to 4.000	4.001 to 5.000	5.001 to 7.000	7.001 to 10.000	10.001 to 25.000	Greater than 25
<i>Palay</i>									
Own	41.6	46.2	48.2	50.3	52.5	53.0	55.2	57.0	64.1
Tenanted	15.2	16.3	13.3	12.6	11.9	11.5	11.4	10.1	7.4
Leased	7.7	6.6	4.8	3.9	3.5	3.0	3.0	2.4	2.7
Rent free	3.5	2.8	2.1	1.8	1.9	1.7	1.5	1.2	0.7
Other forms	0.4	0.5	0.6	0.7	0.7	1.1	1.4	1.3	1.0

Tenure status of farms	Farm size (ha)								
	Less than 1	1.001 to 2.000	2.001 to 3.000	3.001 to 4.000	4.001 to 5.000	5.001 to 7.000	7.001 to 10.000	10.001 to 25.000	Greater than 25
Own and tenanted	10.6	7.3	7.1	6.2	4.8	4.8	3.7	3.2	1.6
Own and leased	0.6	0.9	1.5	1.7	1.7	1.6	1.8	1.5	1.5
Other forms	20.4	19.3	22.5	22.9	23.0	23.4	22.1	23.3	21.0
<i>Corn</i>									
Own	39.3	51.3	53.9	55.2	59.8	58.4	60.6	59.9	62.7
Tenanted	22.5	18.2	13.0	11.8	11.3	11.2	11.1	10.8	7.7
Leased	5.8	4.7	3.7	3.3	2.6	2.5	2.5	2.5	2.4
Rent free	9.8	5.5	3.3	2.9	2.7	2.4	2.5	1.7	1.0
Other forms	0.9	1.2	1.3	1.4	1.7	1.8	2.7	2.0	1.9
Own and tenanted	5.0	3.2	3.4	2.9	1.9	1.9	1.3	1.1	0.9
Own and leased	0.4	0.5	0.9	1.0	0.9	0.9	0.8	0.7	1.0
Other forms	16.3	15.5	20.5	21.5	19.1	20.9	18.5	21.2	22.3
<i>Coconut</i>									
Own	54.4	54.6	53.2	53.3	55.4	54.5	55.3	56.2	62.7
Tenanted	13.3	16.4	14.7	14.2	14.6	14.4	14.8	13.9	10.8
Leased	4.6	4.2	3.9	3.6	3.0	3.0	3.1	2.8	2.7
Rent free	6.3	3.5	2.6	2.3	2.2	2.0	1.9	1.5	1.1
Other forms	0.6	0.7	0.7	0.7	0.8	0.9	1.0	0.9	0.8
Own and tenanted	3.5	2.6	2.9	2.6	2.1	2.4	2.3	2.3	1.1
Own and leased	0.2	0.4	0.6	0.6	0.6	0.6	0.6	0.6	0.8
Other forms	17.0	17.6	21.5	22.6	21.2	22.2	21.0	21.8	19.8
<i>Sugarcane</i>									
Own	43.7	50.0	50.7	51.4	54.9	54.4	54.6	56.0	55.9
Tenanted	14.3	14.2	11.7	10.5	10.4	9.3	9.8	9.0	7.5
Leased	7.8	5.9	4.5	4.7	3.4	3.2	4.1	3.2	4.0
Rent free	10.0	5.4	4.5	4.0	3.4	2.8	2.5	1.6	2.4
Other forms	0.7	1.2	1.2	0.9	0.6	0.9	1.3	0.5	0.9
Own and tenanted	4.4	3.3	3.9	3.5	2.6	2.5	2.0	1.2	0.8
Own and leased	0.1	0.3	0.4	0.5	0.6	0.4	0.8	1.0	0.9
Other forms	19.0	19.7	23.1	24.3	24.0	26.5	24.9	27.5	27.4

Authors' estimates based on the 2002 Census of Agriculture.

Farms planted to pineapple and garlic are under other forms of arrangement, not owner-cultivatorship, regardless of farm size. In contrast, majority of farms planted to cabbage and citrus are under owner-cultivatorship, regardless of farm size.

II. Farm Size and Access to Credit and Land Markets

The viability of the small farm sector is determined to a large extent by access to key factors of production specifically credit and land. Lack of access would mean inability of small farmers to manage agriculture risk, undertake investments, and utilize farm labor and assets effectively. It is possible that access to these markets is determined by the size of farm. That is, farm size can be used as proxy for risk or even expected returns. If this is so, then land reform measures such as CARP can have adverse effects on agriculture and rural development.

On the other hand, it is argued that CARP does not only result in the break-up of large farms but also provides secure land tenure, which induces investment demand and credit supply effects. Households tend to increase investments on land when they perceive that the security on land rights provides them evident claim over the benefits from these investments. The provision of property rights also expands the ability of farm households to make investments since lenders become more willing to make loans when land pledged as collateral is secure and free of competing claims. If these effects prevail, than an inverse relationship between farm size and productivity would dominate since the higher efficiency of family labor in small farms would be complemented by access to other factor markets.

a. Access to credit markets.

Studies have shown that credit is an important element in agricultural production and in shaping the structure of the agrarian economy. Access to credit increases the capacity of farmers for greater investment and consumption as credit provides an insurance substitute against production or income fluctuations. However, the literature also notes that in many developing countries, rural credit markets are imperfect due to significant information asymmetries and monitoring costs. There is thus a bias among formal market lenders to focus their lending activities to less “risky” rural households. This risk factor tends to be defined by the wealth conditions of households and by the existence of desirable collateral such as land. The provision of “desirable” collateral is central to the goals of CARP. Land is not only a factor of production but a valuable asset as well. Thus, beneficiaries of CARP would be better off than non-land owners in agriculture.

- Risk profile of Agrarian Reform Beneficiaries.

This section describes the risk profile of households engaged in agriculture, particularly the ARBs. It is important to know if the new landowners, i.e., ARBs, do pose greater risks to lenders even if they already own the land.

Although a CLOA suffers from many shortcomings as an instrument for credit, it must be recognized that the presumption of risk is still the primary constraint to credit. This section describes the risk profile of households engaged in agriculture, particularly the ARBs. It is important to know if the new landowners do pose greater risks to lenders, even if they already own land.

Based on the 2004 Annual Poverty Indicator Survey, only 17% of all households own agricultural land.² If only households with at least one member engaged in agriculture are considered, then only about 30% of them own agricultural land. The following describes the risk profile of five types of households:

- ARB—at least one member is an agrarian reform beneficiary
- Non-ARB in agriculture, with land—none of the members is an ARB, at least one is engaged in agriculture, and the family owns agricultural land
- Non-ARB in agriculture, without land—none of the members is an ARB, at least one is engaged in agriculture, and the family does not own agricultural land
- Non-ARB, not in agriculture, with land—none of the members is an ARB, none of the members is engaged in agriculture, but the family owns agricultural land
- Non-ARB, non in agriculture, without land—none of the members is an ARB, none of the members is engaged in agriculture, and the family does not own agricultural land

Figure 5-2 above shows that 40% of all households have members engaged in agriculture. Less than one-third owns agricultural land. There are also households that do not work in the agriculture sector but own agricultural land—less than 5%.

Households whose members do not work in agriculture have better educated household heads. The non-ARBs who work in agriculture but do not own land have the lowest quality of human capital as measured by age and education of the household head.

Poverty incidence is lowest among households that are not in agriculture, especially those that own agricultural land (9%). As expected, non-ARBs who are in agriculture but do not own land have the highest poverty incidence. Interestingly, poverty incidence among ARBs is lower than among non-ARBs in agriculture but with land.

The ranking of the groups by poverty incidence is supported by the above table. In terms of current income, ARBs pose lower credit risk vs non-ARBs in agriculture, even those with land.

² Note that this is less than what was found in the 2000 Census of Population and Housing.

Table 5-2 Equity profile across household types

Characteristic	ARB	Non-ARB in agri with land	Non-ARB in agri without land	Non-ARB not in agri with land	Non-ARB not in agri without land
<i>Household head characteristics</i>					
Mean age	51	51	46	52	45
Mean years of schooling	7.2	6.4	5.9	10.0	9.5
% High school graduate	30.0	25.0	19.0	60.0	59.0
<i>Welfare characteristics</i>					
Mean per capita income, pesos	25,120	19,024	13,725	53,134	32,167
% Poor	25.0	37.0	50.0	9.0	15.0
% of income spent on food	58.0	61.0	64.0	39.0	42.0
<i>Assets (% with)</i>					
House and lot	8.9	7.2	2.4	13.5	3.0
Car	22.1	15.2	9.1	37.1	19.2
Sala set	42.9	35.8	25.7	65.7	53.2
Television set	55.6	46.1	39.1	79.4	79.1
Component	14.8	9.1	5.1	34.1	23.6
CD/DVD/VCD player	33.3	24.8	16.9	53.6	47.5
Karaoke	23.6	18.0	11.6	31.4	23.7
Radio/cassette player	61.7	61.4	55.3	59.5	52.6
Refrigerator/freezer	31.3	24.8	14.4	63.5	49.6
Gas range	21.8	14.2	10.5	39.8	32.3
Washing machine	22.2	14.2	9.6	43.7	41.3
Air condition	4.2	1.7	0.6	14.9	8.4
Computers	3.4	1.6	0.6	15.2	8.8
Mobile phone	34.0	23.9	15.1	60.6	50.6
Total estimated assets, pesos	258,752	239,544	19,477	349,176	55,038

The asset profile of ARBs rank second to those on non-ARBs who are not in agriculture but owns agricultural land. This means that ARBs are better risks than even non-ARBs who own land.

Table 5-3 Sources of income

Source	ARB	Non-ARB in agri with land	Non-ARB in agri without land	Non-ARB not in agri with land	Non-ARB not in agri without land
<i>Entrepreneurial activities (%)</i>					
Crop farming	73	87	46	16	2
Livestock	19	18	14	5	2
Fishing	4	6	15	0	0
Forestry	2	2	2	0	0
Trade	17	14	12	28	23
Manufacturing	3	4	4	5	3
Personal serv	3	2	2	6	6
Transport	6	4	3	10	8
Mining	0	0	0	0	0
Construction	0	0	0	0	0
NEC	0	0	0	2	1
Number of EA engaged in	1.3	1.4	1.0	0.8	0.5
<i>Income from other sources (%)</i>					
Wages	25	19	36	36	51
Enterprise	45	52	38	22	18
Foreign remittance received, pesos	11,697	7,302	3,360	35,683	20,520

These profiles show that ARBs are the best qualified for credit among the other groups engaged in agriculture.

Table 5-4 Human capital of household members

	ARB	Non-ARB in agri with land	Non-ARB in agri without land	Non-ARB not in agri with land	Non-ARB not in agri without land
<i>Quantity</i>					
Family size	4.94	4.95	5.05	4.44	4.54
Household members age <1	0.09	0.09	0.11	0.08	0.09
Household members ages 1 – 6	0.55	0.61	0.75	0.49	0.66
Household members ages 7 – 14	0.95	1.04	1.13	0.81	0.86
Household members ages 15-24	1.01	0.93	0.92	0.85	0.84
Household members ages 25 up	2.34	2.29	2.14	2.20	2.09
<i>Quality</i>					
Household members ages 18 up	2.98	2.87	2.71	2.76	2.64
% HS grad	41.00	36.00	29.00	68.00	65.00

- Determinants of access to credit.

The credit supply effect of CARP is in general perceived to be unfavorable. Some sectors have even considered CARP a stumbling block to access credit due to the possible loss of collateral value of agriculture land (Estanislao and Llanto, 1992; Ravalo 1998). This loss arises from the eroded exchange value of agriculture land as a result of the following: (1) the legal impediments on the conveyance of lands under CARP which make them non-transferable and non-marketable within a period of 10 years upon award of the title; (2) most CARP lands are mortgaged with the Land Bank and second mortgages are uncommon in the country; (3) the incomplete assignation of property rights through the issuance of collective CLOAs and the problems with regard to the conversion of Certificate of Land transfers (CLTs) into titles.³ CARP issued titles thus have not attained the same acceptance in the formal sector as with judicially issued titles (LAMP 2004).

The impact of CARP on credit is ascertained using farm level data from the 2000 and 2006 IARDS survey. The two surveys were undertaken to provide comparisons across years. Originally, 1,824 households were interviewed in 2000 but during the resurvey in 2006 only 1,623 of the former respondents can be resurveyed.⁴ From this list we dropped those households whose household heads were not the same as those interviewed in 2000. The data for analysis emerged from a panel of 3,120 households.

Table 5-5 Distribution of loans by source and by farm size

Loan Source	2000				2006			
	All	Small	Medium	Large	All	Small	Medium	Large
Formal	182 (25.7)	151 (25.7)	23 (22.5)	8 (42.1)	136 (32.9)	118 (33.1)	13 (27.7)	5 (55.6)
Banks	77 (10.9)	63 (10.7)	12 (11.8)	2 (10.5)	41 (9.9)	35 (9.8)	5 (10.6)	1 (11.1)
Cooperatives	74 (10.4)	62 (10.5)	7 (6.9)	5 (26.3)	63 (15.3)	55 (15.4)	5 (10.6)	3 (33.3)
Farmer's Associations	9 (1.3)	7 (1.2)	1 (1.0)	1 (5.3)	15 (3.6)	13 (3.6)	1 (2.1)	1 (11.1)
NGOs	1 (0.1)	0	1 (1.0)	0	3 (0.7)	3 (0.8)	0	0
Gov't Agencies	21 (3.0)	19 (3.2)	2 (2.0)	0	14 (3.4)	12 (3.4)	2 (4.3)	0
Informal	527 (74.3)	437 (74.3)	79 (77.5)	11 (57.9)	277 (67.1)	239 (66.9)	34 (72.3)	4 (44.4)
Private Money	159	130	27	2 (10.5)	136	119	17	0.0

³ Prior to the approval of the CARP law (RA 6657), EO 228 was issued in July 1987 declaring full ownership of land covered by PD 27. This law provided for the conversion of all certificates of land ownership issued under PD 27 into Emancipation Patents (EPs) regardless of the status of land amortization payment. However, not all CLTs have been converted to titles due to ownership conflicts, owner's non-acceptance of valuation and/or lost mother titles of the redistributed lands.

⁴ No replacement was provided for dropped households. The reasons given for the attrition of ARB respondents were as follows 42.7% was caused by death, 17.1% by migration, 12% by selling or mortgaging, and 6.1% by physical disability. There were no reasons provided for the attrition of non-ARB households. DAR and UPLB Foundation (2007), *Assessment of CARP and its Impact on Rural Communities: Micro Perspective (Final Report)*.

Loan Source	2000				2006			
	All	Small	Medium	Large	All	Small	Medium	Large
Lenders	(22.4)	(22.1)	(26.5)		(32.9)	(33.3)	(36.2)	
Friends/Relatives	183 (25.8)	160 (27.2)	21 (20.6)	2 (10.5)	66 (16.0)	61 (17.1)	4 (8.5)	1 (11.1)
Traders	145 (20.5)	116 (19.7)	24 (23.5)	5 (26.3)	51 (12.3)	36 (10.1)	12 (25.5)	3 (33.3)
Landowners	12 (1.7)	10 (1.7)	2 (2.0)	0	4 (1.0)	4 (1.1)	0	0
Input Dealers	28 (3.9)	21 (3.6)	5 (4.9)	2 (10.5)	20 (4.8)	19 (5.3)	1 (2.1)	0
All	709 (100)	588 (100)	102 (100)	19 (100)	413 (100)	357 (100)	47 (100)	9 (100)

Farm size: small <= 3 ha, medium 3.1-7.0 ha, large >=7.1 ha
 Figures in parentheses are percentage to total.

The households were selected through stratified random sampling from 43 provinces that had the largest area of CARP lands. The respondents were also classified into ARBs, those who have been awarded lands or have been instituted as leaseholders under CARP, and into Non-ARBs, those who are not beneficiaries or have not been awarded land under the CARP.

The analysis of data shows that farm households remain dependent on informal credit in 2000 and also in 2006 (Table 5-5). This is observed for both small-sized farms (i.e., less than or equal to 3 hectares) and medium-sized farms (i.e., >3 to 7 hectares). On the other hand, there are more large-sized farm owners that had access to formal sources of credit in both years.⁵ Overall, the number of loans availed by households in 2006 is lower by about 40% than in 2000

Table 5-6 Average nominal interest rates by source of loan

Source of Loan	2002			2005		
	No.	Ave.	Std. Dev.	No.	Ave.	Std. Dev.
<i>A. Formal Sources</i>	264	17.9	12.7	497	33.1	26.9
Rural Banks	22.3	14.5	14.50	73	14.1	14.1
Commercial Banks	21.4	18.0	18.01	6	6.3	6.3
Other Private Banks				33	13.5	13.5
Land Bank (Land Bank)	15.7	3.7	3.70	14	7.3	7.3
DBP	13	0.0	0.00	1	0.0	.
UCPB				5	5.4	5.4
GSIS/SSS	8.8	2.1	2.12	12	6.3	6.3
QUEDANCOR				32	5.5	5.5
LGU	13.2	7.8	7.81	8	16.6	16.6

⁵ Formal lenders include both private and government bank and non-banking institutions including government agencies with lending activities. This definition is adopted from the Agricultural Credit Policy Council.

Source of Loan	2002			2005		
	No.	Ave.	Std. Dev.	No.	Ave.	Std. Dev.
Natl/Foreign-aided Project	1.7	0.1	0.10	11	17.2	17.2
Cooperatives	16.2	13.3	13.31	152	20.9	20.9
Lending Investors	23.3	13.7	13.71	38	47.8	47.8
Other Formal Sources	15.3	11.3	11.33	112	34.1	34.1
<i>B. Informal Sources</i>	<i>334</i>	<i>39</i>	<i>27.4</i>	<i>476</i>	<i>60.8</i>	<i>60.9</i>
Traders/Millers	23.2	15.5	15.48	185	44.1	44.1
Landowners/Employers	24.4	13.7	13.65	14	38.7	38.7
Input Suppliers/Dealers	17.9	18.3	18.32	36	58.1	58.1
Private Moneylenders	67	56.3	56.26	86	80.2	80.2
Friends/Relatives	44.3	49.2	49.21	138	56.9	56.9
All loans	598	29.5	16.6	973	46.7	48.7

Sources: Agricultural Credit Policy Council. Small Farmers and Fisherfolk Credit Accessibility Survey 2002; and Small Farmer's Survey, 2005

Access to the formal credit market is critical because of the significantly lower interest rates provided by these institutions. As shown in Table 5-6, average nominal rate in the informal sector is twice that of the formal sector. Although borrowing from the formal sector can be tedious due to several requirements, there have been significant changes in the strategies of the formal sector in recent years. Formal credit institutions have become less traditional. They have adopted some strategies of the informal sector such as payment in kind, non-land collateral, and temporary take-over of cultivation in case of loan defaults. Credit unions and microfinance institutions have also increased in number to supply the credit demand of rural households that are traditionally not served by banks. In particular, the cooperatives and farmers' associations have been the main sources of credit of small farmers. Government non-bank agencies including local government units are also providing credit to small farmers but this strategy is being discouraged since it can only lead to distortions and inefficiencies in the market as evident from past directed credit programs of the government.

Increasing access of small farmers to formal credit remains an important policy issue. Several studies have noted the intrinsic wealth biases of rural credit markets. Those that are able to access the market tend to have higher incomes and more land assets than those not offered a loan. Similar biases are displayed in the sample households. Table 5-7 contains some descriptive statistics of wealth measures of households that received a loan from formal sources. These households have higher average incomes than those that had no access or could not borrow from the formal credit market. They also have higher value of non-land assets. All farm households have diversified incomes but households that borrow from the informal sector appear to have higher dependence on agriculture. Another important finding is that households with loans from the formal sector have higher area of titled owned farmlands. This could mean that legally secure tenure on farmlands has a positive impact on credit access.

Table 5-7 Mean wealth levels of households by credit demand

	Positive Effective Demand		Zero Effective Demand (no need)	Positive Notional Demand		
	Loan Recipient			No access	Can't afford	Borrowed from informal only
	Banks	Coops				
No. of households	38	72	289	102	508	265
Area of titled owned land	0.8	0.7	0.9	0.6	0.5	0.6
Area of formal owned land	0.4	0.6	0.5	0.5	0.6	0.5
Non-land assets (P)	118,564	176,442	241,643	98,041	95,364	131,155
Household income (P)	91,803	60,709	61,300	45,047	45,766	83,913
% Agriculture income	38.5	20.6	17.5	8.6	22.2	44.0
% Off farm income	3.6	2.9	3.0	4.7	5.6	3.1
% Non-farm income	48.2	59.2	35.8	48.1	42.1	30.8
% Remittance income	9.8	17.4	43.8	38.6	30.0	22.2

Note: Households that borrow from both formal and informal credit sources are not included due to very few observations

To further examine the effect of legally secure and individual property rights on credit, the study classified households into the type of title ownership on farmland. Under the Philippine Property Registration law and the process of title issuance under CARP, there are different forms of property rights on agriculture land. The collateral value of land might vary depending on the type of title or rights given. This means that different types of titles or property rights can have differential impact on credit access.

From the IARDS panel data, the study classified households into types of title ownership on agriculture land operated. The categories of households based on type of title are as follows: “Titled” households are those with at least one parcel or lot of farmland held with formal, legally registered and mortgageable title. Farms with titles in the form of TCT, EP or CLOA-I belong to this category. The “Formal” category refers to households that do not qualify as Titled. These households have acceptable legal rights of ownership but can only be recognized as full owners upon completion of the titling process. Farms with Mother CLOA, CLT and Deed of Sale as proof of ownership belong to this category.⁶ The last class “Other” includes households with farmlands held with no formal, legal rights of ownership or have yet to obtain legal or formal rights of ownership.

Table 5-8 displays the distribution of households in 2000 and 2006 based on the above categories. The proportion of titled households with access to credit (i.e. unconstrained) is

⁶ A Mother CLOA is a title issued by DAR to several CARP beneficiaries. At the Land Registry, the beneficiaries are not reflected as title owners but legal claimants to a property as annotated in the property title of the landowner covered by the program. They become titled owners upon completion of a parcelization process that will identify the actual area of each beneficiary. The CLT are certificates of ownership issued under PD 27, which by law should have been converted into EPs but were not due to reasons cited above (Footnote 1). Deeds of sale or mortgages are contracts that indicate transfer or sale of property to another owner. The law allows for the process of title transfer to be undertaken within a period of one year; otherwise the contract becomes void.

higher compared to those with formal titles. The classification of households in terms of access to credit from the formal sector (i.e., unconstrained or constrained) is based on respondents' responses to the question about their actual and perceived access to credit. Households classified as unconstrained or with access are those that availed of loans from the formal sector and those that did not need a loan possibly due to sufficient capital. The constrained households are those that had no access, unable to afford or borrow only from informal lenders. Households who borrowed from both the formal and informal sectors are assumed quantitatively rationed. These households would have been expected to obtain their desired credit requirements from the formal sector. Considering that interest rates from the informal credit market are much higher than the formal sector, households would tend to seek loans from the informal sector last. Their failure to receive the credit needed despite the presence of formal lenders in the market provides evidence of credit rationing.

While there are more titled household with access to formal credit, the proportion (26% in 2000 and 28% in 2006) is low. It is possible that the limited effect is due to the low percentage of titled lands that are fully paid. Under CARP, beneficiaries on private agricultural lands have to pay the Land Bank the amount paid for the land awarded to them. The land awarded to the beneficiary thus is mortgaged to the Land Bank until the total value of the awarded land is fully paid. The acceptability of titled lands as collateral if not fully paid is limited. However, this problem is magnified in the case of formal titles since the issue is not only amortization payment but also incomplete transfer of ownership rights.

Table 5-8 Distribution of sample households by type of property rights

	2000			2006		
	Titled	Formal	Other	Titled	Formal	Other
Number of observations	780	45	281	493	364	543
Mean household expenditure	56,711	41,103	60,615	80,075	73,624	69,436
Unconstrained households (%)	26.4	13.3	30.2	28.4	22.5	22.1
Households in ARCs (%)	31.0	44.4	19.2	49.1	58.2	36.8
ARB households (%)	75.1	95.6	40.2	66.5	87.9	28.5
Cooperative members (%)	40.6	62.2	47.3	36.5	34.1	30.9
Share of land irrigated (%)	39.2	20.6	38.4	37.1	34.8	31.7
Mean age of household head	55.5	45.8	55.3	62.1	60.6	57.8
Fully amortized households (%)	25.9	11.1	6.8	29.2	36.3	7.2

	2000			2006		
	Titled	Formal	Other	Titled	Formal	Other
<i>Number unconstrained</i>	206	6	85	140	82	120
<i>Number in ARC</i>	242	20	54	242	212	200
<i>Number ARB</i>	586	43	113	328	320	155
<i>Number cooperative members</i>	317	28	133	180	124	168
<i>Number fully amortized</i>	202	5	19	144	132	39

Titled—HH with at least one parcel/lot owned that is titled- TCT, EP, CLOA-Individual; Formal—Mother CLOA, CLT, Deed of Sale/Mortgage as proof of ownership; Other—Lease contract, Tax declaration, Certificate of stewardship, none.

Unconstrained HH—(a) borrow only from formal creditors; (b) no need to borrow.

Constrained HH—(a) no access or no capacity; (b) borrow from informal creditor only; (c) borrow from both formal and informal creditors

Table 5-8 also shows that there are more ARB households in the titled category but a sharp increase in the number of household in the formal category is observed in 2006. This seems consistent with the attempts of the DAR to fast track accomplishments on land distribution through the issuance of collective CLOAs. It could also mean that several households have acquired titled farmlands through sale or mortgage (e.g., land pawning). Membership in cooperative and ownership of titled land seems not strongly linked. Households that rent-in land can be members of cooperatives and thus could have access to formal credit

The positive effect of title on access to credit is supported by regression results. The econometric model is based on a notional credit demand function that considers both lender's loan offer decisions and household's perception of its credit status. The latter include households that consider themselves being rationed based on previous loan application or from their own assessment of the likelihood to obtain a loan. The model is estimated with a binary probit procedure using observable household-specific and lender-specific characteristics as regressors.

Table 5-9 Probability of access to credit

Variables	Random Effects			Fixed Effects			Pooled (OLS)	
	Coef.	Std. Err.	dF/dx	Coef.	Std. Err.		Coef.	Std. Err.
Fully amortized dummy	-0.054	0.096	-0.016	0.030	0.043		-0.013	0.130
Titled owned land	0.051	0.024	**	0.014	0.026	**	0.012	0.005
Formal owned land	0.006	0.044		0.002	0.013		0.005	0.007
HH expenditure	0.138	0.052	***	0.041	0.011		0.008	0.006
HH members with tertiary education	0.010	0.002	***	0.003	0.001		0.003	0.000
Age of household head	-0.007	0.020		-0.002	0.000		0.000	0.003
Age of household head square	0.000	0.000		0.000	0.000		0.000	0.000
Distance to bank	-0.001	0.004		0.000	-0.004	*	0.000	0.000
ARC dummy	0.134	0.072	*	0.039	0.044		0.012	0.011
ARB dummy	-0.156	0.079	**	-0.045	-0.038		-0.021	0.011
Membership in coop	0.335	0.069	***	0.101	0.028		0.059	0.011
Brgy urban dummy	0.059	0.108		0.017	(dropped)		0.001	0.017
Percent irrigated land	0.001	0.001		0.000	0.000		0.000	0.000
Province dummy	0.000	0.000	*	0.000	(dropped)		0.000	0.000
_cons	-2.425	0.781			0.345		-0.087	0.099
	No. of obs.	2,070		No. of obs.	2,070		No. of obs.	2,070
	Wald chi2(15)	109.53		F (13, 887)	1.24		Wald chi2(15)	149.47
	Prob > chi2	0.00		Prob > F	0.24		Prob > chi2	0.00
	Log likelihood	-1,074.89		corr (u_i Xb)	-0.143		Log likelihood	47.25

*** = significant at 1%

** = significant at 5%

* = significant at 10%

The results show that title has a significant positive effect on access to formal credit markets. This finding is consistent for random, fixed effects, and pooled regressions. Compared to those with “weak” titles, i.e., “formal” households, an increase in the area of titled owned land increases the probability of getting a loan from the formal sector by 1.4% (Table 5-9). Household education and income (proxied by household expenditure) are among the factors that have strong positive impact on access to credit. Compared to the income and asset position of households, the effect of title on access is low. It is also possible that the positive impact of CARP property titles is muted due to unpaid amortization. The requirement particularly of banks for full payment of the land to release the land from mortgage with the Land Bank can lead to preemptive rationing among households.

The importance of title can be viewed under different credit rationing outcomes. Barham, Boucher, Carter (2008) show that credit constrained outcomes are due to either price- or non-price rationing. The latter includes mechanisms such as quantity rationing and risk rationing. Taking into account these types of rationing, the empirical evidence from Peruvian farmers shows that title has the effect of relaxing quantity rationing among formal loan applicants by as much as 10 percentage points from those with no title. In the case of risk rationing, title has the effect of reducing this risk by about 2 percentage points. This means that without clear, individual, and legal title households can be discouraged to apply for loans since they perceive that banks or formal lenders would provide loan offers that would require them to bear significant risk.

Legally registered individual title becomes even more important under an environment of weak land administration. When comprehensive information on land resources and ownership are absent, legal registered titles facilitate credit investigation on the borrower’s claims over the revenues on land even when land is not used as collateral. On the other hand, incomplete title increases the information costs. It is possible that the lender offers a loan contract but at interest rates higher than titled households. This can discourage potential “less risky” borrowers since they are unable to afford the loan.

Membership in cooperatives or farmers association also came out as highly significant determinant of access to credit. Cooperatives and farmers associations have been identified as institutions that can fill in the gap to improve access to credit specifically for farming households. Compared to banks, cooperatives and credit unions have lower information and monitoring costs because their clientele are members and operations are community-based. Cooperatives also tend to have less stringent requirements on land as collateral. The development and viability of cooperatives in the country, however, remain to be the challenge. A significant number of farm households are non-members of cooperatives or associations and these households are mainly dependent on informal sources of credit.

Households within ARCs tend to have better access to credit than those in non-ARCs. This access is possibly generated by the availability of support services in these communities. On the other hand, an ARB has a negative impact on access to credit, which means that ARBs are more credit constrained. This finding shows that overall the impact of CARP on access to credit is muted because the program focused mainly on land redistribution without complete assigning of property rights and sufficient support services including strengthening of

cooperative system. Nevertheless, recent experiences with developing credit cooperatives within ARCs and providing new approaches for linking micro-finance institutions to small farmers in ARCs have proved quite successful. A case in point are the results of the MICROSOL and AGRISOL models elaborated as part of the World Bank-supported Second Agrarian Reform Communities Development Project described in more detail in Box 5-1.

Box 5-1 Pilot experiences in developing access to credit in small farmers communities

Under MICROSOL, existing and mature microfinance institutions (MFIs) are provided an operating cost subsidy for three years on a declining basis to reach out to project areas. The MFIs could use the subsidy to cover project and non-project areas on a 1:3 ratio. This resulted in a sufficient client base over the three-year period to achieve viable and sustained MFI operations in the area. MICROSOL has supported 39,079 ARC microenterprises—mainly women—with a continuing credit portfolio of Php210 million and savings mobilization of Php32 million.

AGRISOL is a pilot enterprise-led approach, with formal credit from the Land Bank of the Philippines. A project unit was established within the LBP Head Office so that all policies and practices were integrated within the LBP hierarchy, including staff performance review indicators. Business Development Specialists were appointed to assist ARCs in identifying market opportunities, securing contracts, preparing business plans and completing bank application requirements. Credit was approved on the basis of a signed buyer's contract. Loan funds were channeled directly to an ARCDP2 cooperative if it fulfilled basic financial management requirements. Alternatively, credit was provided through an existing LBP credit conduit. To date, AGRISOL has assisted 26,977 ARC producers to achieve firm, viable market linkages with a credit portfolio of Php115 million. The Land Bank is continuing to extend operations in the pilot areas. Further, LBP has established enterprise development teams and a national training program across the whole country modeled on the AGRISOL approach.

b. Access to land markets.

The extent to which beneficiaries of CARP should be allowed to transfer their land rights is an important policy issue. At present, there are legal restrictions that constrain ARBs to freely engage in land market transactions. The reason behind this is the possible consolidation of landholdings by larger and wealthier farmers. On the other hand, restricting the transfers of land rights can lead to inefficiencies. It prevents households from using the land market as adjustment mechanism to respond to imperfections in other non-land factor markets. This efficiency advantage, however, depends on whether access to the land market is determined by productive ability rather than wealth. An efficient land market ought to contribute to equity by providing land access to the poor and to greater productive efficiency.

- Land sale market.

Land transfers can be through sale or rental. The distinction is important since land sales and land rental markets might respond to rural market imperfections in different ways. In many developing countries, the land sales market is often viewed as inefficient since wealth and access to credit tend to be the dominant factors to access the land sale market. The study is unable to test this empirically in the case of the Philippines due to lack of data. The evidence on the extent and dynamics of agriculture land sales is thin.

However, the manner on how these sales are undertaken can give insights into the reasons for land sale (or purchase) and the possible distortions that can arise from these transactions. There are direct and indirect ways of sale of agricultural lands. Indirect sales are done through waiver of rights, land conversion or land pawning. Waiving of rights is common on sale of CARP awarded lands. In this scheme, farmer beneficiaries make written waivers in favor of other persons. The act involves a voluntary release of rights and possession of the land. One reason for the use of waiver is that the awarded land has not been fully paid and thus not eligible for sale. It is common knowledge in agrarian villages and in the municipal DAR offices that waiver of rights is used by contracting parties to undertake sale transactions or ownership transfers (DAR 1996, p. 7). Transfer via waiver has been significant but no systematic record of these waivers is available at the DAR municipal or provincial offices.

Another indirect method of sale is through conversion of agriculture land to non-agriculture uses. The sale transaction is undertaken upon approval of conversion. The conversion to non-agriculture use allows the land to be sold without the restrictions imposed by the land reform law.

Land pawning or *sanglaan* is an informal credit facility that involves a transfer of usufruct rights that can be redeemed upon payment of the loan. Sale can occur after a pawning transaction. Usually, a permanent transfer of ownership rights occurs when the debt accumulates and remains unpaid after a long period of time (Nagarajan, David and Meyer 1992).

It has been observed that sales of agriculture lands are mainly done through indirect methods. Land purchases through the land conversion method might also have been used to circumvent the land reform law. The process of sale of agriculture lands requires informal channels of approvals that could imply significant transaction costs. The different modes of sale is shown in Box 5-2.

Box 5-2 Modes of sale transactions on CARP lands

Direct Sale Transaction

- (1) The farmer-beneficiary approaches a possible buyer, who is usually a person with available cash.
- (2) Farmer-beneficiary and buyer agree on the price and other conditions of sale.
- (3) The farmer beneficiary files with the DAR Municipal Office a written request to transfer landholding with the following documents (DAR Administrative Order 8 series of 1995/1996): (a) Certification of Full payment of amortization to be issued by the Land Bank or the DAR for Voluntary Land Transfer and Direct Payment schemes; (b) Certification on full payment of irrigation fees; (c) Certification on loans from DAR or LBP; (d) Tax clearance; (e) Affidavit of that the land has no pending case with the DARAB, DAR, Courts or the Office of the President.
- (4) The Buyer submits the following documents: (a) Affidavit of aggregate area of agricultural landholding in the country; (b) Certification of the provincial Assessor's Office regarding the extent of buyer's landholding within the province; (c) Copy of income tax return and residence certificate.
- (5) DAR Provincial Office reviews and evaluates the documents and provides recommendation.
- (6) DAR Regional Office reviews the documents and recommendations of the DAR Provincial Office.
- (7) The Regional Director approves or disapproves the recommendations of the DAR Provincial Office.
- (8) The decision of the Regional Director is forwarded to the Legal division for proper disposition. Copies of the decision will be given to the contracting parties, DARPO and DARMO.
- (9) The decision of the regional Director may be appealed to the Secretary through the Bureau of Agrarian Legal Assistance.

Sale Transactions through Waivers of Rights

- (1) Farmer beneficiary approaches a possible buyer, which is usually a person with available cash.
- (2) Farmer-beneficiary and buyer agree on the price and other conditions of sale.
- (3) Farmer-beneficiary executes "waiver of rights" in favor of the buyer.
- (4) Surviving heirs also sign the waiver of rights to indicate their agreement to the sale.
- (5) The barangay chairman, BARC or other local officials affix their signature as witnesses.
- (6) Buyer and farmer beneficiary submit waiver to DAR Municipal Office and sign additional documents—(a) Affidavit of acceptance of new farmer beneficiary (i.e. buyer); (b) OLT Form No. 9; (c) Recommendation of ARBA/SN/BARC; (d) Production survey form of former farmer beneficiary (seller); (e) Investigation Report; (f) Farmer's Undertaking.
- (7) DAR Municipal Office issues Transfer Action Order to serve as basis for releasing the new title in favor of the new farmer beneficiary.
- (8) The new farmer beneficiary will be listed in the PARO Masterlist Record.

Sale Transactions via pawning

- (1) Farmer-beneficiary in need of cash offers to pawn his land to relatives or to a "rich" farmer or person.
- (2) Written contract or loan agreement is executed by the farmer-beneficiary and lender (or pawnee) and witnessed by the barangay chairman and/or BARC. If between relatives, a BARC clearance is not required.
- (3) The pawning contract is usually for 2 years.
- (4) Upon giving the cash loan, the lender takes over the cultivation of the land or hires laborers ("porcientohan") to work on the farm.
- (5) The loan remains outstanding until the farmer beneficiary repays the loan.
- (6) The farmer-beneficiary may draw additional loan from the land in which case, the lender may require that a waiver of rights be executed.
- (7) If farmer is unable to pay large loan for a long time, the pawnee offers to buy the land.
- (8) If farmer-beneficiary agrees, the documentation for sale transaction is started.

Sale via Land Conversion Transactions

- (1) A buyer convinces the farmer beneficiary to sell land usually by offering a price above the current market price of land.
- (2) If the beneficiary agrees to the price, buyer prepares documents for land conversion with the farmer beneficiary as applicant.

- (3) DAR evaluates and approves land conversion.
- (4) Upon conversion, buyer registers the land transfer to the Registry of Deeds.

Source: Ballesteros and de la Cruz (2006) Land Reform and Changes in Land Ownership. PIDS Discussion Paper 2006

- Land rental market.

Compared to the land sale market, the land rental market can provide productive farmers access to land even when credit markets are imperfect. Empirical evidence from developing countries shows evidences toward the important role played by labor endowments (both family labor and draft) in access to the land rental market. However, significant transaction costs in the land rental market can cause barriers to participation and to the degree of participation in the market.

The study examines the case of the Philippines using the IARDS data described earlier. An assessment of households endowments of non-land factors of production show that family labor, both male and female, seems to create the need to participate in the land rental market. Controlling for land holdings and farm size, the factor ratios of renters prior to participation statistically differs from that of owner-cultivators or the non-participants in the rental market. The factor ratios on family labor particularly male labor are found to be adjusted to that of owner's ratio for those renting-in land (Table 5-10). However, this relation is not observed in the case of draft labor. For the renting-out households, endowments of family and draft labor are apparently not the key factors to participation in the rental market.

The study further examined these results using the land rental market model developed in the literature, which argued that the presence of market imperfection in labor services (both management and draft) in the context of credit market imperfections provides the rationale for land leasing. Households with surplus labor relative to their land assets would choose to rent-in land while those with more land relative to their labor capacity would rent out their surplus land. This relationship is expressed as follows:

$$DCA = f(L, O) \quad (1)$$

where

DCA is the desired cultivated area

L is endowment of labor

O is draft or machine capacity

Households make up the difference between DCA and land owned (A) through the rental market such that the net land lease-in (NLI) is the difference between DCA and A .

$$NLI = h(f(L, O) - A) \quad (2)$$

where

h' is the function of imperfection in the land market. It can be expressed linearly as

$$NLI = c + h'f_1L + h'f_2O - h'A \quad (3)$$

The econometric equation is as follows:

$$NLI = \beta_0 + \beta_1L + \beta_2O - \beta_3A + \varepsilon \quad (4)$$

If adjustment is done perfectly, $h' = 1$ or $\beta_3 = -1$ which means that actual cultivated area is equal to the desired cultivated area and the market is functioning efficiently.

Table 5-10 Comparison of pre- and post-factor ratios, owner and renters by farm size

	Owners			Renting-In			Renting-Out			P-value for Test between Groups				
	Small	Medium	Large	Small	Medium	Large	Small	Medium	Large	Owner vs Renting-In			Owner vs Renting-Out **	
										Small	Medium	Large	Small	Medium
No. of farms	760	84	18	333	52	15	95	9	1					
Agri land owned	1.4	4.6	11.0	0.2	1.1	1.8	2.1	6.3	8.8					
Farm Size	1.4	4.6	11.0	1.4	4.3	10.5	0.9	4.5	7.7					
Farm animals per agri land owned	0.3	0.1	0.1	1.0	0.4	1.1	0.2	0.2	0.0	0.650	0.683	0.916	0.608	0.266
Farm animal per ha. of land operated	1.3	0.3	0.2	1.4	0.5	0.2	2.2	0.4	.	0.228	0.189	**	0.501	0.938
Agri land owned per family labor	0.5	1.3	3.0	0.1	0.3	1.0	0.6	2.2	8.8	0.000	0.000	0.001	0.001	0.092
Land operated per family labor	0.5	1.3	3.0	0.5	1.2	4.1	0.3	1.7	7.7	0.351	0.648	0.233	0.000	0.742
Agri land owned per male family labor	0.7	2.3	4.7	0.1	0.6	1.6	1.1	2.7	8.8	0.000	0.000	0.003	0.002	0.228
Land operated per male family labor	0.7	2.3	4.7	0.7	2.2	5.6	0.5	2.0	7.7	0.794	0.775	0.492	0.000	0.792
Agri land owned per female family labor	1.0	3.2	6.9	0.2	0.8	0.7	1.5	4.5	.	0.000	0.000	0.000	0.001	0.107
Land operated per female family labor	1.0	3.2	6.9	1.1	2.8	6.9	0.6	3.3	.	0.090	0.311	0.876	0.000	0.851

Note: small: <= 3.0 hectares; medium: = 3.1–7.0 hectares; large: >= 7.1 hectares

*** If p-value <0.05, the groups compared significantly differ

** Test is not performed for groups when there are very few observations

Table 5-11 shows descriptive statistics from the regression equations. The role of DAR in the land rental market is shown through the inclusion of ARB and ARC dummies. Classifying farm households in terms of these dummies reveal that there are differences in the ownership of land and operated land between ARB and non-ARB. On the other hand, residing within an ARC displays no dissimilarity within groups. Non-ARBs though appear to have greater demand for land than ARBs as seen in the comparison of farm size with agriculture land owned.

Table 5-11 Some descriptive statistics of IARDS panel data

	ARB in ARC		ARB not in ARC		Non-ARB in ARC		Non-ARB not in ARC	
	2000	2006	2000	2006	2000	2006	2000	2006
Number of Observations	261	418	480	307	120	240	699	575
Agri land owned	2.3	2.0	2.3	2.0	1.5	1.2	1.4	1.0
Farmsize	2.1	2.0	2.1	2.1	1.6	1.4	1.7	1.2
Percent irrigated land	39.7	39.6	39.3	35.7	39.7	32.3	29.1	31.2
Male family labor	1.8	2.5	1.9	2.4	1.7	2.3	1.4	2.2
Female family labor	1.7	2.2	1.6	2.2	1.2	1.9	1.2	2.0
Age of household head	55.7	59.9	56.0	62.4	55.3	59.3	54.7	60.1
Predicted value of credit access	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Crop value	47,745	24,365	31,364	35,350	30,994	21,618	21,532	18,599
Gross profit	22,900	11,018	13,825	16,397	19,043	8,065	10,330	7,864
Net profit	22,967	10,387	14,561	11,745	15,344	9,356	10,102	8,589

It is further observed average male and female labor for all households increased in 2006. The probability of access to credit is also similar for ARBs and non-ARBs except for those non-ARBs not in ARCs. In terms of crop production and profits, it is observed that ARBs in ARC appear better off but they appear vulnerable to shocks. In 2006, net income is only half of that in 2000. Other households also suffered similar declines except for ARBs not in ARCs.

The regression results from the land rental market equation did not confirm the hypothesis that endowment of labor services provides the motivation for participation in the land rental market. The key factors that affect the probability of land market participation are land endowment and credit access (Table 5-12).¹ Households with less land endowment and better access to credit are more likely to rent-in. The probability to rent-in also increases among households with larger land area, i.e., greater than 5 hectares. Households in ARCs have higher probability of renting-in.

¹ The predicted credit access value was derived from the results of the probability estimates on access to credit (see Table 5-5).

Table 5-12 Probability estimates of renting-in/renting-out (random effects)

Variables	Renting-Out			Renting-In				
	Coef.	Std. Err.	Marginal Effects (dF/dx)	Coef.	Std. Err.	Marginal Effects (dF/dx)		
Agri land owned	0.365	0.046	***	0.082	-0.337	0.053	***	-0.071
Agri land owned X 2006	-0.040	0.048		-0.009	-0.261	0.071	***	-0.055
Agri land owned > 5 ha	-0.117	0.043	***	-0.026	0.137	0.057	**	0.029
Agri land owned > 5 ha X 2006	-0.057	0.057		-0.013	0.171	0.108		0.036
No. of plots owned	0.049	0.083		0.011	0.238	0.092	***	0.050
Male family labor	-0.012	0.033		-0.003	0.047	0.035		0.010
Female family labor	-0.044	0.038		-0.010	0.010	0.038		0.002
Age of household head	0.004	0.005		0.001	-0.003	0.005		-0.001
Education of household head	-0.039	0.031		-0.009	-0.009	0.030		-0.002
ARB dummy	0.082	0.109		0.018	-0.141	0.105		-0.030
ARC dummy	0.082	0.108		0.019	-0.311	0.115	***	-0.062
Percent irrigated owned land	0.003	0.001	***	0.001	-0.001	0.001		0.000
Percent plain owned land	-0.006	0.005		-0.001	-0.003	0.005		-0.001
Percent rolling owned land	-0.007	0.005		-0.002	-0.001	0.005		0.000
Percent hilly owned land	-0.007	0.006		-0.002	0.000	0.005		0.000
Province dummy	0.000	0.000	*	0.000	0.000	0.000	***	0.000
Credit access (predicted)	-0.717	0.386	*	-0.161	1.542	0.404	***	0.323
_cons	-0.930	0.652			-1.044	0.578		
<i>Number of obs</i>	<i>1062</i>			<i>1062</i>				
<i>LR chi2(17)</i>	<i>151.18</i>			<i>132.77</i>				
<i>Prob > chi2</i>	<i>0.0000</i>			<i>0.0000</i>				
<i>Pseudo R2</i>	<i>0.1554</i>			<i>0.1347</i>				
<i>Log likelihood</i>	<i>-410.8712</i>			<i>-426.324</i>				

The probability of renting-out is also motivated by land endowment. Household with surplus land have higher probability of renting out but those with bigger landholdings have less probability to do so. A bigger area of irrigated land creates the motivation to rent-out which could mean that irrigation tends to balance out the demand for more land. Households with limited access to credit are more likely to rent-out land but the effect is weak compared to that of the probability to rent-in land.

The degree of participation in the land rental market is tested using full sample regression (OLS) and censored Tobit regression in the subsamples for household who rent-in and rent-

out. The net land rent-in is constructed by subtracting total agriculture land owned from the operated land or farm size. Thus, negative values of the dependent variable correspond to renting-out land; positive values correspond to leasing-in land and zero values to non-participants or autarky. The same determinants as the probit model were used in the regressions.

The results are presented in Table 5-13. Labor endowments both male and female are not significant determinants of the net amount of land rent-in (or rent-out). This result is inconsistent with the probit results. It is possible that family labor both male and female would rather rely on the wage market as source of income rather than use labor resources in cultivating rent-in land. This can be looked upon as insurance through risks diversification.

Table 5-13 Determinants of net land rent-in (random effects)

Variables	Full Sample Regression (OLS)			Renting –Out (Tobit)			Renting –In (Tobit)		
	Coef	Robust Std. Err.		Coef	Std. err.		Coef	Std. err.	
Agri land owned	-0.300	0.081	***	1.113	0.114	***	-0.581	0.137	***
Agri land owned X 2006	-0.099	0.053	*	-0.072	0.117		-0.790	0.183	***
Agri land owned > 5 ha	-0.316	0.089	***	-0.144	0.102		0.096	0.147	
Agri land owned > 5 ha X 2006	0.403	0.121	***	-0.253	0.131	*	0.692	0.253	***
No. of plots owned	0.413	0.114	***	-0.263	0.201		0.606	0.242	**
Male family labor	0.014	0.029		-0.043	0.083		0.089	0.092	
Female family labor	0.061	0.033	*	-0.084	0.095		0.128	0.099	
Age of household head	0.001	0.003		0.003	0.012		-0.006	0.012	
Educ of household head	0.033	0.028		-0.149	0.079	*	-0.037	0.078	
ARB dummy	0.096	0.109		-0.067	0.272		-0.522	0.276	*
ARC dummy	-0.264	0.086	***	0.325	0.270		-0.890	0.306	***
Percent irrigated owned land	-0.001	0.001		0.008	0.003	***	-0.002	0.003	
Percent plain owned land	0.005	0.002	**	-0.016	0.013		-0.002	0.012	
Percent rolling owned land	0.008	0.002	***	-0.022	0.013	*	0.002	0.012	
Percent hilly owned land	0.011	0.003	***	-0.022	0.013		0.009	0.013	
Province dummy	0.000	0.000	***	-0.001	0.000	**	0.001	0.000	**
Credit access (predicted)	1.926	0.444	***	-2.690	0.956	***	4.970	1.057	***
_cons	-1.689	0.398		-1.178	1.609		-4.249	1.522	

Variables	Full Sample Regression (OLS)		Renting –Out (Tobit)		Renting –In (Tobit)	
	Coef	Robust Std. Err.	Coef	Std. err.	Coef	Std. err.
<i>Number of obs</i>	1062		1062		1062	
<i>Log likelihood</i>			-660.66		-701.18	
<i>Prob > chi2</i>			0		0	
<i>test aglandown = -1</i>						
<i>chi2(1)</i>			0.97		9.31	
<i>Prob > chi2</i>			0.3235		0.0023	

*** = significant at 1%
 ** = significant at 5%
 * = significant at 10%

Note: All coefficients of renting-out were multiplied by -1 for ease of interpretation.

On the other hand, the ownership of agriculture land is a major determinant of net land rent-in. Those with higher (lower) amount of land endowment tend to rent-out (rent-in) more land. This result is consistent with the important role played by initial land endowment in the probability of participation in land markets.

Households with larger owned land, i.e., greater than 5 hectares have higher demand for land. This finding is significant in 2006, which indicates possible structural shift in the land rental market between 2000 and 2006. The structural shift is weak in the case of renting-out.

The positive and significant coefficient of access to credit implies that imperfections in the credit market lead farm households to adjust their operational landholdings through the land market. Under this condition, households that are credit constrained would have difficulty renting-in or would be unable to fully adjust to their desired cultivated area. On the other hand, households would also rent-out more land when access to credit is constrained.

The relation between the amount of land leased and the proportion of irrigated land owned is significant only for those households who rent out. This is consistent with the findings from the probit estimates. It confirms the role of irrigation in balancing out the demand for land.

Being an ARB or in ARC affects only the amount of land rent-in. The negative coefficient implies that an ARB or a household residing in ARCs tend to rent-in less land. Beneficiaries of land reform are in autarky, which can mean either “optimal” farm size or presence of significant transaction cost in the land rental market.

A test on the coefficient of agriculture land owned is performed to assess whether the land rental market allows those participating in it to adjust to their desired farm size. As mentioned earlier, the coefficient of land owned measures the function of imperfection in the land rental market. If households do not face significant transaction costs, the adjustment of

land owned to desired cultivated is achieved and the coefficient of land owned should be equal to -1. The negative sign implies that households with higher landholdings rent-in less land while those with lower landholdings rent-in more land. The result of the test performed on the data shows that the coefficient of land owned equal to -1 is rejected for those renting-in. This implies that the adjustment taking place in the land rental market is less than perfect. On average, those households renting-in are able to obtain only 58% of their desired area. Comparatively, the coefficient of own land for those renting-out is not significantly different from -1 thus those renting-out are able to adjust well their landholdings.

The inefficiency in the land rental market is further examined through the relation between agriculture land owned and farm size. Table 5-14 shows that operational landholding is primarily determined by the size of agriculture land owned. This relationship is shown in Figure 1-3. The demand for more land increases as ownership approaches five hectares. An “optimal” farm size of 5 hectares seems to be maintained. However, this could be mainly due to the ownership ceiling of 5 hectares imposed under the CARP. The demand for land again increases for ownership greater than 5 hectares but declines as ownership approach 10 hectares. Beyond this point, landowners tend to rent-out land.

Table 5-14 Determinants of farm size

Variables	Fixed Effects			Random Effects		
	Coef.	Std. Err.		Coef.	Std. Err.	
Agri land owned	0.553	0.097	***	0.716	0.003	***
Agri land owned X 2006	-0.179	0.071	**	-0.098	0.003	***
Agri land owned > 5 ha	-0.120	0.082		-0.312	0.010	***
Agri land owned > 5 ha X 2006	0.359	0.089	***	0.418	0.013	***
No. of plots owned	0.551	0.149	***	0.433	0.005	***
Male family labor	0.064	0.078		0.019	0.002	***
Female family labor	-0.057	0.072		0.057	0.002	***
Age of household head	0.002	0.015		0.000	0.000	
Educ of household head	0.076	0.091		0.033	0.002	***
ARB dummy	0.012	0.388		0.109	0.006	***
ARC dummy	-0.400	0.220	*	-0.270	0.005	***
Percent irrigated owned land	-0.002	0.003		0.000	0.000	***
Percent plain owned land	0.007	0.013		0.004	0.000	***
Percent rolling owned land	0.011	0.013		0.008	0.000	***
Percent hilly owned land	0.008	0.013		0.009	0.000	***
Province dummy				0.000	0.000	***
Credit access (predicted)	2.192	0.675	***	1.779	0.031	***
_cons	-1.632	1.564		-1.618	0.032	

Variables	Fixed Effects		Random Effects	
	Coef.	Std. Err.	Coef.	Std. Err.
No. of obs.		1,062	No. of obs	1,062
F (16,280)		17.63	Log Likelihood	-623.52
Prob > F		0.00	Prob > chi2	0.00
F test that all u_i=0:				
F(765,280)		1.33		
Prob > F		0.0023		

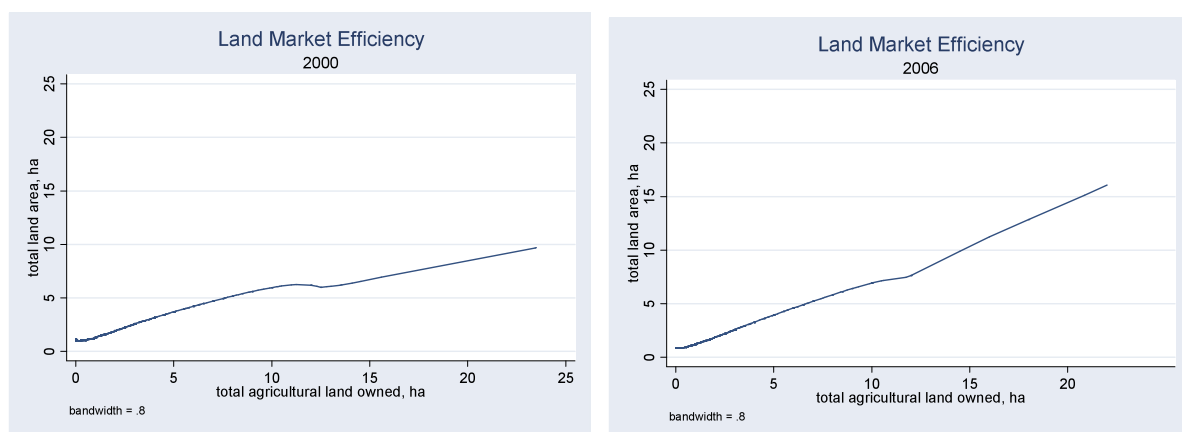
*** = significant at 1%
 ** = significant at 5%
 * = significant at 10%

It is also shown that the landless have access to the land rental market but access is limited by the competition among small landlords (<=3 hectares) to medium sized landlords (3.1–7.0 hectares).

A shift in the behavior of ownership and farm size is observed between 2000 and 2006. In 2000 the relationship between ownership and farm size is less defined. Controlling for family labor, the study finds that the land rental market is more active in 2000 compared with that of 2006.

Non-parametric regressions display a clearer comparison of the two years. The lowest graph (Figure 5-3) shows a steeper slope in 2006 compared to 2000 for land owned less than 25 hectares. Note that a 45-degree line implies autarky, which indicates an inactive land rental market. It appears that the land market has been less efficient in 2006. There is less land supplied in the market by bigger landlords. On the other hand, credit constraints are possibly inducing households to smaller sized farms.

Figure 5-3 Trends in land markets efficiency: 2000-2006



III. Revisiting the Inverse Relationship Between Farm Productivity and Size

Although land reform in the Philippines has been regarded as a fundamental step in securing social justice, the belief that smaller farms are fundamentally more efficient than the larger ones has also been considered as a major justification. The empirical determination of the existence of an inverse relationship between farm size and productivity (IRSP) has been one of the main rationales for advocating land reform in developing countries, whereby equity and efficiency gains could be simultaneously achieved. It is therefore of interest to assess whether small farms continue to enjoy a productivity edge against larger farms under current conditions affecting factor markets in Philippine rural areas.

Assessing the existence of a particular relationship between farm size and productivity is akin to describe the symptoms of a given condition, but not the causes. And even more important is the need to understand the policy implications that the analysis suggests once the symptoms and the causes are related to each other. As discussed in the literature (e.g., Feder, 1985; Kevane, 1996) various combinations of imperfections affecting credit, labor, land, and risk markets can have radically different implications for the relationship between productivity and farm size. The strategy followed in this specific analysis is to first assess the IRSP, then explain it on the basis of the accumulated evidence on rural market imperfections in the Philippines, and finally derive implications for changes in the functioning of land markets for the IRSP.

To estimate the relationship between size and productivity the study relies on the IARDS data previously described, thereby focusing on rice and corn areas. This chapter will deal more closely with sugarcane lands. Results for the rice and corn areas will yield important insights for land reform in sugarcane lands. To proceed with the empirical analysis, this chapter starts first by constructing a profit function from the panel data. Profits are defined as the value of revenues, which includes the value of self-consumed production based on prices in the nearest market, minus the cost of inputs, hired labor, and the shadow cost of family labor. The latter is obtained by valuing the total amount of days devoted by family members to farm labor using the mean daily wage in the village.

This measure of farm profits falls short of the idea standard, by which output should be valued using its shadow price (Binswanger, Feder, and Deininger, 1995). This limitation could be particularly important in the context of the present analysis given the high degree of protection afforded to rice. On the other hand, rice is the prevalent crop across all observations and farm sizes, so that this shortcoming is not considered to affect the estimated relationship between farm size and productivity for this particular sample. By using farm profits instead of the value of revenue, the analysis improves on past empirical work on the Philippines (e.g., Riedinger et. Kang, 2000).

The regressions were estimated using both gross profit and net profit. Gross profit excludes shadow price of family labor.² The study also uses farm size and area planted to explore the impact of farm size on productivity. Previous work by Lamb (2003) has demonstrated how

² Shadow price computed based on average hired labor price within barangay.

errors in measuring farm size in the context of panel data analysis biases the results toward rejecting the hypothesis of a non-existence of an IRSP when the household specific effects are assumed fixed. This chapter therefore assumes that household-specific effects are distributed randomly. Land quality is controlled by including in the regression a number of indicators such as the percent of land that is irrigated, plain, rolling, or hilly. The influence of government programs supporting farm productivity is controlled by including a dummy specifying whether the farm is managed by an ARB or belongs to an ARC. Finally, agro-ecological constraints are taken into account by introducing dummies for cultivated crops. The latter would also help in controlling for the influence of crop mix on revenues through prices.

The regression results in Tables 5-15 to 5-7 show that the elasticity of net farm profits to farm size is consistently less than 1 across the different regressions: as the size of the farm increases, the increase in net profits is less than proportional. In turn this implies that the ratio of net farm profits to farm size decreases with the latter. The size of the elasticity varies between 0.615 and 0.713 depending on whether the dependent variable is net or gross profits and whether one looks at cultivated or total farm size, where the latter includes fallow land. A doubling of cultivated land (farm size) leads to a 40% (29%) decline in net farm profits (gross profits). These estimates tend to be quite in line with other similar studies from other countries, in particular Benjamin (1995) for Indonesia and Lamb (2003) for Semi-arid India.

Table 5-15 Regression results on gross profit (double log function)

Variable	OLS (hetero corrected)			Random Effects		
	Coef.	Std. Err.		Coef.	Std. Err.	
Farm size	0.662	0.066	***	0.695	0.015	***
Farm size_ ARC	-0.128	0.107		-0.225	0.016	***
Percent irrigated land	0.004	0.001	***	0.004	0.000	***
Owner dummy	0.028	0.119		0.003	0.017	
Amortizing Owner dummy	0.237	0.155		0.271	0.026	***
Leased dummy	0.328	0.162	**	0.284	0.015	***
Mortgaged dummy	0.111	0.570		0.389	0.034	***
Other tenure dummy	0.265	0.412		0.406	0.150	***
Percent plain land	0.002	0.008		0.003	0.002	*
Percent rolling land	-0.002	0.008		0.000	0.002	
Percent hilly land	-0.006	0.008		-0.003	0.002	*
Rice dummy	-0.168	0.129		-0.111	0.017	***
Corn dummy	-0.271	0.143	*	-0.420	0.022	***
Permanent crop dummy	0.081	0.124		0.143	0.015	***
Cash crop dummy	0.440	0.219	**	0.526	0.079	***
ARB dummy	0.051	0.105		0.121	0.018	***
ARC dummy	0.198	0.114	*	0.184	0.018	***
Brgy urban dummy	0.592	0.155	***	0.674	0.015	***
Credit access (predicted)	0.591	0.359	*	0.690	0.039	***
No. of plots owned	0.126	0.070	*	0.116	0.013	***
_cons	8.427	0.845		8.127	0.194	
<i>No. of obs.</i>	<i>984</i>				<i>984</i>	
<i>Prob > F</i>	<i>0.00</i>			<i>Prob > chi2</i>	<i>0.00</i>	
<i>Log likelihood</i>					<i>-1218.5</i>	

*** = significant at 1% ** = significant at 5% * = significant at 10%

Table 5-16 Regression results on net profit (double log function)

Variable	OLS (hetero corrected)			Random Effects		
	Coef.	Std. Err.		Coef.	Std. Err.	
Farm size	0.615	0.059	** *	0.615	0.009	***
Farm size_ARC	-0.154	0.097		-0.188	0.019	***
Percent irrigated land	0.005	0.001	** *	0.004	0.000	***
Owner dummy	-0.027	0.108		-0.025	0.020	
Amortizing owner dummy	0.064	0.139		0.003	0.018	
Leased dummy	0.229	0.149		0.282	0.017	***
Mortgaged dummy	-0.221	0.480		-0.074	0.211	
Other tenure dummy	0.266	0.399		0.493	0.187	***
Percent plain land	0.003	0.008		0.003	0.001	***
Percent rolling land	-0.001	0.008		-0.001	0.001	
Percent hilly land	-0.003	0.008		-0.004	0.001	***
Rice dummy	-0.090	0.115		-0.103	0.019	***
Corn dummy	-0.272	0.123	**	-0.326	0.022	***
Permanent crop dummy	0.161	0.108		0.230	0.022	***
Cash crop dummy	0.368	0.188	*	0.404	0.066	***
ARB dummy	0.118	0.096		0.148	0.012	***
ARC dummy	0.211	0.101	**	0.254	0.013	***
Brgy urban dummy	0.515	0.140	** *	0.540	0.018	***
Credit access (predicted)	0.379	0.322		0.501	0.057	***
No. of plots owned	0.144	0.064	**	0.149	0.010	***
_cons	8.386	0.808		8.234	0.102	
<i>No of obs.</i>	<i>1161</i>			<i>1161</i>		
<i>Prob > F</i>	<i>0</i>			<i>Prob > chi2</i>	<i>0</i>	
<i>Log likelihood</i>				<i>-1430.16</i>		

*** = significant at 1%
 ** = significant at 5%
 * = significant at 10%

Note: Net Profit excludes shadow price of family labor.

Table 5-17 Regression results on gross profit (double log function)

Variable	OLS (hetero corrected)			Random Effects		
	Coef.	Std. Err.		Coef.	Std. Err.	
Total area planted	0.7129	0.0653	***	0.7135	0.0104	***
Area planted_ ARC	-0.0968	0.1045		-0.2032	0.0224	***
Percent irrigated land	0.0037	0.0012	***	0.0040	0.0001	***
Owner cultivator dummy	0.0668	0.1161		-0.0088	0.0180	
Amortizing Owner Dummy	0.2562	0.1515	*	0.0423	0.0231	*
Leased dummy	0.3144	0.1583	**	0.2530	0.0203	***
Mortgaged dummy	0.0369	0.5542		-0.0970	0.1285	
Others dummy	0.3055	0.4009		0.5659	0.1679	***
Percent plain land	-0.0016	0.0080		0.0022	0.0020	
Percent rolling land	-0.0044	0.0080		-0.0021	0.0020	
Percent hilly land	-0.0077	0.0080		-0.0041	0.0020	**
Rice dummy	-0.0100	0.1283		0.0222	0.0290	
Corn dummy	-0.0712	0.1400		-0.1555	0.0319	***
Permanent crop dummy	0.1686	0.1201		0.3252	0.0261	***
Cash crop dummy	0.5550	0.2132	***	0.5141	0.0246	***
ARB dummy	0.0353	0.1028		0.1565	0.0158	***
ARC dummy	0.1401	0.1046		0.1871	0.0138	***
Brgy urban dummy	0.5273	0.1517	***	0.4972	0.0162	***
Credit access (predicted)	0.6780	0.3487	*	0.5074	0.0430	***
No. of plots owned	0.1233	0.0671	*	0.1354	0.0121	***
_cons	8.6568	0.8234		8.2850	0.1962	
<i>No of obs.</i>	976			1,152		
<i>Prob > F</i>	0			<i>Prob > chi2</i>	0	
<i>Log likelihood</i>				-1391.45		

*** = significant at 1%
 ** = significant at 5%
 * = significant at 10%

Irrigation is also a determinant of productivity but the increase in productivity attributed to a unit increase in irrigation is minimal. This is quite surprising but might also reflect the imprecision with which irrigation services are measured at the plot level in the survey. Almost half the area potentially serviced by national and communal irrigation systems is in fact in need of rehabilitation. Access to water varies significantly depending on the location with respect to the main canals. Farming on hilly, marginal lands results in lower profits. Among crops, rice, cash crops, and permanent crops have positive effects on productivity but not so for corn. A comparison between rice, cash crops, and permanent crops shows that results are robust for the latter (cash and permanent crops).

As expected, access to credit also has a positive significant impact on productivity. The effect of tenure arrangement on productivity is not robust. However, the study observes that amortizing owners, leaseholders, and land mortgagees enjoy a productivity advantage over share tenants. This is not so between owners and share tenant. The tenure effect, however, becomes insignificant once the shadow price of family labor is discounted from gross profits.

The influence of CARP is quite intriguing. On one side, being an ARB or belonging to an ARC has an important impact on profits, either gross or net: by being included in an ARC a farm increases its net (gross) profits by 25.4% (18.2%). Likewise, being an ARB is associated—everything else being equal—with an increase in net (gross) profits 14.8% (12%). This direct effect most likely reflects the impact of support services delivered by DAR. On the other hand, a more subtle effect appears through the interaction effect between inclusion in an ARC and the size of the farm: in ARCs the IRSP is much stronger. This result is consistent with the study's previous finding that rental markets work less efficiently in areas where DAR's presence is stronger. As demonstrated in Feder (1985) when credit is rationed and labor supervision is costly, imperfections in the land rental market make the IRSP more likely.

IV. Agrarian Reform, Efficiency and Equity: Do We Still Have a Win-Win Solution and What Are the Policy Implications for the Future of CARP?

Market imperfections in rural markets for credit, land, and labor have been shown to exist and be significant. As shown by Feder (1985), the combined influence of the imperfection makes the IRSP more likely. Indeed the data from rice and corn lands confirm this expectation. Which implications can this study therefore derive from the previous analysis for the CARP's extension?

With the exception of the labor market, CARP has a significant role in the functioning of the credit and land market, and more so in the case of the latter. The analysis above shows that strengthening tenure security and removing or softening the restrictions on land transfers would significantly improve access to farmland by the land poor. Moreover, complementing the reform of such restrictions with the one banning sharecropping would have additional beneficial effects in terms of enhancing the potential for landless farmers and farm-workers to improve their socioeconomic status.

Of course, even with such reforms approved and implemented a bias in credit access against smaller farms would continue to be observed, albeit reduced. Imperfections in both labor and credit markets would continue to influence the relationship between farm size and productivity even if land markets were to work efficiently. A key question is whether an IRSP would continue to be observed in a counterfactual scenario in which restrictions on land transfers are fully removed.

An answer to this hypothetical question can be provided on a theoretical basis. As discussed in Feder (1985), Kevane (1996), and Bardhan and Udry (1999) an IRSP is likely to exist when a combination of imperfect labor and credit markets exist. The likelihood of an inverse relationship will be greater the higher the cost of supervising hired labor and the weaker the credit constraints for small relative to larger farms (e.g., Feder); the more important are the leisure effects associated with income (e.g., Kevane, Bardhan, and Udry). Credit constraints would be softened with a reform of CARP that would improve tenure security and reduce transaction costs in land rental markets.

Thus, under improved conditions for tenure security and land markets, an IRSP would continue in all likelihood to be observed. In turn this would suggest that land reform under such conditions would still be warranted. The key problem is that an extension of an agrarian reform program such as CARP would not simultaneously achieve a proper functioning of land markets—that is, achieving the twin goals of equity and of efficiency. The issue, therefore, is whether an approach to agrarian reform that would allow improvements in both equity and efficiency (while reinforcing itself through an improved functioning of land markets) is in fact feasible in the Philippines today.

6. CARP EXTENSION AND THE CHALLENGE OF SUGARLANDS

I. Introduction

Much of the balance in land acquisition and distribution (LAD) is in sugarlands, especially in the Visayas region. LAD has already been significantly delayed mainly by landowner opposition. This chapter examines three arguments against breaking up large sugarcane estates into small family-owned farms.

- The first, and most obvious, argument is that small farms forego the economies of scale enjoyed by big farms.
- The second is that coordination costs would be much higher if mills were to transact with numerous small landowners, compared with dealing with a few big landowners. Coordination involves the timely, continuous delivery of very large volumes of cut cane to the mill, taking into account the postharvest perishability of sugarcane.
- Third is that sugarcane supply likely would decrease since small family farms are more prone to shift to other crops, compared with owners of big farms.

The latest development in the industry, the Biofuels Act, reinforces these arguments. The Act creates new sources of demand for sugarcane as feedstock for ethanol production. Ethanol processing benefits from large-scale economies. It is important to maintain high productivity, stable supplies, and coordinated deliveries in the face of open competition from traditional processing of sugarcane for food.

This chapter evaluates the past implementation of LAD, its potential impact on sugarcane supply and procurement costs, and options for addressing the LAD balance in major sugarcane-producing areas. Specifically, the chapter—

- 1) Reviews the socioeconomic and institutional context of implementing agrarian reform in sugarcane areas;
- 2) Gathers evidence to assess the following:
 - Existence of significant scale economies in sugarcane production;
 - Significant increase in coordination costs between planters and millers, when the number of planters increase;
 - Tendency of farmers to shift from sugarcane to other crops, as farm size decreases;
- 3) Looks at options or models for extending CARP to sugarcane plantations.

II. Conceptual Framework, Review of Literature, and Methodology

Is sugarcane farming special? Traditionally, ownership of sugarcane farms is highly concentrated. The vision of land reform is a sugarcane sector producing under small-scale owner cultivation. The three arguments presented above support the idea that sugarcane farming is somehow special, and that only concentrated ownership can consistently achieve efficiency and high productivity.

The argument based on scale economies is perhaps the most popular among large estate advocates for two reasons. The first reason says that to borrow working capital for sugarcane production is difficult. But because large farmers tend to be wealthier, they can either self-finance or offer adequate collateral. The second reason says mechanized farming is efficient compared with using draft animals. Only the bigger landowners would have the means and incentive to own large farm equipment.

However, granting both arguments, the solution might not lie in land consolidation. Credit policy can address borrowing constraints. Small farmers can rent, instead of buy, mechanized farming technologies. If these alternatives fail, a deeper explanation is required based on either transaction or other costs facing small farmers.

The argument based on coordination cost arises from the twin problems of assuring enough deliveries to maintain output and avoiding putting too much cut cane on queue as this raises the risk of postharvest deterioration. Although it seems evident that coordination is more difficult with numerous small deliveries, there is still no evidence that alternative coordination arrangements – such as planter associations – can address the problem.

Finally, the argument concerning the likelihood of sugarcane supply decreasing is related to the issue of excess capacity, since the shift to parceled production allows a greater diversity of crop choice in the farms around the mills. However, granted that parceled production is diversified, presumably small farmers have shifted crops in response to market signals. Apparently big farmers, who have a greater tendency to continue sugarcane production, hear a different set of signals. For this argument to hold, these differences should be given a plausible explanation.

On the other hand, there might be different reasons as to why the sugarcane industry is “special”. The concentration of land simply might have been a product of history and institutional factors—colonial heritage, consolidation of political interests, and control over regulatory mechanisms. Perpetuating these conditions could be socially inefficient, but privately rational, since they make it possible to profit from the lack of real competition in the industry. If so, this kind of profit could well be an important part of the value of sugarcane land. This makes it expensive to pay land compensation and raises the cost of land amortization to potential CARP beneficiaries.

a. Related studies.

Hayami, Quisumbing, and Adriano (1990), and more recent work (Hayami 2003; 2004) debunk the economic superiority of plantation agriculture. There are supposedly “few crops” exhibiting sufficiently strong economies of scale at the farm level. For every plantation crop, there are small family farms elsewhere successfully producing the same crop. Sugar is often cited as a case of scale economies arising from the need to coordinate production and large scale processing, both to avoid under-capacity, and to ensure that harvested cane be processed quickly enough to avoid deterioration. However, while the amount of sugar recovered per unit of cane does decline as processing is delayed, the rate of decline is slow. This allows sugarcane to be hauled over long distances and temporarily stored. Small family farms can resolve potential problems in coordinating harvest and processing through a system of contracts and quota deliveries. This system has been demonstrated in Australia, Thailand, and Taiwan. For certain crops such as sugar, plantation agriculture has dominated because only the wealthy could pay for the infrastructure cost of opening up land, along with the cost of acquiring concessions over raw land. Those with the means to do so typically were the elite and Western settlers during the colonial period.

Abundant literature is devoted to the issue of scale economies and the related issue of the inverse relationship between farm size and productivity (the smaller the farm, the higher the productivity). Fan and Chang-Kang (2005) provide the most recent review. Sen (1962) first observed the inverse relationship followed by numerous studies that appeared to establish this relationship. A favored explanation is that small farms can apply a higher intensity of family labor (Chayanov, 1966), which is more efficiently supervised than hired labor (Raghbendra et al, 2000).

With the advent of the Green Revolution in the 1970s, however, labor has become less important compared with modern inputs such as fertilizer, which require more cash and credit flow. Recent literature shows no consensus on the inverse relationship. In fact, there are studies suggesting that this inverse relationship is accurate for traditional agriculture but not for agriculture undergoing technological change (for example, in Chattopadhyay and Sengupta, 1997). More specifically for Philippine data, Herdt and Mandac (1981) find that small rice farms exhibit greater technical efficiency, though Lingard, Castillo, and Jayasuriya (1983) rule out size as a factor in the efficiency of rice farms. Tadesse and Krishnamoorthy (1997) also find that measures of technical efficiency vary across both farm size and agro-ecological zone.

Assunção and Braido (2007), in a very recent study, examine whether the inverse relationship is simply a spurious association owing to omitted variables. They considered whether the omitted variable might be household-specific – that is, a matter of farmer ability. They then considered whether the omitted variable might be plot-specific – that is, the farmer privately recognizing such plot characteristics as the low quality of the land, prompting him to farm extensively over bigger plots (e.g., Bhalla and Roy, 1988). To identify which case actually holds, Assunção and Braido use plot-level data from India in which a single household simultaneously crops plots of varying size. They find that the inverse relationship holds across plots within the same household, hence ruling out household-specific explanations.

The inverse relationship is consistent with but not equivalent to diseconomies of size (increasing average cost). Even for this issue, the evidence as reviewed by Alvarez and Arias (2003) is conflicting, that is, studies find both economies of size (L-shaped average cost) as well as diseconomies of size in farming. Their favored explanation for economies of size is the presence of an indivisible input, namely managerial ability.

These studies have so far relied on farm survey data. A different approach is taken by Vollrath (2007), who looks at national data to conduct cross-country regressions, in the mould of empirical growth literature. The dependent variable is agricultural output per worker, with the Gini coefficient of landholding among the explanatory variables. Land inequality has a *negative*, significant, and sizable effect on agricultural labor productivity. The analysis rules out decreasing returns to farm size as a transmission channel, though political economy remains a possible explanation, that is, landholding inequality leads to stronger resistance against political and educational reforms.

Studies specifically for sugarcane remain sparse. Outside the Philippines, the issue of optimal farm size has been investigated for Trinidad (Palmer and Pemberton, 2007). The output that minimizes long run average cost is 697 tons, corresponding to about 13 ha; 98% of sample farmers were found to be operating below this size. In the Philippines, Padilla (1993) examines the issue of scale economies using cost and returns data averaged for six farm size classes at the level of the mill district. Production function analysis shows that there are no increasing returns to size in sugarcane production.

Table 6-1 Performance indicators for sugarcane farms, by size class

Efficiency type	Small	Medium	Large
Yield (t/ha)	40.9	51.5	61.5
Cost (pesos/ha)	24,571.2	28,621.0	32,392.6
Unit costs:			
Seeds	273.9	193.3	155.6
Fertilizer (NPK)	7.1	6.8	6.5
Power	106.8	110.5	107.9
Labor	98.0	86.7	89.5
Efficiency:			
Allocative	0.80	0.85	0.87
Technical	0.76	0.82	0.83
Economic	0.62	0.71	0.73

Source: Padilla-Fernandez (2000).

Padilla-Fernandez (2000) revisits the issue using the method of technical and allocative efficiency, based on data for individual farms. Measurement of efficiency relies on nonparametric Data Envelopment Analysis. Farms are classified into small (up to 10 ha), medium (10–50 ha), and large (over 50 ha). Yields are highest for large farms, but costs are also highest (Table 6-1). However the difference in yield more than compensates for the difference in cost. Efficiency measures, whether technical or allocative, are closest to unity for the large farms. The critical source of allocative efficiency for large farms is the difference in unit cost of inputs. Bulk purchasing and other marketing advantages allow them to pay a lower price for fertilizer, labor, and seeds.

The only published paper specific to agrarian reform beneficiaries (ARBs) engaged in sugarcane farming appears to be that of De los Santos and Mendoza (2002). The study surveyed 304 ARBs from 18 agrarian reform communities (ARCs) growing sugarcane in 1998-1999, covering crop years 1994-1997. Yields were 22%-31% lower than those of the mill district, the region, and the country. Costs ranged from Php11,300 to Php33,480 (plant crop), compared with commercial farms (Php35,590). Low productivity can be traced to: extending ratoon¹ more than twice; absence of irrigation; narrow row spacing; and low application of fertilizers, particularly nitrogen. Based on soil quality analysis, six ARCs were not suitable for sugarcane farming, while only eight were moderately suitable. Hence, there is considerable scope for productivity improvement in ARCs.

b. Methodology.

To achieve the foregoing objectives, this study will undertake a desk review, a rapid appraisal for primary source information, and analysis of data from secondary sources, such as the Sugar Regulatory Administration (SRA) and the Bureau of Agricultural Statistics (BAS). The desk review provides the socioeconomic and institutional context of agrarian reform in the sugarcane industry. The rapid appraisal further expands on this context and generates stakeholder information and perspectives about the impact and prospects of land reform implementation on sugar lands.

The rapid appraisal covered the provinces of Negros Occidental (which has the biggest sugarcane area and one of the lowest LAD accomplishments) and Bukidnon (a center of sugar industry growth and among the highest in LAD accomplishments). In Negros Occidental, the study focused on the First Farmer's mill district, with the central located in Barangay Dos Hermanas, Talisay City. The First Farmer's mill is a stock corporation owned by members of the First Farmer's Association (FFA); it is the only surviving planter-owned sugar central in the country. In Bukidnon, meanwhile, the study focused on areas around the Busco mill (Quezon) and the Crystal mill (Maramag).

For the issue of economies of scale, the study will use SRA data from its Farm Management Record-keeping survey. The survey was conducted by the Extension and Technology Division under the Research, Development, and Extension Department for Luzon and Mindanao. Unfortunately the counterpart Department for Visayas (for the Negros mill region) did not conduct this survey; consequently mill regions covered are Luzon, Eastern

¹ A shoot or sprout growing from the root of a plant (especially sugarcane) that has been cropped.

Visayas, Panay, and Mindanao. Respondents were selected according to a stratified sampling frame for crop years 2002, 2003, and 2004. There were 307 respondents in the first round and 333 in the subsequent rounds. The survey focused on cost and returns, although other respondent and farm-level information was also collected.

Systematic assessment of the returns to scale issue is done by estimating the conditional cost function: $C = C(Q, w, z)$, where C is total minimum cost, Q is the total output, w a vector of input prices, and z a vector of control variables. Denote average and marginal costs respectively as AC and MC ; the elasticity of scale η , computed at the sample mean, follows the simple identity:

$$\eta = \frac{AC}{MC} = \left(\frac{\partial \ln C}{\partial \ln Q} \right)^{-1} \quad \eta = \frac{AC}{MC} = \left(\frac{\partial \ln C}{\partial \ln Q} \right)^{-1}$$

(1)

For coordination cost, the study will rely on the rapid appraisal, as well as examination of SRA data on mill recovery, compared to indicators of farm size concentration.² For diversification, the study will examine sugarcane area trends over time, compared to indicators of farm size concentration, using SRA data, and conduct multiple regression analysis of the determinants of sugarcane area, by province, with farm size concentration indicators among the explanatory variables.

Finally, for the rent hypothesis, the study estimates returns to land (profit), which is then capitalized into imputed land price (this can be compared with the prices obtained from rapid appraisal). The counter-factual would then be imputed land prices when profits are re-computed under world prices.³ This would allow estimation of the rent component of sugarcane land price. With scenarios from price changes due to the application of the Biofuels Act, additional adjustments can be made regarding the rent component of the land value. Based on these projections, the institutional context, as well as analytical results regarding scale economies and coordination cost, the study can then provide an assessment of the prospects for land reform in sugarcane areas.

III. Socioeconomic and Institutional Context

a. Industry profile

Sugarcane is among the country's major crops, after palay, coconut, corn, and banana (Table 6-2). Its share in total agricultural output (by value) grew slightly from 4.8% to 5.4% over 1988-2006. Production has been growing over time, albeit slowly with some episodes of decline (Table 6-3). In the 1970s cane production was about 19.5 million tons, hitting 22.5 million tons in 2006. Production has long been dominated by Negros, which accounted for

² Ideally to pin this down we would need complete milling cost data, isolating other factors affecting milling costs (such as lagged investments in mill capacity, technological change, etc.), and an explanatory variable for average deliveries per supplier. However it would be infeasible to expect commercial mills to allow access to complete cost data.

³ The computations assume away the inevitable market adjustments should the industry be subjected to import liberalization.

58% of output in the 1970s; the rest of the Visayas split 17%, while Luzon took up most of the remainder. Mindanao production was then negligible. Currently Negros maintains its output share. A pronounced difference is the rise of Mindanao output to a 16% share, at the expense of Luzon and the rest of Visayas.

Table 6-2 Shares in output value by major crop, 1988 – 2006

	1988	1993	1998	2003	2006
Palay	27.5	26.5	25.4	34.3	35.0
Coconut	13.3	15.0	15.9	16.8	15.9
Corn	12.1	12.1	10.2	10.5	12.5
Banana	5.2	4.7	5.6	7.4	8.5
Sugarcane	4.8	6.3	5.0	5.9	5.4
Others	37.1	35.4	37.8	25.1	22.6
All crops	100.0	100.0	100.0	100.0	100.0

Source: BAS.

Table 6-3 Production of sugarcane, total and by milling region in '000 t, 1972 – 2005

Region	1972	1980	1985	1990	1995	2000	2005
Philippines ('000 t)	19,491	22,490	18,719	19,352	18,505	19,571	22,572
Shares (%)							
Luzon	24.2	22.2	23.8	21.9	19.5	18.4	15.6
Negros	58.3	58.3	56.0	58.0	59.5	55.3	56.7
Panay	10.4	9.1	6.0	5.5	6.1	6.4	6.7
E. Visayas	6.5	6.6	6.4	6.3	5.5	4.8	4.0
Mindanao	0.6	3.8	7.9	8.3	9.4	15.2	17.0

Source: SRA.

In terms of area, sugarcane lands occupy nearly 392,000 ha (3.2% of agricultural land), compared to about 441,000 ha in the 1970s (Table 6-4). The decline in area occurred in the early half of the 1980s, concentrated in Panay and Eastern Visayas (with a minor slide in Negros). In contrast, sugarcane area has grown rapidly in Mindanao.

Table 6-4 Area planted to sugarcane, total and by milling region, 1972 – 2005

Region	1972	1980	1985	1990	1995	2000	2005
Philippines (h)	440,986	442,201	406,751	334,922	369,132	362,528	391,712
Shares (%)							
Luzon	27.1	27.2	25.4	24.6	19.6	18.1	18.0
Negros	53.6	51.4	50.5	52.0	53.7	54.3	50.5
Panay	12.5	11.3	8.3	6.2	9.1	8.5	6.7
E. Visayas	6.2	6.1	6.2	6.7	5.4	4.6	4.7
Mindanao	0.5	4.1	9.6	10.4	12.2	14.6	20.1

Source: SRA.

The fact that the country achieved higher output with decreasing land area implies rising annual yield (Table 6-5). Despite dips (e.g., in the mid-1980s and mid-1990s), yield has risen from 44 tons/ha to 58 tons/ha. Negros consistently leads here as well, while the lagging regions have been Luzon and Eastern Visayas. Industry observers note the frequency of typhoons in these areas, particularly for the latter. Mindanao also saw yield trends coinciding with that of the national average, except for the drop in the mid-2000s, accompanying a rapid expansion in area.

Table 6-5 Sugarcane yield by milling region (t/ha), 1972-2005

Region	1972	1980	1985	1990	1995	2000	2005
Philippines	44.2	50.9	46.0	57.8	50.1	54.0	57.6
Luzon	39.5	41.6	43.1	51.4	50.0	54.9	49.8
Negros	48.0	57.7	51.0	64.5	55.5	55.0	64.8
Panay	36.8	40.9	33.1	50.8	33.5	40.5	57.6
E. Visayas	46.1	54.9	47.3	54.1	50.9	56.4	49.0
Mindanao	48.1	47.9	37.8	45.8	38.9	56.3	48.7

Source: SRA.

In 2006, production of raw sugar for the domestic market was about 2 million tons, a figure that has held steady over the past few years (Table 6-6). Exports comprised the bulk of production in the 1970s, but exports dropped steeply in the 1980s. Currently exports account for only 137,000 tons, or less than 10% of exports in the 1970s. Exports were exclusively for the US market, except in 2004-2005, where exports to the world market (D sugar) averaged 85,000 tons. The country is largely self-sufficient in sugar, registering zero importation up to 1995, and again by the mid-2000s.

Table 6-6 Production, exports, and imports of sugar, 1975 – 2005, in tons

	Production	Exports	Imports
1975	2,396,992	1,514,502	-
1980	2,266,963	1,619,469	-
1985	1,722,209	877,334	-
1990	1,753,420	275,488	-
1995	1,647,023	149,529	84,524
1996	1,790,375	229,112	816,668
1997	1,829,993	248,467	132,624
1998	1,802,744	198,876	97,650
1999	1,624,322	141,298	601,499
2000	1,619,613	91,250	101,330
2001	1,805,203	89,317	215,921
2002	1,898,501	75,401	87,907
2003	2,161,525	137,353	41,978
2004	2,338,574	137,000	351
2005	2,150,746	137,353	

Note: Imports sum up raw and refined sugar.

Source: SRA

Processing of raw sugar is done domestically; currently there are 28 sugar mills operating, down from a peak of 42 (in 1978). Negros has the most mills (12), followed by Luzon (7); Mindanao has four, while Panay and Eastern Visayas have three each. The reduction in number of mills despite higher production levels implies rising investment in milling capacity since 1975 (Table 6-7). However the expansion is accounted for almost entirely by Mindanao, with minor increases in Negros. Capacity actually declined in the other regions, with the fastest drop in Panay.

Table 6-7 Rated capacity of sugar mills by milling region, in cane t/day, 1975–2004

	1975	1980	1990	2000	2003	2004
Total	157,651	189,622	173,130	168,800	177,800	178,300
Luzon	40,228	48,654	45,800	36,500	39,700	38,500
Negros	83,045	96,658	92,080	87,000	87,600	82,800
Panay	18,078	20,398	13,250	14,000	12,000	12,000
E. Visayas	12,300	11,912	12,000	8,800	10,000	10,000
Mindanao	4,000	12,000	10,000	22,500	28,500	35,000

Source: SRA.

b. History.

Sugarcane was already cultivated in the country during the pre-colonial period. Widespread farming of the crop started in the Spanish period. At that time, demand grew and new technologies in the form of crude milling machines were introduced. Exports began in the 1700s, but at low levels. Luzon was then the center of sugarcane farming and sugar production. The industry took off in the mid-1800s, with the opening of the port of Iloilo to foreign trade, and expansion of plantations in the Visayas. Subsequently the importance of Luzon declined. Sugarcane farming was then based on share tenancy (Padilla-Fernandez, 2000). Consistent with the argument of Hayami (2004), much of the acquisition of new areas involved filing a claim on public or Crown lands for a nominal fee, as well as practices like *sanglang-bili* (Corpuz, 1997).

During the American period, the domestic sugar market in the United States was opened up to duty-free importation from the Philippines. Production rose from just 0.2 million tons in 1913 to 1.56 million tons in 1934. After independence, quota access to the US market continued, reaching 1.3 million tons in 1971, with the Philippines becoming the top sugar exporter to the US. New centrifugal technologies were introduced, leading to the specialization of processing to large-scale mills. To ensure sufficient cane supply, mill investors entered into long term milling agreements with planters, which became the basis of the output sharing schemes (Larkin, 1993). Cane deliveries were facilitated by railways, which inhibited competition and led to bargaining between millers and planters, organized into associations. Share tenancy gave way to wage labor and mechanized farming. The elite “sugar bloc” was established around this time (Padilla-Fernandez, 2000).

Many observers have noted the severe land inequality in sugarcane farms. In 1991, the Gini coefficient was 0.81, compared with the national average of 0.57. The average farm size was likewise higher at 7.2 ha, versus 2.2 ha average for the country. This high concentration is the result of a colonial legacy that might have been reinforced by market distortions owing to domestic protection and the preferential US quota (World Bank, 1998).

Even though parity and trade agreements ended in 1974, the US quota was maintained, although this quota was to decrease over time. During the mid-1970s, the martial law government monopolized sugar trade. However, gross mismanagement led to large-scale business failures.⁴ Restoration of democracy in 1986 led to reorganization of the industry under the SRA. The reforms combined heavy government regulation with strong private sector representation.

⁴ During the boom of 1974 (following the failure of the sugar beet harvest in Europe), government withheld rice from the market, on speculation that prices would go up. But prices fell precipitously instead, bringing with it a near collapse of the industry. Planters could not pay their loans. Banks cut their credit lines to planters and workers went unpaid (Padilla-Fernandez, 2000).

c. Regulatory framework.

The Sugar Regulatory Administration is an attached agency of the Department of Agriculture (DA). The governing body of the SRA is the Sugar Board, composed of a representative each from millers and planters, along with the SRA Administrator and the DA Secretary. The industry is organized into mill districts. Given large mill capacities, the number and location of mills is zoned to ensure output while avoiding congestion. Planters in each district are organized into associations. Each mill district implements a sugar-sharing scheme (RA 809). Under this scheme, millers are assigned a fixed share of the output of raw sugar, usually 30% (though some mills are allowed a 35%-65% scheme). The representatives of the associations, mills, and the SRA form the Mill District Development Council. The SRA collects a lien of Php2 per bag (50 kg) of raw sugar. Proceeds of the levy are administered by the Mill District Development Council for R&D and extension services.

The SRA implements the *quedan* system, which is a warehouse receipt corresponding to some amount of sugar. *Quedans* can only be issued and redeemed upon authorization of the SRA. Hence, the SRA can monitor transactions and enforce its regulations through the *quedan*. In practice, the mill would already issue the *quedan* to the planter upon delivery of a batch of cane, using an estimate of the amount of sugar recovery from that batch. *Quedans* have evolved into a trading instrument for raw sugar.

Box 6-1 Sugar Orders (SOs)

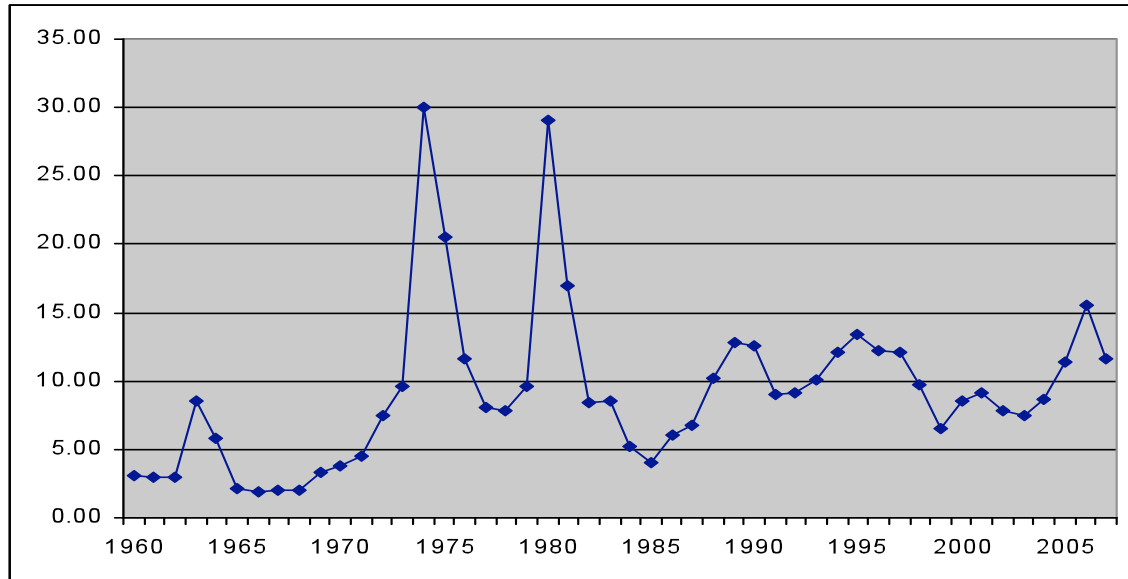
The SOs are based on annual demand and supply projections. The latter is obtained by extrapolations from mill production figures and farm survey data. These data are collected by the SRA (respectively, by the Extension and Technical Services Division and the Regulation and Enforcement Division). For 2007-2008, the projected output is 2.3 million t, hence the SO allocated 7% of *quedans* to A, 80% to B, 5% to C, and the remainder to D. Note that the SOs are subject to modification within the year as need arises based on changes in demand and supply conditions.

An important function of the *quedan* is to enforce the quota system, which allocates sugar every year to the US, domestic, reserve, and world markets (respectively, A, B, C, and D sugar). The proportional allocation is decided annually by the Sugar Board and codified as Sugar Orders (SO), issued at the start of the milling season (Box 6-1). Prices can therefore be segmented by market destination. Quantitative restrictions are implemented by controlling the issuance of B sugar. Imports above the amount allocated for B sugar is classified as C sugar and prevented from being released immediately into the market. Protection is also imposed by slapping a 65% tariff (out-quota), the highest tariff rate among agricultural products (de la Pena, 2006).

Traditionally, owing to high protection in the US, A-sugar prices were usually highest, followed by domestic market prices, with reserve and world prices being lowest. However, the world market entered a period of extreme volatility in the mid-1970s (Figure 6-1). World prices of sugar hit their all-time peak in nominal terms in 1974 at 30 cents/lb, but gyrated

wildly over the next decade. By 1985 prices had collapsed to just 4 cents/lb. Since then prices have fluctuated mostly within the 5 to 15 cent-band.

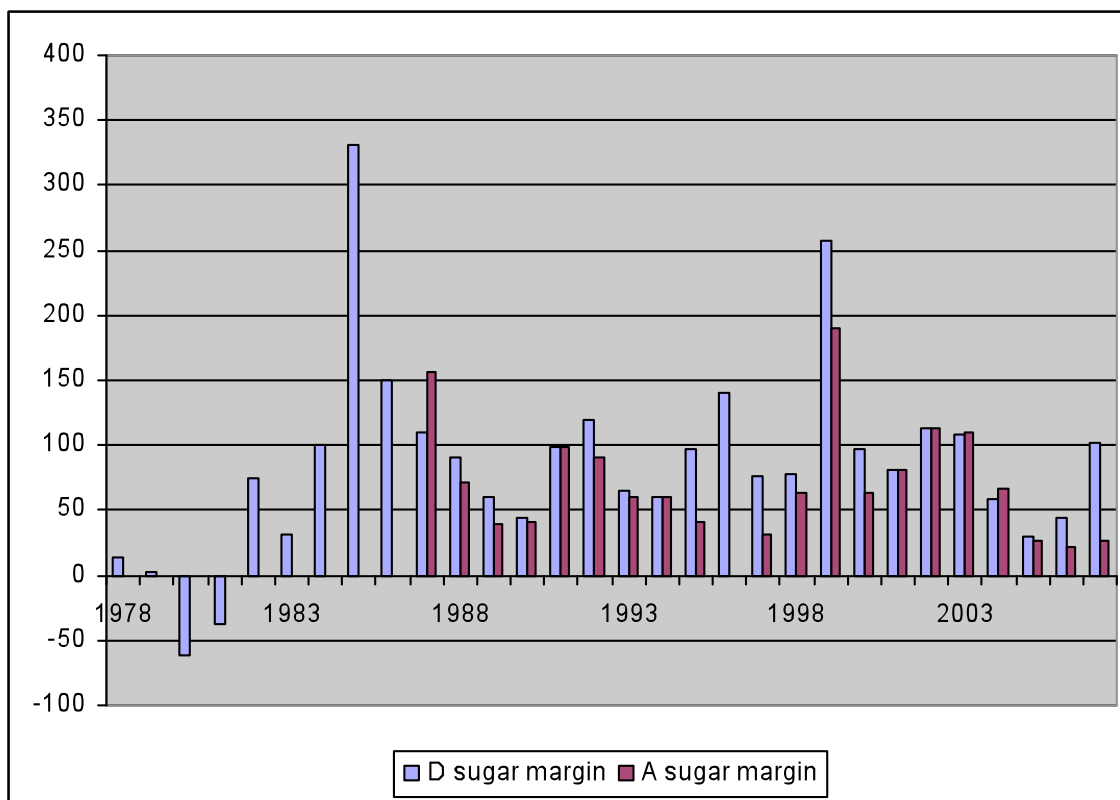
Figure 6-1 World market price for raw sugar, New York Contract No. 11 (US cents/lb)



Source: SRA

Figure 6-2 shows the domestic margin, which is the excess of the domestic wholesale over world price as a percent of the world price (a measure of the nominal protection rate). The margin has also varied, but remains generally positive. Since 1978, the only exceptions were in 1980 and 1981 during another world price spike. From 1990 onward the margin has averaged 93%. Also shown is the A-sugar margin, which is the excess of the A-sugar price over the world price, as a percent of the world price (a measure of the nominal protection rate provided by the US market). Unfortunately SRA data is readily available only from 1987. Just like the domestic margin, the A-sugar margin is positive, i.e., exporters to the US are better off than the average exporter to the world market. However, the A-sugar margin is lower than the domestic margin (except for 1987 and 1991); the average since 1987 is only 73%. Since the 1980s, the US market has become a less lucrative destination owing to rising domestic production (such as from sugar beet) and sugar subsidies. This was combined with declining demand as processors shifted to substitutes, notably the high fructose corn sweetener—a development that was partly induced by the high sugar prices in the 1970s (Barry, 1990).

Figure 6-2 Domestic and A-sugar margins, 1978-2007



Source: SRA

d. Industry prospects.

Demand is projected by SRA to be flat at approximately current levels (reaching 2.019 million tons by 2011). Given trade protection, domestic production is able to meet and even exceed domestic demand under current prices, with the excess absorbed by either reserves or the world market. In the area of multilateral trade liberalization, progress in the negotiations for the Doha development round of the WTO has stalled, and there appears to be no significant agreements in the offing in the near future.

However the country's participation in the ASEAN Free Trade Agreement opens a significant opportunity for liberalizing trade in sugar, at least within ASEAN. Sugar is classified under the "sensitive list" of agricultural commodities, whose inclusion in the common effective preferential tariff (CEPT) is scheduled on 2010. Given the presence in the region of sugar exporters such as Thailand, which can compete at world market prices, the CEPT promises a wider range of choices for sugar consumers, but significant adjustment for sugar producers. There are however no recent quantitative projections available regarding the impact of CEPT inclusion on the sugar industry.

Given the apparent inevitability of trade liberalization, industry players have looked to biofuels to create an alternative protected market. The most significant prospect for sugarcane is the fuel market. The Biofuels Act mandates a 5% ethanol-gasoline blend by 2009, and provides a package of tax exemptions and fiscal incentives to promote biofuels production.⁵ It creates a body called the National Biofuels Board (NBB), composed of Secretaries of various agencies, which monitors implementation of the Act and oversees the national program for biofuels. The Act empowers the NBB to raise the ethanol mandate to 10% by 2011. Importation of ethanol is currently subject to 10% tariff, possibly dropping to 1% if the DOE certifies the imports are to be used in the fuel ethanol program (EO 449). However, imports of bioethanol are only allowed with DOE approval up to 2011.

The SRA has drawn up projections on the sourcing and impact of bioethanol demand created by the Act (SRA, 2007). The ethanol mandates are expected to require 223 to 482 million liters of ethanol from 2009 to 2011. With ethanol recovery from sugarcane at 70 liters/ton, the ethanol mandate would therefore require 49,000 to 106,000 ha of land, under current yields. Currently “excess” cropping area (i.e., area that can be removed from cane production without a significant increase in domestic price) is estimated at about 38,000 ha up to 2011; part of this area (25,000 ha) can be re-allocated to ethanol production. Combined with an expansion of sugarcane areas by about 63,750 ha, the combined sugarcane area of 88,750 ha would be able to meet the ethanol requirement by 2011. The expansion areas account for less than 1% of the country’s total arable land. They are currently idle, or used for pasture and farming of other crops (perennials, vegetables, and grains). The rise in food prices as an indirect effect of bioethanol demand is expected to be insignificant.

On the processing side, the minimum economic size of a bioethanol plant is about 100,000 liters/day, corresponding to 7,000 ha for sugarcane feedstock at current yields. Two types of plants are possible: facilities adjunct to an existing mill, and stand-alone facilities. The former is cheaper (about Php800 million compared to Php1.3 billion for the latter), as well as quicker to construct (18 months, as against 24–30 months for stand-alone facilities). Currently there are 18 investment proposals for bioethanol plants, of which 15 identify sugar or molasses as feedstock. Of these, only one proposes an adjunct facility, indicating relatively slow adaptation of existing mills to the emerging fuel market.

On the consumption side, regular vehicle engines can generally take up to a 10% blend (E10 gasoline) with no diminution in performance. Beyond this level, special “flex-fuel” engines are needed for a gasoline blend with 20% ethanol content or higher (e.g., E20, E85, or E100). Energy content of ethanol is about 34% less than that of gasoline, translating to lower fuel economy (km/l) for ethanol. That is, the price advantage of ethanol (on a per liter basis) should be at least 34% to induce the consumer to make the voluntary switch.

⁵ The Biofuels Act of 2006 is RA 9367. The Implementing Rules and Regulations were promulgated on May 2007 as DOE Circular 2007-005-0006.

Table 6-8 Ethanol and gasoline prices, world market

	July 2008	Change compared to previous months, in %		
		1 month	6 months	12 months
Anhydrous ethanol, Sao Paolo spot (\$/m ³)	506.18	3.4	3.5	17.9
Conventional gasoline, New York Harbor (\$/m ³)	921.17	1.8	30.4	36.3

Source: http://www.ethanolstatistics.com/Commodity_Prices/Brazilian_Ethanol_and_Commodity_Prices.aspx

Under the extraordinarily high crude oil prices (US\$130 to US\$140/barrel) of recent months, refined gasoline prices have also hit unprecedented levels (Table 6-8). The world price translates to about Php40/liter. Based on cost and returns data for 2006 from SRA (Table 6-9), under the baseline or current prices, production cost is equivalent to P1,014/ton. Based on the 70-liter/ton estimate of the SRA, this translates to a feedstock cost of Php14.5/liter. Using the cost structure of 50:50 between feedstock and processing (USDA, 2006), then total cost of a liter of ethanol is Php29/liter. With the energy content adjustment (Php39 per 1.34 liter of ethanol \approx 1 liter of gasoline), ethanol from domestic sugarcane is just competitive with gasoline at current world prices.

Table 6-9 Per ha cost, returns, and capitalized net income from sugarcane farming, by scenario

	Baseline (Current prices)	Baseline with biofuels	Regulated feedstock
Revenue	80,390	72,351	76,213
Price (per LKG) ^a	1,088.6	979.7	1,032.0 ^b
Tons of cane	58.1	58.1	58.1
LKG	105.5	105.5	105.5
Recovery	1.82	1.82	1.82
Direct cost	52,424	52,424	52,424
Management cost	6,492	6,492	6,492
Profit	21,474	13,435	17,297
NPV	236,214	147,785	190,267

^aComposite of A, B, C, D prices; assumes a 70% planter's share on average.

^bComposite of sugar and feedstock price.

Source of basic data: SRA.

Given that such high prices would probably not be sustained in the medium term (EIA, 2008), the viability of the bioethanol industry would be determined by policy rather than market forces. However, interviews with the Bukidnon sugar millers point to a lack of firm government policies that constrains serious positioning for the biofuels market. Outstanding issues include: the role of the SRA in regulating cane supply for ethanol plants; shift to cane purchase from quedan system for ethanol production; environmental regulations, such as the

proper treatment of wastes from fermentation (slops); and degree of flexibility in allowing ethanol imports in the short to medium term.

e. Profitability and land values

From Table 6-9, note that at current domestic prices sugarcane growers are netting an average of Php21,474 (gross of land rental value); production cost is equivalent to US\$221/ton of sugar. Compare this with the Brazilian benchmark (lowest cost producer in the world); in mid-2005 its production costs per ton were US\$145. Meanwhile cost per ton was US\$195 in Thailand and US\$185 in Australia. About one-quarter of the total worldwide sugar production is at US\$200-\$US250/ton, above which the cost jumps to US\$400/ton and higher; these high-cost sugars in turn account for about one-half of the total world sugar production (Kojima and Johnson, 2006).

The profit per ha (gross of land rental value) may be imputed as returns to owning sugarcane land. The capitalized value of net returns per ha (using a 10% discount rate) is Php236,214, based on current prices. This figure is well within the range of estimates of land value obtained from the rapid appraisal (Php200,000 to Php300,000/ha). However for alternative use, estimates of the value of say corn land (in areas remote from the sugar mill) are in the neighborhood of Php120,000.⁶ This cost structure is assumed to hold in the near future, which defines our baseline scenario.

The other scenarios are: (a) liberalization; (b) biofuels; and (c) regulated feedstock. Assumptions for the liberalization scenario are:

- 1) There is no progress in multilateral negotiations under the Doha round. Nevertheless, in line with regional commitments, sugar falls under the CEPT.
- 2) The Philippines is a price-taker in the ASEAN Free Trade Area sugar market.
- 3) Residual protection is enforced through the quedan system (and some small preferential tariff). In any case, the world price is not an accurate indicator of the true opportunity cost of sugar due to support policies in the developed countries (e.g., European Union subsidies), as well as by domestic distortions in developing countries.⁷ Estimates of the true shadow price in the literature provide the following figures: 20% to 40% (Beghin and Aksoy, 2003); 43.2% (Wohlgenant, 1999); 48% (Elobeid and Beghin, 2006); and 33% (Nolte, 2008).

For the biofuels scenario, the study adopts all the features of the liberalization scenario, and introduces the additional demand for sugarcane as ethanol feedstock. Feedstock purchase falls under the cane procurement system. The SRA (whose mandate covers only sugar) fails

⁶ Compare this with estimates of corn land value of Php70,000/ha (Negros Occidental provincial assessor) up to Php85,000/ha. However this is confounded by the fact that corn tends to be grown in marginal rainfed areas where quality of land is low.

⁷ Reducing revenues by 48%, the level of protection afforded to A sugar, leads to a negative profit. The industry's standard objection to unilateral trade liberalization, voiced in the Sugar Master Plan, is that these distortions subject the domestic producer to unfair competition from the "dump market" (PSMA, 2000).

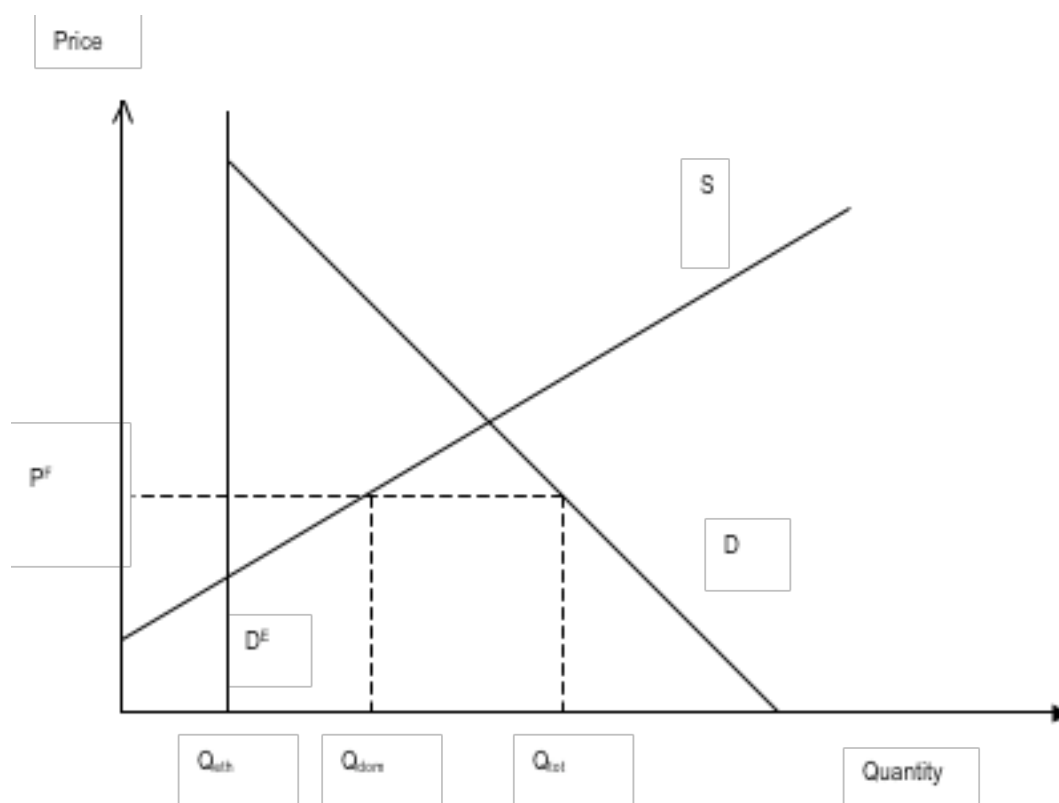
to include ethanol within its regulatory purview; hence, farmers can freely decide whether to supply sugar mills or ethanol processors. Imports of ethanol are not allowed; rather, processing capacity comes online at the onset of liberalization.

Finally, for the feedstock regulation scenario, the study modifies the biofuels scenario by allowing the SRA to control the supply of sugarcane as ethanol feedstock. This might be based on Rule 4, Section 16 of the IRR, which instructs the SRA to “at all times ensure that the supply of sugar is sufficient to meet the domestic demand and that the price of sugar is stable.” The regulation limits the amount that any one farmer can supply to the ethanol processor (in a similar manner, the quedan system limits the amount that any one planter can sell to the most lucrative market.) We leave unspecified for now the exact regulatory arrangement for the restriction.⁸

Analysis of the liberalization and regulated feedstock scenario is aided by Figures 6-3 and 6-4. Point Q_{eth} represents the fixed quantity of ethanol implied by the ethanol mandate; feedstock demand is therefore described by a vertical curve DE. The market demand curve is given by D; subtracting Q_{eth} from D leaves the demand curve for food sugar. The supply curve is given by S, which is upward sloping. There is a fixed price of foreign sugar, given by PF, which incorporates the residual protection under the CEPT. This residual protection is estimated as follows: subtract the domestic margin for 2007 (48%), but add a 33% adjustment for world price distortion, representing a politically defensible level of protection. The foreign supply curve is horizontal at PF, representing the small open economy assumption. A crucial feature about the Figures is that Q_{eth} is below the domestic supply corresponding to PF, which appears reasonable since the sugar equivalent of the ethanol mandate is only 190,000 tons (15% of the market output in 2006).

⁸ One tantalizing possibility offered by a farmer was to extend the quedan system to incorporate ethanol use (“E-sugar”). However, there are difficulties with this arrangement particularly if there are stand-alone ethanol processing facilities.

Figure 6-3 Graphical representation of the liberalization scenario



For the liberalization scenario (Figure 6-3), the domestic price settles down to the protected level at P^F . The additional demand due to the ethanol mandate does not materially alter the domestic price or even quantity produced. Profit per ha is about 48% lower (but still positive). The net present value of farm income is a little below Php150,000 per ha (Table 6-9). With reference to the domestic price under this scenario, the rent component of the imputed land price is therefore about Php80,000 or 52% of the actual capitalized net income. This suggests a lighter fiscal burden of land redistribution under this scenario.

For the regulated feedstock scenario (Figure 6-4), the restriction segments the market, resulting in two supply curves for sugarcane; the higher one corresponds to the feedstock supply, the lower one to food supply. This allows two prices, one for feedstock sugar (implicit in the cane price), and one for food sugar. The study assumes the percentage restriction per planter is the feedstock requirement as a share of 2006 output (12%). To fully offset liberalization, the price of cane must be 90% higher than the implicit cane price in 2006. This corresponds to nearly Php30/liter feedstock cost of ethanol. This is neither competitive even at current high gasoline prices nor politically sustainable in the face of lobbying by fuel companies and users.

In Negros Occidental, where the total scope of private lands is about 208,000 ha, total accomplishment is less than 60%. For lands under compulsory acquisition, accomplishment is only 21% of working scope (Table 6-10). Nevertheless there is already a large number of beneficiaries: up to 86,000 for just the voluntary offer to sell (VOS) and compulsory acquisition (CA) lands. It is likely that a large portion of redistributed lands and ARBs are sugarcane growing, as sugarcane areas account for 40% of the province's agricultural land.

Table 6-10 LAD accomplishment in Negros Occidental, as of October 31, 2007

Land type	Working Scope	Percent of total scope	Accomplishment		Farmer beneficiaries
			Ha	Percent of working scope	
PAL	207,618	100.0	122,514	59	109,830
OLT	16,147	7.8	10,728	66	12,002
GFI	16,271	7.8	14,355	88	8,787
VOS	89,428	43.1	75,023	84	72,271
CA	79,999	38.5	16,949	21	13,695
VLT	5,773	2.8	5,459	95	2,625

Source: DAR Provincial Office.

Since implementation of land reform in sugarcane areas, there has been a shift in farm size distribution (Table 6-11). The proportion of the sugarcane area falling under the small farm category rose, while that of the large and medium categories fell. A similar movement is observed in each of the milling regions. However, the contribution of CARP to this transition is not clear. Even before land reform, the shift toward decreasing inequality was already in motion, as can be seen by comparing area composition in 1976 and 1990, for the country and by milling region, except for Mindanao.

The story of land consolidation may well have held during the long establishment phase of the industry, but no longer seems to hold at the mature phase. The Mindanao exception may in fact prove the rule, as the 1976–1990 period was pioneering for the region. The more accurate narrative may be fragmentation or liquidation of larger farms, and entry of new farms dominated by smallholders as the changes in area shares (in percentage points) were larger for the CARP period compared to the pre-CARP period.

An earlier rapid appraisal study (APPC, 2007) probes into some of the constraints facing land reform in sugarcane areas, as exemplified by the case of Negros Occidental. Two stages of agrarian reform are: land acquisition and distribution; and farm production under owner-cultivation. In the first stage, the major problems encountered are: a) landowner resistance; b) land documentation; c) beneficiary selection.

A major reason for resistance is that the value of compensation is below the landowner's own valuation of the land. Resistance can be exerted through the legal system, or outside it. The former involves filing of lawsuits and criminal cases against DAR officials, obtaining court injunctions, application of exemptions and conversion, and so on. The latter involves harassment of officials and beneficiaries, or denial of access to the land. In some cases implementation is further weakened by the fact that some LGU officials oppose the program, being landowners themselves. Documentation problems take the form of defective titles (e.g., intestate deceased owner, overlapping titles, faulty technical description of the property), and missing titles (e.g., only substitute instruments such as tax declarations are available). Judicial remedy is a tedious and expensive process.

Table 6-11 Distribution of sugarcane area, by milling region, selected years

	1977			1990			2003		
	Small	Medium	Large	Small	Medium	Large	Small	Medium	Large
Total	18.5	36.4	45.0	25.1	33.7	41.2	34.4	31.2	34.4
Luzon	25.5	36.0	38.5	33.1	35.2	31.7	37.8	35.6	26.6
Negros	11.9	36.8	51.3	15.5	33.9	50.6	24.2	32.9	43.0
Panay	27.2	40.2	32.6	37.0	34.0	29.0	45.3	28.3	26.3
E. Visayas	12.7	33.3	54.0	19.8	30.5	49.7	22.3	23.8	53.9
Mindanao	72.7	24.8	2.5	47.9	31.6	20.5	54.8	26.1	19.1
Changes:									
Total				6.6	-2.7	-3.8	9.3	-2.5	-6.8
Luzon				7.7	-0.8	-6.9	4.7	0.4	-5.0
Negros				3.6	-2.9	-0.7	8.7	-1.0	-7.6
Panay				9.8	-6.2	-3.6	8.3	-5.7	-2.6
E. Visayas				7.2	-2.8	-4.4	2.4	-6.7	4.2
Mindanao				-24.8	6.8	18.0	6.8	-5.5	-1.4

Note: Small farms = not more than 5 ha; Medium farms = over 5 and below 50 ha; Big farms = over 50 ha.

Source: SRA.

Section 22 of RA 6657 provides the following way of selecting beneficiaries: qualified beneficiaries are local residents who do not own land, "in the following order of priority: (a) agricultural lessees and share tenants; (b) regular farm workers; (c) seasonal farm workers; (d) other farm workers; (e) actual tillers or occupants of public lands; (f) collective or cooperatives of the above beneficiaries; and, (g) others directly working on the land." In no case would an existing tenant be removed or a beneficiary awarded more than three ha of land. The ARB forfeits the land if he ceases to cultivate it. Transfer of land can be made only to legal heirs, the Land Bank, or the government.

The procedure works fairly well in tenanted lands, such as rice, corn, and coconut. In contrast, sugarcane lands are typically cultivated with wage labor. There are usually regular farm workers, especially for the larger estates. However, the regular farm workers are too

few to completely subdivide the covered property. The DAR field office would then identify beneficiaries according to the above listing (the “inclusion-exclusion” process). In many cases, the beneficiaries would be familiar with only a narrow set of tasks related to sugarcane farming (e.g., cane harvesting and hauling).

In some cases landowners could delay redistribution by dissuading their regular farm workers from participating in the identification phase. The DAR would then omit these farm workers. However, toward the final phase of redistribution, these regular workers would then demand to be included in the list of beneficiaries, creating hostility between them and the DAR as well as the official beneficiaries.

Another set of problems arises in the farm production phase, after the CLOA holder is installed in the property. Yield under ARB cultivation is said to be lower than under the traditional landowner. The two main reasons are:

the ARB has little know-how and experience in farming;

the ARB lacks cash, which has two effects: first, he or she cannot achieve the recommended levels of variable inputs (mainly fertilizer and rent of equipment for mechanized farming); second, the ARB cannot purchase cane points for replanting, hence resorts to more ratoons than warranted.

Over time, some ARBs opt to shift from sugar, where cash requirements are high but circulation is slow (one harvest per year), to other crops where cash requirements are lower (e.g., cassava) and/or cash circulation is faster (e.g., corn). Others take the more drastic step of waiving rights to cultivate their land, in favor of a lessee, pawnee, or even buyer. Pawning or sale of rights is of course illegal under RA 6657. Lease (or “leaseback”) is legal under RA 7905. The Provincial Agrarian Reform Coordinating Committee (PARCOM) can process applications for leaseback and other alternative venture arrangements, “provided that leaseback arrangements should be the last resort.” In practice, many lease agreements in sugarcane areas are in force even as the applications are being processed, or avoid the formal application altogether. Punitive action in the form of disqualification of the erring ARB and identification of a new beneficiary is rare given the cumbersome judicial process (Ballesteros and Cortez, 2007).

Ballesteros and Cortez (2007) as well as APPC (2007) also underscore the failure to enforce other basic landowning obligations. These are the payment of the land amortization to the Land Bank and payment of the real property tax to the LGU. While this may be partly attributable to lax collection practices, the main explanation is the common practice of redistribution by collective CLOAs, rather than individual CLOAs. This practice has expedited LAD but also undermined individual property rights and obligations.

A study by the Negros Occidental Provincial Government (2007) carefully documents these problems at the level of the ARB. In 2007 the LGU requested a complete master list of ARBs and their corresponding CLOAs divided by the six districts of the province. From the original list of 111,830 CLOAs distributed, a validation process narrowed the number of unique

ARBs to 78,470 (70%). This was followed by a field validation of status of occupancy, through complete enumeration by barangay health workers and other deputized personnel. This step identified only 41% of beneficiaries to be continuing the cultivation of awarded land (Table 6-12).¹⁰ Other information was subsequently derived from a sample survey covering 2,325 respondents.¹¹ Information was collected using a structured questionnaire. Many of the questions were answerable by either No or Yes. For the “Yes” responses, respondents were asked to qualify their answers further on a 5-point scale (1-Very Low; 2-Low; 3-Enough; 4-Much; 5-Very Much).

Table 6-11 Negros Occidental ARBs’ progress indicators, 2007

	Percent of respondents	Extent of benefits (where applicable)
<i>Status of cultivation</i>		
Cultivating	59	
Not cultivating	41	
<i>Status of awarded land</i>		
Individual CLOA	19	
Collective	61	
Others	20	
<i>Crops planted</i>		
Corn	13	
Sugarcane	54	
Palay	26	
Vegetable	5	
Others	2	
<i>Status of land tax payment</i>		
Paying	28	
Not paying	72	
<i>Status of amortization payment</i>		
Paying	26	
Not paying	74	
<i>Membership in ARC</i>		
Member	76	
Not a member	24	
<i>Types of benefits under CARP</i>		
Economic	31	Low
Productivity	20	Low
Social	61	Low
Overall benefits facilitated by CARP	62	Low

Source: Negros Occidental Provincial Government.

¹⁰ Data pertains to status as of September 15, 2007. The other options listed in the questionnaire are: leased; pawned; sold rights; under financing (a variation of pawning); and others.

¹¹ Respondents were drawn by stratified random sampling according to district.

Other findings tend to confirm those from other studies, anecdotal observations, and results of previous rapid appraisal. These findings include: preponderance of collective CLOAs over individual CLOAs; concentration of crop choice in sugarcane; and infrequency of payment for real property tax and land amortization. Majority of sample respondents (62%) do confirm receiving benefits under CARP, but the type of benefit is mostly “social”. Economic and productivity benefits are much less common (31% and 20%, respectively). In any case the extent of benefits were all rated to be Low.

The study’s final source of information is the rapid appraisal in Bukidnon and Negros Occidental.¹² The study elicited the farm profile (Table 6-13) of sugarcane planters interviewed (25 in Bukidnon and 13 in Negros). In both provinces, the average total landholding is far in excess of the retention limit specified under CARP (e.g., 33 ha in Bukidnon and 62 ha in Negros). Negros planters were almost solely devoted to sugarcane. Bukidnon planters were more diversified (mostly into corn and rice, with some into coconut, rubber, and fruit trees), but still highly concentrated on sugarcane.

Table 6-12 Cropping and tenure among sugarcane planters, Bukidnon and Negros

	All crops and tenure	Planted to sugarcane	Rented
Bukidnon planters (N=26)			
Average area (ha)	32.6	27.5	14.1
Percent of total area surveyed	100.0	84.5	43.4
Percent of landholdings, average	100.0	81.4	41.2
Negros planters (N =13)			
Average area (ha)	61.9	61.5	41.4
Percent of total area surveyed	100.0	99.4	67.0
Percent of landholdings, average	100.0	99.5	61.3

Source: Author’s data

In Negros Occidental, up to two-thirds of the respondents’ area (and three-fifths average across respondents) were rented by the planters. The planters indicated that the landowners were mostly agrarian reform beneficiaries. It is not that difficult to find areas to lease, as most ARBs are inclined toward this arrangement. Meanwhile in Bukidnon, lease agreement is less common, but still widely practiced (43% of respondents’ area and 41% average across planters).

Many of the planters who had been subject to CARP pointed out that their farm operations were largely intact due to these lease agreements (although their farms were not necessarily the identical plots owned previously). The difference though is a weakening of security of tenure, preventing them from making long term land improvements (such as irrigation,

¹² In the case of Bukidnon MDDC, the study’s rapid appraisal asked key officials of planter’s associations regarding the proportion of registered planters who are ARBs. No data was available, and their best guess could only narrow it down to a “small percentage”. Given the fact that the mills in that district require membership in a planter’s association before accepting a delivery, the lack of ARBs in the planter’s association is telling.

leveling, etc.) The planters attribute the prevalence of lease agreements to poor policies of the government, first, in the selection of beneficiaries (many ARBs have no skill or inclination to cultivate the land), and second, in the inadequate amount of support (mainly, the provision of credit to cash-strapped ARBs).

IV. Are Bigger Farms Better?

a. Scale economies.

On the issue of scale economies, the study first examines cost and return summaries of SRA, available for Luzon, Eastern Visayas, and Mindanao (LEVIM) milling regions, for 2006. Farms are categorized into small, medium, and large (as earlier defined). Yield by category and mill district is shown in Table 6-14. The data point to a violation of the inverse size productivity relationship: large farms obtain greater yields than small farms, and for Batangas, Cebu, Leyte, Bukidnon, and Cotabato, yield rises monotonically with size class.

Table 6-14 Yield per ha in tons of cane, by mill district and size category, 2006

	Small	Medium	Large
LEVIM	99.8	104.8	111.7
CARSUMCO	75.0	70.4	79.7
Tarlac	141.8	81.0	101.6
Pampanga	85.0	97.5	97.0
Don Pedro	114.0	128.3	138.8
Balayan	102.3	119.8	138.5
PENSUMIL	52.1	89.1	84.0
Bogo-Medellin and Durano	70.8	86.4	89.0
Bosco - HISUMCO	113.4	117.4	130.9
Bukidnon	109.8	121.8	129.1
Davao	141.6	144.4	137.3
Cotabato	92.4	97.0	102.9

Source: SRA

However, rising yield does not necessarily translate into lower average cost. Table 6-15 shows the average cost data (in pesos per 50 kg bag of sugar). Average cost does fall with size class, consistent with economies of size, for Balayan, Cagayan, Bukidnon, and Cotabato, and approximately for LEVIM. For the other provinces the relationship is non-monotonic, i.e., the medium farms show either higher cost than small farms, or lower cost than large farms. However, for CARSUMCO and Tarlac, the smallest farms also have the lowest average costs.

These comparisons fail to control for other factors that might be determining economic performance. The study now turns to an econometric analysis of the FMR survey that incorporates these controls. Survey data was requested from SRA and obtained in electronic form, along with the variable code linked to the survey instrument. Extensive processing of the raw data was required as the initial processing was focused on quantifying the individual cost items per farm, rather than correctly coding price and quantity information. In many cases, price or quantity information was assigned using the “nearby neighbor” principle; in particular local prices of some inputs were missing when these were either unused or owned by the farmer (e.g., rental value of land when land is owned by the farmer). At the end of this process, the data set contained useable input prices for seed, cultivation fee (per ha), and fertilizer price. The last is stated as cost per kilogram of the major macronutrients (nitrogen, phosphorus, potassium) based on actual use by farm.

Table 6-15 Average cost in pesos per bag, by mill district and size category, 2006

	Small	Medium	Large
LEVIM	626.0	597.5	600.0
CARSUMCO	477.5	485.9	493.3
Tarlac	362.7	516.4	463.6
Pampanga	463.1	498.2	407.5
Don Pedro	486.5	555.2	403.8
Balayan	607.1	537.6	463.6
PENSUMIL	864.4	569.2	452.1
Bogo-Medellin and Durano	698.2	578.9	625.5
Bosco - HISUMCO	560.8	564.9	603.0
Bukidnon	517.8	450.2	411.5
Davao	373.9	341.9	395.3
Cotabato	570.1	535.6	508.5

Source: SRA

Other control variables available from the survey are farmer and farm characteristics, i.e., age of farmer, years of schooling of farmer (converted from educational attainment), soil type, and terrain. The last two are coded by parcel, and are converted into percentages of aggregate landholding by observation. The variable labels and definitions used in the cost function regression are shown in Table 6-16.

Table 6-16 Variable labels and definitions for the cost function regression

Label	Definition
Lnout	Output per planting season in LKG of sugar, in logs
Lnseedp	Price per laksa, in logs
Lnfertp	Price per kilogram of fertilizer, in logs
Lncultp	Cultivation fee per ha, in logs

Label	Definition
Md1	Cagayan mill district
Md2	Tarlac mill district
Md3	Pampanga mill district
Md4	Batangas mill district
Md5	Camarines Sur mill district
Md6	Danao, Cebu mill district
Md7	Medellin, Cebu mill district
Md8	Leyte mill district
Md9	Bukidnon mill district
Md10	Davao mill district
Md11	Cotabato mill district
Year	Year of survey
Lnage	Age of planter in years, in logs
Lnyred	Years of schooling of planter, in logs
Area_st1	Farm area with sandy soil, in percent of total farm area
Area_st2	Farm area with sandy loam soil, in percent of total farm area
Area_st3	Farm area with clay-loam soil, in percent of total farm area
Area_top1	Farm area with flat terrain, in percent of total farm area
Area_top2	Farm area with slightly rolling terrain, in percent of total farm area

Note: Logs denote natural logarithms; "Laksa" refers to 10,000 seed pieces.

Source: SRA.

The conditional cost regression takes the annual cost per planter as the dependent variable, with total output and input prices (as well as other conditioning variables) as explanatory variables. The study first adopts the double log form, i.e., the Cobb-Douglas specification. The coefficient of the output term is directly the reciprocal of the elasticity of scale. The study also applies the extended form with output and input price interaction terms, i.e., the translog specification:

$$\begin{aligned}
\ln C_i = & \alpha_0 + \alpha_1 \ln Q_i + 0.5\alpha_2 (\ln Q_i)^2 + \beta_1 \ln \text{seed} p_i + \beta_2 \ln \text{fert} p_i + \beta_3 \ln \text{cult} p_i \\
& + 0.5\beta_{11} (\ln \text{seed} p_i)^2 + \beta_{12} \ln \text{seed} p_i \ln \text{fert} p_i + \beta_{13} \ln \text{seed} p_i \ln \text{cult} p_i \\
& + 0.5\beta_{22} (\ln \text{fert} p_i)^2 + \beta_{22} \ln \text{fert} p_i \ln \text{cult} p_i + 0.5\beta_{33} (\ln \text{cult} p_i)^2 \\
& + \sum_{j=1}^{18} \gamma_j z_{ji} + \varepsilon_i
\end{aligned} \tag{2}$$

Note that the study has imposed symmetry outright. The study can also obtain the elasticity of scale for this specification using (1), which it evaluates at the sample mean.

The results of the Cobb-Douglas regression are shown in Table 6-17. The output and input price coefficients have the correct sign, and are statistically significant at the 5% or even 1% level (except for the cultivation fee). Other variables with significant coefficients are year (capturing inflation), and age (with negative effect). Interestingly, the soil and terrain variables are not statistically significant. Given rejection of constant variance for the OLS regression (based on Breusch-Pagan test), the White-corrected standard errors are applied in the last column, but there are no big changes in the patterns of statistical significance. The output coefficient implies a high elasticity of scale of 2.27.

The results of the translog specification are shown in Table 6-18. Based on adjusted R^2 , the translog achieves a higher goodness-of-fit to the data. Moreover the F-test rejects the hypothesis of jointly zero coefficients for the price interactions, pointing to the incompleteness of the Cobb-Douglas specification. The elasticity of scale for the translog is now much closer to but still above unity, indicating moderate economies of scale. The linear restriction consistent with unit elasticity (at the sample mean) is rejected with an F-test at significance level 0.01. According to the translog regression, the elasticity of scale is decreasing with size. Constant returns is achieved at an output level that is 53% above the mean output. At even higher output, planters are operating at decreasing economies of scale. At average yield, this corresponds to landholding area of about 58 ha.

Based on the rapid appraisal, virtually all stakeholders (big and small planters, agrarian reform beneficiaries, sugar mill representatives, and SRA officials) agreed that there are economies of scale as well as farm size. The most common explanations given are:

- Farm equipment for sugarcane is fairly large compared to those used in other major crops (e.g., rice and corn). The rental market is therefore relatively thinner for sugarcane. Planters who must rent equipment might have to wait in line for the machine. Instead, farming is most efficient when the planter uses his own equipment since he can then select the appropriate timing and intensity of use.
- Sugarcane farming is much more demanding of working capital over a crop year, compared to other major crops. Small farmers tend to be less wealthy, have lower access to credit, and therefore less capable of applying the recommended doses of fertilizer and other variable inputs.

Table 6-17 Results of Cobb-Douglas conditional cost regression, OLS and White-corrected estimates

Variable	Coefficient Value	$P(t > t_c)$ OLS	$P(t > t_c)$ White-corrected
Lnout	0.441	0.000	0.000
Lnseedp	0.121	0.000	0.000
Lnfertp	0.066	0.000	0.000
Lncultp	0.012	0.309	0.323
Md1	-0.067	0.697	0.649
Md2	0.354	0.014	0.006

Variable	Coefficient Value	$P(t > t_c)$ OLS	$P(t > t_c)$ White-corrected
Md3	0.834	0.000	0.000
Md4	0.642	0.000	0.000
Md6	0.290	0.057	0.036
Md7	0.718	0.000	0.000
Md8	0.853	0.000	0.000
Md9	0.586	0.000	0.000
Md10	0.469	0.001	0.012
Md11	0.263	0.141	0.058
Year	0.256	0.000	0.000
Lnage	-0.116	0.000	0.001
Lnyred	0.067	0.071	0.108
Area_st1	0.001	0.653	0.670
Area_st1	-0.001	0.456	0.507
Area_st1	0.000	0.758	0.774
Area_top1	-0.001	0.355	0.396
Area_top2	0.002	0.153	0.158
Constant	-504.99	0.000	0.000

Notes:

Adjusted R² for the OLS is 0.57.

Elasticity of scale is 2.27.

Breusch-Pagan test for OLS yields $P(\chi^2 > \chi_c^2) = 0.000$

Source: Author's calculations, using SRA data.

- Small farmers tend to have lower endowment of human capital and probably less managerial skills. From the Farm Management Record Keeping Survey, pair wise correlation between years of schooling and landholding area is 0.13 (which is statistically significant). Inadequate know-how in the entire business of farming is especially acute for ARBs who have smaller landholdings.

Table 6-18 Results of translog conditional cost regression OLS and White-corrected estimates

Variable	Coefficient Value	$P(t > t_c)$; OLS	$P(t > t_c)$ White-corrected
Lnout	-0.710	0.000	0.000
Lnseedp	0.114	0.007	0.025
Lnfertp	0.195	0.004	0.009
Lncultp	0.002	0.974	0.977
Lnout ²	0.199	0.000	0.000
Lnseedp ²	0.004	0.679	0.711
Lnseedp*Lnfertp	-0.015	0.000	0.021
Lnseedp*Lncultp	0.001	0.684	0.829
Lnfertp ²	0.007	0.778	0.794

Variable	Coefficient Value	$P(t > t_c)$; OLS	$P(t > t_c)$ White-corrected
Lnfertp*Lncultp	-0.004	0.257	0.404
Lncultp ²	0.005	0.791	0.798
Md1	-0.245	0.047	0.058
Md2	0.164	0.111	0.082
Md3	0.311	0.004	0.005
Md4	0.130	0.168	0.185
Md6	0.118	0.273	0.279
Md7	0.442	0.000	0.001
Md8	0.419	0.000	0.000
Md9	0.079	0.383	0.416
Md10	-0.064	0.538	0.590
Md11	0.025	0.842	0.764
Year	0.140	0.003	0.004
Lnage	-0.002	0.899	0.905
Lnyred	0.022	0.390	0.425
Areash_st1	0.001	0.587	0.604
Areash_st2	0.000	0.866	0.878
Areash_st3	0.000	0.992	0.993
Areash_top1	0.000	0.946	0.946
Areash_top2	0.001	0.204	0.201
Cons	-269.17	0.004	0.006

Notes:

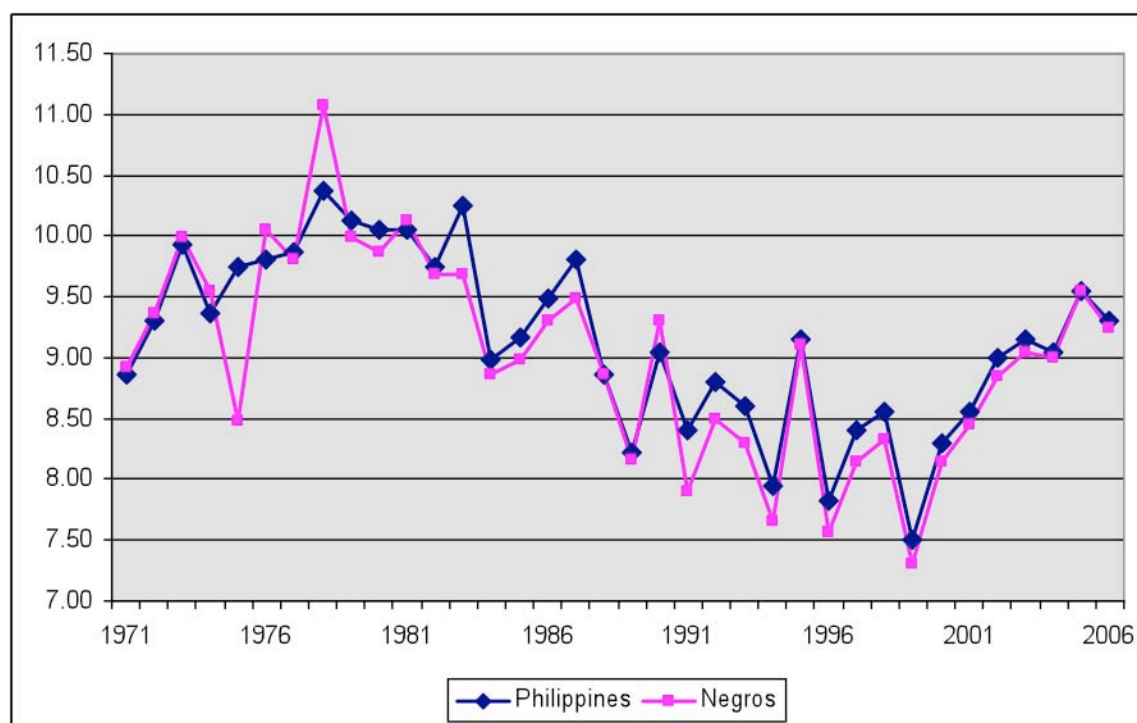
- Adjusted R² for the OLS is 0.79.
- Elasticity of scale is 1.09.
- Breusch-Pagan test for OLS yields $P(\chi^2 > \chi_c^2) = 0.000$.
- F-test for zero coefficients of interaction terms yields $P(F > F_c) = 0.000$.
- F-test for linear restriction $\alpha_1 + \alpha_2 \ln q_i = 1$ yields $P(F > F_c) = 0.0058$.

Source: Author's calculations, using SRA data.

b. Coordination cost.

Sugar recovery from cane (in kg of sugar per ton of cane) is an important indicator of coordination efficiency. Trends in recovery are shown in Figure 6-5. The national average peaked in 1978 but went into a prolonged (though erratic) decline that appears to have been reversed only in 2000. Recovery in Negros has generally fallen behind that of the national average since the industry's crisis period in the late 1980s. Note however that recovery might be capturing other effects, such as mill inefficiencies. As pointed out by David (2003), investment in mill improvement is seriously restrained by the mandatory output sharing.

Figure 6-5 Recovery from cane, Philippines and Negros mil region, 1971 – 2006, in kg/ton



Within the same mill district however, there seems to be no difference in sugar recovery across size category of farms based on 2006 data (Table 6-19). This suggests that coordination problems do not appear to differ by size of farm. However one might argue that coordination costs would not affect a specific size category, but rather all farms across the board. This requires comparing overall sugar recovery with indicators of overall landholding inequality.

As the area under smallholder farms has been growing over the same period, one might well obtain a spurious positive correlation between recovery and farm size inequality. To isolate the effect (if any) of smallholding on recovery, the study runs a multiple regression introducing other control factors, i.e., farmgate price of output (by province), sugarcane farmer's wage (by region), price of fertilizer (by province), time trend, and province dummies. Price variables were deflated by the implicit price index of agriculture based on agricultural GVA (by region). The output price was further adjusted by taking the three-year moving average (with one period lag). The model is fitted to SRA data (1990–2004), by mill district, for sugar recovery and area under smallholder production (in percent); price variables are obtained using BAS provincial data.

Table 6-19 Sugar recovery from cane, in kg/t, by size category and mill district

Mill district	Small	Medium	Large
LEVIM	88.7	92.2	91.2
CARSUMCO (Cagayan)	100.3	98.0	94.0
Tarlac	86.1	77.7	83.9
Pampanga	78.0	76.8	77.6
Don Pedro (Batangas)	95.8	97.9	96.4
Balayan (Batangas)	68.1	92.2	95.5
PENSUMIL (Camarines Sur)	69.7	83.9	69.3
Bogo-Medellin and Durano (Cebu)	79.8	85.1	82.8
Bosco – HISUMCO (Leyte)	97.2	97.7	102.9
Bukidnon	110.0	109.7	113.1
Davao	50.0	50.0	50.0
Cotabato	97.6	98.0	96.9

Source: SRA

Results are shown in Table 6-20. OLS regression yields a decent goodness-of-fit (adjusted R-squared is 0.522). *Small*, which denotes the share of mill district area under smallholder production (5 ha and below), is confirmed as a negative factor in sugar recovery. The effect is statistically significant (at the 5% level). Based on coefficient magnitude, however, the effect is far from alarming—a one percentage point increase in area under smallholder production reduces cane recovery by a half-kg per cane ton. Moreover, less than 50% of variation from the mean is explained by the model (adjusted $R^2 = 0.48$). Presence of heteroscedasticity is detected with the Breusch-Pagan test; the model is re-estimated with White-corrected standard errors, with corresponding probabilities in the third column. Results from the White-corrected run are almost identical to those of the OLS regression.¹³

The rapid appraisal, however, identifies qualifiers regarding this basic finding. In Bukidnon, none of the planters or millers found coordination of deliveries a problem. Recently the two mills had expanded their capacity, eliminating the phenomenon of long queues. Even before this expansion, the delivery problem was kept manageable by allocating delivery quotas per unit time to sub-districts, via the planters' associations. Meanwhile in Negros, coordination of deliveries is not a problem because of competition among millers—congestion at one mill would cause planters to deliver their cane to another mill. Moreover in the district visited, about 70% of the cane was obtained through vertically integrated deliveries, avoiding coordination problems.

¹³ Given the panel structure of the data, the study also tried to group the observations by province and run a fixed effects regression using the same explanatory variables (except the province dummies). Coefficients and standard errors were very close to those OLS regression.

Table 6-20 Regression results for sugar recovery, OLS and White-corrected estimates

Variable	Coefficient	Prob($t > t_c$), OLS	Prob($t > t_c$), White-corrected
<i>Small</i>	-0.002	0.035	0.014
Year	0.009	0.115	0.156
Market price	0.000	0.888	0.901
Capacity	0.000	0.132	0.164
Pampanga	-0.252	0.041	0.000
Batangas	0.098	0.404	0.092
Cagayan	0.068	0.581	0.368
Camarines Sur	-0.359	0.004	0.000
Pangasinan	-0.216	0.167	0.017
Tarlac	0.027	0.830	0.704
Negros Occidental	-0.250	0.030	0.000
Negros Oriental	-0.052	0.654	0.378
Capiz	-0.333	0.007	0.000
Iloilo	-0.224	0.078	0.002
Cebu	-0.349	0.005	0.000
Leyte	-0.180	0.142	0.022
Bukidnon	0.049	0.693	0.450
Davao	0.158	0.215	0.054
Cotabato	-0.215	0.140	0.267

Source: Author's calculations, based on SRA data.

c. Area allocation.

Comparison of Tables 6-4 and 6-11 suggests a mixed correlation between sugarcane supply and the proportion of sugarcane area in the small farm category. The mill regions experiencing the biggest gain in proportion of small farms are Negros, Panay, and Mindanao. The first maintained its production share, the second suffered a declining production share, but the third experienced a rapid increase in production and area share.

The study explores the relationship more systematically, again with multiple regression. The dependent variable is sugarcane area by province, as a percent of total farm area. An explanatory variable is the percent of provincial sugarcane area under small farms (denoted as *Small_sh*). The study adds other explanatory variables, namely time trend, output price, wage, fertilizer price, and provincial dummies. Prices are converted into real terms using the implicit agricultural GVA deflator, and lagged one period. This follows to some extent the supply response and acreage allocation literature (e.g. Rosegrant, Kasryno, and Perez, 1998; Khiem and Pingali, 1995; Bewley, Young, and Colman, 1987), but modified to take into account the study's more modest aim of determining the role of small-scale farming decreasing the share of sugarcane vis-à-vis all other crops.

Results are shown in Table 6-21. The adjusted R-squared for this model is 0.952. The coefficient of *Small_sh* is statistically significant. Surprisingly, the effect is positive. The

regression suggests that as the size profile of landholding shifts toward small farms, the area share of sugarcane farms increases. This is consistent with the trend discussed toward the end of Section 3, which noted the shift from large estates and the entry of new, smaller farms, coinciding with the overall growth of farm area for the industry.

Table 6-21 Regression results for area share of sugarcane, OLS and White-corrected regressions

Variable	Coefficient	Prob($t > t_c$), OLS	Prob($t > t_c$), White-corrected
<i>Small_sh</i>	0.024	0.018	0.007
Year	0.145	0.074	0.120
Price of sugar	-0.004	0.969	0.916
Wage	-0.059	0.082	0.059
Price of fertilizer	-0.005	0.476	0.418
Batangas	20.398	0.000	0.000
Bukidnon	6.301	0.000	0.000
Cagayan	-0.870	0.334	0.071
Camarines Sur	-0.776	0.396	0.104
Capiz	4.925	0.000	0.000
Cebu	1.968	0.044	0.001
Davao	3.647	0.000	0.000
Iloilo	1.069	0.242	0.330
Laguna	0.289	0.760	0.577
Leyte	44.431	0.000	0.000
Negros Occidental	11.357	0.000	0.000
Negros Oriental	1.147	0.228	0.037
Pampanga	11.339	0.000	0.000
Pangasinan	-2.109	0.018	0.000
Tarlac	9.529	0.000	0.000
Constant	-284.532	0.078	0.125

Source: Author's calculations, based on SRA data.

V. Prospects for land reform in the sugar lands

a. Summary.

The study's examination of the hypotheses yields the following findings:

- 1) The presence of scale economies in sugarcane farming is confirmed by econometric analysis. According to the rapid appraisal, this is largely attributed to the size and cost of farm equipment, combined with timing and availability problems associated with the

machine rental market. Greater availability of working capital and managerial know-how for wealthier farmers, who tend to have bigger output, is also a likely contributor.

- 2) There are downstream coordination problems associated with small scale farming, again based on econometric analysis of sugar recovery rates. According to the rapid appraisal, this problem might be specific to a mill district. In those districts surveyed, planter's associations and large milling capacity have addressed these problems.
- 3) There is no systematic tendency for small scale farming to be associated with a shift out of sugarcane cultivation.
- 4) The study also finds that the industry has managed, through regulatory capture, to enjoy rents from domestic protection and market segmentation (even taking into account distortions in the world price owing to external subsidies and the dump market.) These rents are subsequently factored into land values.

These findings explain some of the salient features of land reform experience in the sugarlands. Bloated land values raise the cost of landowner compensation, encourage evasion (such as through subdivision of land among kin), and lead to stiff landowner opposition in the face of a fiscal bind. Small farmers are also hard-pressed to compete against large landowners who own their machinery and have more working capital. They are also short on familiarity and skill in managing whole farm operations, unlike their tenant counterparts in rice and corn lands. Many ARBs resort to leasing their land in the informal market, or to more complicated transactions involving the pawning of land rights (in exchange for bigger loans). Limits on leaseback and abandonment are hardly enforced owing to cumbersome legal proceedings required by punitive action.

Hence, while many big landowners have undergone redistribution, they are cultivating landholdings much bigger than the retention limit, either through renting land, or through consolidating relatives' lands under a single operation. Land reform has simply severed the legal ownership relation between the operator and the land, but not actual decision-making. The fact that large-scale farming remains mostly intact is consistent with the third finding, i.e., the sustained operation of sugarlands. However, it also seriously undermines the credibility of the program. The message here is that the sugar industry *is* special. Its uniqueness among the major traditional crops should matter greatly in the way land reform is conducted in sugarcane areas.

7. THE ROLE OF AGRICULTURE IN POVERTY REDUCTION IN THE PHILIPPINES AND POTENTIAL PATHWAYS OUT OF RURAL POVERTY

I. Introduction

This chapter provides some preliminary steps toward new targeting for an extended CARP as a means of rural poverty reduction. The chapter focuses on the role of agricultural sector growth, vis-à-vis growth in other economic sectors, in rural poverty reduction and the observed changes in the rural Philippines in the past few decades that can potentially have significant implications for CARP targeting in the future.

The basic thrust of the arguments is that while agriculture has had significant roles to play in rural poverty reduction, its relative importance has shrunk substantially over the past few decades and the relative role of non-agricultural and non-farm sectors grew correspondingly. The so-called ‘pathways’ out of rural poverty diversified and agricultural growth might not always be the primary engine of rural poverty reduction in some areas. This suggests that it is important to identify the areas (or the characteristics of households) for which agricultural growth still constitutes the primary and optimal pathway out of rural poverty. Accordingly, the implementation of an extended CARP, with its relatively limited resources, should also focus on those areas.

II. Existing Studies on Alternative Pathways Out of Rural Poverty

In the past few decades, the national economy, including economic activities in rural areas, diversified rapidly with an equally rapid increase in the proportion of non-agricultural activities available for the rural landless (construction, plumbing, tricycle driving, local shop, etc.). Based on the national account data, for example, the share of agricultural GDP declined from 30% as of 1970 down to 14% in 2006 while that of services increased from 39% to 54% during the same period. As a result, it is likely that the potential routes for escaping poverty in rural areas have also become increasingly diverse over time.

Studies documenting the changes in the relative importance of alternative pathways out of rural poverty, however, are relatively rare due to the paucity of household-level panel data covering sufficiently long periods of time appropriate for such purposes. Nevertheless, recent micro-level studies all point to the crucial role played by the non-agricultural income growth in poverty reduction and the increase in the relative returns to education vis-à-vis agricultural land.

In general, rural households can escape from poverty either through climbing the ‘agricultural ladder’ or through increased incomes from the non-agricultural sector. The main sources of the non-agricultural sector incomes, in turn, include the rural non-agricultural sector, the urban sector or international labor migration. Yujiro Hayami and Masao Kikuchi, for example, document the long-term changes in a village in Laguna province since the 1970s in a series of studies. Hayami and Kikuchi (2000) report that poverty incidence in the village declined from 68% in 1974 to 56% in 1995 and identify the expansion of the non-agricultural income earning opportunities resulting from industrialization in the metropolitan area (e.g., household enterprises subcontracting the export oriented metal craft industry, factory employees, etc.) as the main source of poverty reduction in the village. According to Hayami and Kikuchi (2000), averaged across all households in the East Laguna Village, the share of farm income declined from 68% in 1974 to 22% while the share of non-farm wage income increased from 9% to 27% during the same period. If we limit our attention to the landless laborer households, which are typically among the poorest in village economies, the share of agricultural labor incomes fell from 59% in 1974 to 35% in 1995 while the share of non-agricultural wage incomes increased from 9% to 28% during the same period.

Another long-term panel study comes from a village in Pangasinan province as documented by James N. Anderson and Nobuhiko Fuwa. Fuwa (1999, 2007) documents a striking decline in the relative share of households escaping poverty via the ‘agricultural ladder’ over the three decades between 1962 and 1994. Among the households moving out of the class of ‘poor households’—defined here (in the absence of consistent income or consumption data) as those households where the main income earner in the household was either a landless laborer or a tenant farmer—the share of the households whose main income earners became owner-farmers (considered as the “pathway out of rural poverty through the ‘agricultural ladder’”) declined dramatically from 76% in the 1962-1966 period to only 11% during the 1981-1994 period.

The share of households that escaped from poverty through obtaining regular non-agricultural income opportunities increased from 24% in the 1962-1966 period to 89% (including the 35% of the poverty-escaping households where the main income source shifted from farming to non-agricultural activities) in the 1981-1994 period (Table 7-5). Unlike in the Hayami-Kikuchi village in Laguna, however, the main sources of such non-agricultural income opportunities in the Pangasinan village consist of self-employment (e.g., sari-sari store, tricycle driving) and, more importantly, international labor migration (Fuwa 2007).

The International Rice Research Institute (IRRI) also conducted, intermittent household surveys in sample villages in Nueva Ecija, Laguna, and Iloilo Provinces starting in 1985 (David and Otsuka 1990; Hossain et al.). While similar descriptions directly relating exits paths from poverty to alternative income sectors, like McCulloch et al (2007) or Fuwa (2007), have not been conducted, Estudillo, Sawada and Otsuka (2007) document the dramatic increase in the relative importance of non-agricultural income sources among *both* farm and non-farm (‘landless’) households during the period between 1985 and 2004 (Table 7-6). The share of non-agricultural incomes (including non-farm wage incomes and remittances) doubled from 27% in 1985 to 52% in 2004 among farm households alone, while

the non-agricultural income share among non-farm households increased from 52% (the rest of income coming from agricultural wage incomes as well as livestock incomes) in 1985 to 71% in 2004 (Estudillo, Sawada and Otsuka, 2007).

They also point to the faster decline in poverty incidence during the same period among landless households (from 63% in 1985 to 24% in 2004) than among farm households (from 50% in 1985 to 31% in 2004). In those IRRI villages in Nueva Ecija and Iloilo, Estudillo, Sawada and Otsuka (2007) contend that the main sources of the non-agricultural opportunities that drove the impressive poverty reduction (especially among the landless) mainly came from the rural non-farm sector such as transport, services, construction and other informal businesses, as well as, to a lesser extent, international migration.

Despite the importance of growth in the non-agricultural sector, however, it is also important to emphasize that most of those studies point to the crucial role played by the dramatic increase in agricultural productivity due to the Green Revolution of the 1970s, which preceded the expansion in non-agricultural income opportunities. The increased income resulting from the agricultural productivity growth allowed farm households to invest in their children's education, which, in turn, allowed those children to benefit from the expansion of the employment opportunities in the non-agricultural sector.

While these case studies emphasize that the non-agricultural income growth was the main driver of poverty reduction in those rice-growing villages, at least during the last decade or two, the relative importance among the specific sources of non-agricultural/non-farm economic activities that drive poverty reduction, appears to differ from one location to another, such as the industrialization driven by the labor intensive export sector in the metropolis (Laguna), rural non-farm activities in general (Nueva Ecija and Iloilo) and international labor migration (Pagasinan and Iloilo). Such differences are likely to depend on geographical location (e.g., proximity to Manila and to local town centers) as well as other socioeconomic characteristics and the ecosystems defining agricultural production.

Unfortunately none of those studies is based on a nationally representative sample, and the geographical coverage of those micro-level studies is extremely limited. They are based on household-level longitudinal data drawn from a small number of rice-growing villages in Luzon and Panay islands. Those results need to be interpreted with ample care, taking into consideration the relative characteristics of the sampled communities. It would also be useful to replicate similar descriptive studies to document the relative importance of alternative 'pathways' out of rural poverty and to understand the critical conditions (economic, social and environmental characteristics) under which one type of 'pathway' becomes relatively more important.

III. Rural Poverty Reduction and Sectoral Income Growth

In light of the limited geographical coverage of the existing studies on rural poverty dynamics, this chapter explores the role of agricultural sector growth, vis-à-vis that of non-agricultural sector growth, in rural poverty reduction based on nationally representative data.

A main question is: to what extent are the findings based on micro-studies generalizable to other parts of the country?

Following the approach taken by Ravallion and Datt (1996) (and also Christiansen and Demery, 2007), an attempt is made to estimate the relationship between the change in poverty and the change in the sectoral income at the level of the provincial aggregate during the period 1991-2006. The 'growth elasticity of poverty reduction' is disaggregated by income sources using provincial-aggregates of FIES income data. Due to the substantially smaller sample sizes prior to the 1991 FIES, the 1985 and 1988 rounds of FIES were excluded from this analysis. For each household, reported incomes from different sources are aggregated into agricultural and non-agricultural incomes. Those incomes from agricultural and non-agricultural sources are then aggregated into the provincial averages, which constitute the unit of analysis.

One drawback of aggregating household-level income data to obtain sectoral incomes at the provincial aggregate (rather than using regional account data) is that the existence of the unearned income category (including domestic and foreign transfers, rents, etc.) makes the interpretation of sectoral incomes ambiguous. Ideally, the unearned incomes should be assigned to the sectors where they originate (e.g., the rental income from land comes from the agricultural sector), but FIES data do not provide sufficient information for such classification. As a result, we had to categorize unearned incomes as non-agricultural income sources.

One consequence of this would be that, when the total household income is disaggregated between the agricultural and non-agricultural incomes (including unearned incomes), the share of agricultural income is inevitably underestimated (since this calculation implicitly assumes that all the unearned incomes come from either secondary or tertiary sectors, which clearly cannot be correct). The focus in the analysis that follows, however, is the *growth rates* in agricultural and non-agricultural incomes, rather than the *levels* of sectoral incomes. The existence of a systematic underestimation of the level of agricultural income would not appear to suggest any systematic bias in estimated growth rates.¹

As an alternative measure of sectoral incomes, the total household consumption expenditure is used as a proxy measure for the total household income and then relative shares of agricultural and non-agricultural wages and enterprise incomes *excluding unearned incomes*, obtained from household income data and aggregated at the provincial level, are applied (i.e., multiplied by) to estimate sectoral incomes. The use of total consumption expenditures, rather than total incomes, as a means of estimating the levels of sectoral incomes is based on

¹ If there is a tendency for the share of agricultural sector incomes to decline within the category of unearned incomes, however, then arguably the study's methodology is likely to overestimate the growth rate of agricultural income. Since the study categorizes all unearned incomes as 'non-agricultural income' (where unknown fractions of such incomes are in fact agricultural incomes, the level of agricultural income is underestimated, as stated earlier, but as the share of agricultural income within the unearned income category declines over time, the extent of underestimation declines over time as well. Since the level of agricultural incomes are estimated to be lower than the actual by a larger amount in earlier years than in later years, the estimated change (growth) over time is likely to be overestimated.

the notion that measured consumption expenditures are likely to be a better proxy for household income than are measured household incomes (e.g., Deaton and Grosh 2000).

This latter measure of sectoral ‘incomes’ is likely to mitigate the underestimation of the level of agricultural income shares as mentioned above. The main assumption in this approach is that sectoral income shares based on wage and enterprise incomes would provide good proxies of the sectoral income shares at the provincial aggregate, a proposition that cannot be verified with existing data. Since there is no *a priori* reason to believe that either one measure should perform better, this study reports results based on both measures of sectoral incomes and examines the robustness of the results.

In addition to the use of two alternative measures of ‘sectoral incomes,’ two separate analyses were conducted on those two measures. First, in an attempt to examine long-run dynamics, the change between 1991 and 2006 is used as the unit of analysis in a cross-section analysis. Second, in order to fully utilize the provincial panel data, all the FIES rounds, conducted every three years between 1991 and 2006, are used as panel data using fixed-effects regression analyses.²

The first sets of results are summarized in Table 7-3. They are based on the regression results replicating equations (5), (7) and (8) of Ravallion and Datt (1996), which investigate the interactions among poverty reduction, sectoral income growth and urbanization (Table 7-3-2, 7-3-3). Unlike what Ravallion and Datt (1996) found in India (where mean income growth in urban areas had no significant impact on national poverty), the mean consumption growth in urban and rural areas are both significantly associated with provincial (both rural and urban areas) poverty reduction. Given the predominance of the rural population (excluding Metro Manila, 66% of the population is found in rural areas on average during the period 1991-2006), rural growth is relatively more important in reducing provincial poverty incidence than is urban growth. The impact of a one percentage increase in *rural* growth is found to have at least twice the size of the poverty reduction impact of the same increase in *urban* growth. In addition, while the coefficients on urbanization (differential population growth rate between urban and rural areas) are negative, suggesting positive effects on poverty reduction, such coefficients are not statistically significantly different from zero.

The study also finds that, not surprisingly, *rural growth* is more important relative to urban growth in reducing *rural poverty*, while, conversely, urban growth is more important in reducing urban poverty. Again, the coefficients on urbanization, albeit having the expected sign, are not statistically significant in explaining the change in either rural poverty or urban poverty. The much researched ‘Kuznetz effects’ on poverty reduction during the process of economic development, therefore, appear to play a minor role, which is in line with the finding by Ravallion and Datt (1996) in India. The observed relationships between poverty reduction and (urban vs. rural) sectoral growth patterns in the Philippines suggest that stimulating rural growth should be one of the key ingredients for accelerating poverty reduction in rural areas.

² More detailed information on the regression equations estimated is provided in Annex 7-1 of this chapter.

Table 7-3-4 summarizes the estimation results of equations (10) through (12) of Ravallion and Datt (1996). It should be noted that while the π coefficients in those equations in Ravallion and Datt (1996) measure the change in the rate of poverty reduction corresponding to one percentage growth in income from particular sectors/sources conditional on sectoral income shares ('contribution effect'), the estimated 'growth elasticity' reported here is defined as the marginal effects of sectoral income growth *multiplied by the income share* ('participation effect' *a la* Christiaensen and Demery 2007). Different authors have placed slightly different importance to the π coefficients or the elasticity measures.³ The π coefficients can be seen as representing a 'fair' comparison of the marginal impacts of a unit change in growth rate among sectors (Christiaensen and Demery 2007). If the cost of raising the growth rate of a sector by 1% (say) is the same regardless of the size of the sectoral income shares, however, then investing in the sector with a higher 'elasticity' (rather than a higher ' π ') would seem to make more sense, which would result in larger impacts on poverty reduction. The regression analyses confirm that non-agricultural growth, rather than agricultural growth, has been the main driver of rural poverty reduction during the past two decades, based on the elasticity measures.

The estimation results of the ' π_k ' coefficients' in Ravallion and Datt (1996)'s equations (10)-(12) (i.e., the 'growth elasticity', *a la* Christiaensen and Demery, *after controlling for income shares*) as well as of the unconditional (on income shares) 'growth elasticity' *a la* Ravallion and Datt (1996) (π_k multiplied by the income share) suggest that the main qualitative conclusions are invariant among different specifications ('short-run' panel versus 'long-run' cross-section analyses) as well as among different datasets (FIES raw income data with unearned incomes classified as non-agricultural sources versus consumption expenditure data multiplied by income shares excluding unearned incomes). Across all specifications, we find no statistically significant difference (at the conventional level of significance) in the π coefficients (*conditional* growth elasticity, or 'contribution effect') between agricultural and non-agricultural income growth.

The point estimates based on the short-run panel specification tend to generate larger absolute values of π coefficients for agricultural growth relative to those for non-agricultural growth. This potentially implies that mean income growth in the agricultural sector might have a disproportionately larger impact, given its income share, on poverty reduction than does non-agricultural income growth. Unfortunately, however, we are not able to make such a statement with much confidence because all of those differences in point estimates are not statistically significant.

The share of agricultural incomes, however, tends to be smaller than that of non-agricultural incomes. As a result, while π coefficients are not significantly different between agricultural and non-agricultural growth rates, in most cases, the *unconditional (on income shares)* growth elasticity of poverty reduction (*a la* Ravallion and Datt, 1996; i.e., π_k multiplied by the income share) is found to be significantly larger for non-agricultural growth than it is for agricultural income growth at least for the change in poverty in the provincial aggregate

³ Christiaensen and Demery (2007) call the π coefficients in Ravallion and Datt (1996) as the 'elasticity of poverty' and the π coefficients multiplied by the income shares as 'participation effect'.

(urban and rural combined) and in provincial rural poverty. This basic conclusion is invariant for the most part, regardless of whether the analysis is based on ‘short-run’ panel or ‘long-run’ cross-section analyses, or whether based on FIES income data or FIES consumption data. Thus, a one percentage increase in non-agricultural incomes tends to generate a larger impact on rural poverty reduction than does the same increase in agricultural incomes. Thus, the general conclusions of this study based on nationally representative data at the provincial level are more or less consistent with those from the small number of villages (but at the household-level observations) in Luzon and Iloilo, as reviewed earlier.

Incidentally, the study’s basic conclusions are invariant whether it includes or excludes the 2006 round of FIES data, or both 2006 and 2003 data rounds as well. This suggests that the study’s basic conclusion is *not* sensitive to the recent controversy regarding the reliability of those recent (2006, and potentially 2003 as well) rounds of FIES.

In addition, some additional attempts have been made to introduce interaction terms between sectoral income growth and some indicators of initial conditions, including the extent of income inequality (as measured by the provincial Gini coefficients of consumption expenditure distribution based on FIES⁴), as well as the two indicators of provincial typology in terms of initial endowments used throughout this report, namely, the degree of urbanization and the degree of ‘irrigability.’ Their results are summarized in Table 7-3-5. While we expect that the growth elasticity of poverty reduction with respect to agricultural income growth would likely be higher (through higher π coefficients) in provinces where the degree of inequality is lower, the coefficients involving interaction-terms with the Gini coefficient of consumption inequality are not statistically significantly different from zero, with the exception of one specification, i.e., short-run panel analysis during 1991-2000 based on consumption expenditure where higher inequality is significantly associated with lower π coefficient for agricultural growth.

Similarly, the coefficients of the interaction terms involving the initial condition of ‘irrigability’ are also found not to be statistically significantly different from zero. However, there appears to be some suggestive evidence that the impact of agricultural income growth on rural poverty reduction might be relatively weaker in more urbanized areas, although this finding is not quite robust (see Table 7-3-5 (G) and (H)). This suggests that, not surprisingly, the same rate of agricultural income growth might have larger impacts on poverty reduction in relatively more rural areas. Rather surprisingly, however, it appears that the relative magnitude of agricultural growth elasticity (*vis-à-vis* that of non-agricultural growth elasticity) increased (i.e., agricultural income growth appears to have become relatively more pro-poor) after 2000 compared with the period 1991-2000 (Table 7-3-5 (D) and (E)).

An additional question is: if agricultural growth is not the primary engine for poverty reduction, which sector should it then be? Unfortunately, this question is more difficult to answer with much confidence using the datasets at hand. It appears that between the two non-agricultural sectors, tertiary (service) sector growth tends to be more pro-poor than secondary

⁴ Provincial Gini coefficient of land distribution can also be obtained from agricultural censuses, but such data are available only in 1990 and 2001. Gini coefficients based on land/farm distribution cannot be used for the panel analysis based on the FIES data which are available in every three years.

(industrial) sector growth. When unearned incomes are separated from earned incomes, the growth elasticity of unearned incomes tends to be higher than that of earned incomes. This question needs to be investigated further and with much care in future studies.

We must conclude that our analysis based on the estimation of sectoral growth elasticity of poverty reduction has thus far produced relatively little guidance in terms of how the extended CARP should be targeted. Nevertheless, our results based on the nationwide provincial data are generally consistent with the conclusions based on the detailed village-level studies obtained from a small number of villages. Non-agricultural income growth has tended to have a larger impact on rural poverty reduction than agricultural income growth. Furthermore, it may be arguable that targeting land reform implementation to areas with relatively higher shares of agricultural incomes might be worth consideration. Such a targeting strategy could have some potential advantages. Obviously, the higher income share from agriculture would ensure larger impacts on poverty reduction (i.e., larger ‘unconditional’ growth elasticity) given the same rate of agricultural income growth. In addition, such areas are likely to be the areas relatively remote from urbanized areas. Since there is a tendency (although weak) that the π coefficients could be higher in less urbanized areas, such areas are likely to have relatively higher elasticities of agricultural growth.

A simple diagram as shown in Figure 7-1 is consistent with the series of regression results as reported earlier. Only slightly negative correlation is observed between the rate of change in poverty incidence and the difference in the growth rates between non-agricultural and agricultural incomes (i.e., non-agriculture income growth less agricultural income growth). Those regression results of the relationship between sectoral income growth and the changes in poverty, however, are the average relationship across provinces. There is, in fact, a great deal of variations across provinces in income growth and in poverty reduction performances.

Based on the provincial panel data between 1991 and 2006, for example, the headcount poverty ratio declined in a majority of the provincial 3-year growth spells (221 out of 365 province-growth spells), but it increased in 152 provincial growth spells. During the same period, the growth rate in the non-agricultural income was higher in 235 out of 365 province-growth spells while that of the agricultural income was higher in 130 province-growth spells. As shown also in Tables 7-4 and 7-5, in most (58) of the 62 provinces where poverty incidence declined between 1991 and 2006, non-agricultural incomes grew faster than did agricultural incomes. Although growth in non-agricultural income was higher than that of agricultural income *and* poverty incidence fell in majority of the provinces, there is also a sizable number of provinces where different patterns are observed.

IV. Rural Poverty and CARP Extension: Tentative Conclusions

In looking forward, how should the extended CARP be possibly targeted? The empirical evidence examined in this chapter and chapters 3 and 4 collectively suggests that CARP did have positive welfare impact on the rural poor over the past two decades. Given the data limitations, however, it is difficult to infer the quantitative magnitudes of such impacts. Nevertheless, it would be safe to conclude that while CARP impact on the rural poor might

not have been as dramatic as its proponents would have liked to see, CARP has not been as ineffective as some of its most fierce critics have claimed either.

The study also finds, however, that CARP implementation has not been strongly focused or targeted toward the poor. While CARP beneficiaries tended to be somewhat poorer households on average, there is no evidence of geographical poverty targeting either at the village or at the province level. In view of the slow implementation of CARP in the past two decades, especially in the compulsory acquisition program, as well as the weak (or absent) pro-poor targeting, it comes as no surprise that the impact of CARP on rural poverty reduction has been modest at best.

This chapter has also taken some initial steps toward considering possible future targeting issues for extended CARP. Although agriculture has had significant roles to play in rural poverty reduction, its relative importance has shrunk substantially over the past two decades while CARP was being implemented. The relative role of non-agricultural and non-farm sectors grew correspondingly. This suggests that there are multiple “pathways out of rural poverty” (including those through non-agricultural wage employment, non-farm enterprise, and international migration, to name only a few), of which the traditional pathway of climbing the “agricultural ladder” is only one. There has recently been a small number of empirical studies based on micro-data from selected rice-growing villages in Luzon and Panay, which all point to the crucial role played by the non-agricultural income growth in poverty reduction and the increase in the relative returns to education vis-à-vis agricultural land. At the same time, the implementation of CARP over the past two decades, especially in the more controversial area of compulsory acquisition, has been extremely slow. This suggests that CARP extension with the same implementation scheme and modality would be likely to result in similarly disappointing results in the near future.

All of those observations suggest that the extended CARP would likely require new and innovative implementation schemes and modalities, possibly with new targeting approaches. This means, in turn, that it is important to identify the areas (or the characteristics of households) for which agricultural growth still constitutes the primary and optimal pathway out of rural poverty. Accordingly, the implementation of an extended CARP, with its relatively limited resources, should arguably also focus on those areas, and the criteria for such new targeting would need to be crafted carefully based on sound empirical evidence.

Our initial results based on provincial panel data covering the period 1991-2006 are mostly consistent with the salient patterns identified in the relatively small number of village-level studies. In most of the provinces (58 out of 62) where poverty incidence declined, the rate of growth in non-agricultural incomes was higher than that of agricultural incomes. We also find that, based on the average relationships across provinces, the ‘growth elasticity’ of rural poverty reduction coming from non-agricultural income growth tends to be significantly higher than that coming from agricultural income growth, which implies that a one percentage point increase in non-agricultural income growth has a larger impact on rural poverty reduction (when income shares are not controlled for) than does a similar increase in agricultural income.

This basic finding is not sensitive to the recent controversy over the reliability of the recent rounds (2006 and 2003) of FIES surveys. The data analysis further suggests that agricultural income growth elasticity of rural poverty reduction tend to be higher in relatively more remote areas. While further analyses is necessary, the study's results appear to imply that targeting land reform implementation toward areas with higher agricultural income shares and in relatively remote (less urbanized) locations might arguably be worth serious consideration.

Annex 7-1 Regression equations estimated

In estimating sectoral income growth elasticity of poverty reduction, we directly follow the approach taken by Ravallion and Datt (1996). The equations take the following basic form:

$$\Delta \ln P = \alpha + \pi_1 s_1 \Delta \ln Y_{ag} + \pi_2 s_2 \Delta \ln Y_{na} + \varepsilon_y \quad (1)$$

$$s_r \Delta \ln P_r = \alpha_r + \pi_{r1} s_{r1} \Delta \ln Y_{ag} + \pi_{r2} s_{r2} \Delta \ln Y_{na} + \varepsilon_r \quad (2)$$

$$s_u \Delta \ln P_u = \alpha_u + \pi_{u1} s_{u1} \Delta \ln Y_{ag} + \pi_{u2} s_{u2} \Delta \ln Y_{na} + \varepsilon_u \quad (3)$$

where P is the provincial (both rural and urban) poverty incidence, and P_u , P_r are the provincial aggregate (i.e., both rural and urban), urban and rural poverty incidence, respectively; s_1 and s_2 are the income share of agricultural and non-agricultural sectors, respectively; s_{u1} and s_{u2} are the income share of agricultural and non-agricultural sectors, respectively, in urban areas; s_{r1} and s_{r2} are the income share of agricultural and non-agricultural sectors, respectively, in rural areas; s_u and s_r are the share of the urban and rural poor, respectively, among the poor in the province (both urban and rural) [$s_u = n_u P_u / P$ and $s_r = n_r P_r / P$, where n_u and n_r are, respectively, the urban and rural population shares in the province].

Equations (1), (2) and (3) above correspond to equations (10), (11) and (12), respectively, in Ravallion and Datt (1996), except that an intercept term has been added to each equation. While the original decomposition of the effects of growth on poverty as derived in Ravallion and Datt (1996) does not contain the intercept term (i.e., there would be no change in poverty incidence when growth rate is zero), the addition of an intercept (as well as provincial fixed-effects and year dummies, as below) allows for the possibility of changes in income distribution that are independent of growth (poverty incidence could change even when the growth rate is zero). Christiaensen and Demery (2007) call the π coefficients (π_i , π_{ri} , π_{ui} , $i = 1, 2$), sectoral growth elasticity of poverty reduction *after controlling for* (or *conditional on*) *the sectoral income share*, “elasticity of poverty”. The provincial growth elasticity *a la* Ravallion and Datt (1996)’s terminology, on the other hand, which is *unconditional on the sectoral income share*, measures the marginal effects of sectoral income growth multiplied by the sectoral income share: $\pi_1 s_1$, $\pi_2 s_2$. Similarly, the unconditional sectoral growth elasticity in urban and rural areas are given by, respectively: $\pi_{uj} s_j / s_u$ and $\pi_{rj} s_j / s_r$ ($j=1,2$). This unconditional poverty elasticity is called “participation effect” by Christiaensen and Demery (2007).

Furthermore, we estimate the above three equations ((1), (2), and (3)) using two slightly different specifications:

- (i) 1991-2006 ‘long-run’ cross-section:

$$\Delta \ln P_k = \alpha + \pi_1 s_1 \Delta \ln Y_{ag,k} + \pi_2 s_2 \Delta \ln Y_{na,k} + \varepsilon_{yk} \quad (1A)$$

$$s_r \Delta \ln P_{r,k} = \alpha_r + \pi_{r1} s_{r1} \Delta \ln Y_{ag,k} + \pi_{r2} s_{r2} \Delta \ln Y_{na,k} + \varepsilon_{rk} \quad (2A)$$

$$s_u \Delta \ln P_{u,k} = \alpha_u + \pi_{u1} s_{u1} \Delta \ln Y_{ag,k} + \pi_{u2} s_{u2} \Delta \ln Y_{na,k} + \varepsilon_{uk} \quad (3A)$$

- (ii) 3 year panel ‘short-run’ analysis between 1991-2006 with province-level fixed-effects:

$$\Delta \ln P_{kt} = \alpha + \pi_1 s_1 \Delta \ln Y_{ag,kt} + \pi_2 s_2 \Delta \ln Y_{na,kt} + \sum_{i=1991}^{2006} \beta_i D_i + \eta_k + \varepsilon_{ykt} \quad (1B)$$

$$s_r \Delta \ln P_{r,kt} = \alpha_r + \pi_{r1} s_1 \Delta \ln Y_{ag,kt} + \pi_{r2} s_2 \Delta \ln Y_{na,kt} + \sum_{i=1991}^{2006} \beta_{ri} D_i + \phi_k + \varepsilon_{rkt} \quad (2B)$$

$$s_u \Delta \ln P_{u,kt} = \alpha_u + \pi_{u1} s_1 \Delta \ln Y_{ag,kt} + \pi_{u2} s_2 \Delta \ln Y_{na,kt} + \sum_{i=1991}^{2006} \beta_{ui} D_i + \varphi_k + \varepsilon_{ukt} \quad (3B)$$

where provincial subscript k and time subscript t have been added. Also added in specification (ii) are a set of year dummy variables D_t , as well as η_k , ϕ_k and φ_k representing province-level unobserved fixed-effects. With specification (i), in an attempt to examine long-run dynamics, the change between 1991 and 2006 (or, alternatively, 2003 or 2000) is used as the unit of analysis in a cross-section analysis. With specification (ii), in order to fully utilize the provincial panel data, all the FIES rounds, conducted in every three years between 1991 and 2006 (or, alternatively, 2003 or 2000), are used as a panel data using fixed-effects estimation.

Table 7-1 Relative shares of households exiting poverty via agricultural versus non-agricultural 'pathways' in a Pangasinan village, 1962-1994

Period	Agricultural route	Non-agricultural route(of which farm households)*
1962-66	0.76	0.24 (0)
1966-71	0.67	0.33 (0.08)
1971-76	0.50	0.50 (0.08)
1976-81	0.35	0.65 (0.20)
1981-94	0.11	0.89 (0.35)**

*'farm households' = households that cultivate non-zero amount of land

**mainly (53% of the household taking the 'non-ag. route') through international labor migration

Source: Pangasinan household panel data collected by James N. Anderson and Nobuhiko Fuwa; see Fuwa (2007) for details.

Table 7-2 Income composition and poverty incidence in 3 villages in Nueva Ecija and Iloilo, 1985-2004

	Farmer households		Landless households	
	1985	2004	1985	2004
Income composition by sources				
Rice income(%)	17	22	0	0
Nonrice crop and livestock (%)	34	17	12	8
Agricultural wage (%)	22	9	36	21
Nonfarm wage (%)	18	35	38	54
Remittances and others (%)	9	17	14	17
Poverty situations				
Headcount poverty ratio	50	31	63	24
Poverty gap	23	15	31	8
Squared poverty gap	15	9	17	4
Number of sample households	137	46	397	467
Village coverage	Nueva Ecija (un-irrigated rice village) Iloilo A ('irrigated rice village) Iloilo B (upland rice village)			

Source: Estudillo, Sawada and Otsuka 2007.

Tables 7-3 Results summary: growth elasticity of poverty reduction with respect to sectoral income growth

Descriptive statistics for growth elasticity estimation equations

Variable	Obs	Mean	Std. Dev.	Min	Max
Change in poverty incidence	365	-.0618705	.3067852	-1.226668	.9364871
Change in rural poverty incidence	365	-.0573743	.3259672	-1.481094	1.034436
Change in urban poverty incidence	350	-.1120423	.5674764	-2.429218	1.680595
Sectoral income growth rate					
Agriculture income growth (using income data)	365	-.0564409	.2934792	-1.370989	.7339669
Non-agriculture income growth (using income data)	365	.0565942	.33386	-.8263031	.9613881
Agriculture income growth (using consumption data)	365	-.0283797	.2325731	-.9412491	.87723
Non-agriculture income growth (using consumption data)	365	.0746732	.2676588	-1.376055	2.400697
Income share					
Agriculture share	365	.2311029	.1241114	.0185851	.5764242
Non-agriculture share (including unearned income)	365	.7688971	.1241114	.4235758	.9814149
Agriculture share in wage and enterprise income only	365	.32662	.1508308	.0259819	.8972098
non-agriculture share in wage and enterprise income only	365	.67338	.1508308	.1027902	.9740182
Agricultural income share (rural)	365	.3315189	.1450224	.042231	.8029734
Agricultural income share (urban)	360	.117283	.09496	.002033	.5680213
Share of rural population	365	.65559	.18967	.038169	1

7-3-1 Growth elasticity of rural/urban poverty w.r.t. rural versus urban growth (provincial panel with fixed effects, using FIES consumption expenditure growth)

	1991-2006	1991-2003	1991-2000
Dep. Var = Change in Provincial poverty (rural and urban)			
π_k coefficients (controlling for sectoral share) ¹			
Rural growth	-1.515 (5.95)	-1.448 (4.86)	-1.374 (4.33)
Urban growth	-1.120 (4.57)	-1.256 (4.43)	-1.218 (4.16)
Population growth	-0.042 (0.70)	-0.044 (0.52)	-0.024 (0.23)
Constant	0.016 (0.50)	-0.091 (1.80)	-0.036 (0.79)
Elasticity rural growth ²	-0.850	-0.807	-0.772
Elasticity urban growth ²	-0.499	-0.560	-0.539
R ²	-0.471	-0.496	-0.545
# of obs.	357	287	217
Dep. Var = Change in Rural poverty			
π_k coefficients (controlling for sectoral share) ¹			
Rural growth	-1.333 (6.25)	-1.266 (5.07)	-1.251 (4.67)
Urban growth	-0.657 (3.90)	-0.746 (3.69)	-0.649 (3.86)
Population growth	-0.062 (1.16)	-0.050 (0.74)	-0.044 (0.59)
Constant	-0.003 (0.11)	-0.059 (1.48)	-0.028 (0.90)
Elasticity rural growth ²	-0.981	-0.928	-0.931
Elasticity urban growth ²	-0.384	-0.438	-0.380
R ²	0.466	0.488	0.550
# of obs.	357	287	217
Dep. Var = Change in Urban poverty			
π_k coefficients (controlling for sectoral share) ¹			
Rural growth	-0.182 (2.60)	-0.182 (2.48)	-0.122 (1.35)
Urban growth	-0.463 (3.63)	-0.511 (3.72)	-0.569 (3.21)

	1991-2006	1991-2003	1991-2000
Population growth	0.020 (0.79)	0.006 (0.21)	0.021 (0.46)
Constant	0.018 (1.25)	-0.031 (1.81)	-0.008 (0.37)
Elasticity rural growth ²	-0.422	-0.419	-0.278
Elasticity urban growth ²	-0.853	-0.942	-1.018
R ²	0.321	0.356	0.372
# of obs.	357	287	217

¹ T-ratios in parentheses

¹ Those correspond to the regression coefficients π_k in Equation (5), (7) and (8) in Ravallion and Datt (1996), namely, the change in the rate of poverty reduction corresponding to a percentage increase in the sectoral income growth *after controlling for the sectoral consumption share*.

² Those correspond to the "growth elasticity" as defined in Ravallion and Datt (1996), namely, $\pi_k \cdot s_k$: the (unconditional on the sectoral shares) change in the rate of poverty reduction corresponding to a percentage increase in the sectoral consumption growth.

7-3-2 Cross-section OLS, using FIES consumption expenditure growth

	1991-2006	1991-2003	1991-2000
Dep. Var = Change in Provincial poverty (rural and urban)			
π_k coefficients (controlling for sectoral share)¹			
Rural growth	-1.710 (6.36)	-1.746 (5.35)	-1.716 (4.48)
Urban growth	-0.977 (2.85)	-1.010 (2.32)	-0.889 (2.18)
Population growth	0.080 (0.69)	0.076 (0.62)	-0.035 (0.30)
Constant	-0.058 (1.00)	-0.081 (1.07)	-0.160 (2.12)
Elasticity rural growth ²	-0.980	-1.000	-0.983
Elasticity urban growth ²	-0.423	-0.437	-0.385
R ²	0.602	0.463	0.373
# of obs.	69	69	72
Dep. Var = Change in Rural poverty			
π_k coefficients (controlling for sectoral share)¹			
Rural growth	-1.684 (7.24)	-1.769 (6.60)	-1.652 (5.69)
Urban growth	-0.374 (1.74)	-0.399 (1.49)	-0.184 (0.78)
Population growth	0.118 (1.16)	0.153 (1.39)	-0.015 (0.18)
Constant	0.004 (0.01)	0.009 (0.15)	-0.094 (1.90)
Elasticity rural growth ²	-1.306	-1.372	-1.281
Elasticity urban growth ²	-0.219	-0.234	-0.108
R ²	0.664	0.563	0.433
# of obs.	69	69	72
Dep. Var = Change in Urban poverty			
π_k coefficients (controlling for sectoral share)¹			
Rural growth	-0.027 (0.17)	0.023 (0.89)	-0.064 (0.31)

	1991-2006	1991-2003	1991-2000
Urban growth	-0.603 (2.40)	-0.611 (2.18)	-0.705 (1.97)
Population growth	-0.084 (0.91)	-0.077 (1.87)	-0.050 (0.70)
Constant	-0.058 (2.31)	-0.090 (2.90)	-0.065 (1.43)
Elasticity rural growth ²	-0.057	0.050	-0.138
Elasticity urban growth ²	-0.986	-0.999	-1.153
R ²	0.311	0.255	0.261
# of obs.	69	69	72

¹T-ratios in parentheses

¹ Those correspond to the regression coefficients π_k in Equation (5), (7) and (8) in Ravallion and Datt (1996), namely, the change in the rate of poverty reduction corresponding to a percentage increase in the sectoral income growth *after controlling for the sectoral consumption share*.

² Those correspond to the "growth elasticity" as defined in Ravallion and Datt (1996), namely, $\pi_k \cdot s_k$: the (unconditional on the sectoral shares) change in the rate of poverty reduction corresponding to a percentage increase in the sectoral consumption growth.

7-3-3 Growth elasticity of poverty reduction w.r.t. agricultural versus non-agricultural income growth

(1) p Coefficients Controlling for Sectoral Income Shares (contribution effect) ¹

(1-A) FIES income (agricultural vs. non-agricultural income (including unearned income & transfer))²

Panel vs. cross-section	Short-run analysis using a panel of 3 year episodes, based on with fixed-effects models			Long-run analysis, based on cross-section OLS		
	rural & urban N=365(1991-06)	rural only N=365(1991-06)	urban only N=365(1991-06)	rural & urban (N=72)	rural only (N=72)	urban only (N=72)
Sector	292(1991-03) 218(1991-00)	292(1991-03) 218(1991-00)	290(1991-03) 217(1991-00)			
Data period: 1991-2006						
agricultural income	-1.109 (4.07)	-0.849 (3.47)	-0.265 (3.92)	-1.175 (1.89)	-1.031 (1.86)	-0.162 (1.21)
non-ag income	-0.768 (6.13)	-0.633 (6.36)	-0.140 (2.83)	-1.205 (5.81)	-1.002 (5.50)	-0.200 (3.08)
p-value for the difference between ag. vs. non-ag						
	0.18	0.36	0.07	0.97	0.96	0.80
Data period: 1991-2003						
agricultural income	-1.083 (4.46)	-0.799 (3.78)	-0.277 (3.88)	-0.846 (0.85)	-0.890 (1.02)	0.019 (0.09)
non-ag income	-0.782 (5.74)	-0.613 (6.42)	-0.169 (2.66)	-1.348 (5.81)	-1.076 (4.87)	-0.267 (3.68)
p-value for the difference between ag. vs. non-ag						
	0.17	0.34	0.19	0.63	0.84	0.20
Data period: 1991-2000						
agricultural income	-1.068 (4.69)	-0.757 (3.78)	-0.309 (3.93)	-0.904 (0.96)	-0.767 (1.01)	-0.114 (0.46)
non-ag income	-0.699 (3.85)	-0.532 (4.33)	-0.167 (1.89)	-1.035 (3.88)	-0.730 (3.10)	-0.305 (2.26)
p-value for the difference between ag. vs. non-ag						
	0.10	0.24	0.23	0.88	0.96	0.39

(1-B) FIES consumption expenditure*wage & enterprise income share by sector (ag. non-ag)³

Panel vs. cross-section	Short-run analysis using a panel of 3 year episodes, based on with fixed-effects models			Long-run analysis, based on cross-section OLS		
	rural & urban	rural only	urban only	rural & urban	rural only	urban only
Sector coverage	N=365(1991-06) 292(1991-03) 218(1991-00)	N=365(1991-06) 292(1991-03) 218(1991-00)	N=365(1991-06) 290(1991-03) 217(1991-00)	(N=72)	(N=72)	(N=72)
Data period: 1991-2006						
agricultural income	-1.613 (7.80)	-1.264 (6.77)	-0.355 (4.95)	-1.308 (3.23)	-1.217 (3.12)	-0.099 (1.54)
non-ag income	-1.338 (9.90)	-1.058 (8.91)	-0.291 (5.08)	-1.719 (7.85)	-1.277 (6.95)	-0.438 (4.27)
p-value for the difference between ag. vs. non-ag	0.14	0.20	0.18	0.43	0.90	0.00
Data period: 1991-2003						
agricultural income	-1.561 (6.83)	-1.182 (5.70)	-0.372 (4.85)	-1.563 (4.30)	-1.507 (4.11)	-0.074 (0.56)
non-ag income	-1.275 (8.88)	-0.965 (8.14)	-0.311 (4.61)	-2.058 (7.06)	-1.573 (5.95)	-0.483 (4.26)
p-value for the difference between ag. vs. non-ag	0.12	0.17	0.26	0.33	0.88	0.00
Data period: 1991-2000						
agricultural income	-1.559 (7.06)	-1.134 (5.56)	-0.423 (4.77)	-1.564 (4.23)	-1.367 (4.23)	-0.180 (1.44)
non-ag income	-1.318 (6.88)	-0.958 (6.57)	-0.360 (3.53)	-1.490 (6.26)	-0.999 (4.48)	-0.498 (2.85)
p-value for the difference between ag. vs. non-ag	0.16	0.26	0.35	0.87	0.32	0.07

¹ T-ratios in parentheses

¹ Those correspond to the regression coefficients π_k in Equation (10) in Ravallion and Datt (1996), namely, the change in the rate of poverty reduction corresponding to a percentage increase in the sectoral income growth *after controlling for the sectoral income share*.

² The provincial average incomes by sources/sectors are the average of percapita household income by five distinct sources (earned agricultural income, earned manufacturing sector income, earned service sector income, unearned income, and remittances from abroad) in FIES income data. These income components consist of five sources.

³ The sectoral income at the provincial aggregates are estimated by multiplying the shares of the (provincial) average earned sectoral (agricultural, manufacturing, and services) incomes in FIES (as obtained above) with the provincial average percapita consumption expenditures in FIES. These income components consist of three sectors/sources.

(2) Sectoral Growth Elasticity of Poverty Reduction (participation effect) ¹

(2-A) FIES income (agricultural vs. non-agricultural income (including unearned income & transfer)²

Panel vs. cross-section	Short-run analysis using a panel of 3 year episodes, based on with fixed-effects models			Long-run analysis, based on cross-section OLS		
Sector	rural & urban N=365(1991-06) 292(1991-03) 218(1991-00)	rural only N=365(1991-06) 292(1991-03) 218(1991-00)	urban only N=365(1991-06) 290(1991-03) 217(1991-00)	rural & urban (N=72)	rural only (N=72)	urban only (N=72)
Data period: 1991-2006						
agricultural income	-0.259	-0.261	-0.256	-0.337	-0.401	-0.175
non-ag income	-0.589	-0.636	-0.444	-0.859	-0.967	-0.537
p-value for the difference between ag. vs. non-ag	0.00	0.00	0.20	0.05	0.08	0.11
Data period: 1991-2003						
agricultural income	-0.274	-0.266	-0.290	-0.243	-0.346	-0.205
non-ag income	-0.584	-0.603	-0.523	-0.961	-1.038	-0.718
p-value for the difference between ag. vs. non-ag	0.00	0.00	0.22	0.04	0.09	0.01
Data period: 1991-2000						
agricultural income	-0.286	-0.268	-0.335	-0.260	-0.298	-0.124
non-ag income	-0.512	-0.516	-0.496	-0.738	-0.705	-0.821
p-value for the difference between ag. vs. non-ag	0.06	0.03	0.56	0.05	0.14	0.04

(2-B) FIES consumption expenditure*wage & enterprise income share by sector (ag. non-ag)³

Panel vs. cross-section	Short-run analysis using a panel of 3 year episodes, based on with fixed-effects models			Long-run analysis, based on cross-section OLS		
	rural & urban N=365(1991-06) 292(1991-03) 218(1991-00)	rural only N=365(1991-06) 292(1991-03) 218(1991-00)	urban only N=365(1991-06) 290(1991-03) 217(1991-00)	rural & urban (N=72)	rural only (N=72)	urban only (N=72)
Data period: 1991-2006						
agricultural income	-0.526	-0.541	-0.479	-0.506	-0.637	-0.145
non-ag income	-0.902	-0.936	-0.811	-1.054	-1.060	-1.013
p-value for the difference between ag. vs. non-ag	0.00	0.00	0.00	0.02	0.16	0.00
Data period: 1991-2003						
agricultural income	-0.527	-0.526	-0.520	-0.604	-0.789	-0.108
non-ag income	-0.844	-0.841	-0.851	-1.262	-1.305	-1.118
p-value for the difference between ag. vs. non-ag	0.00	0.00	0.01	0.01	0.08	0.00
Data period: 1991-2000						
agricultural income	-0.554	-0.533	-0.608	-0.605	-0.716	-0.263
non-ag income	-0.850	-0.818	-0.940	-0.914	-0.819	-1.153
p-value for the difference between ag. vs. non-ag	0.00	0.00	0.08	0.15	0.62	0.02

¹ Those correspond to the "growth elasticity" as defined in Ravallion and Datt (1996), namely, $\pi_{tjS_j} (\pi_{tjS_j}/S_i, \pi_{tjS_j}/S_u)$, j = ag. or non-ag.:the (unconditional on the income shares) change in the rate of provincial (rural, urban) poverty reduction corresponding to a percentage increase in the sector (agriculture, or non-agricultural) income growth.

² The provincial average incomes by sources/sectors are the average of percapita household income by five distinct sources (earned agricultural income, earned manufacturing sector income, earned service sector income, unearned income, and remittances from abroad) in FIES income data. These income components consist of five sources.

³ The sectoral income at the provincial aggregates are estimated by multiplying the shares of the (provincial) average earned sectoral (agricultural, manufacturing, and services) incomes in FIES (as obtained above) with the provincial average percapita consumption expenditures in FIES. These income components consist of three sectors/sources.

7-3-4 Summary of interaction terms

(A) Ag. income* Gini coefficient of consumption expenditure distribution: provincial aggregate (rural & urban)

Income data	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹						FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²					
	Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS			Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS		
Data period	1991-2006 (N=365)	1991-2003 (N=292)	1991-2000 (N=218)	1991-2006 (N=73)	1991-2003 (N=73)	1991-2000 (N=73)	1991-2006 (N=365)	1991-2003 (N=291)	1991-2000 (N=218)	1991-2006 (N=73)	1991-2003 (N=73)	1991-2000 (N=73)
Ag.income	0.721 (0.48)	-0.606 (0.49)	-0.969 (0.86)	-3.63 (2.33)	-4.753 (1.50)	-7.409 (1.54)	-1.662 (1.25)	-2.729 (2.21)	-4.514 (3.71)	-2.286 (1.68)	-1.176 (0.71)	-1.574 (0.73)
Non-ag income	-1.381 (2.08)	-1.478 (1.87)	-1.893 (1.43)	-1.100 (0.95)	-1.158 (1.59)	-1.383 (0.97)	-1.262 (1.57)	-1.989 (2.66)	-2.235 (2.61)	-0.822 (0.91)	-1.039 (0.89)	-0.403 (0.36)
Ag.income*EGINI	-5.676 (1.26)	-1.481 (0.38)	-0.231 (0.06)	7.122 (1.45)	11.079 (1.06)	19.368 (1.27)	0.154 (0.04)	3.455 (0.92)	9.003 (2.48)	2.902 (0.60)	-1.090 (0.22)	0.124 (0.02)
Nonag.inc* EGINI	1.657 (0.89)	1.958 (0.89)	3.427 (0.91)	0.203 (0.05)	-0.587 (0.28)	1.327 (0.33)	-0.206 (0.10)	2.030 (0.98)	-2.664 (1.05)	-2.693 (0.95)	-3.100 (0.86)	-3.129 (0.93)

*T-ratios in parentheses

(B) Ag. income* Gini coefficient of consumption expenditure distribution: provincial aggregate RURAL

Income data	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹						FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²					
	Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS			Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS		
Data period	1991-2006 (N=365)	1991-2003 (N=292)	1991-2000 (N=218)	1991-2006 (N=73)	1991-2003 (N=73)	1991-2000 (N=73)	1991-2006 (N=365)	1991-2003 (N=291)	1991-2000 (N=218)	1991-2006 (N=73)	1991-2003 (N=73)	1991-2000 (N=73)
Ag.income	0.705 (0.50)	-0.312 (0.28)	-0.733 (0.79)	-3.017 (2.40)	-4.451 (1.69)	-6.353 (1.75)	-1.172 (0.97)	-2.172 (2.11)	-3.671 (3.66)	-2.017 (1.57)	-1.257 (0.91)	-1.456 (0.87)
Non-ag income	-1.157 (2.05)	-1.472 (2.49)	-1.923 (1.96)	-1.002 (1.08)	-1.038 (1.77)	-1.411 (1.28)	-1.013 (1.34)	-1.955 (2.95)	-2.248 (3.11)	-0.780 (1.08)	-0.947 (0.97)	-0.520 (0.06)
Ag.income*EGINI	-4.814 (1.16)	-1.491 (0.43)	0.056 (0.02)	5.757 (1.40)	10.055 (1.16)	16.560 (1.44)	-0.272 (0.08)	2.893 (0.95)	7.680 (2.62)	2.372 (0.51)	-0.708 (0.16)	0.318 (0.06)
Non-ag.inc* EGINI	1.418 (0.89)	2.410 (1.54)	3.961 (1.49)	0.098 (0.03)	-0.126 (1.18)	2.235 (0.73)	-0.125 (0.06)	2.780 (1.61)	3.722 (1.89)	-1.467 (0.63)	-1.904 (0.61)	-1.370 (0.50)

*T-ratios in parentheses

(C) Ag. income* Gini coefficient of consumption expenditure distribution: Provincial aggregate URBAN

Income data	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹						FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²					
	Panel vs. cross-section	Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS			Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS	
Data period	1991-2006 (N=365)	1991-2003 (N=292)	1991-2000 (N=219)	1991-2006 (N=72)	1991-2003 (N=72)	1991-2000 (N=72)	1991-2006 (N=365)	1991-2003 (N=291)	1991-2000 (N=216)	1991-2006 (N=72)	1991-2003 (N=72)	1991-2000 (N=72)
Ag.income	-0.076 (0.25)	-0.308 (0.89)	-0.241 (0.45)	-0.700 (1.59)	-0.550 (0.62)	-0.924 (0.70)	-0.427 (1.27)	-0.572 (1.53)	-0.848 (1.90)	-0.328 (1.12)	-0.064 (0.10)	-0.067 (0.08)
Non-ag income	-0.212 (1.37)	-0.011 (0.04)	0.024 (0.05)	-0.155 (0.43)	-0.169 (0.65)	-0.002 (0.00)	-0.221 (0.91)	-0.043 (0.14)	0.009 (0.02)	-0.081 (0.18)	-0.163 (0.35)	0.025 (0.04)
Ag.income*EGINI	-1.587 (0.58)	0.073 (0.06)	-0.264 (0.15)	1.559 (1.28)	1.635 (0.63)	2.424 (0.58)	0.219 (0.20)	0.624 (0.50)	1.341 (0.96)	0.683 (0.73)	-0.009 (0.00)	-0.318 (0.12)
Non-ag.inc*EGINI	0.196 (0.44)	-0.440 (0.53)	-0.521 (0.35)	-0.111 (0.10)	-0.298 (0.39)	-0.829 (0.50)	-0.187 (0.25)	-0.749 (0.78)	-1.050 (1.81)	-1.088 (0.73)	-0.970 (0.66)	-1.515 (0.78)

*T-ratios in parentheses

¹ The provincial average incomes by sources/sectors are the average of percapita household income by five distinct sources (earned agricultural income, earned manufacturing sector income, earned service sector income, unearned income, and remittances from abroad) in FIES income data. These income components consist of five sources.

² The sectoral income at the provincial aggregates is estimated by multiplying the shares of the (provincial) average earned sectoral (agricultural, manufacturing, and services) incomes in FIES (as obtained above) with the provincial average percapita consumption expenditures in FIES. These income components consist of three sectors/sources.

(D) Ag. Income* after 2000: Provincial aggregate (rural & urban)

Income data	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹		FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²	
	Panel data (3 year episodes, with fixed-effects)			
Panel vs. cross-section	Panel data (3 year episodes, with fixed-effects)		Panel data (3 year episodes, with fixed-effects)	
Data period	1991-2006 (N=365)		1991-2003 (N=292)	
	1991-2006 (N=365)	1991-2003 (N=292)	1991-2006 (N=365)	1991-2003 (N=292)
Ag.income	-0.862 (2.85)	-0.924 (3.89)	-1.458 (6.15)	-1.459 (6.81)
Non-ag income	-0.696 (4.19)	-0.707 (4.02)	-1.244 (6.43)	-1.274 (6.63)
Ag.income*2000s	-1.044 (1.80)	-1.105 (1.28)	-0.506 (0.97)	-0.629 (0.90)
Non-ag.inc* 2000s	-0.165 (0.59)	-0.233 (0.73)	-0.223 (0.75)	-0.041 (0.11)

(E) Ag. Income* after 2000: Provincial aggregate RURAL

Income data	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹		FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²	
	Panel data (3 year episodes, with fixed-effects)		Panel data (3 year episodes, with fixed-effects)	
Data period	1991-2006 (N=365)	1991-2003 (N=292)	1991-2006 (N=365)	1991-2003 (N=292)
Ag.income	-0.602 (2.22)	-0.654 (3.18)	-1.059 (4.59)	-1.058 (5.23)
Non-ag income	-0.522 (4.73)	-0.535 (4.54)	-0.878 (5.85)	-0.916 (6.34)
Ag.income*2000s	-1.054 (2.16)	-1.010 (1.48)	-0.650 (1.40)	-0.742 (1.30)
Non-ag.inc* 2000s	-0.243 (1.11)	-0.241 (1.03)	-0.417 (1.74)	-0.205 (0.74)

(F) Ag. Income* after 2000: Provincial aggregate URBAN

Income data	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹		FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²	
	Panel data (3 year episodes, with fixed-effects)		Panel data (3 year episodes, with fixed-effects)	
Data period	1991-2006 (N=365)	1991-2003 (N=292)	1991-2006 (N=365)	1991-2003 (N=292)
Ag.income	0.273 (4.05)	-0.265 (3.85)	-0.397 (5.26)	-0.397 (5.16)
Non-ag income	-0.175 (2.04)	-0.172 (1.99)	-0.366 (3.92)	-0.358 (3.65)
Ag.income*2000s	0.052 (0.43)	0.080 (0.35)	0.152 (1.32)	0.126 (0.73)
Non-ag.inc* 2000s	0.075 (0.78)	0.007 (0.006)	0.192 (1.74)	0.160 (1.23)

¹T-ratios in parentheses

¹ The provincial average incomes by sources/sectors are the average of percapita household income by five distinct sources (earned agricultural income, earned manufacturing sector income, earned service sector income, unearned income, and remittances from abroad) in FIES income data. These income components consist of five sources.

² The sectoral income at the provincial aggregates are estimated by multiplying the shares of the (provincial) average earned sectoral (agricultural, manufacturing, and services) incomes in FIES (as obtained above) with the provincial average percapita consumption expenditures in FIES. These income components consist of three sectors/sources.

(G) Ag. Income* endowment (irrigability & urbanization): Provincial aggregate (rural & urban)

Income	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹						FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²					
	Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS			Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS		
Panel vs. cross-section	1991-2006 (N=360)	1991-2003 (N=290)	1991-2000 (N=217)	1991-2006 (N=73)	1991-2003 (N=73)	1991-2000 (N=73)	1991-2006 (N=365)	1991-2003 (N=290)	1991-2000 (N=217)	1991-2006 (N=72)	1991-2003 (N=72)	1991-2000 (N=72)
Data period												
Ag.income	0.685 (0.51)	1.111 (0.78)	0.093 (0.07)	-1.958 (0.97)	-4.287 (1.98)	0.682 (0.34)	-0.742 (0.82)	-0.666 (0.69)	-1.190 (1.18)	-3.157 (3.72)	-4.049 (4.56)	-2.673 (2.04)
Non-ag income	-0.500 (2.08)	-0.355 (1.05)	0.374 (0.82)	-1.177 (1.27)	-1.379 (3.27)	-0.190 (0.26)	-0.888 (2.10)	-0.692 (1.48)	-0.660 (1.28)	-2.185 (4.38)	-2.356 (4.53)	-1.343 (2.12)
Ag.inc* irrigability	-0.414 (1.19)	-0.445 (1.43)	-0.170 (0.53)	-0.407 (0.90)	-0.423 (0.50)	-1.978 (3.22)	-0.356 (1.26)	-0.466 (1.63)	-0.172 (0.61)	0.036 (0.10)	0.466 (0.98)	-0.359 (0.89)
Ag.income* urbanity	-3.766 (1.37)	-4.507 (1.43)	-2.744 (0.84)	0.881 (1.25)	2.544 (2.31)	1.740 (2.12)	0.486 (0.27)	0.025 (0.01)	0.128 (0.06)	5.660 (3.05)	5.012 (2.14)	7.138 (2.66)
Non-ag.inc* irrigability	-0.132 (0.93)	-0.268 (1.44)	-0.448 (1.81)	0.247 (0.81)	0.009 (0.05)	-0.088 (0.29)	-0.159 (0.78)	-0.246 (1.20)	-0.214 (0.91)	0.478 (2.43)	0.391 (1.48)	0.291 (0.87)
Non-ag.inc* urbanity	-0.089 (0.20)	0.076 (0.11)	-0.778 (0.99)	-0.298 (1.17)	0.066 (0.33)	-0.314 (1.29)	-0.234 (0.35)	-0.289 (0.41)	-0.697 (0.89)	-1.114 (2.08)	-0.954 (1.27)	-1.213 (1.63)

(H) Ag. Income* endowment (irrigability & urbanization): Provincial aggregate RURAL

Income data	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹						FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²					
	Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS			Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS		
Panel vs. cross-section	Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS			Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS		
Data period	1991-2006 (N=360)	1991-2003 (N=290)	1991-2000 (N=217)	1991-2006 (N=73)	1991-2003 (N=73)	1991-2000 (N=73)	1991-2006 (N=365)	1991-2003 (N=290)	1991-2000 (N=217)	1991-2006 (N=72)	1991-2003 (N=72)	1991-2000 (N=72)
Ag.income	-0.205 (0.21)	0.002 (0.00)	-0.732 (0.72)	-1.938 (1.00)	-4.251 (2.09)	0.030 (0.02)	-1.010 (1.53)	-1.021 (1.43)	-1.336 (1.79)	-3.044 (3.79)	-3.777 (5.14)	-2.206 (2.01)
Non-ag income	-0.642 (3.27)	-0.537 (2.24)	-0.130 (0.40)	-1.893 (2.39)	-1.598 (3.89)	-1.063 (1.78)	-1.219 (3.80)	-0.997 (2.92)	-0.942 (2.59)	-2.485 (5.53)	-2.722 (6.13)	-1.939 (4.05)
Ag.inc* irrigability	-0.269 (1.04)	-0.302 (1.31)	-0.133 (0.51)	-0.274 (0.66)	-0.320 (0.47)	-1.574 (3.47)	-0.324 (1.41)	-0.400 (1.77)	-0.222 (0.99)	0.075 (0.26)	0.351 (0.95)	-0.290 (0.92)
Ag.income* urbanity	-0.537 (0.29)	-0.677 (0.32)	0.848 (0.36)	0.855 (1.29)	2.472 (2.79)	1.767 (2.78)	1.360 (1.11)	1.967 (1.52)	2.131 (1.53)	5.737 (3.34)	5.743 (3.33)	5.850 (2.90)
Non-ag.inc* irrigability	-0.077 (0.67)	-0.188 (1.35)	-0.328 (1.69)	0.357 (1.36)	0.078 (0.45)	0.021 (0.08)	-0.095 (0.57)	-0.195 (1.20)	-0.193 (1.06)	0.480 (2.76)	0.383 (1.74)	0.336 (1.27)
Non-ag.inc* urbanity	0.536 (1.87)	0.758 (1.82)	0.600 (1.21)	0.186 (0.91)	0.353 (2.51)	0.319 (1.53)	1.218 (2.90)	1.175 (2.88)	1.070 (2.33)	1.163 (2.18)	1.827 (3.62)	1.196 (2.19)

*T-ratios in parentheses

(I) Ag. Income* endowment (irrigability & urbanization): Provincial aggregate URBAN

Income data	FIES income (primary, secondary, tertiary, unearned income, foreign remittances) ¹						FIES consumption expenditure*FIES income share by sector (primary, secondary, tertiary) ²					
	Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS			Panel data (3 year episodes, with fixed-effects)			Long-run poverty reduction/growth rate, based on cross-section OLS		
Data period	1991-2006 (N=365)	1991-2003 (N=290)	1991-2000 (N=217)	1991-2006 (N=72)	1991-2003 (N=72)	1991-2000 (N=72)	1991-2006 (N=365)	1991-2003 (N=290)	1991-2000 (N=217)	1991-2006 (N=72)	1991-2003 (N=72)	1991-2000 (N=72)
Ag.income	0.890 (1.56)	1.110 (1.89)	0.825 (1.63)	-0.010 (0.02)	-0.068 (0.10)	0.652 (0.88)	0.268 (0.85)	0.355 (1.04)	0.146 (0.46)	-0.114 (0.57)	-0.272 (1.06)	-0.467 (1.21)
Non-ag income	0.142 (2.09)	0.181 (1.22)	0.505 (2.14)	0.737 (2.88)	0.232 (1.80)	0.873 (2.89)	0.330 (2.08)	0.305 (1.72)	0.282 (1.48)	0.301 (2.64)	0.366 (2.88)	0.596 (2.44)
Ag.income*irrigability	-0.145 (1.15)	-0.143 (1.30)	-0.038 (0.40)	-0.153 (1.26)	-0.143 (0.65)	-0.406 (1.84)	-0.032 (0.39)	-0.067 (0.80)	0.049 (0.62)	-0.040 (0.59)	0.115 (0.86)	-0.069 (0.55)
Ag.income* urbanity	-3.228 (2.40)	-3.830 (2.57)	-3.593 (2.84)	-0.033 (0.14)	0.121 (0.26)	-0.025 (0.06)	-1.846 (2.32)	-1.942 (2.16)	-2.003 (2.38)	-0.075 (0.14)	-0.729 (0.67)	1.289 (1.26)
Non-ag.inc* irrigability	-0.055 (1.51)	-0.080 (1.19)	-0.120 (1.14)	-0.122 (1.75)	-0.078 (1.44)	-0.108 (1.00)	-0.064 (1.11)	-0.052 (0.80)	-0.022 (0.29)	-0.002 (0.05)	0.008 (0.13)	-0.044 (0.43)
Non-ag.inc* urbanity	-0.625 (2.63)	-0.681 (1.73)	-1.379 (3.01)	-0.476 (3.18)	-0.278 (2.22)	-0.634 (3.76)	-1.453 (4.54)	-1.464 (4.19)	-1.767 (4.29)	-2.277 (7.88)	-2.780 (5.59)	-2.409 (8.19)

* T-ratios in parentheses

¹ The provincial average incomes by sources/sectors are the average of percapita household income by five distinct sources (earned agricultural income, earned manufacturing sector income, earned service sector income, unearned income, and remittances from abroad) in FIES income data. These income components consist of five sources.

² The sectoral income at the provincial aggregates are estimated by multiplying the shares of the (provincial) average earned sectoral (agricultural, manufacturing, and services) incomes in FIES (as obtained above) with the provincial average percapita consumption expenditures in FIES. These income components consist of three sectors/sources.

Table 7-4 Number of province-growth spells by change in poverty incidence and by income growth by sector: FIES provincial panel 1991-2006 (every 3 years)

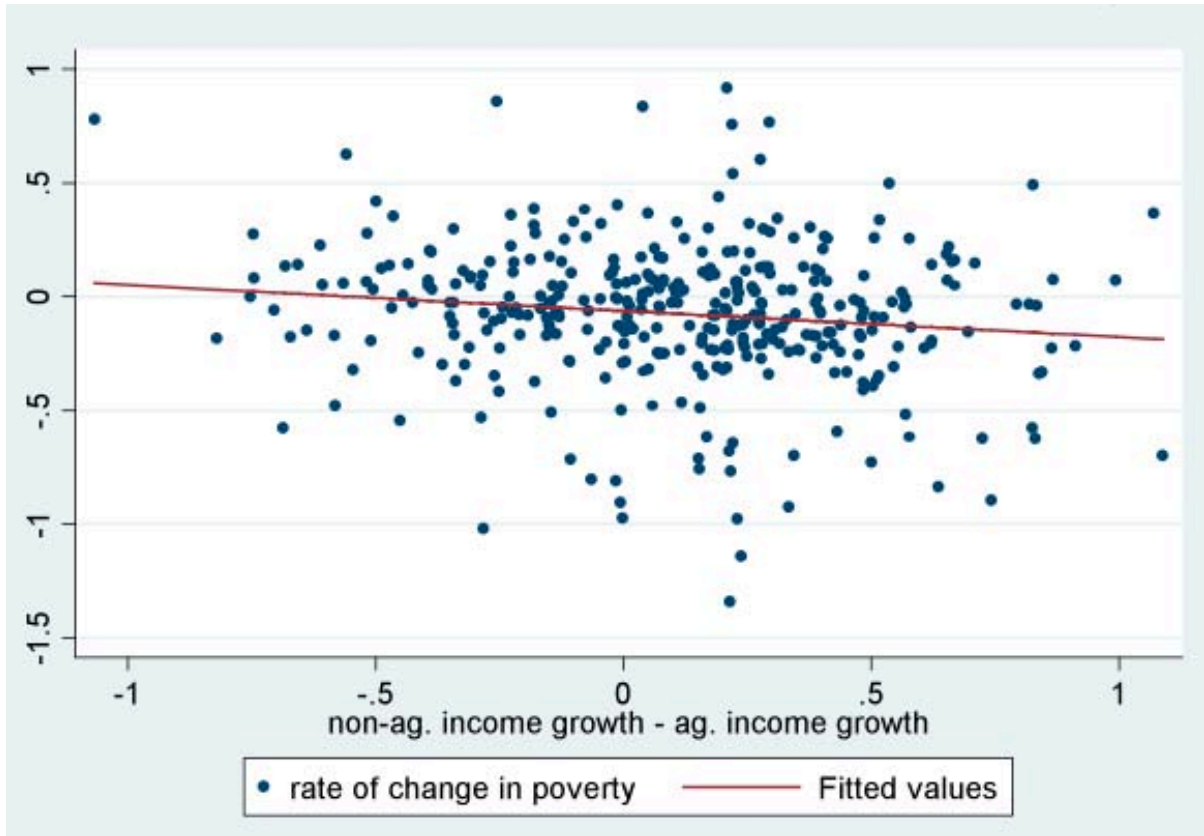
Number of Province-Growth Spells		
	Δ ag income $>$ Δ non-ag income 1991-2006	Δ ag income $<$ Δ non-ag income 1991-2006
Poverty reduction	72 (2000.0)*	149 (1998.8)
Poverty increase	58 (2002.7)	86 (2000.2)

*Year average across growth spells

Table 7-5 Changes in poverty incidence and growth of ag. versus non-ag income among 73 provinces, 1991-2006

Ag. vs. Non-ag Income Growth Rate During 1991-2006		
	Δ ag. income $>$ Δ non-ag income	Δ ag. income $<$ Δ non-ag income
Δ poverty incidence during 1991-2006	increase	<p><u>poverty increase, via non-ag. income contraction</u> Quezon, Mt. Province, Mindoro Occ., Kalinga Apayao, N. Samar, Lanao del Norte, Lanao del Sur, Sulu [8]</p>
	decrease	<p><u>Poverty reduction, via non-ag. income growth</u> Agusan del N., Agusan del S., Aklan, Abra, Albay, Antique, Aurora, Basilan, Bataan, Batanes, Batangas, Benguet, Bohol, Bukidnon, Bulacan, Camarines Norte, Camarines Sur., Camiguin, Capiz, Cavite, Cebu, Cotabato, Davao, Devao del Sur, Davao Or., Ilocos Norte, Ilocos Sur, Iloilo, Isabela, La Union, Laguna, Leyte, Masbate, Mindoro Or, Misamis Occ, Misamis Or., Negros Occ., Negros Ori., Nueva Ecija, Nueva Vizcaya, Palawan, Pampanga, Pangasinan, Quirino, Rizal, Romblon, Siquijor, S. Cotabato, S. Leyte, Sorsogon, Sultan Kudarat, Surigao del N. , Surigao del S., Tarlac, W. Samar, Zambales, Zamboanga del Norte, Zamboanga del Sur [58]</p>

Figure 7-1 Change in poverty vs sectoral income growth differential



8. OPENING NEW PATHS FOR AGRARIAN REFORM IN THE PHILIPPINES

The Comprehensive Agrarian Reform Program or CARP has suffered from inefficiencies typical of centralized land reform programs (World Bank, 2003). Granting CARP's ambitious size, its implementation has been extremely slow. Even though expropriated private landowners have been compensated with land values that in principle reflect market values, DAR's adjudication's powers, land valuation, and settlement of agrarian reform beneficiaries have sparked intensive legal and extra-legal conflicts.

The first section of this chapter reviews the main problems associated with the implementation of CARP to better predict the kind of difficulties the program will face when extended to cover the highly contentious private lands. Besides the challenges represented by implementation speed and legal disputes, CARP will continue to be a substantial cost to Philippine society. This implies that an extension of CARP beyond 2008 should allow for enough time for the program to be completed.

Are there different approaches that could be pursued in completing CARP? This chapter explores recent experiences in improving the Voluntary Land Transfer model. As discussed in Chapter 3, this model of land transfer has been highly contentious and regarded as a mechanism for evading land reform. It has also been attacked on the grounds that it has a very limited redistributive impact (e.g., Borras, 2008). Evidence to the contrary is reviewed and implications for the role that local communities can play in the process of land reform are discussed.

The adoption of what the chapter will refer to as "a more decentralized approach" to land reform will also pave the way for the adoption of a long-term model of a fully decentralized agrarian reform that could well continue to operate in a post-CARP environment in which land markets will be allowed to operate without direct public intervention. In such an environment, a potentially viable small farm sector may well face a different willingness to pay for land compared with large landowners. This possibility, in turn, might lead to a reversal in CARP's achievements. The last section of this chapter examines more closely these issues and analyzes how complementary policies such as land taxation and access to subsidized mortgages could be usefully adopted and fine-tuned in a transition to a post-CARP scenario.

I. Land Administration and Management Issues Affecting Land Acquisition and Distribution: An Overlooked Link

Under CARP there are several key activities undertaken to complete the transfer of ownership and use rights from landowners to identified beneficiaries. These are the following: (1) identification of the scope of CARP coverage; (2) acquisition or possession of

private or public lands; (3) determination of land values or just compensation; and, (4) land titling and registration of titles. All of these factors point to the large transaction costs imposed on CARP by an extremely weak, incomplete, and cumbersome land administration system.

a. Identification of the scope of CARP coverage.

The methodology for determining CARP's scope has always been a controversial issue. In the absence of a systematic database on landownership, the DAR devised the "Barangay Carpet Approach" to capture this data, whereby field staff members create a list of landholdings with their corresponding beneficiaries. Records of titled and untitled lands are first collected at the office of the Local Assessors. Many of these records are not current or undated and often consist of Tax Declarations that do not reflect the actual landowners. Tax maps do not show the actual configuration of the lots of corresponding tax declarations. Validation of titled lots is quite problematic as only an estimated 20% of privately owned land in the country is registered (World Bank, 2006). The magnitude of validation required for untitled lands is enormous and legally complicated (see Ballestreros and Cortez, 2007).

Land records are fragmented and dispersed among many agencies. Total landholdings of every citizen in the country cannot be accurately determined: a person might have owned a titled agricultural lot with an area less than five hectares situated in a particular municipality and is therefore exempt from coverage but the same person might own another agricultural lot with an area also exempt from coverage in another town or province. Moreover, if the same owner registers the title of the lot in another person's name the said lot cannot be considered part of the latter's landholdings. A landowner who wishes to retain ownership of his landholdings will purposely arrange to have his land titled in the name of another person he can control. This person need not be limited to children or relatives. This has been a common evasion scheme used by owners for the last 35 years since PD 27.

b. Acquisition of private land.

The landowner can choose among three acquisition options: (1) voluntary offer to sell (VOS); (2) voluntary land transfer or direct payment scheme (VLT/DPS); or, (3) compulsory acquisition (CA). Both the VOS and VLT schemes have been encouraged because of the belief that these schemes could achieve the "quickest results and the least political cost" (Putzell 1990 p.312). In the VOS scheme there is less resistance from the landowners since they willingly surrender their land to the State for coverage. However, the scheme has been used as a way of speculating on the value of land, evade the provisions for compulsory acquisition under PD 27, and as a way to dispose of lands located in areas under insurgency control and therefore difficult to manage. As of December 2007, VOS represented 12% of DAR's total accomplishment in terms of private lands.

Under the VLT scheme payment is made directly by the beneficiary to the landowner based on an agreed contract, subject to DAR's prior review and approval. Like the VOS, however, this scheme also reflected the weakness of land administration in the country. In fact, there is anecdotal evidence that the VLT has been used by landowners to evade coverage and to

undertake implicit sale of property.¹ As of December 2007, VLT accomplishments represent about 29% of total private agricultural lands within DAR's scope (DAR, 2008).

Compulsory acquisition is the least popular scheme among landowners and thus the most challenging. Privately owned rice and corn lands were covered under PD 27 (issued in 1972), while the remaining lands were covered by CARP. Landowners reject CARP for two major reasons: one, they protest its coverage and, two, they reject the valuation made on their land as basis for compensating them. Protests related to coverage arises from issues on the non-agricultural use of land or on the retained areas of owners. This kind of protest is common among landowners and this arises from the unclear policy of the government on land use. Although the power to approve land conversions was vested on the DAR, the 1991 Local Government Code also gave LGUs the authority to reclassify lands in their locality through the preparation of a Comprehensive Land Use Plan. Unfortunately, most LGUs do not have information on the actual extent of land use and thus significant deviation can exist between the actual land utilization and proposed land use plan (Silva 1993, IARDS 1998). There is an incentive among LGUs to upgrade land classification to non-agriculture because of the income that can be generated from such classification. In addition, DAR's prerogatives in clearing land conversion are subject to substantial discretionality.²

If the protest concerns a rejection of valuation, DAR proceeds with the land distribution process and the Land Bank of the Philippines creates an escrow account in favor of the landowner. With protests related to coverage, DAR usually waits for a court decision before proceeding with the distribution. In cases where distribution and titling have been carried out, a favorable decision for the landowner would result in cancellation of CLOAs. Tensions with beneficiaries waiting for land to be distributed to them can often degenerate into violence.

c. Determination of landowner compensation.

Although land redistribution can proceed if the only issue is land valuation, the problem of "just compensation" is the thorniest issue confronting the program. While the basis for valuation is prescribed in PD 27 and Section 17 of RA 6657, landowners often disagree with the valuation made by the Land Bank of the Philippines. Many of the disagreements end up unresolved.

During Operation Land Transfer under PD 27, land the valuation was guided by a provision in the law, which stated that the value of the land was equivalent to 2½ times the average harvest of three normal crop years immediately preceding the promulgation of the Decree. Under the provision of RA 6657, the criteria for determining land value have been tempered. In determining just compensation, RA 6657 takes into account the following: the cost of acquisition of the land, the current value of like properties, its nature, actual used and

¹ See Borras, 2008 for a summary of such evidence, where testimonials allege that as much as 70% of VLT accomplishments are transfers to relatives, friends, or non-legitimate beneficiaries of the program.

² For instance, DAR's AO 7, Series of 1997, reads- "if the City/Municipality does not have a Comprehensive Land Use Plan and Zoning Ordinance duly approved by the HLURB or Sanggunian but the dominant use of the area surrounding the land subject of the application of conversion is no longer agricultural, or if the proposed use is similar to or compatible with the dominant use of the surrounding areas, conversion may be granted.....".

income, the sworn valuation by the owner, tax declarations, and the assessment made by government assessors.

The Land Bank of the Philippines (LBP) provides and approves land valuation based on its own appreciation of the conditions of the land. The valuation or purchase price of the land is submitted by the LBP to the Municipal Agrarian Reform Office (MARO). It is this valuation that will be included in the offer of the DAR when it serves the notice to acquire the land. If the landowner accepts the DAR's offer, the LBP pays the landowner the purchase price of the land within 30 days after the landowner executes and delivers a deed of transfer in favor of the government and surrenders the Transfer Certificate of Title (TCT). However, in cases when the landowner disagrees with the valuation, he has the right to a court proceeding. There are several unresolved cases in court involving questions of just compensation. These cases include not only lands that are covered through CARP but also lands covered 35 years ago under PD 27..

The compensation formula can also be manipulated, resulting in substantial uncertainty and lack of horizontal equity. For instance, landowners could secure more than market value compensation of their lands. Based on implementation, the value of land is determined by averaging three estimates of market value: (1) assessed market value, which is based on recent tax declaration; (2) market value, which is based on three sales of comparable land in the vicinity inflated by consumers' price index; (3) owners own declaration of fair market value made during the land registration program of 1987-1988. The formula permits valuation of up to 33% more than market value (DAR AO 1988 in Putzell 1990).

However, this formula does not necessarily deter excessive compensation. There are several ways that the formula can be abused (Putzell 1990 p. 312). (1) market values can be based on highly valued land, labeling the sales as comparable; (2) landowner pays one tax installment on the basis of an inflated value of land and thus raises the assessed value of land; (3) the landowner can plan the most advantageous level for the land's declared market value. The compensation thus is subject to abuse and corrupt practices.

d. Land titles and titling.

The title to land covered by CARP is a primary requirement in land acquisition and payment to the landowner. The inability of a landowner to surrender his Transfer Certificate of Title will delay the process of land distribution even in cases when the landowner accepts the coverage and property valuation. The failure of the landowner to surrender the TCT might be due to either a lost title or untitled land. Under the law a landowner who intends to delay coverage can declare lost owners' title and has no incentive to petition for the issuance of a new title to replace the lost one.

In the case of untitled land, the subject land has to be initially titled prior to CARP coverage. Lands can be titled either administratively by DAR (Free Patent) or judicially by a court. There are also untitled lands situated within the area not classified as Alienable and Disposable (A&D). These lands cannot be titled until such lands have been declared A&D through legislative action.

Land titling in the country can be a long process. An application for a judicial confirmation of ownership involves a tedious and expensive process specifically when the ownership of the lot is being contested (as when ownership is contested among heirs). In the case of Free Patent, conveyance of the land is made only five years after issuance of title. The tedious titling system means that coverage can be subsequently delayed.

The difficulties of coverage and the long process of land titling, on the one hand, and the need of DAR to provide land distribution outputs on the other, have led to the issuance of either collective titles or collective CLOAs (see Chapter 2). A collective CLOA is a certificate of title in the name of all the ARBs in the lot covered by the title but does not show the individual area awarded to each beneficiary. In all, collective CLOAs cover an area of 2.05 million hectares and account for about two-thirds of the total output of DAR. Since the beneficiaries of the CLOA have yet to define the lot area, payment on land cannot be made upon award of the title. This factor has contributed to the low rate of amortization by CARP beneficiaries.

II. Second Generation Implications of Land Administration and Management Issues

a. Security of tenure.

The beneficiaries of CARP obtain land rights and responsibilities upon award of CLT/EPs or CLOAs. However, although CLOAs and EPs are considered land titles and provide beneficiaries the formal legal rights on land, many of the CARP issued titles have not been perfected. “Imperfect titles” result from: (1) unsettled landownership issues on land covered by CARP specifically concerning untitled lands; (2) unsettled issues on “just compensation”; (3) unpaid landowners who cannot obtain payment due to the tedious re-documentation required; and, (4) the issuance of collective titles. A major consequence of a title being imperfect is that the process for paying the land mortgage is legally blocked. Added to the problem of a traditional difficulty in recovering public loans, such a legal impediment has contributed to the massive evasion in the amortization of agrarian debt. In fact, only 10% of ARBs have either fully paid their lands or been regularly paying their amortizations to the Land Bank. This means that 90% of CLOAs issued under Land Bank accounts are in arrears. In principle, they can be subject to foreclosure.³ The situation differs across agrarian reform operating units of the Land Bank but the overall collection rate is still low at 25% (Table 8-1).

³ Based on the provisions of RA 6657 Section 26, the Land Bank can foreclose the properties of non-paying ARBs. This means that the Land Bank has legal rights over these properties

Table 8-1 Land amortization collections from agrarian reform beneficiaries (as of Dec. 2006)

Agrarian Operations Center	Actual Collections (Php M)				Amount Due & Collectible (Php M)	Collection Rate (%)
	Principal	Interest	FAR	TOTAL		
1	3.6	1.5	2.6	7.7	19.6	28
2	12.1	7.9	12.1	32.1	174.8	13
3	41.5	14	50.8	106.3	294.6	27
4	6.6	1.6	38.6	46.8	53.9	49
5	2.3	3.1	17.8	23.2	80.4	21
6	1.5	1.1	19	21.6	41.6	34
7	0.3	0.3	9.3	9.9	12.5	44
8	0.6	0.1	8.6	9.3	3.2	78
9	0.9	0.2	9.7	10.8	18.8	37
10	5.5	3	17.2	25.7	38.3	41
11	7.4	1.8	53.9	63.1	66.5	51
12	6.4	3	26.8	36.2	375.3	8
Total	88.7	37.6	266.4	392.7	1179.5	25

Source: Strategic Planning Group, Land Bank of the Philippines (LBP)

This problem has spawned second-generation issues brought about by the sale and transfer of rights of “unperfected titles” in the informal market. As discussed in Chapter 5, the agrarian reform law prohibits land acquired by ARBs to be sold, transferred or conveyed except through hereditary succession or to the government, to the Land Bank or to other qualified beneficiaries for a period of 10 years after the award (RA 6657, Section 27). However, it is contended that this provision of the law has been visibly disregarded or overlooked. Unfortunately only non-systematic evidence is available to draw a firm conclusion on the size of this phenomenon. DAR’s inability to track the stability of its land reform achievements represents a major factor in CARP’s perceived lack of transparency as recent hearings in Congress confirm.

In a 1995 DAR study covering 23 provinces with one village sample in each province, the average number of EP recipients who sold and transferred their rights averaged 15% (DAR, 1995). This percentage ranged from a low of 4% to a high of 74%. Among CLOA recipients, the average was higher at 26% and the percentage ranged from 2% to 100%. The later percentage was common in areas such as the CALABARZON provinces where land commanded a higher price due to increasing urbanization from the spillover of population in Metro Manila.

Similar findings were reported in a 2003 study by Urbis Philippines under the WB-AusAID Land Administration and Management Program (LAMP). Many beneficiaries were selling their lands as soon as they got hold of their EPs/CLOAs. In Malaybalay City, the Municipal Agrarian Reform Officer estimated that 80% of the original agrarian reform awardees had already sold their lands covered by CLOAs. The CLOAs were being sold even before the

expiration of the 10-year holding period. Some processes on how these transfer are undertaken have been documented (see Box 8-1).

Box 8-1 Selling and transfer of CLOAs in agrarian reform areas

Tacloban City

"The selling of CLOAs even before the 10-year holding period is common in Sta Elena; Sto Niño; and New Kawayan. Usually after the transactions, buyers of land occupy the area as a confirmation of the deal made. The buyer would take hold of the CLOA although the CLOA is still formally in the name of the original beneficiary. The agrarian reform beneficiary with three hectares usually receives Php 150,000 as payment.

The formal transfer usually occurs after the 10-year holding period. The clearance from DAR to transfer the CLOA would take a week if the documents are in order. The formal transfer of the CLOA to the buyer would usually take six months to one year.

Another CLOA transaction is the waiving of rights of the beneficiary in favor of the buyer. The CLOA beneficiary returns the land to the original land owner. The original land owner then compensates the CLOA beneficiary.

The waiving of rights to CLOA is estimated to occur two to three times per month. The average size of lot involved is two hectares. The number of transactions increases especially when an investor needs large tracts of land, some of which may be covered by CLOA. The investor is then given a duplicate copy of the CLOA as a proof of the sale. The cost of the land would depend on its development status and market value.

Big private buyers who want large tracts of land also resort to the cancellation of CLOAs so the land could be titled to him. The buyer compensates the CLOA beneficiary directly. The cancellation of CLOAs can be easily done as most of the buyers have contacts at the Department of Agrarian Reform (DAR). The usual reasons given for the cancellation of the CLOA are: a) land not subject to the Comprehensive Agrarian Reform Program (CARP); b) beneficiary is not a tenant; and c) waiving of rights of the CLOA beneficiary.

The CLOA beneficiaries who sell the land awarded to them normally do so because they need money for personal needs and/or they have no capability to develop the land for agricultural purposes."

Bamban, Tarlac

DAR personnel facilitate the sale of CLOAs and transfer of title from CLOA to regular TCT. A land under CARP coverage may be awarded even to non-tenants. This is done in connivance with DAR personnel who make it appear that a tenant (non-existent) waives in favor of another claimant.

DAR personnel have also been involved in the provision of credit to beneficiaries with CLOAs as collateral. In case of a loan default, the DAR personnel look for a buyer and transfer the CLOA in the name of the buyer.

Source: Land Market Study, LAMP-DENR 2002

The land covered by a CLOA/EP has been transacted several times like any ordinary titled land. However, the transactions are largely informal. These transactions do not appear in official records and it is not easy to follow the trail of changes that have occurred over time. The official records of DAR, Land Bank, and the Registry of Deeds (ROD) do not match. These records also do not match field data.

The practice of ARBs of transferring land rights upon award or “prematurely” has defeated the objective of security of tenure under CARP. CARP has envisioned that the improvement in land tenure through land redistribution would provide the incentives to improve farm productivity and allow the tillers and agricultural workers to obtain all of the gains from higher yield. However, insufficient incomes in agriculture, the highly volatile earnings from agriculture, and better income opportunities from non-farm activities have lessened the attractiveness of agriculture among farming households.

b. Efficient functioning of the rural land markets.

The informal and “illegal” schemes employed to transact, transfer, and register “imperfect” CARP titles have rendered CLOAs and EP titles “unstable”. Because of non-transparent transactions, the possibility of competing claims on ownership or usufruct rights on these lands is not remote. Thus despite the perceived security provided to a CLOA/EP title by law, it has not attained complete acceptance in the formal sector. The Supreme Court has not held CLOA titles in the same regard as other titles (LAMP-DENR Study on Land Laws and Regulations 2002). Among the negative consequences of this lack of tenure security, access to credit is a major one, making settlement of agrarian reform beneficiaries more precarious.

The informality of transactions in the rural land market has made it more difficult to carry out effective land administration, management and planning. The problem on non-transparency has weakened support to land reform from many LGUs. Their financial base has been eroded by the inability to tax land transferred through CARP or land informally transacted. Real property tax, including transfer taxes, represent about one-third of their locally generated resources (LAMP-DENR Fees and Finance Policy Study 2002). The lack of support is further reinforced by the conflict between the LGUs and DAR on conversion of agricultural lands. LGUs have been tasked to implement a comprehensive land use plan in their locality. This function has given them the authority to reclassify lands, which often has been done without regard to the CARP (IARDS 1998; Silva 1990).

The process of re-documentation required to correct the market is complex (see Box 8-2). The magnitude of this process cannot be given a definite time frame to finish given the poor land administration system in the country.

Box 8-2 Process and extent of re-documentation required under CARP

DAR has no mechanism to monitor the sale of lands covered by CLOAs. It will only be known when the LBP processes the Claimfolders (CFs) for the purpose of paying the landowner. However, before payment is made the LBP would have to create a ledger of the beneficiaries and amount that have to be paid by each beneficiary. This would require not only the beneficiary's name but also the area of the lot, which each ARB is entitled to, based on actual subdivision survey of the lot.

To satisfy the requirements of the LBP, CFs are returned to the DAR with a list of requirements that could only be accomplished by field investigation. The sale of the CLOA will only be discovered during the field investigation and the land surveying that the DAR and LBP jointly undertakes. If the lots were already sold to other parties and the lot occupants are not anymore the original beneficiaries, the joint investigation will result in the re-identification and re-documentation of the new beneficiaries. In the meantime, the ARBs do not pay the required amortization for several reasons; (a) the ARB does not know how much to pay for the cost of the land awarded to them; (b) the LBP does not have any valuation of the land; (c) the ARB has illegally sold the land.

There are three judicial proceedings involved to remedy a situation where the lot covered by a CLOA is sold illegally by the ARB. These proceedings will involve the following cases, namely: (a) disqualification of the ARB; (b) correction of the Title; and, (c) cancellation of the CLOA previously issued to the erring ARB. These cases will involve a process of Inclusion and Exclusion.

If it is found that there are changes in the farmer-beneficiary on the ground during the conduct of the investigation and ground survey, the original beneficiary will be disqualified and a new farmer-beneficiary is assigned and documented. A process of re-identification and re-documentation ensues. In the meantime, rule of law dictates that there is no summary disqualification. The erring ARB is given a day in court and disqualification proceedings are undertaken by the DARAB. During the hearing of the disqualification case by the DARAB, neither the erring ARB who sold the land nor the buyer of the land will appear since they know that the transaction they entered into is illegal. However, there is no punitive action for this act. Selling land covered by a CLOA is not a criminal offense – the only penalty is disqualification of the erring ARB. Both of them will simply ignore the judicial proceedings.

Since the disqualification will result in the change of names of the ARBs annotated in the title of the original landowner, another judicial proceeding for the correction of the title will be undertaken by the DARAB. Before the filing of the case for the correction of the title, the DARAB will ascertain that the new list of ARBs is correct. Any omission will result in the filing of another correction case.

Aside from the disqualification proceedings at the DARAB, another case is filed for cancellation of the CLOA issued to the erring ARB. Unlike a disqualification case where the DARAB has jurisdiction, cancellation of CLOA title is a Land Registration Case and only the regular court (Municipal Trial Court or Regional Trial Court) has jurisdiction over these cases. The DARAB cannot issue an order directing the Register of Deeds to cancel a CLOA title. Only the court of competent jurisdiction can order the cancellation of the title. The CLOA title of the new beneficiary can only be issued when the CLOA of the erring ARB is finally cancelled and rendered void.

The resolution of Inclusion and Exclusion cases and the cancellation of the CLOA title is a long process. As the acquisition and disposition of lands to be covered continues, the number of Inclusion and Exclusion cases continues to pile up in the dockets of the courts. The growing number of such cases is beyond the capability of the single DARAB lawyer assigned per province.

III. The Administrative Cost of Land Acquisition

The slow implementation of CARP's LAD component and the large bureaucracy fielded to support land transfer operations raises the question of DAR's cost effectiveness in achieving

its targets. The 10-year extension for financing the program as embodied in RA 8532 is deemed over by end of 2008. The current round of debates on CARP's extension raises a much wider range of options beyond merely extending the period for program implementation. Reform measures ranging from delimiting the program scope to alternative distribution modalities, to terminating the program are among the proposals being pushed by different interest groups. The findings of this report suggest that overall there are still efficiency and equity reasons to support agrarian reform. Yet, as options for alternative approaches to land reform are discussed, the issue of which one can prove more cost-effective is of paramount importance in view of two fundamental constraints: budget and time.

Most of the discussion on CARP extension has focused on the outcomes and welfare impacts of the program. Little attention is focused on the cost of the program from the taxpayers' point of view. Figures from the Presidential Agrarian Reform Council (PARC) indicate that the total expenditures for CARP under the Agrarian Reform Fund (ARF) from 1987 to June 2008 are Php126 billion. This amount covers both direct and indirect costs including transfers to the Land Bank of the Philippines for landowners' compensation. The program has spawned a large bureaucracy that is entrusted to implement CARP. In addition to the 13,000-strong Department of Agrarian Reform, the ARF likewise funds both personnel and activities of other line agencies like DENR, DPWH, NIA, LRA, and DTI, among others. This chapter explores the expenditure profile of DAR over the past five years to get a good indication of the costs associated with program implementation. This can be used as a benchmark in assessing the cost implications of alternative modalities in program implementation.

There are three main sources of funds for CARP. The ARF is the major source as provided in RA 6657. The proceeds from the Presidential Commission on Good Government (PCGG) and the Asset Privatization Trust (APT) go to this fund. The General Fund or Fund 101 under the General Appropriations Act (GAA), likewise provides annual appropriations to DAR, most of which goes to Personnel Services.⁴ Fund 102 is for foreign assisted projects of DAR. This includes the loan proceeds of foreign assisted projects (FAPs) and GOP counterpart funding for FAPs.⁵ Table 8-2 shows that the total expenditure (obligations) of the DAR in the last five years, by fund source. It ranges from Php7.9 billion to Php10.3 billion. When the total expenditure to total LAD accomplishment of DAR for the same time period is related, there is a unit cost ranging from Php60,638 to Php89,750 per hectare of land distributed, or an average of Php76,000 per hectare.

⁴ Note that funding for Personnel Services of DAR is sourced from both Fund 101 and Fund 158. Roughly half of the requirements come from each source.

⁵ This does not include the grant projects or grant portions of FAPs, which are usually coursed through special funding windows or account facilities, depending on the funding agency. Additional local counterpart funding is also sourced by DAR from Fund 158.

Table 8-2 DAR funds (in million pesos)

Source	2003	2004	2005	2006	2007
Agrarian Reform Fund (Fund 158)	3,555.50	4,245.07	3,951.60	5,116.43	6,145.80
General Fund (Fund 101)	1,764.38	1,729.60	1,782.00	1,865.53	1,922.59
Foreign Assisted Projects (Fund 102)	3,457.27	2,713.25	2,214.14	2,333.22	2,208.18
Total	8,777.14	8,687.92	7,947.75	9,315.18	10,276.58
<i>LAD Accomplishment, in Has</i>	<i>97,795</i>	<i>104,069</i>	<i>131,069</i>	<i>125,177</i>	<i>134,041</i>
<i>Total expenditure per hectare, in Php</i>	<i>89,750.45</i>	<i>83,482.27</i>	<i>60,637.88</i>	<i>74,416.08</i>	<i>76,667.45</i>

Table 8-3 Itemized obligations, Fund 101 and 158 (in million pesos)

Item	2003	2004	2005	2006	2007
Land Acquisition & Distribution (LAD)					
EP/CLOA Generation & Distribution	307.79	344.71	547.12	600.11	548.34
Land Use Management & Development	158.65	224.84	373.03	305.72	365.55
Agrarian Justice Delivery (AJD)					
Agrarian Legal Assistance	17.04	27.71	42.11	67.82	75.23
Adjudication of AR Cases	18.30	25.00	34.75	25.97	29.26
Agrarian Reform Information & Education (ARIE)	25.21	25.26	22.45	24.87	23.49
Program Beneficiaries Development (PBD)					
Agrarian Reform Beneficiaries Development	52.83	56.65	62.55	115.31	584.67
Locally Funded Projects	1.50	196.46	1.50	1.36	1.50
Foreign Assisted Projects (GOP counterpart)	330.13	-	29.52	58.46	121.20
Administrative Overhead and Operational Support					
General Administration and Support	453.49	1,295.05	800.80	1,115.14	788.77
Personal Services	3,540.18	3,542.35	3,613.13	3,748.56	3,886.01
Capital Outlay	402.54	224.28	164.91	834.35	1,453.96
Other MOOE	12.20	12.36	41.73	84.31	190.43
Total Fund 101 and 158	5,319.87	5,974.67	5,733.61	6,981.96	8,068.40

Source: DAR Budget Division

Total expenditure covers activities related to land acquisition and distribution, legal assistance and adjudication, and beneficiaries' development, while actual cost of the land paid out by the LBP as landowners' compensation are not included. The bulk of expenditures go to Administrative Overhead and Operational Support, of which Personnel Services alone accounts for almost half of the total DAR budget. This is followed by expenditures to fund operations related to DAR's key programs: LAD, PBD, and AJD (see Table 8-3).

As of 2008, 67% of DAR's 12,844 staff was assigned to Land Tenure Improvement functions, the bulk of which is for LAD purposes. Applying these shares to the total administrative costs results in an average of PhP3,511 million per year (2003-2007) assigned for LAD support. Summing these to the average PhP755.2 millions for LAD related operations, it follows that on average DAR has spent PhP4,266.2 million pesos for LAD purposes during 2003-07. Referenced to the LAD accomplishment, this amounts to Php 36,080 per hectare. How does this compare with the value of land? Based on LBP's data (Table 8-4), the average landowner's compensation during 2003-2007 amounted to PhP94,241 per hectare for lands acquired under RA 6657. This implies that "overhead" costs for land distribution amount to roughly 38% of the value of land transferred or 28% of the PhP128,321 per hectare total cost of transferring land. In other words, for each peso the landowner receives, taxpayers transfer 38 centavos to DAR.

Table 8-4 Land values

Year	Area	Land Value	Php / ha.
2003	42,908	3,693.35	86,076.02
2004	29,061	2,562.76	88,185.54
2005	33,205	3,136.84	94,468.91
2006	33,686	3,389.47	100,619.55
2007	35,263	3,591.79	101,857.19

Source: LBP/DAR
 Referred to lands transferred under R.A. 6657

IV. A Community Managed and Negotiated VLT Approach: The CMARPRP

The large overhead cost of DAR's operations and administrative services in transferring land could be used elsewhere if alternative approaches to land reform were pursued. The clearest alternative to the current centrally managed CARP would be to strive for a decentralized and negotiated approach, where a large part of the estimated overhead costs could actually be converted into grants for the beneficiaries to facilitate their access to land. The feasibility of such a scheme in the Philippines is discussed in the next section. Specifically, the discussion centers on an important pilot project—the Community Managed Agrarian Reform and Poverty Reduction Project or CMARPRP—which was carried out from 2003 to 2007.

CARP's design has been quite flexible at providing different approaches in transferring land that would fit variations in tenure, landowners' resistance, and specific agro-ecological conditions. As a result, various modalities of land transfer were envisioned, ranging from compulsory acquisition (CA) to the voluntary transfer of land. As the pace of implementation has been very uneven in relation to the program's scope (see Chapters 2 and 3) and particularly slow in the case of private lands targeted for CA, this original flexibility has eroded. The bulk of lands targeted for transfer consists of private lands where resistance by

landowners has been highest and where the compulsory acquisition of land is programmatically seen as the only way forward. As a result, the per-hectare administrative costs for transferring the remaining balance of lands and the average value of the latter are likely to increase substantially.

CMARPRP transferred lands to agrarian reform beneficiaries through voluntary farmer-landowner negotiations by adopting and modifying the more traditional VLT/DPS approach. It aimed to foster community-state partnerships in the planning, provision, and management of productive investment and support services. The project supported DAR in expanding the piloting of improved modalities of land transfer to landless farmers or prospective ARBs. It was implemented as a pilot in conjunction with the World Bank-supported Second Agrarian Reform Communities Development Project (ARCDP2), which is still ongoing. CMARPRP sought to empower ARBs so that they could actively engage in land market transactions and gain access to credit and other critical services to increase their production and income. The project also introduced new approaches in the provision of support services that were more cost-effective and with higher potential for raising farm productivity.

To achieve these objectives, CMARPRP:

- (i) Developed a farmer-initiated, demand-driven land transfer process through capability-building assistance to landless farmers interested in acquiring agricultural lands identified for productive undertakings;
- (ii) Accelerated land transfers by facilitating negotiations between ARBs and landowners, harnessing the assistance of local institutions to ensure a successful outcome for the involved parties;
- (iii) Integrated land transfer and support service delivery by shortening the time lag between the transfer of land to beneficiaries and support service delivery; and,
- (iv) Ensured that income generation goals were attained and poverty reduced by providing strategic interventions that would increase farm productivity, and by developing mechanisms linking ARBs with markets, investors, and credit financing. The project was carried out between 2003 and 2007.

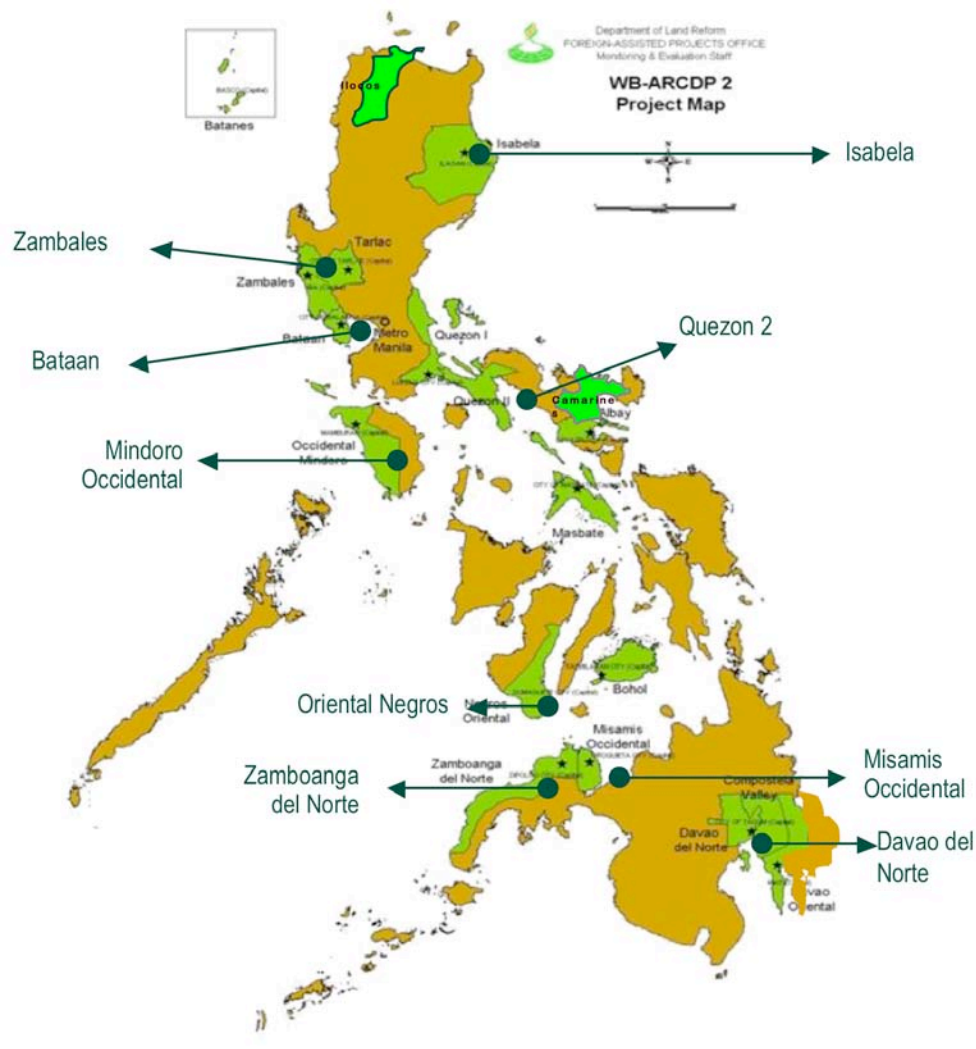
a. Project description and key results.

CMARPRP covered a total of 10 sites; five in Luzon, one in the Visayas and three in Mindanao (see Figure 1). The original target was to cover a total of 1,000 hectares or about 100 hectares per area to ensure that infrastructure investment were not thinly spread over the pilot sites. The pilot sites included Isabela, Bataan, Zambales, Occidental Mindoro, Quezon II Unisan, and Quezon II Guinyangan all in Luzon; Negros Oriental in the Visayas; and, Zamboanga del Norte, Misamis Occidental, and Davao del Norte in Mindanao. This involved 10 ARCs with 17 Barangays and a total ARC population of 53,000. Total actual number of CMARPRP recipients was 656 ARBs involving 68 Landowners.

Of the 10 sites, seven were considered prime agricultural lands in terms of strategic location, land use vis-à-vis the municipality, and the cost of the land. In Mindanao, for instance, the Aumbay ARC site was considered the rice bowl of the city because it produced several thousand cavans of palay enough to feed the entire city. In Luzon, the Hermosa pilot site was adjacent to Subic, an industrial free-port. Another area in Unisan, Quezon was very near the Bondoc-Peninsula highway planted with rice, coconut, and fruit trees. In the Visayas, the site in Siaton, Negros Oriental was about two kilometers from the highway. These areas had actual land values ranging from Php100,000 to Php200,000 per hectare.

A major activity of CMARPRP was land distribution, using DAR's voluntary land transfer (VLT) scheme. This involved direct negotiation between farmer-beneficiaries and landowners, brokered by a project-supported local area committee chaired and co-chaired by the Mayor and the municipal DAR officer, respectively. Of the project's target to cover 1,000 hectares (or about 100 hectares per pilot site), a total of 972 (97%) hectares were successfully negotiated. This involved 656 farmer-beneficiaries and 68 landowners that went through several negotiation processes. Around 785 hectares (81%) of the successfully negotiated area were issued new land titles. The balance of 186 hectares is targeted to be distributed by end of the second quarter of 2009. These areas are either undergoing land survey, waiting approval of survey plans, or require additional documentary evidence to complete the land title issuances. The bulk of this balance is in the pilot areas of Zambales, Quezon II, and Negros Oriental.

Figure 8-1 Location of CMARPRP sites



In the baseline study conducted for the CMARPRP sites, only about 50% of the beneficiaries were involved in direct negotiation with landowners for the cost of the land. Understandably in some areas, farmers opted to choose farmer-leaders to represent them in the negotiation as in the case of Aumbay ARC in Samal City, Quezon II, Bataan and Zambales. In Occidental Mindoro, the Mangyans were normally represented by the elders called “kuyays”.

A major concern about the VLT approach and, hence, the CMARPRP, was the impact of negotiations on the final price of land. Critics of the VLT scheme (e.g., Borras, 2008) claimed that direct negotiation would escalate the cost of the land compared with VOS or CA. Table 8-5 below, however, refutes this particular concern. Negotiated price was much lower by 30%-85%. It was only in Samal City in Mindanao where the cost of the land was 17% higher compared with other modes of acquisition but this was attributed to the current use of the land, which was as irrigated rice land. Yet, even in this instance, during field interviews after program completion, ARBs claimed that they still were able to negotiate for

a value approximately 20% below current market price. Mayors of the involved LGUs played a key role in negotiations to settle the final price.

Terms of payment ranged from cash payment upon signing of the Deed of Voluntary Land Transfer (as in the case of Zambales where price of land per hectare was only Php1,000–Php5,000) to 15 years of equal amortization payments (in the case of Samal City where cost was about Php65,000-Php75,000. per hectare). The highest negotiated price was registered in Bataan, where it ranged from Php20,000 to Php100,000 per hectare depending on the proximity to the Subic-Tarlac highway and the number of matured mango trees planted in the area.

CMARPRP prepared the beneficiaries in the negotiation process, exposed them to market opportunities, taught them process documentation, and trained them on the development of enterprise and farm and non-farm production. In addition, to ensure sustainability, it facilitated the formation and strengthening of associations and cooperatives in the 10 pilot areas, including local barangay groups and committees.

Table 8-5 Comparative cost of lands between CMARPRP-VLT and lands under VOS/CA

Province	Negotiated Cost of Land per Ha under CMARPRP-VLT (Php)	Terms of Payment	Cost of Land per Ha of Same Area or Adjacent Areas (VOS/CA Scheme) as per LBP Valuation (Php)*	Terms of Payment	Remarks
Isabela Bgy. Bannawag, Jones	25,000	3 cropping seasons (1½ years to pay), interest free	70,000	Maximum 30 years equal amortization at 6% interest per year	64% lower than prevailing LBP valuation of adjacent properties
Zambales Bgy. San Juan & New San Juan, Cabangan	1,000-30,500	Cash upon signing of DVLТ contract, interest free	30,000-40,000		23%-96% lower than prevailing LBP valuation of adjacent properties (55% on average)
Bataan Bgy. Mabiga, Hermosa	20,000-50,000-100,000	5 years installment, interest free	70,000-150,000		33%-71% lower than prevailing LBP valuation of adjacent properties (48% lower on average)
Quezon 2 Bgy. Capuluan Central/Tulon, Guinayangan	10,000	5 years equal amortization, interest free	16,500		39% lower than prevailing LBP valuation of adjacent properties
Quezon 2 Bgy. Bulo Ilaya, Unisan	15,000-20,000-40,000	10 years to pay, interest free	40,000-70,000		43%-62% lower than prevailing LBP valuation of adjacent properties (55% lower on average)
Occidental Mindoro Sitio Tagbungan, Bgy. Maranan, Sta. Cruz	15,000	5 years to pay w/ 3 years grace period, interest free	50,000		70% lower than prevailing LBP valuation of adjacent properties
Negros Oriental Bgy. Napacao, Siaton	7,000-12,000-36,000	2-5 years to pay depending on the amount, interest free	150,000-200,000		82%-95% lower than prevailing LBP valuation of adjacent properties (84% lower on average)
Zamboanga del Norte Bgy. San Miguel, Mutia	5,000	3 years to pay, interest free	10,000-20,000		75% lower than prevailing LBP valuation of adjacent properties
Misamis Occidental Bgy. Trigos, Guimad, Guingona, Ozamis City	2,500-15,000	Some on cash payment basis; others up to 6 years to pay depending on the value of the land, interest free	10,000-55,000		73% lower than prevailing LBP valuation of adjacent properties
Davao del Norte Bgy. Aumbay, Tagbay, Tagbaobo, Anonang, City of Samal	75,000	10-15 years to pay, interest free	62,373		17% higher than prevailing LBP valuation of adjacent properties

Source: Certification/LBP documents submitted by MAROs/PAROs (CY 2005)

Seven CMARPRP beneficiaries' associations were formed and three of these graduated into farmers' cooperatives. Barangay Implementing Teams (BITs) and Infrastructure Operation and Maintenance Groups (IOMGs) were likewise organized and trained to monitor implementation of agri-enterprise and infrastructure subprojects. Area Committees were organized in each pilot site to oversee planning, implementation, and monitoring of development projects in the area. Chaired by the City/Municipal Mayor, the Committees decided what priority projects should be endorsed to the DAR. The Committees also ensured that LGU equity was allocated.

Under CMARPRP, each community received technical assistance to formulate its own Comprehensive Area Development Plan (CADP) to prioritize interventions. All beneficiaries were coached and trained to formulate farm business plans to ensure that they got maximum income and productivity out of their transferred lands. The increased income derived from their farm and other agri-enterprise would be used as payment for land amortization. An additional interesting feature of the project was that it required beneficiaries to participate in the formulation of individual farm business plans (IBP). More than half of these IBPs (64%) were implemented and were either related to crops and livestock production or non-farm enterprises. These IBPs were either funded by the LGUs, through micro finance (rural banks and cooperatives), or self-financed by the ARBs themselves. Through CMARPRP's demonstration farms and 'roll-over' scheme, some IBPs were partially implemented with varying results. Collective business plans were also planned under the project but were not implemented in several pilot sites possibly because of their huge loan requirements.

Table 8-6 CADPs, IBPs, and CBPs

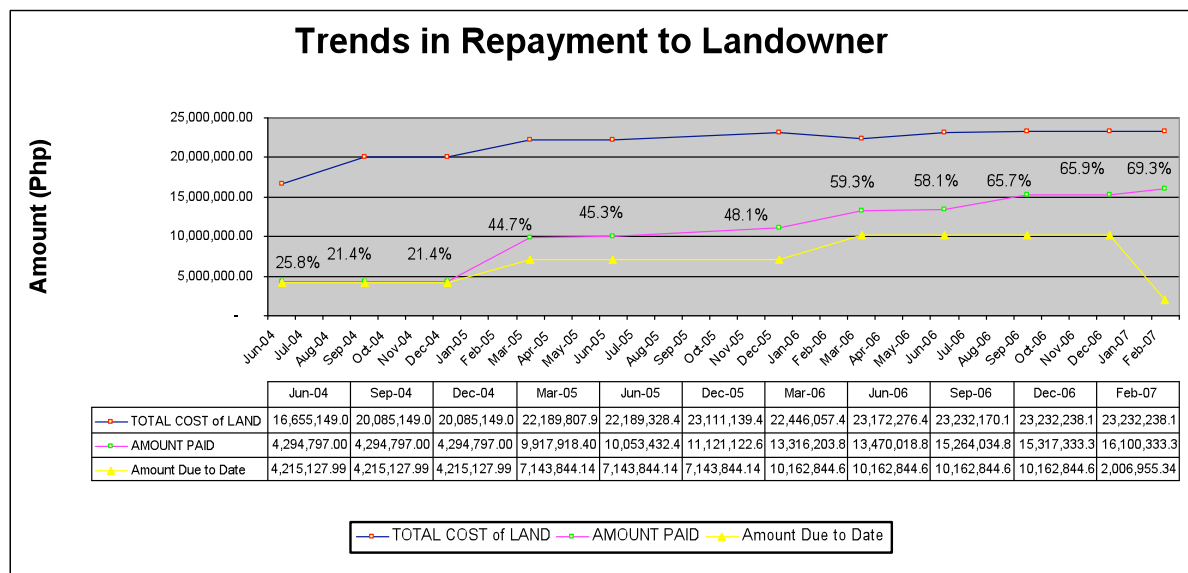
	Global Target	As of Dec '06	As of Feb 28 '07
CADPs Investment	Php208.2 M	57% (P119.8 M invested)	63% (Php130 M invested)
IBPs Implemented	656	55% (362 IBPs implemented on-ground)	64% (422 IBPs implemented on-ground)
CBPs Implemented	13	31% (4 CBPs implemented)	31% (4 CBPs implemented)

The project delivered a more traditional package of interventions under the form of infrastructure sub-projects (potable water systems, multi-purpose centers, bridges and road constructions) and technical assistance in farm and non-farm enterprise development. A favorable cost sharing arrangement between the LGUs and DAR for the funding of the infrastructural sub-projects resulted in excess demand. As a result, six participating LGUs complemented the projects funded under CMARPRP by accessing additional external resources. These sub-projects had important spill-over benefits at the local level. Aside from the more than 2,000 CMARPRP households directly benefiting, another 3,000 households from nearby and adjacent barangays gained potential access to the infrastructure, specifically the road network and the water system

CMARPRP facilitated the conduct of techno-transfer trainings and other agri-related technical assistance. Farmers' partnerships with private companies such as East West Seed Co., San Miguel Corporation, Cacao Foundation of the Philippines and mostly local traders provided the technology to enhance crop production as well as identification of market linkages to absorb their products. Finally, although below initial expectations, ARBs under CMARPRP showed a reasonable improvement in access to credit from local financial institutions.

The most evident impact of CMARPRP was the continuous upward trend in repayment by beneficiaries. Figure 8-2 shows repayment by ARBs increasing from June 2004 (25%) to February 2007 (69%). The high repayment was attributed to an improved collection strategy and the extensive repayment and collection information campaign launched by the DAR and the Area Committee. This positive result largely surpassed the average rate of repayment at the national level and showed that under appropriate conditions farmers could in fact repay their agrarian debt. Half (50%) of the ARBs are now full owners and the rest are amortizing owners. About 58% (Php13.52 million) of the total land cost of Php23.23 million have been paid directly by the farmer beneficiaries, while the rest was "bridged" by LGUs in their effort to support the direct negotiations.

Figure 8-2 Repayment trend (national summary)



CMARPRP has pioneered a new land repayment modality and upped the local government's stake in the land transfer program. For the first time in Philippine agrarian reform history, LGUs provided bridge-financing for land repayment and guaranteed farmers' amortization. Under this scheme, the LGU initially advanced the money as initial payment to the landowner. This was part of the LGU's strategy to convince landowners to negotiate for the transfer of their lands to their tenant-farmers. Since implementation started in 2004, three LGUs have agreed to provide the financing scheme. These LGUs are Samal City, Unisan, Quezon II and Guinyangan, Quezon. Total amount involved is about Php2.7 million

benefiting three landowners and 136 CMARPRP recipients cultivating about 174 hectares. In the case of Samal City, ARBs began paying their amortizations before the end of the grace period.

Table 8-7 LGU bridge-financing scheme

CMARPRP Pilot Site	Davao del Norte	Q2 Unisan	Q2 Guinayangan	Total
Amount Bridge Finance (BF)	2,401,000.00	2000,000.00	80,000.000	2,681,000.00
Actual Area Covered by BF (in ha)	49.00	25.00	100.00	174.00
Landowner Involved	Heirs of Daslla	Maloles	Heirs of Arivillaga	3
Actual No. of FBs Involved	63	23	50	136
Terms of Payment	15 yrs of equal amortization w/ 2-yr grace period after transfer w/ no interest but at 6% interest in case of payment default	10 yrs	1 yr but payment will be used as revolving fund for AED projects	
Start of Payment to LGU	Dec 2007	Dec 2007	Jan 2008	
Amount of Payments Made by FBs	108,302.15 (advance payment)	Not yet due	Not yet due	108,000.00
No. of FBs with Payments	47			47
Balance	2,292,697.85	200,000.00	80,000.00	2,572,697.85

The high rates of amortization might be explained by various factors. One is the ARBs' interest in securing ownership in a context of increasing land values. By the end of 2006, land values in eight CMARPRP sites had increased tremendously. In some areas like Misamis Occidental whose area is not considered prime agricultural land, value of land increased sevenfold. Perhaps, the most dramatic impact of infrastructure was demonstrated in Guinayangan, Quezon, where local authorities reported that the cost of land increased from Php30,000 per hectare before the project to Php300,000 per hectare after a networks of roads were constructed. These trends were confirmed during recent field visits by one of this report's authors. Overall, it seems that beneficiaries had an excellent return on their investment. Table 8-8 below shows the range of comparative land values before and after the CMARPRP.

Table 8-8 Increase of land value in CMARPRP areas

Province	City/Municipality	Price/Ha (Php)		% Increase
		Before Project	After Project	
Isabela	Jones	15,000	60,000	300
Bataan	Hermosa	50,000-1000,000	75,000-350,000	50-250
Zambales	Cabangan	18,000	18,000	
Quezon 2	Guinayangan	10,000-50,000	50,000-100,000	100-400
Quezon 2	Unisan	15,000-40,000	50,000-100,000	150-233
Occ Min	Sta. Cruz	15,000	25,000	67
Oriental Neg	Siaton	18,333	80,000	336
Zamboanga Norte	Mutia	5,000	5,000	
Misamis Occ	Ozamis City	2,500-15,000	20,000-50,000	233-700
Davao Norte	Samal City	70,000	300,000	329

Data source: PPO ICM Reports December 31, 2006

Other factors likely to explain the high rate of amortization include the relatively low value of land as a result of the negotiation, the mechanisms put in place by DAR under the project to facilitate repayment by beneficiaries, and access to nonfarm income opportunities by many of the CMARPRP beneficiaries that allowed them to provide for the land amortization requirements. Moreover, under CMARPRP there is more pressure in terms of social accountability on the part of the ARBs to amortize the land, particularly in cases where the LGUs provided the bridge financing for land acquisition.

V. Toward an Inclusive and Decentralized Agrarian Reform in the Philippines

Despite its small scale, CMARPRP has introduced and tested an alternative approach to the traditional VLT scheme from which substantial lessons can be learned. This particular scheme has been criticized in several circumstances¹ based on anecdotal evidence and personal interviews with DAR management. Among the main criticisms is that the VLT scheme, including the CMARPRP, has been used as a way to transfer land to family members. This is indeed one of those aspects related to the definition of beneficiary under the CARL that has been difficult for DAR to regulate and control.

While there are no precise figures with regard to the broader VLT scheme, CMARPRP has monitored the phenomenon closely and in only 11% of the cases did a transaction involve a relative or a family member (see Table 8-9). In addition, physical inspection and direct interviews with the members of the community conducted by this study reveals that some of the relationships between the tenants and the land owner families do in fact emerge as part of local habits. Of course, the study is considering cases of households that are not too ‘socially’ distant.

¹ See Borras, 2008, for a review of critical positions.

Table 8-9 Relationship between landowners and beneficiaries in CMARPRP sites

Province	Total No. of Beneficiaries	No. of Beneficiaries related to Land Owner	No. of Children of Land Owner
Isabela	100	4	3
Zambales	81	26	0
Bataan	53	19	5
Quezon II-Unisan	56	0	0
Quezon II - Guinayangan	77	0	0
Occidental Mindoro	48	0	0
Negros Oriental	26	0	0
Zamboanga del Norte	67	0	0
Misamis Occidental	76	8	0
Davao del Norte	80	10	0
Total	664	67	8

Data Source: DAR/PPO ICM Reports December 31, 2006

A very important lesson from CMARPRP is that a negotiated approach to land transfer has the potential of ensuring that farmer beneficiaries are provided lands and are issued in relatively short time *undisputed* land titles. A key factor in this outcome is of course the seller's willingness to perfect the transaction. Direct payment by beneficiaries and the intervention of a supportive LGU as a mediator are two important ingredients in securing such a successful negotiation.

Moreover, it is of paramount importance that settlement of the beneficiaries is as successful as possible in order to ensure that payments will take place regularly. Support services, therefore, must have to be timely but swift and in line with the needs, resources, and capability of the stakeholders. In this regard, the critical role played by LGUs and local communities in traditional CDD-type projects is further enhanced under the CMARPRP approach. The LGU-bridge financing scheme is something that the DAR can more systematically adopt as part of its ARC strategy and could in fact become one cornerstone of a scaled-up CMARPRP approach.

The Local Area Committee proved to be an effective 'partner in development' of DAR. The experience of this Committee in the planning, implementation, and monitoring of development projects under CMARPRP turned out to be an asset during project implementation. The vast resources of the Offices of the members of the Committee including the political power and influence of its members from the barangay to the provincial and district levels was a very potent force and resource that could certainly be tapped in the future under similar circumstances.

A scaled-up CMARPRP is indeed an attractive proposition in view of the major challenges that a CARP extension will face. The issue is under which conditions will it work? The CMARPRP had shown that improved agrarian reform modalities based on the following key elements are possible:

- (i) a “willing seller and willing buyer” approach where the land transaction will not require GOP financing;
- (ii) public and private investments in credit and other support services made simultaneously with the initiation of the land transfer process; and,
- (iii) involvement of Area Committees (AC) as a facilitative mechanism that harnesses not only the respective resources but also the goodwill of concerned citizens and local government.

So far, the model has been run in more traditional rice and corn areas, where the structure of landownership is relatively less dominated by large holdings as compared for instance with sugarcane and coconut plantations. Indeed, landowners in CMARPRP are mainly middle sized. It is expected also that the ability of landowners to be influenced by LGUs and other stakeholders will be inversely related to the size of their holdings. Thus, while the CMARPRP model would probably be amenable to scaling up in rice and corn lands or in those areas where middle sized landholdings dominate the CARP scope, it might be more difficult to apply in areas dominated by large landowners, whose influence on local authorities is greater. In such circumstances the bargaining process might be too unbalanced and might easily fall apart.

A differentiated, adaptable approach would recognize both the potential offered by the CMARPRP model in redistributing mid-size holdings and the legal and operational challenges posed by redistribution of larger holdings. In such an approach, DAR would phase its LAD activities during the CARP extension and focus CA, whenever other approaches would fail, on landholdings equal to or larger than 25 hectares. All landowners with less than 25 hectares would automatically be allowed to be reclassified under the VOS or VLT/CMARPRP modality during a transitory period, allowing therefore their landholdings to be transferred through a negotiations. In both instances, failure to transfer the land through negotiations would automatically lead to its compulsory acquisition. This approach recognizes the particular difficulty represented by large private lands, where legal disputes would require time and resources and where the installment of beneficiaries might be hampered by captive LGUs.

According to information on the breakdown of the LAD balance by mid-size and large holdings (see Annex 8-1 Table A1), under this approach, 32% of the LAD balance involving 5.5% of the CARP-able landholdings would be covered by CA, while the remaining 94% of landowners with mid-size holdings representing 68% of the LAD balance would be allowed to voluntarily negotiate their lands or sell it to the State. The main difference in this approach is that, unlike traditional VLT, LGUs and local associations would be mobilized both to

facilitate negotiations as well as to deliver support services. DAR's role in these areas would be limited to controlling and verifying that processes are duly followed and implemented, and that beneficiaries are selected according to the provisions in CARL. DAR's role also includes providing technical assistance to beneficiaries, their associations and LGUs as requested by the stakeholders, and ensuring that negotiations are fairly conducted.

Resources for implementing the program would be through a package of grants and loans targeted to beneficiary associations, communities, and LGUs to further decentralize land reform implementation. Following the *Cédula da Terra* and *Crédito Fundiario* models of Brazil, beneficiaries would receive through their associations a financing package divided into three components. Aside from a settlement grant that would allow beneficiaries to support their initial transition, the remaining part of the package would be used to purchase the land and to finance on-farm investments. While the part of the package used for land acquisition would be transformed into a loan (along the current specifications under the CARL), the part used to finance productive investments would be considered as a grant. This particular scheme, experimented with substantial success in Brazil, offers a clear incentive for reform beneficiaries to negotiate the price of land.

Under this more decentralized model, the role of DAR would be somewhat different from the one under the CMARPRP. On one side, DAR would continue implementing CARP on the larger holdings unless a credible willingness to sell the land is manifested by the owner. In these lands traditional LAD activities would continue to be implemented, although major changes would concern the resolution of disputes over adjudication and valuation in order to solve what continues to prove a major hindering factor in CARP implementation.

In areas to be covered under CMARPRP, DAR's presence would instead be greatly reduced, although the agency would continue to take the lead in key activities, including: ensuring proper beneficiary selection, upgrading beneficiaries' negotiations skills, ensuring proper use of funds, providing technical assistance to beneficiaries' associations and LGUs, if a demand for such services materializes, conducting information campaigns on the program's provisions, and monitoring and evaluating progress in program implementation. LGUs, together with beneficiaries' associations, would become key drivers in the delivery of support services and would be allowed to solicit technical assistance from the private sector as an alternative to the one provided from the public sector. Financing for technical assistance and infrastructure sub-projects could be provided to participating LGUs through a system of matching grants that would reflect the extent of progress in closing the CARP balance locally.

As a result of this shift in CARP implementation, DAR would progressively become leaner. On one side it would devolve to capacitated LGUs and beneficiaries' associations the delivery of support services. This of course would have major implications for the ARC strategy (Chapter 3) as the area development planning functions would now be vested at the level of municipalities and provinces. On the other, its LAD activities would be mainly focused on large holdings, which represent only about a third of the estimated LAD balance if the 25 hectares threshold is considered.

The more precise institutional implications of this model for transitioning the country toward a post-CARP scenario are discussed in Chapter 9. The study notes here that this proposal would achieve two key goals.

- One, assuming that its next extension will be the final one, CARP would have entered a transition phase at the end of which a new model of rural development would emerge.
- Two, a fully decentralized and negotiated program for the purchase of farm land, once CARP is completed, would require a very lean financing agency, perhaps a unit within the Land Bank,. All other key implementing functions would be taken over by LGUs.

CARP has been the leading program in rural development during the past two decades. More broadly, agrarian reform has been the key paradigm of rural development in the Philippines. As shown in other parts of this report (e.g., Chapters 4 and 5), there is indeed value in supporting the small farm sector provided key market imperfections are addressed properly. By distorting land and credit markets, CARP in its current design hinders the emergence of a dynamic and competitive small farm sector, once CARP's one-time effect on productivity is exhausted.

Adopting CMARPRP as the model for a fully decentralized agrarian reform would lead to the emergence of a dynamic and competitive small farm sector, in which land-poor households could access farm land productively. In the long run, a fully decentralized and negotiated program supporting access to land by the landless will not have to depend on the existence of CARP.

Annex 8-1 Table A1 Estimated CARP coverage, by holdings with less than or above 25 hectares

PROVINCES	Above 25 hectares			Between 5 and 25 hectares		
	Area	No. of Landowners	Ave Area/ LO	Area	No. of Landowners	Ave Area/ LO
Negros Occidental	53,971	502	107.5	51,269	2,966	17.3
Leyte	17,597	231	76.2	26,434	2,993	8.8
Negros Oriental	20,368	188	108.3	20,502	1,891	10.8
Maguindanao						
Ilollo	17,836	328	54.4	19,658	2,716	7.2
Davao Oriental	9,067	78	116.2	26,469	1,588	16.7
Cagayan	19,201	63	304.8	15,586	1,078	14.5
Sultan Kudarat	7,079	43	164.6	26,371	1,924	13.7
Lanao del Sur						
Cebu	12,411	144	86.2	19,985	1,611	12.4
North Cotabato	5,038	89	56.6	25,478	3,635	7.0
Camarines Sur	10,871	114	95.4	18,015	1,142	15.8
Bukidnon	5,234	77	68.0	20,816	2,278	9.1
Lanao Norte	4,820	79	61.0	19,598	1,708	11.5
Albay	7,493	97	77.2	16,035	1,614	9.9
Masbate	6,490	65	99.8	16,963	1,788	9.5
Isabela	2,481	81	30.6	18,257	3,235	5.6
Quezon 2	10,833	102	106.2	6,803	622	10.9
South Cotabato	1,416	25	56.6	15,773	1,495	10.6
Oriental Mindoro	4,092	71	57.6	13,087	1,318	9.9
Sorsogon	3,925	63	62.3	12,838	1,312	9.8
Western Samar	2,184	77	28.4	13,681	1,786	7.7
Camarines Norte	2,481	61	40.7	13,019	1,460	8.9

PROVINCES	Above 25 hectares			Between 5 and 25 hectares		
	Area	No. of Landowners	Ave Area/ LO	Area	No. of Landowners	Ave Area/ LO
Agusan Del Sur	3,069	11	279.0	11,411	916	12.5
North Nueva Ecija	4,692	64	73.3	9,768	816	12.0
Tawi-tawi						
Ifugao	811	4	202.8	12,804	264	48.5
Sibugay	1,235	20	61.8	12,265	892	13.8
Misamis Occidental	2,189	49	44.7	10,850	1,423	7.6
Compostela Valley	578	14	41.3	11,120	1,098	10.1
Nueva Vizcaya	4,049	19	213.1	7,393	407	18.2
Basilan						
Rizal	8,011	38	210.8	3,070	187	16.4
Davao Sur	2,580	100	25.8	8,245	2,285	3.6
Palawan	7,693	30	256.4	2,963	313	9.5
Quezon 1	2,443	40	61.1	8,195	902	9.1
Eastern Samar	947	5	189.4	9,682	167	58.0
Bohol	3,749	64	58.6	6,449	858	7.5
Zamboanga Sur	757	21	36.0	9,342	1,123	8.3
Capiz	5,331	191	27.9	4,673	1,437	3.3
Davao Norte	1,397	16	87.3	8,579	882	9.7
Sarangani	2,076	66	31.5	7,858	1,177	6.7
Tarlac	3,605	50	72.1	5,892	508	11.6
Batangas	3,774	55	68.6	5,324	537	9.9
Biliran	2,082	13	160.2	5,770	240	24.0
Davao City	2,133	30	71.1	5,714	355	16.1

PROVINCES	Above 25 hectares			Between 5 and 25 hectares		
	Area	No. of Landowners	Ave Area/ LO	Area	No. of Landowners	Ave Area/ LO
Zamboanga Norte	492	19	25.9	7,209	1,029	7.0
Aurora	361	14	25.8	5,634	846	6.7
Pampanga	2,133	14	152.4	3,835	157	24.4
Northern Samar	606	17	35.6	5,180	687	7.5
Laguna	1,594	48	33.2	4,061	713	5.7
Misamis Oriental	888	16	55.5	4,125	361	11.4
Agusan Del Norte	764	12	63.7	4,218	570	7.4
Benguet	2,174	16	135.9	2,672	133	20.1
Bulacan	1,834	36	50.9	2,988	316	9.5
Ilocos Norte	1,177	13	90.5	3,628	193	18.8
Occidental Mindoro	1,146	14	81.9	3,329	251	13.3
Kalinga	728	46	15.8	3,468	874	4.0
Aklan	1,619	20	81.0	2,520	214	11.8
Pangasinan	1,609	37	43.5	1,924	479	4.0
Surigao Del Sur	417	9	46.3	2,955	506	5.8
Sulu						
Romblon	1,363	11	123.9	1,521	56	27.2
Antique	366	8	45.8	2,459	338	7.3
Bataan	978	14	69.9	1,496	114	13.1
Cavite	1,204	12	100.3	1,051	75	14.0
La Union	1,137	2	568.5	1,053	12	87.8
Mt. Province	0	0	0.0	2,169	90	24.1
South Nueva Ecija	475	37	12.8	1,491	500	3.0

PROVINCES	Above 25 hectares			Between 5 and 25 hectares		
	Area	No. of Landowners	Ave Area/ LO	Area	No. of Landowners	Ave Area/ LO
Abra	356	6	59.3	1,228	227	5.4
Quirino						
Guimaras	585	22	26.6	710	324	2.2
Marinduque	159	7	22.7	999	226	4.4
Catanduanes	79	13	6.1	1,062	748	1.4
Ilocos Sur	463	3	154.3	636	44	14.5
Zambales	35	2	17.5	900	165	5.5
Apayao	151	26	5.8	706	509	1.4
Southern Leyte	97	7	13.9	629	481	1.3
Siquijor	17	2	8.5	703	336	2.1
Surigao Del Norte	9	1	9.0	491	174	2.8
Camiguin	22	1	22.0	174	29	6.0
Batanes						
Total	313,127	3,983	78.6	661,228	68,724	9.6

Source: DAR, FOO-IMRU FOF1 Database.

9. AGRARIAN JUSTICE IN CONTEXT—SOME SUGGESTIONS FOR REFORM

I. Introduction

Effective agrarian justice systems take into consideration the unique historical, social, and cultural contexts in the relationships between those that hold title to the land and those who cultivate it; those who relate to the land and those who regulate it; and, those who market the products of the land and those who hold on to the asset for significant cultural purposes. The tenant is not only a participant in a consensual relationship called a ‘contract’. She or he is part of a household that is subordinate to the holder of the land. The farmworker is not only one controlled to some degree by the agricultural enterprise’s managers. She or he also is a member of a society of workers that associate in different ways while at the same time part of a rural community that depends on the same agricultural business enterprise for social security.

Further, land to indigenous peoples might retain (and evolve) cultural meanings different from a factor of production. Administrators of land tenure reform programs might have different goals and objectives from the landlord, her tenant, or the farming community.

In the Philippines, agrarian reform has primarily been a measure of social justice. It is only secondarily a means to either improve agricultural productivity or efficiently allocate resources. It alters legal entitlements, presumptions, burdens of proof, and dispute processing mechanisms. In other words it seeks to redefine relationships. It was not designed to ensure that there be significant welfare gains in a Pareto optimal sense.

This chapter starts from the premise that altering relationships of exchange can, in a sense, lay foundations for improving productivity of farm households and farmworkers. Identifying how to achieve this is beyond the scope of this chapter. Nonetheless, when conditions under which agrarian reform operates do not promote increases in productivity, then changes in entitlement will either be more detrimental to beneficiaries or result in a return to the original relationship. This has given rise to conflicts after certificates of land ownership awards (CLOA) and emancipation patents (EP) have been granted. The State should continue to assist the farmer beneficiary after the award is completed. This is to strengthen their bargaining position and ensure that beneficiaries get the best deal in cases of either lease back or contract growing arrangements. Furthermore, more regulation is necessary in cases where lands already awarded to farmer beneficiaries are threatened with expropriation for other public purposes.

II. The Law and the Efficient Allocation of Resources

The nation's laws should ensure that land, or any other resource, be allocated to where it becomes most productive. Productivity can be understood as the value added that human intervention can contribute to land. Among competing uses, the law should make certain that land produces the most value added. Land therefore should end up where it is valued most. Given its scarcity, no other premise would make economic sense.

Measures of productivity, however, do not exist in a vacuum. What is considered part of value added depends a lot on how "relevant market" is defined and who is seen as the main beneficiary within that market.

The infusion of capital from foreign agribusiness changes the configuration of the possible and competing uses of agricultural land. But, within an indigenous community alienated from the rest of society by impassible roads, the competing uses are very local. The real market therefore defines productivity. In the Philippines, these two types of markets still exist side by side. The economy among the B'laan in Sitio Salnaong, Tampakan, Sultan Kudarat, is radically different from the agricultural plains of Bulacan.

Value also depends on whose standpoint is being considered. In terms of the global economy, the productivity of a parcel of agricultural land is very close to the profit margins of the agricultural product it sells. But, from the point of view of a single poor farmer, any measure of value might also consider which competing use might be able to give the farmer more control over his destiny. This could be in the form of assured revenues or even clear participation in decisions on how the land will be used. The possibility of whether agricultural activity encourages local industries that produce its inputs or use its products could also be another standpoint in determining which use is more valuable.

Productivity also is not *a priori*. Existing capability of the participants in agricultural production also determines value. Institutional mechanisms determine capability, enhance or limit market conditions, and define initial entitlements to resources. Law participates by providing a framework to define relations, create institutions, and provide remedies for breaches of its provisions.

Agrarian reform law is premised on the belief that the initial entitlements to land in the Philippines, and the mechanisms to ensure entitlements, do not assure productivity. The narratives embedded in the country's jurisprudence either assume that changing the ownership of land will necessarily unleash the capabilities of the owner cultivator (or farmworker) or that the objective of these laws have nothing to do with economics but is solely to achieve the vague objective of "social justice." Social justice however has not been fully defined in legally operational terms.

These narratives must be reexamined. Changing the holding of ownership rights does not guarantee either productivity or more freedoms in all cases. Like all generalizations, they are bound to be successful in a few cases but not in all. Agrarian reform law should acknowledge

that it will have multiple objectives. It must trace the nuances of productivity and the dynamic dialectic between the creation of value, standpoint, and institutional mechanisms.

III. Efficiency of Agrarian Justice Systems

Justice as understood in this chapter means ensuring that the nation's agrarian reform law is efficient and that other laws do not serve to defeat its objectives. Efficiency in agrarian justice means that the remedies ensure an outcome that is harmonious with the objectives of agrarian reform. This means that procedures must always be based on the current political and economic contexts of the parties who might be its plaintiffs and defendants. It should also consider the current capabilities of existing government offices in charge of carrying out these procedures.

Reduced to a heuristic equation:

$$S = f(p, D) - c ; \text{ never } f(p, D) < c$$

Where

S: success in litigation

P: probability of going on to the next stage of the process (as a result of the stature of client, reputation of lawyer, vulnerabilities of the judge, accountability of the system)

C: financial resources expended

D: amount of damages or penalties provided or the value of the title or use of the land

A farmer or landowner will sue when the estimated costs of suing is outweighed by the potential benefits. The costs increase with the complexity of the claim since lawyers become necessary and more of their expertise will be required. Costs also increase as the forum for settling conflicts becomes farther. Thus, the higher the court, the more expensive it becomes.

The benefits of the suit should not simply be understood as either the amount of damages or the value of the land title granted after the procedure. There are real probabilities to every stage of a procedure. Hence, even if the law grants ownership to an owner cultivator, if she is poor and unlettered and does not have access to information or a lawyer, without any intervention the probability that she will be able to gain title will be close to zero. Hence, the law guarantees nothing. She loses even before she starts. The same is true of a small landowner who might not have the same resources to litigate against a wrong valuation of land imposed by the Land Bank.

Also, the chances of an outcome closer to the objectives of the law become lower when the costs of a litigation is improperly subsidized by government in favor of a party to the suit. A system of no docket fees or where the docket fees are the same for any litigant regardless of

their capability to pay provides an improper subsidy to the richer party. This will therefore increase the probability of the richer party winning and lowers the probability of winning of the poorer litigant. Provision of legal services is also a form of subsidy.

IV. The Role of the DARAB

RA 6657 clarifies the jurisdiction of the Department of Agrarian Reform Adjudicatory Board (DARAB). Section 50 provides:

SECTION 50. Quasi-Judicial Powers of the DAR. — The DAR is hereby vested with primary jurisdiction to determine and adjudicate agrarian reform matters and shall have exclusive original jurisdiction over all matters involving the implementation of agrarian reform except those falling under the exclusive jurisdiction of the Department of Agriculture (DA) and the Department of Environment and Natural Resources (DENR).

It shall not be bound by technical rules of procedure and evidence but shall proceed to hear and decide all cases, disputes or controversies in a most expeditious manner, employing all reasonable means to ascertain the facts of every case in accordance with justice and equity and the merits of the case. Toward this end, it shall adopt a uniform rule of procedure to achieve a just, expeditious and inexpensive determination of every action or proceeding before it.

It shall have the power to summon witnesses, administer oaths, take testimony, require submission of reports, compel the production of books and documents and answers to interrogatories and issue subpoena, and subpoena duces tecum, and enforce its writs through sheriffs or other duly deputized officers. It shall likewise have the power to punish direct and indirect contempts in the same manner and subject to the same penalties as provided in the Rules of Court.

Responsible farmer leaders shall be allowed to represent themselves, their fellow farmers, or their organizations in any proceedings before the DAR: Provided, however, That when there are two or more representatives for any individual or group, the representatives should choose only one among themselves to represent such party or group before any DAR proceedings.

Notwithstanding an appeal to the Court of Appeals, the decision of the DAR shall be immediately executory. The Department of Agrarian Reform, through the DARAB, its adjudicatory arm, has primary and exclusive jurisdiction over all matters that pertain to agrarian disputes and controversies. There are no distinctions in terms of types of conflicts. The mode for settling the controversy is quasi-judicial adjudication.

Adjudication requires the presence of a third party neutral adjudicator. Within the DAR's structure, there are layers of adjudication. There is the Provincial Agrarian Reform Adjudicator, the Regional Agrarian Reform Adjudicator and the DARAB. Their relationship is hierarchical. The DARAB acts as the final appellate body for administrative adjudication.

No agrarian dispute will go through adjudication unless there is some mediation that takes place within the local barangay. Hence the law provides:

SECTION 53. Certification of the BARC. — The DAR shall not take cognizance of any agrarian dispute or controversy unless a certification from the BARC that the dispute has been submitted to it for mediation and conciliation without any success of settlement is presented: Provided, however, That if no certification is issued by the BARC within thirty (30) days after a matter or

issue is submitted to it for mediation or conciliation the case or dispute may be brought before the PARC.

Any matter decided by the DARAB can be enforced immediately. This is further supported by a prohibition against any form of restraining order or preliminary injunction. Thus:

SECTION 55. No Restraining Order or Preliminary Injunction. — No court in the Philippines shall have jurisdiction to issue any restraining order or writ of preliminary injunction against the PARC or any of its duly authorized or designated agencies in any case, dispute or controversy arising from, necessary to, or in connection with the application, implementation, enforcement, or interpretation of this Act and other pertinent laws on agrarian reform.

However, the law defines the modes of review through the judicial system. Thus,

SECTION 54. Certiorari. — Any decision, order, award or ruling of the DAR on any agrarian dispute or on any matter pertaining to the application, implementation, enforcement, or interpretation of this Act and other pertinent laws on agrarian reform may be brought to the Court of Appeals by certiorari except as otherwise provided in this Act within fifteen (15) days from the receipt of a copy thereof.

The findings of fact of the DAR shall be final and conclusive if based on substantial evidence. After appeal to the Court of Appeals is exhausted, there can also be an appeal or a special civil action to the Supreme Court. All told, all types of agrarian disputes undergo five layers of dispute processing: one layer using conciliation processes, two administrative adjudicatory layers, and two layers involving judicial appellate procedures. The costs to both parties, actual and in terms of opportunity costs, are obvious.

The adjudicators are more or less permanent and the parties have no choice. Except for government salaries and benefits, there is very little incentive for the adjudicators to improve on their ability to settle conflicts. In other words, the parties to the dispute do not weigh in. They do not feedback on the competence of the conciliators at the barangay level, the adjudicators at the quasi-judicial level, and the justices at the appellate level.

The government pays for the time of the adjudicators no matter how private the benefits of the conflict. Hence, conflicts among farmer beneficiaries and also among landowners claiming retention rights are equally subsidized by the state. Furthermore, these cases demand equal time together with cases where there is a public interest involved.

This chapter argues that arbitration will be a way to address specific types of conflict in more appropriate means while at the same time increase the possibility that the costs will be born by the private parties when the benefits are purely private. Arbitration will also reduce the layers of dispute processing. It will also allow feedback and therefore incentive to the private arbitrators to improve.

V. A Possible Role for Arbitration in Agrarian Justice Cases

Arbitration is an alternative dispute resolution process. In private contracts, it is encouraged by the Alternative Dispute Processing Law of 2004 or RA 9285. Because of the provisions of RA 6657, it is not allowed for agrarian disputes.

In arbitration, the parties choose the neutral third parties. These third parties might come from a pool of accredited private parties (lawyers, professors, farmer leaders). Ad hoc arbitration allows the parties to define how many arbitrators will be present. Many institutionally sponsored arbitral processes, including the UNCITRAL Model adopted by the ADR law, specify three arbitrators by default. Each party chooses one arbitrator. The two arbitrators chosen will select a third who will act as the chair of the arbitral panel. A challenge procedure for purposes of revealing bias or interest can be instituted. The costs are also borne by the parties although the law can provide assistance to the poor.

Unlike in adjudication, there is more incentive for arbitrators to hone their skills. Parties choose them. Theoretically, their reputation increases with every successful settlement of a conflict. Arbitrators come from a pool and most arbitrations require third parties. Most of the individuals who become accredited, therefore, will aspire to be fair and unbiased. Furthermore, since the costs can be borne by the parties (with state participation to ensure subsidies for those who are poor), the opportunity cost of the arbitrator's time is properly compensated. Besides, this will be a way of ensuring that private benefits are not improperly subsidized by the state.

Depending also on the law, parties can also be free to choose the language and the procedure. The parties might submit their case for decision through mere documentary evidence or they might prefer informal hearings where testimony and documents can be produced. Since costs are borne by the parties, there will be assurances that the arbitrated award will come sooner than through ordinary adjudication. Arbitration could also accommodate situations where the parties agree to an amicable settlement rather than wait for an award.

Courts can come in to enforce arbitrated awards and provisional remedies requested by the parties. Arbitrated awards are final and may not be appealed. They may only be vacated should there be fundamental shortcomings in the process, such as corruption or fraud.

Hence arbitration reduces the number of layers of dispute processing to three: one layer for arbitration; and two layers consisting of judicial appeals (trial court and Supreme Court). It also narrows the grounds for going to courts. Incidentally, it will also reduce the docket for administrative adjudication.

VI. A Typology of Conflicts

Administrative adjudication cannot be completely eliminated. It is necessary where one of the parties is the State or in instances where the subject of the conflict is one of public interest. For this purpose, we can classify agrarian conflicts into six types.

- Type 1 conflicts involve disputes between the landowners and the farmer beneficiary.
- Type 2 conflicts involve conflicts between the landowner and the State.
- Type 3 conflicts involve those between the farmer beneficiary and the State.
- Type 4 conflicts involve conflicts between farmer beneficiaries.
- Type 5 conflicts are disputes between alleged landowners that delay or affect the implementation of any part of the agrarian reform program.
- Type 6 conflicts cover disputes involving participants in the agrarian reform program and third parties.

Type 1, 4, 5, and 6 conflicts should primarily be processed through arbitration. They are purely private cases. This will remove some of the cases from DARAB's docket, address the problem of delay, reduce the possibility for corruption, and allow better internalization of costs of the dispute on the parties (with special provisions for addressing capability to pay by impoverished farmer beneficiaries and some landowners).

Type 2 conflicts are disputes between the landowner and the state. These are usually issues relating to coverage, retention limits, and valuation of covered agricultural land. The first two issues should remain within the DARAB's jurisdiction.

The efficiency of solving contested valuation of agricultural land can be improved by removing the authority of the DARAB to preliminarily determine just compensation since, constitutionally, it is the regular courts that will determine its value. Immediately, this will remove two layers of decision-making and thus address delays in the payment of landowners and also the transfer of titles to the farmer beneficiaries. The transfer of title to beneficiaries depends on the full payment of the land value to the landowner.

The filing of ejectment cases in courts against occupants, tenants or other farmer beneficiaries have recently become an irritant in the implementation of the agrarian reform program. Agrarian reform advocates have considered this as strategic lawsuits to prevent farmer beneficiary participation in the implementation of the agrarian reform program.

According to current doctrine, the landowner has the privilege of filing a civil complaint in the Municipal Trial court for ejectment if the pleading does not allege tenancy. The respondent may allege tenancy in her or his answer. However, the civil complaint cannot be dismissed because of current procedural rules on how a court can acquire jurisdiction. It is therefore necessary for legislation to provide that courts should make a preliminary determination of the issue of tenancy when it is alleged in a responsive pleading. If it can be shown prima facie that tenancy exists, then the case should be dismissed and immediately referred to agrarian arbitration as in all Type 1 cases.

Type 3 cases involve conflicts between the farmer or farmer beneficiary and the State. These include issues relating to conversion orders, issuances and corrections of Certificate of Land Ownership Awards (CLOAs), and coverage of some parcels of land. Since this involves matters directly related to the agrarian reform program, it should remain within administrative adjudication. Moreover, and for obvious reasons, it will be difficult to have arbitration when one of the parties is the State. It is the State that creates the pool of arbitrators and accredits them.

There is little that can be done with criminal cases that arise from the implementation of the agrarian reform program. The current law is already efficient in this regard, i.e., all these cases are immediately referred to the courts (after the proper preliminary investigation). An ordinary court is also designated as a special agrarian court. This ensures that the judge acquires, through training and experience, the proper set of knowledge, skills, and attitudes to resolve agrarian reform cases.

VII. Clarifying Jurisdictional Issues

Jurisdictional issues among agencies should be clarified. Conflicts in jurisdiction unnecessarily increase the costs of resolving the conflict and resulting confusion encourage paralysis. Needless time and effort is also wasted among officials of the concerned agencies.

A future agrarian law should clarify that when the land is considered as covered under the agrarian reform program, other agencies should cede jurisdiction to the Department of Agrarian Reform. Hence, the DENR should cede jurisdiction over all lands considered to be of the public domain where agricultural activity exists. The Commission on the Settlement of Land Disputes of the Department of Justice should not entertain complaints involving any controversy related to agrarian reform. The barangay should also not conduct its *katarungang pambarangay* processes when the area is already considered agricultural. On the other hand, increased coordination with these agencies and the DAR should be encouraged.

Ambiguity in law invites more dispute. More dispute can create more litigation, which translates to costs for the parties as well as delays in the administration of justice. Hence, no effort should be spared to clarify the content of the rules when there are opportunities to craft new legislation.

In agrarian reform, the Comprehensive Agrarian Reform Law (RA 6657) governs alongside some provisions in the Agricultural Land Reform Code (RA 3844), the Public Land Act (Commonwealth Act 141) and the Property Registration Decree (PD 1529). The amount of conflict therefore going through the quasi-judicial as well as court processes can be reduced with better-crafted legislation. Hence, the statute to extend agrarian reform should clearly specify which provisions in all these laws will be reenacted.

The same rationale also applies to other controversial issues such as conversion of classification and conversion into other land uses. Clarifications should be made regarding the relationships of local government units, the Department of Agriculture, and the DAR for

purposes of conversion into non-agricultural uses. It will also make sense to create a central body to examine competing land uses. As an inter-agency body, the Presidential Agrarian Reform Council seems the ideal office to discharge this function.

In *Association of Small Landowners v Department of Agrarian Reform*, the Supreme Court ruled that coverage within the agrarian reform program in order to eventually transfer ownership of the property to farmer cultivators is an exercise of the State's power of eminent domain. The government expropriates land for public use purposes. However, in two other decisions, the Supreme Court has announced that after land has been ceded to a farmer beneficiary, it can again be taken for another purpose. In *Ardana v Reyes* and again in *Province of Camarines Sur v Court of Appeals*, the same court declared that land previously awarded to a beneficiary can again be taken by a local government for tourism purposes. Then, in the recent case of *Didipio Earthsavers et al v DENR*, the court intimated that even agrarian land could again be taken for purposes of allowing contractors to explore, develop, or utilize mineral resources.

The criteria of what is considered "public use" is broad. It incorporates many of objectives. Recently, the court has been deferential to the political objectives of both local and national governments. Courts acknowledge that the power to expropriate is inherent in the State. However, courts also have reiterated that the power of national agencies and local governments to expropriate may be limited by public purposes as defined in legislation. Future agrarian reform legislation should therefore take this into consideration. Perhaps, it could provide clearer criteria for evaluating whether a proposed public use outweighs all welfare gains resulting from an award of land to a farmer beneficiary. Providing for this criteria in law also serves to settle ownership over agricultural land.

VIII. Ancestral Domains and the DAR

Through a Presidential Executive Order, the National Commission on Indigenous Peoples was put under the administrative supervision of the Department of Agrarian Reform. This is contrary to the provisions of the Indigenous Peoples Rights Act (RA 8371), which requires that this office be directly under the Office of the President. This is because it deals with ancestral lands and domains, even those within the jurisdiction of the Department of Environment and Natural Resources. Ancestral domain is concerned with issues of indigenous peoples whose situation varies significantly from other agricultural areas.

Recognition of ancestral domain involves conflicts not strictly between landowner and tenant farmer but conflicts involving time immemorial possessors of ancestral territories and encroachers. Most of these conflicts do not involve any office within the Department of Agrarian Reform. The DAR Secretary does not even sit in the Commission and has no jurisdiction over appeals. Hence, it would make better sense that ancestral domain issues remain outside the DAR. Should there be an allegation that a conflict involves ancestral domains, future legislation should provide that the case be immediately transferred to the National Commission on Indigenous Peoples.

IX. Recommendations

- (1) The principal mode to settle disputes between landowners and farmer beneficiaries should be through compulsory arbitration. Rather than permanent adjudicators, the DAR can maintain a pool of arbitrators specially trained in agrarian issues and coming from various constituencies (lawyers, academics, agrarian reform advocates, land specialists). Using the UNCITRAL model for adjudication mandated by the Alternative Dispute Resolution Law of 2004, the parties can therefore choose one arbitrator each. The arbitrators chosen shall choose a third arbitrator. Costs should be shared between the parties. Should the farmer or farmer beneficiary be a pauper litigant, the State should pay for her or his costs. Compulsory time periods can therefore be more likely met.
- (2) The DARAB and the BALA should be restructured to allow compulsory arbitration. Hence, the statute that will extend the CARP should allow for a one-year transition period to capacitate its personnel.
- (3) Arbitration will cover issues relating to tenancy, terms and conditions of work, leasehold contracts within areas, exercise of pre-emption and redemption rights of tenants, and correction and cancellation of Certificates of Land Ownership Awards.
- (4) Arbitration, rather than adjudication, should also be the principal means for settling conflicts among farmers and farmer beneficiaries. Arbitration should also be the principal means of settlement between alleged or conflicting agricultural landowners where such conflict delays implementation of the agrarian reform program.
- (5) For conflicts relating to just compensation, i.e., fair market value of the land, the DAR should cease to have preliminary jurisdiction in contested cases. Special Agrarian Courts should immediately have jurisdiction over cases of just compensation should the landowner and the DAR (together with the Land Bank of the Philippines) disagree with respect to the amount and mode of compensation. DAR should immediately file an action for expropriation under Rule 67 of the Revised Rules of Civil Procedure.
- (6) The statute that will extend the Comprehensive Agrarian Reform Program should specifically provide that in all cases of ejectment filed where a claim of tenancy is raised in responsive pleadings, courts must preliminarily determine whether there is prima facie tenancy involved. When this is the case, the case should immediately be referred to arbitration and the case dismissed. Arbitration awards can be reviewed by the court using grounds provided in the Alternative Dispute Resolution Law of 2004.
- (7) Questions relating to coverage and the exercise of retention rights will remain within the jurisdiction of the DARAB appealable only to the Court of Appeals through Petitions for Review by Certiorari.

- (8) Since ancestral lands and domains are excluded from the coverage of agrarian reform, the National Commission for Indigenous Peoples should not be within the administrative supervision of the DAR. Ancestral domain issues typically also involve issues within the competence of the DENR, such as mining claims. The implementation of the Indigenous Peoples Rights Act therefore should not burden.
- (9) The Presidential Agrarian Reform Council should provide guidelines for the approval of all encumbrances, alienation (or transfers), and expropriation of lands covered by the agrarian reform program. Legislation to extend CARP should clarify the conditions under which agricultural land can be mortgaged, taking into consideration the primary duty of government to provide financial and other assistance to farmer beneficiaries. No encumbrance, alienation, or expropriation may be done without the approval of the DAR based on specific guidelines provided by the PARC. In special cases, apart from the mortgage of agricultural land, guarantees may be provided by the government for loans incurred by the farmer beneficiary.
- (10) The procedure for encumbrances should also apply to leases and contract growing arrangements entered into by the farmer beneficiary. The DAR should be given the authority to inquire into the viability of the consideration for a lease back or contract growing arrangement with the former owner of the agricultural land.
- (11) The holding of agricultural land should be dependent on whether it can be made productive. Hence the agrarian reform program should immediately cover private idle and abandoned land unless they can be converted to other uses within a limited span of one year. However, irrigated and irrigable private lands should not be the subject of conversion. Idle agricultural land awarded to a farmer beneficiary will revert back to the State only when it can be shown to the satisfaction of the Special Agrarian Court that significant efforts have already been exerted to help the farmer make the land productive.
- (12) The basis and procedure for conversion of agricultural land into other agricultural uses should be included in the statute to extend agrarian reform. This will ensure that the discretion of administrative agencies be reduced and that the guidelines be fully debated within Congress.
- (13) The still applicable provisions of the Agricultural Land Reform Code (RA 3844), the relationship of agrarian reform with the Public Land Act (Commonwealth Act 141) and the Property Registration Decree (PD 1529) should be included in the statute that will extend the CARP so as to reduce ambiguity in the provisions that apply in the agrarian sector.
- (14) Persons awarded agricultural public domain land by virtue of homestead or free patents should be entitled to the same benefits as other agrarian reform beneficiaries even though their lands are exempted from coverage of land transfer.

- (15) The statute should provide for an automatic review every five years.
- (16) Continued training programs for all adjudicators, arbitrators and agrarian reform lawyers, and paralegals should be provided. This training should also include alternative dispute processing methodologies.

10. INSTITUTIONAL IMPLICATIONS OF CARP EXTENSION: TOWARD A NEW MODEL OF RURAL DEVELOPMENT

I. Background and Context

Agrarian reform has been the main rural development strategy of the Philippines for decades. Its rationale is based on both equity and efficiency grounds. It seeks to promote a more equitable distribution of land, which is the main asset in an agricultural economy. It was envisioned that, by redistributing farmlands, a more equitable distribution of wealth would ensue.

Agrarian reform is also expected to promote greater efficiency in the farm since it was believed that land ownership would spur beneficiaries to increase productivity since they could now capture all the benefits from higher farm yields. Former landowners were expected to invest in non-farm enterprises and industries that, in turn, were supposed to be supported by the enhanced purchasing power of consumers from the farming sector. Thus, with a more equitable distribution of wealth, higher farm productivity and incomes, and a revitalized non-farm industrial base in the countryside, it was anticipated that rural development would follow on the heels of the agrarian reform program.

Agrarian reform as a formula for rural development has not lived up to the original expectations of its supporters. Poverty and inequity continue to plague the countryside. Rapid rural-to-urban migration underscores the fact that rural industrialization, the instrument for tightening the rural labor market, has not occurred at a sufficient pace, extent, and depth. Chapter 4 of this study has shown that, although CARP has had some positive impact on farm incomes, poverty reduction and overall beneficiary welfare were below what were expected. These results were attributed to several structural and operational factors.

For one, the Philippine economy, along with most of the Asia-Pacific region, has transformed over the years so that agriculture is no longer its main engine of growth (see Chapter 4). Even in the rural sector and among farming households, non-farm economic activities are now generally the main sources of income. Agrarian reform beneficiaries (ARBs) themselves get majority of their incomes from non-farm sources.

The rural areas are also highly heterogeneous in terms of socioeconomic conditions and endowments so that a “one size fits all” approach to development will not have optimum results. The effective pathway out of rural poverty will necessarily differ across various localities. For instance, the study has observed that land reform appears to work best in areas with medium to high agricultural potential, access to markets, and where small-scale farming is viable. On the other hand, land distribution in the plantation sector is expected to result in productivity loss, albeit limited, due to scale issues in production and coordination as well as

due to greater managerial, technical, and financial resource requirements inherent among plantation crops. Meanwhile, non-farm occupations and migration appear to be the best pathways out of poverty in the marginally productive rural lands.

In addition, the design of the CARP, which focuses on agricultural development and the removal of share tenancy, has meant that many of the most vulnerable sectors can not be covered by the program. Communities in marginal areas or those that are least developed in infrastructure (meaning those with the slightest agricultural potential) were hardly included. Meanwhile, rapid population growth and the concomitant decline in available agricultural lands mean that it is now landless rural workers, not share tenants, who comprise the bulk of the rural labor force. They are also the poorest in the sector.

CARP was also designed and implemented during the period when a centralized, top-down approach to development management was prevalent. The passage of the 1991 Local Government Code and the following evolution of socioeconomic and political dynamics in the country placed the LGUs and communities at the frontline of development management in general and public service delivery in particular. Consequently, this study has concluded that land reform can be a catalyst for local development only if it is clearly integrated with local and regional development interventions. The Community Managed Agrarian Reform and Poverty Reduction Program (CMARPRP), where LGUs acquired a more pro-active role in land acquisition and transfer negotiations, was cited as a viable alternative land reform modality. The CARP, however, is still mainly implemented in a highly centralized manner.

Moreover, the slow implementation of land transfers as well as delays in payments to land owners have also discouraged private investments in the countryside. Uncertainties in land tenure security, the non-transferability of government-issued land titles, among other factors, made banks wary about lending to small farmers (ACPC, 1994). The break-up of agricultural lands into small holdings might have also considerably increased the transaction costs of investors.

II. Objectives and Scope of the Chapter

This study concludes that the approach to rural development must evolve away from a singular focus on agrarian reform and move toward an area-based, decentralized, and diversified strategy to be effective against rural poverty. Agriculture and agrarian reform programs are, therefore, only parts of a wider multi-sector menu of development interventions that are offered for the informed consideration of target-beneficiaries whose aspirations and socioeconomic conditions need to be congruent with such interventions. The study goes further to say that even the choice of delivery channels of required services (through national government, LGUs, civil society, private sector) must be driven by the beneficiaries themselves. This means that effective control of resources for these services must be with the beneficiaries. This necessary evolution in the approach to rural development can be fully accomplished only if there are reforms both in the implementation mechanisms of CARP and in the structure of rural development institutions themselves.

The main objective of this chapter, therefore, is to provide viable options to the Government of the Philippines (GOP) for short, medium, and long term institutional reforms that would facilitate the achievement of CARP goals and sustain these gains beyond the program extension. The main goal of these reforms would be to support the transition toward a post-CARP institutional set-up in which agrarian reform is framed in the context of an area-based rural development paradigm wherein LGUs and local social organizations are the key protagonists.

As a point of reference, the next section of this chapter will present the current institutional arrangements and mechanisms for CARP implementation. To address the issue of whether such an institutional context can be achieved, the succeeding section examines the tradition of area-based development in the Philippines and the extent of LGUs' participation. The chapter then examines the features of different local and international models and good practices of the area-based approach to development. From these models, lessons are then derived and used as inputs to the last section. The last section presents institutional reform strategy options to replicate, upscale, and mainstream the various appropriate models and good practices of area-based rural development for the country.

III. The Current Institutional Set-up and Arrangements for the CARP

The present institutional system of CARP shows that its execution is directed at two levels: *policy overview and coordination*, which is undertaken by the Presidential Agrarian Reform Council (PARC), and *implementation management*, which is assumed by the DAR in collaboration with seven other national CARP implementing agencies (CIAs), the LGUs, and civil society.

a. Policy overview and coordination.

PARC is led by the President as Chairperson, with the DAR Secretary serving as Vice-chair. The Executive Secretary and the heads of 13 agencies (DA, DENR, DBM, DOF, DOJ, DOLE, DILG, DPWH, DTI, DOTC, NEDA, LBP and NIA) comprise the other members from the national government. Nongovernment members include three landowner representatives (one each from Luzon, Visayas, and Mindanao), and six agrarian reform beneficiary (ARB) representatives (two each from Luzon, Visayas, and Mindanao).

An executive committee (PARC ExeCom) drafts major policies for the approval of PARC. These policies include targets, implementation schedules, and support requirements that CARP implementing agencies (CIAs) will have to abide by. So, even if the CIAs initiate the planning and budgeting process, it is the PARC and its ExeCom that ultimately determine actual CARP activities and investments. The PARC also has a technical committee (PARC TechCom) that provides general support and coordinative services, interagency linkages, program and project appraisal, as well as monitoring and evaluation of CARP programs and services.

Similar oversight structures were replicated by the Comprehensive Agrarian Reform Law (CARL) at the provincial and barangay levels in the form of Provincial Agrarian Reform Coordinating Committees (PARCOMs) and the Barangay Agrarian Reform Councils (BARC), respectively. The PARCC is tasked to coordinate, monitor, and evaluate CARP implementation in the province in accordance with CARL guidelines and PARC. The BARC, which draws its members from agrarian reform stakeholders at the local level, mediates among parties involved in agrarian disputes and serves several important functions including the following: (1) identification of qualified ARBs and landowners within the barangay; (2) attesting to the accuracy of the initial parcellary mapping of the ARB's tillage; (3) assisting in obtaining credit from lending institutions; (4) assisting in the initial determination of the value of the land; and, (5) coordinating the delivery of support services to ARBs.

b. CARP implementation management.

Figure 10-1 shows the organizational structure of DAR. It is headed by a Secretary assisted by four Undersecretaries for Planning, Policy, and Legal Affairs; Field Operations; Support Services; and Finance, Management, and Administration. Several offices are directly under the Office of the Secretary, such as the DAR Adjudication Board, Special Concerns Staff, Public Affairs Staff, the PARC secretariat, and the Internal Affairs Staff. It is the DARAB that handles agrarian reform cases and have regional and provincial counterparts, with support and assistance from the BARCs as specified above. Meanwhile, the offices of the undersecretaries are supported by task-specific bureaus and services such as those on land acquisition and distribution, land development, ARB development, policy and strategic research, agrarian legal assistance, planning, project development and management, foreign assisted projects, and information and education, among others.

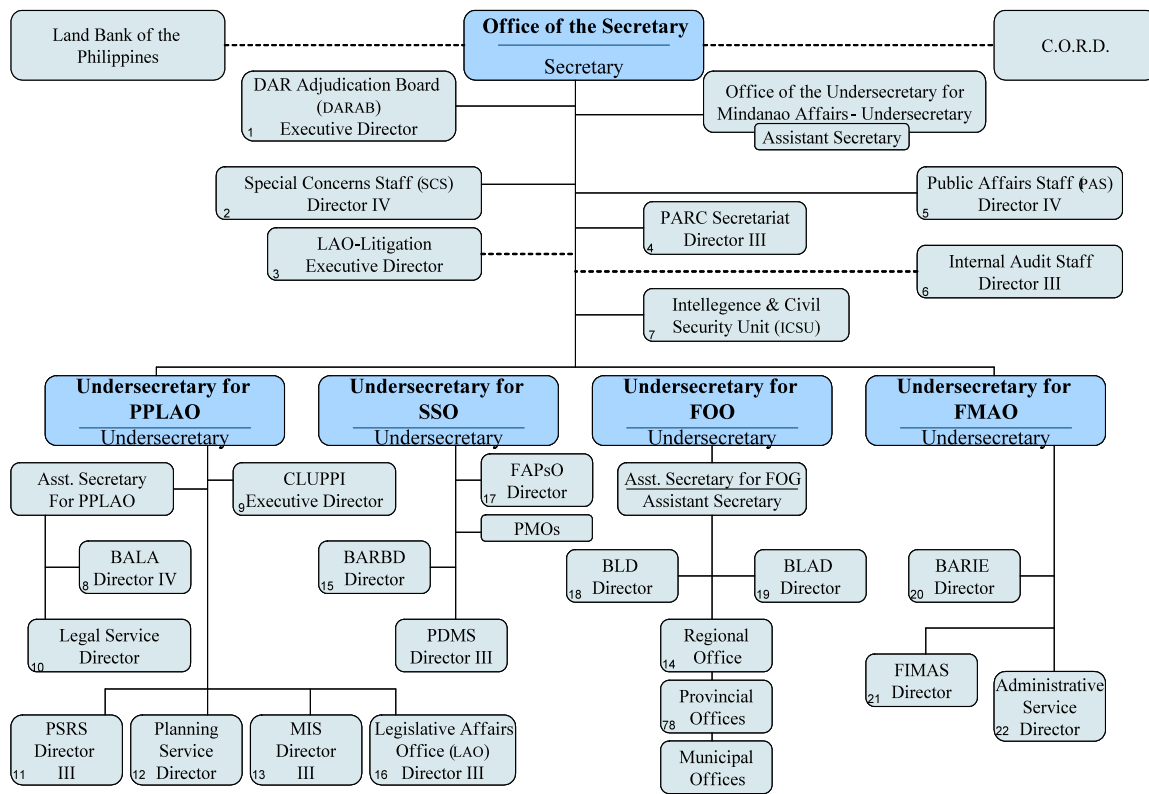
A recent study (GTZ, 2006) reported that the DAR's regional and provincial offices are generally considered to be adequately staffed. However, the municipal offices appear to be having difficulties coping with the workload even though they account for the largest share of DAR personnel. Thus, some provincial offices began grouping municipal offices into districts or clusters in order to maximize land tenure improvement (LTI) services given the completion of LAD in many municipalities.

DAR functions are not devolved to local government units or LGUs. LGUs are supposed to have a more direct hand in the delivery of PBD services in line with the 1991 Local Government Code. As a general practice, the National Government (NG) directly provides large infrastructure projects while the LGUs, with technical assistance from the NG, deliver the other PBD and small infrastructure services. The NG's degree of involvement in PBD service delivery, however, is indirectly proportional to an LGU's capacity. As a result of this limited devolution DAR maintains one of the largest plantilla among the different line agencies. Most of DAR's workforce is deployed at the sub-national level (93.4%). The DAR, therefore, maintains a highly de-concentrated administrative structure.

The LGUs, in turn, are primarily responsible for extension services as provided in the Local Government Code. These are undertaken in close coordination with the CIAs whose level of direct involvement depends on the capacities of individual LGUs. They also provide

counterpart funds, assume the operation and maintenance of turned-over facilities and also directly execute some CARP-related projects. Seven CARP Implementing Agencies (CIA) assist the DAR in its operations: DENR, LBP, LRA, DPWH, DOLE, DTI, and DA. The LGUs play largely a supporting function to the NG in the execution of land adjudication and distribution and agrarian justice delivery by assisting in monitoring and evaluation as well as in the coordination of activities and services. Table 10-1 presents the specific roles and contributions of the other CIAs by program component. Essentially, they support the LAD and PBD components by directly providing technical, legal, financial, and infrastructure assistance to the ARBs as well as their associations and the concerned LGUs.

Figure 10-1 Department of Agrarian Reform organizational structure



Source: GTZ 2006

Table 10-1 Roles and contributions of implementing agencies by CARP component.

Agency	Land Acquisition and Distribution	Program Beneficiaries Development
DENR	<ul style="list-style-type: none"> Disposition and distribution of public lands Support to LAD (e.g., surveys) Information, Education, Communication 	<ul style="list-style-type: none"> Technical and marketing assistance (e.g., nurseries)
DA		<ul style="list-style-type: none"> Training Technical and marketing assistance
LBP	<ul style="list-style-type: none"> Financing/ guarantee for farm lot acquisition Amortization collection 	<ul style="list-style-type: none"> Credit provision
LRA	<ul style="list-style-type: none"> Issue decrees of registration, certificates of title, register documents/patents for ARBs and landowners 	
DPWH		<ul style="list-style-type: none"> Provide infrastructure support for land reform areas
NIA		<ul style="list-style-type: none"> In charge of CARP irrigation component Organization of Irrigators' associations (IAs) Technical assistance to LGUs and IAs
DTI		<ul style="list-style-type: none"> Enterprise development support
DOLE		<ul style="list-style-type: none"> Capacity-building, esp. for CARP cooperatives

Reference: GTZ (2006)

Meanwhile, the role of NGOs and peoples organizations (POs) in CARP has grown over the years to also include support service provision on top of their usual advocacy and social mobilization activities. They serve as conduits for services such as credit, marketing and legal assistance. They are also contracted to provide PBD services in CARP-related projects.

Given the number of implementing agencies, the DAR has established CARP Implementing Teams (CITs) at the regional, provincial, and municipal levels to address coordination and complementation issues. The composition of the CITs depends on the nature of the CARP issues and the presence of partners in the area. Initially, LAD/LTI coordination issues were the main concerns. At present, CITs are mostly involved in coordinating PBD service delivery.

The present institutional set-up and arrangement of the CARP, therefore, provide leeway for decentralized implementation as well as for the participation of LGUs, ARBs, NGOs, POs, and other stakeholders. Nevertheless, decision-making and service-delivery are still significantly NG-centric. Most CARP resources are still in the effective control of the NG, especially the DAR, even though efforts are made to make infrastructure and service delivery demand-based.

The DAR, however, pilot-tested a market and community-based agrarian reform project called the Community Managed Agrarian Reform and Poverty Reduction program (CMARPRP). In this program (see Chapter 7), the potential beneficiaries directly negotiated with willing landowners for the purchase and transfer of farm lands, with the assistance of the LGUs and the DAR. There was no required outlay from the NG for land purchase. The

LGUs' facilitation in the negotiation process was made attractive by the promise of PBD support delivery from the NG, conditioned on a successful negotiation. Chapter 7 points to a possible viable direction toward which the CARP can evolve in a more decentralized and sustainable implementation modality and institutional arrangement.

IV. Models of Area-based Institutional Arrangements and Initiatives for Rural Development

Generally, as commonly accepted, the area-based development (ABD) approach is a development paradigm that deliberately and systematically tailors its strategies and interventions to the unique socioeconomic, physical and geographical characteristics and endowments as well as the development aspirations (expressed through local development plans, consultations, etc) of a target community or community cluster. Its basic elements include (i) a distinct geo-physical target; (ii) a generally homogenous socio-cultural profile of the target beneficiaries; (iii) a multi-dimensional approach to development that explicitly takes the linkages of the various sectors of the local socio-economy into consideration; and, (iv) the empowerment of the target community or community clusters in the planning and implementation of the development interventions, thus, fostering social capital formation.

a. Local ABD-like Models.

To what extent has locally-driven development been adopted as a paradigm of rural development in the Philippines? Given the definition and criteria above, there are several completed and ongoing local development programs implemented by different NG agencies in the Philippines that, to some degree, can be said to be ABD-like in their features. These include the following: (1) Second Agrarian Reform Communities Development Project (ARCDP2) of DAR; (2) Mindanao Rural Development Program (MRDP) of the DA; (3) Community-based Ecosystems Management (CBEM) programs of the DENR; (4) KALAHI-CIDSS program of the DSWD; and, (5) the Autonomous Region of Muslim Mindanao Social Fund Program (ASFP). All of these programs target specific communities or LGUs.

To a significant extent, the identification and delivery of development services and programs are highly consultative or demand-driven although the effective control of project resources is still in the hands of the NG. Moreover, the mix of available development programs and services are not confined to sector-specific interventions. These include not only agriculture production and natural resource management services but also social (e.g., education, health), entrepreneurial (e.g., livelihood, joint ventures) and value-adding (e.g., processing), as well as infrastructure (e.g., FMRs, irrigation, potable water supply) services. (Please refer to Annex 10-1 and Annex Table 10-1 for additional details).

Social capital formation, or the fostering of citizenry participation in community-building or development processes and initiatives, is an explicit goal and feature of these programs. Social capital formation involves community mobilization, participation and consultations for the planning, implementation and maintenance of development initiatives. Technical

assistance to communities include the design and implementation of household or community investments, particularly in livelihood activities.

These are especially true for those programs whose main target-beneficiaries are communities, such as the ARCDP2, KALAHI-CIDDS, ASFP, and the CBEM. In particular, the ASFP and the KALAHI-CIDDS projects clearly set participatory governance and accountability goals and activities. On the other hand, although the MRDP also targets communities, especially in poverty-stricken areas, its main targets are the LGUs that the program seeks to capacitate so that the DA can turn over to them the responsibility of providing devolved agriculture support services. The MRDP also has governance and accountability goals and activities but more in line with the LGUs' delivery of agricultural support services than in participatory governance

Local government units are considered partners, particularly in community mobilization as well as in the delivery of technical assistance and support services to target communities. They are also involved in the planning, actual construction, and maintenance of infrastructure projects. However, large infrastructure projects, like irrigation, are still undertaken by the NG. It should be noted, however, that the ARCDP made provisions to also allow LGUs with demonstrated abilities to undertake even large infrastructure projects. The LGUs also provide counterpart financing for the projects. Nevertheless, the NG is still the main source of financing in these projects.

The LGUs are also considered to be clients, and not just partners, in these projects. Nearly 20 years after the enactment of the Local Government Code, many rural LGUs are still deemed to be too weak to properly service their constituencies. Thus, technical assistance to LGUs and the direct delivery of some goods and services by the NG to the communities, are part of the project design. Such technical assistance was mainly in the areas of planning, implementing, maintaining as well as in the monitoring and evaluation of development projects, especially infrastructure. Advocacy and capacity-building in good governance and accountability are also included.

These various models shows that LGUs, if properly supported, can satisfactorily deliver devolved support services. A case in point is the Mindanao Rural Development Project, a 12- to 15-year World Bank-funded Adaptable Program Loan to the DA. Its first phase was deemed successful in achieving its objectives of capacitating target LGUs to deliver devolved agricultural support services despite some initial shortcomings in decentralizing the planning process and in building local capacities for M&E. The second phase triggers were successfully fulfilled so that there is now an expansion in program coverage. Although similar in design to ARCDP2, MRDP has a stronger institutional and policy foundation in the sense that it was implemented to operationalize the law devolving agricultural service provision to the LGUs. There is no devolution policy regarding the CARP. Hence, devolution is being implemented as a policy by the MRDP while it is being implemented as a strategy by the ARCDP.

Civil society and private entities are also considered to be implementing partners. They are mainly involved in community mobilization, consultations, and in the delivery of project goods and services that the NG or LGUs choose to outsource to them.

These local applications of the ABD approach range from pilot-testing (DA, DSWD, DOF, ARMM) to sub-sector implementation (DENR) to mainstreaming (DAR). The DA, DSWD, DOF and ARMM initiatives are pilot projects and, thus, are not part of these agencies' regular operations. A case in point is the DOF's Community-based Resource Management Program (CBRMP), which does not lend itself easily to replication because (1) the thrust of the project is not the core function of the implementing agency; and, (2) the favorable grant-loan financing mix of the project, which encouraged LGU and community participation, will not anymore be provided in line with the government's current NG-LGU cost sharing policy. Meanwhile, the DENR implements their ABD-like initiatives exclusively in their "green" sector. Only the DAR has fully integrated this approach in its core function involving the delivery of the beneficiary development and support services.

These local programs fail to achieve the cross-sectoral dimension that would best match a locally-driven development approach. For instance, the sector programs, such as those implemented by the DA, DAR, DENR and DOF, offer a menu of interventions and services that are largely agricultural in nature although some non-agricultural interventions are also offered. There are relatively fewer interventions to promote rural industrialization or to facilitate the outmigration of target-beneficiaries (through, among others, vocational education), if needed. The latter could have been useful to the DENR, , in terms of lessening the population pressure in critical ecosystems.

The sector bias of the DA and the DAR comes from their main mandate to support agricultural production and the tillers of farmlands, while the DENR's is to protect and conserve the environment and natural resources. In fact, it has been observed that CARP has mainly targeted areas with agricultural potential. It should be noted, however, that the DENR's current community-based integrated ecosystems management (CB-IEM) strategy more closely approximates the ABD approach in the sense that all interventions will be fully demand-driven since they will have to emanate from community-developed Watershed Management Plans. The CB-IEM will, however, only be extensively implemented by the DENR in the newly-effective National Program Support for the Environment and Natural Resources Management Project (NPS-ENRM). The development and use of such community-drafted ecosystem management plans were not much emphasized, if at all, in previous CBEM initiatives.

A possible exception is the Laguna Lake Development Authority, which based investments and programs on its Lake Development Plan. However, its focus leans more toward environmental protection. Thus, it could be said that the menu of available interventions in these sector-based development programs are, more or less, constrained prior to the consultations with the target communities. It should also be noted that the interventions and services offered by these programs are largely supplied and directed by NG agencies especially since the effective control of the resources for these services remain with the NG.

The local sector-based “ABD” models, therefore, do not fully empower clients since they are provided with limited rural development options and do not place program resources under direct local control. The sector orientation of DA and DAR also limits their scope and area coverage and, consequently, their impact on rural poverty and development. The DA focuses on areas with the highest agricultural potential; the DAR on ARB-dense areas; the DENR on critical watersheds and ecosystems. The majority of the rural poor and the rural labor force, most of whom are landless, are not concentrated in these areas.

On the other hand, the non-sector agency led programs (DSWD and ARMM) appear to have provided a more holistic and balanced menu of development services and programs. There was no prior sector-leaning or bias in the identification and design of proposed interventions. Social mobilization, community consultations, and local development plan formulation fully preceded the identification of projects and services to be supported by these programs. Thus, these non-sector based programs more closely approximated the ABD approach to development. These programs, however, need to be up-scaled beyond vulnerable groups to be truly rural in scope. Such up-scaling is, however, not expected from the DSWD whose core mandate involves mainly social protection and safety nets. Meanwhile, the scope of ARMM’s developmental activities is hinged to support the peace process, through post-conflict interventions.

Overall, in order for local initiatives to be full models of area-based development, they need to (1) be sector-neutral in their approach; (2) fully take off from local/community development plans but within the parameters of a broad spatial development strategy; (3) expand their target coverage and menu of development interventions to fully encompass diverse rural development needs; and, (4) more fully empower their target-clients to participate in the various phases of the development cycle, as well as in the selection of service providers or encourage competition among the various service providers.

b. International ABD models.

The international ABD models consist of the (1) Micro-Regions Program of Mexico, (2) Cedula da Terra of Brazil, and (3) the Thai Business Initiative in Rural Development (TBIRD) program of Thailand. The first two are national government-led while the last is NGO-led. The Mexican and Thai models are sector-neutral in the sense that the identification and design of the development programs are fully community demand-driven without any prior sector focus. Meanwhile, the Brazilian model is essentially an agrarian reform program. It focuses on agriculture-based clients and interventions. All these models apply the CDD approach in the identification, design, and implementation of development programs. They target specific communities or cluster of communities, and their mix of available development programs and services are not confined to sector-specific interventions although the Brazilian menu is more focused. (Please refer to Annex 10-2 and Annex Table 10-2 for additional details).

The Mexican program uses a clear spatial, multi-sector and community-based development framework that seeks to support a place-based approach to rural development expressed in the common development program of community clusters or micro-regions. A micro-region

is a cluster of contiguous and socioeconomically-related municipalities that share common development goals. Each micro-region submits a set of rural development plans and interventions for review and funding by the program. These are evaluated on the basis of at least 10 sets of impact indicators (called *banderas blancas* or white flags) that include an operative telephone service, a minimum number of internet accessible computers, a minimum percentage of rural land registered, among others. Once approved, support to these development programs are ensured at all levels of governance (federal, state, local) by a set of coordination mechanisms and negotiated agreements among the various relevant ministries that will provide an integrated set of funding and technical assistance.

Political coordination among 16 ministries is enforced through an Inter-sector Committee for Micro-Regions, which is chaired by the President and meets twice a year to provide broad policy and strategy guidelines. A Normative Working Group, composed of the Vice-Ministers of the 16 ministries, meets four times a year to agree on which projects to approve and finance,. The Working Group is supported by a Technical Committee and a Operative Working Group where the Director-Generals in charge of the strategy meet every month. The overall operative coordination is the responsibility of a Vice-Minister in the Social and Human Development Ministry.

Brazil's Cedula da Terra program is more sector-based since it is basically a land reform program that pilots community-driven, market-based, and negotiated land acquisition processes. It is similar to CMARPRP but more advanced in the sense that community organizations are enabled and fully empowered to (1) identify suitable and available farmlands; (2) undertake community mobilization and preparation; (3) negotiate with landowners for the selling price and transfer of farmlands; (4) apportion the land and loan payment share among its members; (5) develop and implement community investment plans; (5) negotiate with both government and private providers for the delivery of technical assistance needed to implement the community investment plans; (6) ensure that members provide labor or cash counterpart for sub-projects; and, (7) ensure the payment of loans by its members.

Moreover, funds are directly given to community organizations. The Federal government provides funding to the farmers' organizations, coursed through State banks, for land purchase, community investment subprojects, and a settlement grant. Relevant State agencies review and approve the release of funds for the negotiated land purchase and community investment plans as well as provide technical assistance to the community organizations. It should be noted, however, that certain reforms in the policy environment facilitated the successful implementation of this voluntary, negotiated land reform program. This includes the passage of an Idle Land Tax, which made it expensive for landowners to hold on to their lands if they are not substantially earning from economic activities in them.

The Thai Business Initiative in Rural Development or TBIRD is a unique ABD model in the sense that it is NGO-led and fully private sector-supported. The lead NGO brings together poor Thai villages and volunteer business firms to develop and implement a village development program. There is some uncertainty on the extent to which the development process is community-driven especially since the development programs will have to suit the

capacities and orientation of the sponsoring firms. Nevertheless, there is active dialogue and negotiations between the villages and the firms, facilitated by the NGO, so that the needs and aspirations of the villages are, as much as possible, fully taken into account within the context of their socioeconomic conditions. Examples of rural (farm and non-farm) development initiatives undertaken by the TBIRD can be found in Boxes 10-1 and 10-2 in the annex section.

c. Lessons learned from local and international ABD models.

- A sector-based approach to rural development would have limited scope and impact given the heterogeneity of socioeconomic and physical conditions as well as development aspirations in the rural areas.
- An area-based locally-driven approach to rural development requires effective vertical and horizontal integration/coordination given the multiplicity and heterogeneity of actors and needed interventions. These underscore the need for (i) a focal agency with sufficient technical capacity and leadership to provide clear and strategic guidelines; (ii) a focal agency with sufficient authority and control, especially over the resource allocation process, in order to effectively enforce integration and coordination; and, (iii) an effective monitoring and evaluation system at all levels of intervention that provides timely feedback to the focal agency.
- The local models show that LGUs, if properly supported, are able to satisfactorily deliver devolved support services.
- The Mexico model shows that a sector-neutral locally-driven area based approach to rural development is possible even with a sector-based bureaucracy as long as there is (i) a clear spatial development paradigm; (ii) a mechanism for enforcing vertical and horizontal integration in the review and approval of development programs as well as in funding and assistance at all levels of governance; and, (iii) a focal ministry, with sufficient political clout and technical expertise, to ensure effective coordination and enforcement of agreements.
- The Thai model shows that the private sector and civil society can be tapped to complement the NG-driven initiatives, especially in areas that business cannot penetrate.
- The Brazilian model shows the extent to which target-beneficiaries can be enabled and empowered to successfully take the lead in charting their own course and achieving results in agrarian reform and agriculture and the extent to which the government can assume a more steering rather than a driving role in rural development. This program might be able to provide a more cost-effective and socially acceptable alternative modality and direction of land reform that, in turn, can lay the foundation for a more holistic area-based rural development program.

V. The Way Forward in Reforming the Institutional Framework for Rural Development

This study emphasizes the need to shift from agrarian reform to a more cross-sectoral ABD approach to rural development in order to effectively address chronic poverty and inequity in the countryside and exploit the multiplicity of pathways out of poverty available to households and communities. This means that the array of development interventions offered to rural dwellers must deliberately consider their socioeconomic and physical conditions and endowments as well as their aspirations.

The scope of rural development programs must be widened beyond agriculture and land reform to also include non-farm pathways out of poverty. LGUs would take the lead in determining the development path more in accordance with their natural resource endowments and territorial vocation. This paradigm shift will also ensure that ARBs and ARCs are mainstreamed into the regular development programs and services of the government regardless of the fate of DAR and CARP beyond 2008.

a. The long-term goal: A national rural development agency.

In the long-term, it appears advisable to consolidate and restructure the country's rural development agencies toward the establishment of a rural development department or agency that will—

- (i) Provide the overall spatial development framework and guidance as well as enabling instruments supporting locally-driven development efforts;
- (ii) Set performance standards as well as undertake impact monitoring and R&D;
- (iii) Promote and co-finance a multi-sector and area-based menu of development programs and services for the target-beneficiaries—agriculture and land reform will only be part of this menu;
- (iv) Undertake a fully demand-driven development process where local rural communities are empowered to choose the development package and service provider they prefer; NG line agencies and LGUs will have to compete with NGOs and the private sector for community contracts;
- (v) Coordinate with the LGUs for resource-matching and the provision of technical and financial assistance to the target communities; and,
- (vi) Encourage the private sector and civil society not only to provide technical services to target communities but also to complement government's rural development initiatives by promoting and facilitating locally-driven development, especially in areas where the government are unable to reach (e.g., the TBIRD model).

The DA can form the core of this rural development agency, which will have to subsume the PBD responsibilities of the DAR along with, perhaps, the agro-forestry functions of the DENR, the agriculture and fishery R&D functions of the DOST, and the agribusiness enterprise development functions of the DTI, among others. The challenge with this arrangement, however, is the need to wean sector-based agencies, like the DA, from the tendency to maintain its sector lens in its evaluation of rural development needs and in its design of interventions for rural areas. Canada, for instance, addressed this challenge by establishing an inter-departmental policy and research network to bring federal policy developers and researchers together to provide the needed multi-sector viewpoint.

However, even if government is convinced now that an area-based, locally-driven development paradigm would be the appropriate successor strategic framework on rural development in lieu of the CARP, this proposed restructuring of rural development institutions will still require some period of advocacy, constituency-building, legislation, institutional re-design and re-tooling. In fact, this has been informally proposed to the GOP a few years' back, but due to the difficulties inherent in the reorganization and restructuring especially of public institutions, it failed to gain sufficient traction and adherents. Perhaps this proposed institutional reform will start to gain momentum as the government grapples with the more complex challenges of rural development within the context of what would presumably be the last extension of CARP.

b. Reform in the intermediate run: Policy coordination and a more LGU- and client-driven agrarian reform program.

In the short-to-medium term, when restructuring is not feasible, what can be undertaken is the establishment of a coordination mechanism for rural development at the policy/oversight level. As regards CARP implementation, its management can be reformed to make it more LGU- and ARB- driven. These immediate reforms can lay the groundwork for eventually establishing a national rural development agency.

The Mexican Micro-Regions Program shows that it is possible to establish an effective interim mechanism for area-based rural development even within existing institutional structures. Moreover, there are other types of coordination mechanisms for rural development that can also be considered. The OECD (2006) reviewed various mechanisms being implemented in member countries. They were classified under the following types:

1. *Special unit reporting directly to the President or Parliament*—This arrangement provides both the authority and incentive for effective inter-departmental coordination and collaboration by directly placing the coordinating unit under the direct auspices of the Chief Executive or the Parliament.

The Inter-Ministerial Delegation to the Planning and Competiveness Territories (DIACT) of France, which is an inter-ministerial body linked to the Office of the Prime Minister with both coordination and implementation responsibilities, is an example of such a unit. Another possible example is the Social Reform Council established during the administration of President Ramos. It was a body created to ensure the integration and

coordination of the President's social reform or anti-poverty agenda in the programs of the national and local bureaucracy. It was chaired by the President himself and had sector Cabinet members, Cabinet officers for regional development, and representatives of the basic sectors, NGOs and business as members. It was supported by a small secretariat attached to the DAR. A Performance Contract system was established where Cabinet members and governors were required to submit contracts to the President to deliver specific and time-bound commitments to their constituents belonging to the basic sectors. These included the adoption of consensus bills, which the President would then certify and forward to the legislature as urgent, and consensus budgets that would finance SRA projects and identify resource sharing opportunities.

2. *Policy-proofing*—This is an inter-departmental coordinating mechanism and process, facilitated by a small unit, where all relevant new public policies are reviewed by an inter-ministerial body for its impact and relevance to a priority development concern before they are elevated to the Cabinet for discussion, approval, and funding.

Canada's "Rural Lens" is an example of policy-proofing for rural development. The Rural Lens staff interacts with their colleagues in the relevant departments to review new policies that might have relevant implications for rural development. They then advise their minister to support, reject or modify the new policies during regular Cabinet meetings. An inter-departmental policy and research network was established to bring federal policy developers and researchers together to provide technical support to this mechanism.

Another possible example is the National Commission on the Role of Filipino Women (NCRFW), which is mandated to mainstream Gender and Development (GAD) in Philippine policy-making. This Commission developed planning, programming and planning tools that would assist NG agencies in integrating GAD in their decision-making. However, the NCRFW did not have sufficient handles and technical capacity to influence these decision-making processes, thus, lessening the effectiveness of their interventions. The NCRFW head, for instance, is neither of Cabinet rank nor a member of the Development Budget Coordinating Committee that oversees the budgeting process. The NCRFW was able to establish a mandatory 5% allocation for GAD activities in the budgets of all NG agencies and LGUs. However, this did not sit well with the most of the bureaucracy, which sought ways around what was considered an imposition. This could partly be an indication of a lack of effective advocacy and technical support from the secretariat. The NG agencies, for instance, are practically left to their own devices to conceptualize and implement GAD mainstreaming in their sectors even with an assignment of a GAD focal person in each department. The GAD planning, programming and budgeting tools are generic and were not made sector-based.

3. *Inter-ministerial coordination via working groups and contracts*—This is a coordination mechanism that revolves around special inter-ministerial (horizontal integration) working groups whose agreements are formalized and enforced through signed contracts or MOAs. Vertical integration is similarly achieved through institutional agreements or contracts between national and local government bodies.

An example of this coordinating model is the Micro Regions Strategy of Mexico. A similar mechanism can be seen in Italy for water management in its southern regions. Institutional Agreements are forged among the relevant ministries, regions and autonomous provinces in order to implement multi-annual plans for common and interrelated interventions. These agreements establish the priorities, procedures, funding sources, and the M&E arrangements of the interventions. These are implemented through Programming Agreements that specify the projects and activities to be undertaken, the allocation of responsibilities among the various actors, the inter-departmental meetings and agreements needed for project implementation, conflict resolution processes, financial plans and funding sources, as well as M&E procedures and responsibilities. Institutional Agreements and Programming Agreements are formally signed and co-funded by all the administrative bodies involved.

These different mechanisms exhibit the following characteristics that made them effective coordinating tools:

1. Clear focal agency or body with sufficient political authority and backing—e.g., headed by the Chief Executive or by a Minister or Secretary
2. Effective influence over the policy-making and budgetary processes
3. Clear strategic and operational guidelines—e.g., prioritized lists of projects, implementing and funding responsibilities, conflict resolution process—all within a clear strategic spatial development framework
4. Formal coordinating platforms and instruments—e.g., inter-departmental councils and working groups, institutional and program agreements, performance contracts
5. Effective monitoring and feedback mechanisms
6. Competent technical support, including research, especially from the coordinating secretariat

These different mechanisms exhibit varying degrees and depths of coordination. On one end, there is policy-proofing that ensures an area-based rural development thrust only at the policy level among national agencies. On the other end, inter-ministerial coordination also involves program coordination, resource sharing agreements at national and sub-national levels. The GoP might wish to first try policy-proofing then work its way toward inter-ministerial coordination. It would also be ideal if the focal agency or secretariat of this coordinating body had a multi-sector orientation with strong links to the academe and research institutions. This will not only provide strong technical back staffing and minimize sector biases but will also relieve the DAR of its coordinating functions, leaving it free to focus on its remaining core functions during the extension period.

It should be noted that Adriano (2007) recommended the conversion of PARC into a Joint Commission on Rural Development, which will provide the policy direction and exercise oversight function of rural development-related agencies. Among others, this proposed Commission will draw up master plans for the provision of various support services, especially to the ARBs, which can serve as the basis for budgetary request by the various rural development agencies for such support services. Adriano further proposed the eventual

re-naming of the Department of Agriculture to the Department of Agriculture and Rural Development to expand the Department's role in countryside development, particularly in supporting small farmers and ARBs, and to facilitate the absorption of some DAR personnel to the proposed new department.

c. CARP implementation management: New roles for the DAR, LGUs, and ARBs.

The findings of the previous chapters of the study underscore the need for LGUs and ARBs to assume a more pro-active and driving role during the CARP extension period while the DAR undertakes a more facilitative and focused function. In terms of Major Final Outputs (MFOs), it is recommended that—

- (i) The adjudication functions of the DAR be more circumscribed leaving a significant portion to either be privatized/ under compulsory arbitration or given to the regular courts;
- (ii) The LAD be more led by associations of ARBs with LGUs providing key facilitation role in negotiations even as the DAR retains its LTI functions;
- (iii) The LGUs take a more leading role in a fully demand-driven PBD service; and,
- (iv) The sphere of application of DARAB's quasi-judicial functions be substantially reduced while enhancing the role of Special Agrarian Courts and introducing arbitration in the resolution of agrarian conflicts not involving the State.

Chapter 7 recommends the up-scaling and replication of the CMARPRP model during the CARP extension period. Along the lines of Brazil's *Cedula da Terra* program, new models of decentralized and negotiated land reform would also be pilot-tested among ARBs and LGUs with manifest capacities, such as those where the locally driven development models have been piloted. This means that voluntary negotiations between farmer beneficiaries and landowners, facilitated by LGUs and the concerned CIAs, would be the default mode for LAD. Compulsory acquisition by the government will only be triggered if the CMARPRP fails and large landholdings would be prioritized. In addition to possibly getting a better price and faster remuneration, the threat of compulsory acquisition should motivate landowners to prefer this mode of LAD.

This scheme is designed to facilitate LAD by minimizing conflicts, speeding up land transfers and considerably reducing the fiscal requirement for this MFO thereby freeing up more resources for more strategic public expenditures in PBD and public infrastructure, for instance. Under this pilot program, ARCs with sufficiently strong ARB associations are given direct control over program resources and LGUs are more active in the delivery of public support services. This model should be the direction toward which the up-scaled and replicated CMARP should evolve.

The next CARP extension should ensure that LGUs are more empowered to undertake their proper role as specified under the Local Government Code. The MRDP2 and, to some extent

the ARCDP2, along with other local ABD-like models, have given the NG and the LGUs sufficient partnership experience in establishing the mechanics and in building the latter's capacity to deliver public goods and services, especially in agriculture. The ARCDP2, in fact, has been open to allowing LGUs with proven capacities to undertake even large infrastructure projects on its own. The next CARP extension should, therefore, also see the up-scaling of these LGU-led PBD pilots leaving the DAR and the other CIAs to focus more on providing counterpart funding and technical assistance to both LGUs (e.g., planning, program design, best practices) and ARBs as well as on monitoring and evaluation of program effectiveness and impact.

In summary, it is recommended that during the next, and hopefully last, extension period of the CARP (i) the DAR should play a more circumscribed role by focusing its direct provision of services on LTI and some aspects of adjudication, and in program facilitation, monitoring and evaluation; (ii) the ARBs and their associations and LGUs undertake a more leading role in LAD; and, (iii) the LGUs, with the support of the other CIAs, should more actively provide demand-driven PBD services.

Department of Agrarian Reform (DAR): ARC Strategy

The DAR, in its execution of the PBD component of the CARP, comes the closest, among the various rural development agencies, in the mainstreaming of an area-based rural development program. Program Beneficiary Development or the delivery of support services to ARBs is one of the 3 core components of the CARP and is, correspondingly, one of the 3 Major Final Outputs (MFOs) of the DAR. Its delivery uses the Agrarian Reform Communities (ARC) approach, which contains many of the elements of ABD. It is a geographical approach to support services delivery primarily to ARBs where the DAR provide demand-driven interventions to increase farm production, improve household income, and promote sustainable development. It provides a more holistic set of interventions than the other rural development agencies since, besides agricultural production support, enterprise/ market development and promotion services were also offered.

The ARCs Republic Act 7905 defines an ARC to be "a barangay or a cluster of barangays primarily composed and managed by ARBs who are willing to be organized and undertake the integrated development of an area and/or their organizations/cooperative." The DAR identified the following seven elements of a viable ARC which also provided the bases of the integrated set of interventions provided by DAR as well as the other CIAs and players in ARC development :

1. Tenurial improvement
2. Physical infrastructure development
3. Agricultural productivity and farm income improvement
4. Agri-based rural industrialization
5. Provision of basic social services
6. Balanced ecosystem development
7. Gender and population and development concerns

There are, however, questions about whether PBD should indeed be a core function or an MFO of the DAR. Agriculture and agri-based support service delivery, for instance, appears to be more within the core competency and mandate of the DA, raising the issue of overlapping functions among NG agencies. Moreover, the delivery of agricultural support services have been devolved to the LGUs by the 1991 Local Government Code.

Nevertheless, a short description of the DAR's ARC Development Project Phase 2 below shows how closely the ARC strategy approximates the ABD approach.

1. Second Agrarian Reform Communities Development Project

This is an on-going World Bank-funded Specific Investment Loan (SIL) project of the DAR which seeks to raise household incomes and the quality of life of the people in the targeted Agrarian Reform Communities (ARCs) through the improvement of productive assets, rural infrastructure and access to key support services. Specifically, the project aims to (a) increase active community participation and self-reliance in ARC planning

processes and implementation of integrated community-identified priorities. (b) build the capability of ARC people's organizations, such as the barangay implementing team, cooperatives, associations, farmers groups, women's groups and producer groups. (c) strengthen the capacity of DAR and LGUs to support appropriate development activities in the target ARCs.

Being in its second phase, it is broadening the reach and implementing the program on about 125 new ARCs. Community mobilization and planning activities are the entry point of this project which also determine its scope of interventions. The other types of development activities that are being undertaken include: (i) capacity building; (ii) rural infrastructure development; (iii) agriculture and enterprise development, (iv) a program to facilitate rural financial services, and (v) subdivision of individual Certificate of Land Ownership Acquisition (CLOAs) into individual titles.

The following are the major project components:

i) *Community Development and Capacity Building*—This provides technical assistance and training to ARCs, LGUs and DAR staff to strengthen their capacities and ensure their effective participation in the planning, implementation and maintenance of community-driven initiatives.

This component initiates the entry of the project into the target community by gaining the support of LGU and partner organizations through a participatory planning procedure. All barangay members are encouraged to attend a workshop/consultation through a Barangay General Assembly, with LGU and agency officials in attendance provide a participatory method of involving all key stakeholders. It will identify community priorities within a realistic framework of what can be achieved within a five year period. This is supported by a detailed situational analysis underpinned by a household survey of 10% of the ARC inhabitants and focus group discussions on key issues. This will be followed by inter-barangay consultations, re-validation of priorities with the broader community and then development of detailed plans.

Besides skills transfer and training, organizational building and strengthening would continue to be a major thrust of this component. Barangay Implementing Teams are formed as the means through which the capacity of the Barangay Development Council and other local leaders will be strengthened. Cooperatives continue to be a lead organization in the ARC but support is broadened to cover other people's organizations such as women and youth groups, producer groups and farmers associations and even temporary groups formed for specific projects within the ARC.

ii) *Rural Infrastructure*—This provides essential rural infrastructure to the target beneficiaries using a community demand driven approach. The first step in the process is the submission of the proposed infrastructure requirements by the Barangay and ARC representatives to the Municipal Development Council for technical consideration after community consultations. Preliminary investigation by LGUs or the NIA will be undertaken after which further surveys and detailed design would be carried out by

technicians from the respective agencies or the private sector, if required. The next step involves the reconfirmation of completed designs, costs and estimated benefits at the field level. The recommended proposals would then be submitted to the Provincial Project Office (PPO) for the first level evaluation and eventually would endorse the proposal to the Central Project Office (CPO) for technical, environmental, financial, economic and administrative appraisal. Most works would be undertaken by local contractors, or, in the case of irrigation, NIA. Direct implementation by LGUs (force account) is by exception and would only be adopted where there is no contracting capacity or interest, and in that case, it would be subject to a contract between the LGU and the CPO.

The infrastructure project coverage include rural roads and bridges, small-scale irrigation, potable water supply systems, post-harvesting facilities and multi-purpose buildings. Investments have a notional cap of about US\$1,700 per ARC family unless otherwise justified. Besides the technical feasibility and economic viability, the willingness of LGUs to provide technical and financial support is also included in the selection criteria.

The project is going further than ARCDP I in decentralizing support to investments by devolving the responsibilities for irrigation sub-projects to LGUs. They have the opportunity to either implement irrigation themselves or else pass that function over to the National Irrigation Administration (NIA). However, the LGUs are given the responsibility for irrigation implementation if they meet the agreed eligibility criteria which would include technical and financial capability as well as commitment to undertaking the work.

iii) *Agricultural and Enterprise Development*—This provides support services to the participating ARCs that will help in increasing productivity and income diversification within and outside agriculture. The basis of support for each ARC is based on technical assessments carried out within the ARC development planning process. The types of activities that are supported include: (i) enterprise development and management; (ii) market development and promotion; (iii) technology promotion, transfer and commercialization; and (iv) resources mobilization and investment promotion, including support for initial investments in long term assets (e.g., tree crops development). This component also covers the subdivision of collective land titles (mother CLOAs) into individual titles, on a demand-driven basis, to strengthen land tenure security, farmer incentives, and access to capital.

iv) *ARCs Access to Financial Services*—This component supports the strengthening of cooperatives and microfinance institutions to provide credit sourced from existing financial institutions (FIs) in the project areas. These FIs include Government Finance Institutions (GFIs), private FIs, and NGOs. The target beneficiaries are ARC cooperatives/Peoples' Organizations and their members and ARC households who are not cooperative members. The cooperative members are enabled to access the services of available FIs. On the other hand, ARC households are enabled to access the services of microfinance institutions which will finance their farm and non-farm income-generating activities.

Department of Agriculture: Devolving Agriculture Support Services to LGUs

The sudden transfer of the primary responsibility to provide agricultural support services to farmers from the DA to the LGUs due to the 1991 Local Government Code has caused disruption in the delivery of this service. The MRDP was designed to smoothen the transfer process and to capacitate the concerned LGUs in the performance of their new mandate.

2. Mindanao Rural Development Project Phase 2(MRDP2)

This is an on-going World Bank-funded Adaptable Program Loan (APL) to the DA that seeks to improve incomes and food security as well as alleviate poverty in the rural communities of Mindanao. These will be achieved by engaging LGUs and rural communities in designing and implementing a rural development program, in close association with concerned national government agencies, within the framework of the Local Government Code. The first phase of this project (2000-2004) covered 32 municipalities in 5 provinces of Mindanao. It will now cover 225 municipalities in all the 27 provinces of Mindanao in the second phase (2007-2012) where the partnership of the DA with the LGUs will be further broadened and deepened to improve the delivery of devolved agriculture and fisheries-related services.

The project has the following major components:

i) *Investments for Governance Reforms (IGR)*—This involves the provision of institutional support and technical assistance to the regional Field Units (RFUs) of the DA as well as the Provincial and Municipal LGUs in Mindanao in order to eventually enable DA to phase out and hand over devolved functions to capacitated and strengthened LGUs. It also includes the improvement of governance and accountability mechanisms at both NG and LGU levels. An incentive provided to the LGUs is the eligibility to access additional grant funding from the NG to implement projects involving devolved investments.

ii) *Rural Infrastructure (RI)*—This involves the capacity building of LGUs to supervise, undertake and maintain rural infrastructure projects that will improve linkages between producers and consumers, enhance productivity and improved value chains. The eligible infrastructures include potable water systems, the rehabilitation and construction of roads and bridges, communal irrigation systems, and other infrastructure critical to agricultural and fisheries productivity and market access. Performance-based grants for farm-to-market roads and communal irrigation subprojects will be provided to participating LGUs upon fulfillment of agreed local revenue generation targets.

iii) *Community Fund for Agricultural Development (CFAD)*—This is a facility to empower vulnerable communities to generate local savings and manage critical investments in partnership with the LGUs and the other agricultural development stakeholders. It will provide capacity for the rational identification, design and implementation of household investment priorities, with the DA, LGUs, NGOs and the

private sector providing technical advice and other support services. These investments include agriculture and fishery production, with allied value-adding activities, that make use of appropriate, sustainable and environment-friendly technologies which are socially and culturally acceptable to target communities. The target groups consist of at least 30% Indigenous Peoples (IPs), rural women (with priorities for women-headed households), youths and other disadvantaged sectors.

iv) *Natural Resources Management (NRM)*—This component covers upland watershed and land use management interventions which would impact on agricultural and fisheries productivity in the MRDP2 sites. The target beneficiaries are relevant national agencies supporting LGUs and communities that have direct influence on terrestrial and coastal resource use. Specifically, its activities will include (a) capability building of communities, LGUs and national agencies to improve land management practices critical to protecting coastal areas; (b) the introduction and demonstration of sustainable land management practices that can directly benefit upland resource users as well as downstream users (especially fisherfolk), through controlling erosion, improving the fertility of land and limiting the release of agrochemicals; and (c) an increase in awareness of the direct linkages between upland and downstream impacts to coastal ecosystems that will be mainstreamed into municipal policies and development plans.

Department of Environment and Natural Resources (DENR), Department of Finance (DOF), and DA : Community-Based Ecosystems Management (CBEM)

The CBEM strategy is the generic term for the CDD approach to environment and natural resources management (ENRM) implemented, in some form or another, by the DENR (FMB, PAWB, LLDA) in collaboration with target LGUs and communities. It involves the capacity-building of local communities and LGUs in forest, upland, river basin and near-shore areas to plan and implement ENRM measures as well as investments for community-initiated development projects to reduce poverty and environmental degradation. It includes demand-driven livelihood activities and investments that help achieve sustainable natural resources management and/or biodiversity conservation. The identification of these livelihood activities is guided by the imperative of linking sustainable natural resources management practices and tenurial instruments with community participation in local ENR monitoring systems and resource protection.

This ENRM-based development approach is mainly implemented by the DENR in the forest/upland ecosystem through CBFM programs. Its institutional mechanisms include Protected Areas Management Boards (PAMBs) and Watershed Management Councils (WMCs), which are multi-sector bodies responsible for watershed/protected areas management. These bodies are composed of representatives from the LGU, the DENR, LGU ENR office, POs/NGOs. The DENR provides both technical and financial support to these bodies. One of the components of the National Program Support for Environment and Natural Resources Management Project (NPS-ENRMP), a WB-funded Sector Investment and Maintenance (SIM) loan to the DENR, implements the integrated ecosystems management (IEM) approach in priority watersheds. The IEM strategy is an improvement over previous CBEM approaches since it provides a more holistic view of the ecosystem or

watershed (interconnectivity of the uplands, lowlands and coastal ecosystems) and is more community-driven since all interventions will have to emanate from the Watershed Management Plans developed by the WMCs.

Meanwhile, in river basin ecosystems, river basin management authorities, like the Laguna Lake Development Authority (LLDA), is the DENR's mechanism for CBEM. The LLDA is implementing a WB-funded SIM loan project called the Laguna de Bay Institutional Strengthening and Community Participation Project (LISCOP). It seeks to assist the LLDA, LGUs and other stakeholders to improve the environmental quality of the Laguna De Bay watershed, through, among others, the establishment of micro-watershed management River Councils as well as the use of market-based instruments and incentives.

In coastal and near-shore ecosystems, there appears to be jurisdictional and operational overlaps between the DENR and the DA-BFAR. The latter was given the mandate and authority by the Fisheries Code. Nevertheless, the DENR is implementing an ADB-funded Integrated Coastal Resource Management Project (ICRMP) which seeks to institutionalize and operationalize ICRM at all governance levels and to provide alternative and supplementary livelihoods for coastal communities.

Meanwhile, the DOF piloted a completed CBEM project in order to help establish the rural finance window of its Municipal Development Fund Office (MDFO). A short description of the CBRM project below provides additional details on the basic features of this strategy.

3. Community-Based Resource Management Project (CBRMP)

This is a completed (1998-2007) WB-funded Specific Investment Loan (SIL) project of the Department of Finance (DOF) which sought to reduce rural poverty and environmental degradation by supporting locally generated and implemented natural resource management sub-projects. More specifically, it aimed at: (a) enhancing the capacity of low-income rural LGUs and communities to plan, implement and sustain priority natural resource management projects; (b) strengthening central government systems to transfer finance (as financial intermediaries) and environmental technology, and improve the implementation of environmental policies; and (c) providing resources to LGUs to finance natural resource management projects. The target beneficiaries were poor LGUs and communities in Regions 5, 7, 8, and 13 with a high proportion of small farmers, fishermen and people generating income from forest products.

It has the following major components:

i) *Natural Resource Management*—This is the largest component which financed investments in NRM *via* grants and loans to LGUs through the rural window of the Municipal Development Fund Office (MDFO). These investments covered: (a) upland agriculture and forestry; (b) coastal resource and near-shore fisheries; and (c) small rural infrastructure and livelihood activities related to NRM.

ii) *Planning and Implementation Support to LGUs*—This supported LGUs and their *barangays* in the planning and implementation of sub-projects through training and equipment supply.

iii) *Initiating an Municipal Development Fund Rural Window and Project Management*— This supported the project management office that was suppose to be incorporated into the structure of the MDFO after a period of three years.

iv) *Environmental Technology Transfer and Policy Implementation* - This supported the DENR and the DA to transfer NRM technology to the LGUs and to improve the management of environmental policies.

This pilot project has proven that an appropriate package of support for NRM, enterprise development and infrastructure sub-projects can stimulate latent interest and related investment in viable resource management, conservation and economic initiatives that lead to poverty reduction. It placed LGUs and communities in control of site-specific initiatives, with technical and financial backing from government agencies. It clearly demonstrated an increase of capacity in low-income rural LGUs and communities to plan, implement and sustain priority NRM initiatives. The capacity of central government systems to transfer finance (as financial intermediaries) to LGUs has improved. And more importantly, it was able to increase the income of a higher-than-targeted proportion of households as a result of the active participation of People’s Organizations (POs) through a CDD process.

The critical outstanding issue, however, is whether LGUs will continue to borrow from the window created without the incentives of sufficient¹ grant to make the financing mix feasible in regard to the competing priorities of the LGU. Nevertheless, the initiatives of the CBRMP are already being incorporated in the MDFO and by DENR in the design of follow-on projects. These include the DENR-WB Environment and Natural Resource Management and the DENR-ADB Integrated Coastal Resource Management Projects. In particular, the important role that the LGUs can play in Natural Resource Management is being given prominence. However, neither projects are continuing the interventions of CBRMP on a similar scale. For instance, the lessons learned in the financing mix have not been replicated. There is no comparable mechanism at present for LGUs to expand their activities, or for other interested LGUs to replicate the CBRMP process due to the current GOP cost-sharing directives.

¹ Currently the GOP policy is a maximum of 50:50 grant: equity mix, compared to the CBRMP 70:20:10, grant: loan: equity mix.

Department of Social Welfare and Development (DSWD) and the Autonomous Region of Muslim Mindanao (ARMM): Community-Driven Development (CDD) Approach to Poverty Alleviation

4. Kapit-bisig Laban sa Kahirapan-Comprehensive and Integrated Delivery of Social Services (KALAHI-CIDSS) Project

This is an on-going WB-funded Specific Investment Loan (SIL) project of the Department of Social Welfare and Development (DSWD). It seeks to strengthen the local communities' participation in *barangay* governance and to develop their capacity to design, implement and manage development activities that reduce poverty. The types of inter-linked interventions that are being undertaken involve the empowerment of communities, the improvement of local governance and the provision of grants for community investment programs. While national in scope (with the exclusion of the areas covered by the ARMM Peace and Development Social Fund), the project covers one-fourth of all municipalities in provinces where the incidence of poverty is above national average of 33.7%. This represents, so far, an initial estimate of 5,378 *barangays* in 193 municipalities in the 40 provinces in the country. It also covers approximately 20 poor urban *barangays*/communities in the urban centers of each 14 region and Metro Manila. All sitios (neighborhoods) of selected urban *barangays* are eligible to participate in the KALAHI-CIDSS project.

The project has the following major components:

i) *Barangay or Community Grants*—This undertakes community development sub-projects, including investment in economic and social infrastructure, environmental conservation measures and capacity building, through the provision of grants to *barangays*. A participatory planning process is used to develop sub-project proposals that will be selected at a competitive inter-*barangay* forum. Community cost contribution for both the investment and O&M costs is one of the selection criteria at this forum. The proposals for sub-projects is guided by an investment menu supplemented by a negative list of activities with adverse environmental and social impacts not allowed under the project . Apart from micro-finance or other activities involving on-lending-of project funds, the community will be able to choose any (investment not consumption) activity it agrees is important for its development, including economic infrastructure such as roads, bridges or irrigation facilities, social service infrastructure such as a school or clinic, water supply and sanitation facilities, environmental conservation measures such as watershed management, or capacity building.

ii) *Implementation Support*—This component seeks to mobilize and support communities and other institutional stakeholders in initiating, planning, implementing, and managing their chosen subprojects. These involve the fielding of community trainers and facilitators who will provide support at all stages of the project cycle - from inception and area targeting, social marketing, information dissemination and sharing, community organizing, participatory community planning, sub-project preparation, municipal competition, project implementation, project monitoring and the preparation and

completion of project reports. The barangay development councils and volunteers receive training on project planning, technical feasibility of subprojects, contracting, construction supervision, O&M, bookkeeping and financial management. The technical staffs of municipalities (e.g., Planning & Development Officer, Social Welfare Officer, Engineer, etc.) are also trained to strengthen their capacity to support the *barangay* level activities and undertake monitoring. In addition, the training menu include development planning and management, conflict resolution, intra- and inter-barangay mediation, quality reviews, and poverty assessments.

iii) *Monitoring and Evaluation*—This component seeks to strengthen the capacity of the National Project Management Office and local communities to monitor and evaluate the implementation of the project and barangay sub-projects, respectively, through the development of baseline data and a computerized management information system. These include participatory monitoring by communities, based on self-defined indicators, and civil society monitoring by the NGOs and the press.

5. Autonomous Region of Muslim Mindanao (ARMM) Social Fund for Peace and Development Project (ASFP)

This is an on-going WB-funded Specific Investment Loan (SIL) project of the ARMM Social Fund/ Office of the President which seeks to foster sustainable development in the Region through poverty reduction and supporting mechanisms for the promotion of a peaceful and safe environment in conflict-affected areas. More specifically, the project aims to a) provide and/or improve sustained access to social and economic infrastructure and services by the poor and conflict-affected poor communities; (b) provide capacity building for women, youth and other community groups for improving food security, employment opportunities and household incomes; (c) strengthen social cohesion and partnerships between and within communities in the ARMM region; and (d) improve local governance and institutional capacities for implementation in the ARMM Region, with a focus on improved transparency and accountability in the allocation and management of public resources by the participating communities, local government units (LGU) and ARMM Regional Government.

The following are the major components of the project:

i) *Community Development Assistance (CDA)*—This component seeks to enable the target communities to implement sub-projects which will improve basic services delivery and address their priority development needs. They get to choose from a menu of eligible subprojects derived from the implementation experiences of on-going projects and from a completed social assessment of community needs in Mindanao. Their selection parameters include their barangay/ sitio development plan framework and an allocation ceiling to be phased in tranches, if appropriate. The subproject menu include, among others, the following: water supply and sanitation systems; small-scale irrigation systems; community health stations; community-based schools and learning centers; post-harvest facilities; farm-to-market roads; timber ports and bridges; community-oriented training; provision of short-term relief and rehabilitation of damaged houses for internally

displaced people; capacity building for women groups, indigenous women groups and out-of-school youth groups in improving food security and household incomes through technical and financial assistance; assistance for training of indigenous people; and mapping assistance in ancestral domain claims. CDD mechanisms are employed so that Peoples' Organizations (POs) from qualified barangays receive on-demand technical and financial assistance so they may efficiently implement and manage their subprojects. Community cost sharing, capacity building, contracting and various accountability mechanisms are implemented to ensure efficient, transparent and sustainable use of funds.

ii) *Strategic Regional Infrastructure* - This involves the rehabilitation of critical infrastructure damaged during the 2000 conflict to improve access and provision of services. The priority (about 13) infrastructure, based on the ARMM's development plan, include facilities for health, education, manpower development, social services, and ports. Technical assistance and training are also provided to enhance the capacity of the Regional line agencies to participate more effectively in procuring, managing, and monitoring infrastructure investments.

iii) *Institutional Strengthening and Governance*—This component seeks to improve the performance, delivery, transparency and accountability of the ARMM and its local government units to their respective (especially conflict-affected) constituencies. In addition, assistance is provided to mainstream the informal community-based education system (including the existing religious group education system) into the national educational system. Curriculum highlighting peace and social cohesion concepts and values through the community-based education system are being developed, pilot-tested and expanded in identified, integrated community-based schools in each province. Teacher training will also be supported to help facilitate accreditation of relevant informal community-based education system to enhance the employment prospects of graduates.

Mexico and Brazil—NG-led Area-based Rural Development Approaches

1. Mexico's Rural Micro-Regions Strategy²

This is a rural development strategy that seeks to operationalize i) an integrated territorial approach and ii) a decentralized governance framework that vertically and horizontally integrates the knowledge available at different governance levels in the design, implementation and monitoring of interventions. The main enabling instruments for this approach is a set of horizontal and vertical contracts and a multi-tier coordination mechanism.

At the Federal level, 16 ministries signed the “Principles for Inter-Ministerial Cooperation and Coordination” which, among others, identified their common target micro-regions that have very high and high degrees of marginalization. Coordination is enforced through the Inter-sector Committee for Micro Regions which meets twice a year and is chaired by the President. It sets the overall strategic guidelines whose enforcement is coordinated by the Ministry for Social Development (SEDESOL).

At the state level, a Sub-Committee for the Attention of Regions of High Priority (COPLADE), which is chaired by the Governor, develops the Programme of Regional Sustainable Development (UPSRD) which serves as the general investment framework for each micro-region. Within the COPLADE is a set of discussion groups (mesas), coordinated by the State delegate of the SEDESOL, which receive bottom-up demands from the multi-sector Councils for Regional Sustainable Development (CRDS).

At the local level, the Strategic Community Centers³ (CECs) coordinate the Committee of Municipal Development (COPLADEMUN). When the micro-region boundaries exceed administrative boundaries (which is often the case), a Micro-Regional Committee is formed to bring together the COPLADEMUN of each municipality in order to articulate their common development agenda and partnership arrangements. With the assistance of SEDESOL representatives, these agenda are transformed into project proposal and submitted to the COPLADE. If the project proposal pass the established criteria and the budget is available in the appropriate ministry, then it is included in the Programme for Regional Investments.

The different levels of government negotiate their respective financial participation in the various approved projects. If the concerned ministry is not willing to fully cover the project cost and the community contribution is not enough for the remaining financial requirement, then the compensatory mechanism of the Micro-Region Programme is tapped.

² A micro-region is a cluster of contiguous and socioeconomically-related municipalities which share common development goals.

³ The most basic coordinating body at the micro-region level.

At least 10 sets of impact indicators (called banderas blancas or white flags) are targeted to be achieved by each CEC. These include an operative telephone service, a minimum number of internet accessible computers, a minimum percentage of rural land registered, among others. So far, the accomplishment rate has been 62 percent since the beginning of this strategy in 2002.

2. Brazil's Cedula da Terra (CT) Project

This is a US\$90M completed (1997–2001) WB-funded Specific Investment Loan (SIL) of the Federal Government of Brazil which sought to reduce rural poverty by: (i) increasing the incomes of about 15,000 poor rural families through improved access to land and participation in complementary demand-driven community subprojects; (ii) raising the agricultural output of these lands; and (iii) pilot testing a market-based, non-conflictive approach to land reform in which beneficiaries, with public funding assistance, directly negotiate with landowners, through community organizations, the purchase of farm lots.

The Federal government allocated R\$11,200 for each beneficiary family for land purchase and community investment subprojects, plus a separate R\$ 1,300 settlement grant. The lower the negotiated price for the land (loan to be collectively paid by the community to the Federal government's participating Bank) the greater the amount left from the R\$11,200 allocation per family for community development projects (considered as grant). Delinquency in loan payments are handled by the community organizations by either replacing the erring members and/or increasing the payment share of the other members.

The project objectives were successfully achieved though the implementation of the following 3 (out of five) main components:

i) *Land Purchase Account*—This component involved the negotiation and purchase of farm lands by the target-communities without land or insufficient land to subsist, with technical assistance from the State and funding assistance from the Federal government. The following land acquisition procedure was followed:

- Community associations identify suitable lands and directly negotiate their purchase with willing sellers;
- Community associations present to the State Land Institute a formal declaration of the land owners' willingness to sell as well as a request for confirmation that the land titles are clean and the negotiated price is consistent with market conditions;
- Community associations submit their land purchase project and community investment plan to the State Technical Unit (STU). The STU, in turn, verify the community's eligibility based an Operations Manual and approves or rejects the land purchase.

- With the STU's approval, the community becomes eligible for a land loan from a Federal land account administered by a Bank. The loan amount is equivalent to the agreed price of the land plus purchase-related expenses such as land surveys.
- Communities decide and enforce by contract the apportionment of the purchased land by member and their corresponding payment share.
- Once the loan is fully paid, individual titles can be created and the land sold, if desired.

ii) *Community Subprojects*—This component provided matching grants to the community associations to finance demand-driven complementary community subprojects and technical assistance. There is only a short negative list of ineligible investments. Eligible subprojects covered infrastructure (e.g., rural water supply, electrification, local road improvements, and small bridges) as well as social (e.g., day care centers, school or health post rehabilitation) and productive (e.g., small-scale community, agro-processing communal tractors and minor irrigation scheme) subprojects.

Each community association has the option of allocating up to 8% of the cost of each subproject for technical assistance and training support which should be specified in the subproject proposal. Beneficiary associations are required to contribute to subprojects either in cash, kind or labor, and would be responsible for the operation and maintenance (O&M) of the investment.

iii) *Community Development Support, Technical Assistance and Training*—This component sought to strengthen the effectiveness and quality of project subprojects by financing demand-driven capacity-building programs provided by the STUs, such as a) community mobilization, b) skills training, c) best practice exchange, d) publicity campaign, e) researches, among others.

Thailand—NGO-led Area-based Rural Development

3. Thai Business Initiative for Rural Development (TBIRD)

This is a program established by the Population and Development and Development Association, a local NGO, in 1988 to facilitate the partnership between a sponsoring company or organization and a rural village in collaborative rural development initiatives. More specifically, the TBIRD seeks:

- to encourage successful businesses to help improve the quality of life of rural people
- to transfer business skills to the villagers
- to establish income generating activities for the rural poor
- to reduce migration and encourage rural migrants to return home

For corporations, the TBIRD provides corporate social responsibility and/ or business opportunities. By fostering or adopting a village, a company can help less privileged villagers earn reasonable income through small-scale sustainable agricultural projects, cottage industries and small enterprises. Meanwhile, the villagers are given a chance to

be owners of community industries and learn four skills essential to their economic security and self-reliant development: to *organize*; to *finance*; to *produce* and to *market*.

The PDA facilitates the process by introducing the company to a village and supporting the project for the first six months after the company joins TBIRD. The PDA lends assistance in three ways:

it coordinates groups, assists in institution building and training on integrated components of rural development

it facilitates relations between government and village organizations

and it facilitates the relations within community organizations

The steps to becoming a TBIRD are as follows:

1. **TBIRD Presentation:** PDA staff present the TBIRD concept to potential sponsors, complimented by slides, products of on-going projects and project documentation.
2. **Task Force Formation:** After agreeing in principle to join TBIRD, the sponsor forms a task force or a working group to plan and manage the project and coordinate with PDA. This taskforce may take a study tour of existing projects. PDA assists the taskforce in identifying potential project villages. Together they explore possible income generation and village improvement activities.
3. **Target Area Visit:** The task force visits potential project villages to meet community leaders and villagers in order to assess village needs and potential.
4. **Project Planning:** After a target village is selected, the task force and villagers discuss possible activities and develop a simple work plan detailing project goals, activities, responsible persons, timeline and budget.
5. **Project Approval:** When the work plan and resource commitments are approved by the company management, the project is formally launched. Funds for rural development are tax deductible through PDA.

The following are the types of rural development initiatives that have been undertaken by the TBIRD:

1. Income Generation

a. Rural Industry - production of traditional handicrafts and foodstuffs

b. Agriculture - organic vegetable and flowers growing, raising ornamental and fruit trees or small animal husbandry projects.

2. Educational Opportunities - village school food production for lunch program, scholarships, equipment to improve school programs.

3. Improving the Environment - reforestation, sanitation or clean-up projects

4. Strengthening Local Institutions - business and other skills training for temples and sub-district councils or cooperatives

5. Social Development - programs for the elderly handicapped and orphans

Box 10-1 TBIRD Agriculture-based Income Generation Project

Bristol-Myers Squibb, a pharmaceutical producer, joined TBIRD in 1991. Like many companies whose products require a great deal of technical sophistication to produce, there was little opportunity for Bristol-Myers to use its TBIRD partnership with Nong Kok village to produce a product that the company could use or sell. Given that the income in the village was primarily derived from agriculture, Bristol-Myers decided it could best contribute by improving agricultural techniques. The means came from an adaptation of a model for agricultural production called a Vegetable Bank.

The Vegetable bank model contrasts greatly with traditional agricultural practices where the staple crops are rice and cassava. The rice is used for human consumption, and the cassava for animal feed, and without irrigation farmers can expect only one crop per year. To escape the constraints of low-rainfall irrigation sources, PDA has promoted the development of irrigated intensively cropped vegetable gardens. This means the villagers grow vegetables, herbs and if close enough to a market, flowers. If care is taken to control water usage, a single well is enough to provide irrigation for up to fifty 800 square meter plots. A single plot can provide a cash income of up to 200 Baht per day, which is significantly higher than the average daily wage for many jobs in the Northeast. As many of the vegetable plots can be tended in the mornings and evenings, villagers can seek other employment, and children can assist after school hours.

After Bristol Myers met with villagers in 1991, the two groups joined to establish the Vegetable Banks at Nong Kok. PDA dug the well and installed the irrigation pumps, and the Government gave permission for the use of 25 rai of land. Bristol-Myers provided the funding for the provision of the infrastructure, and hired a full time coordinator to work with a committee selected from amongst the 43 families that joined the project. Bristol-Myers also provided the initial loan that paid for the site construction, however the villagers are required to repay the loan through the charges levied for water consumption. This not only gives the villagers a stake in the project as they will own it once the loan is repaid, it also encourages water conservation.

As a result of the success of Vegetable Bank projects like this one, over 10 sites are implementing similar systems with assistance from TBIRD. The aim of TBIRD projects is to improve the living standards of all villagers in the area, whether direct participants in the projects or not.

Source: University of Melbourne website

Box 10-2 TBIRD Industry-based Income Generation Project

Singer, a well-known producer of sewing machines and household electrical appliances, joined TBIRD in December 1989, and opened its first centre in 1990. The Singer project is unusual in several ways. First, it is not located in or aimed at a particular village. Rather Singer has established two centers offering training in industrial sewing. These centers train women from villages throughout the northeast. Secondly, Singer's project does not contain traditional development work aimed at providing basic needs. The project primarily involves the promotion of income-generating skill that can be used in people's home village to allow them to make enough money to support themselves without having to migrate.

The resources provided by Singer have also been used to train participants from other TBIRD projects. For example, the first group of workers at the Bata factory received their training at the Singer facilities.

To get the facilities started, Singer donated sewing machines and provided experienced sewing teachers. The classes are held in buildings at the PDA centers, and the course of study lasts three months. Once a student graduates, they are entitled to an interest free loan from a fund provided by Singer, to help them purchase their own sewing machine. In some villages graduates have set up cooperatives to accept contract work from garment factories. Singer has provided some contract work, and tries to coordinate orders from other buyers.

Source: University of Melbourne website

Annex Table 10-1 Summary matrix on the roles of various stakeholders in Local Area-Based Development (ABD) models and initiatives.

ABD Model/ Activity	Stakeholders' Roles				
	National Gov't	Regional/ Local Gov't Unit	Target Community/ Beneficiary	NGO/PO	Private Sector/ Business
A. ARCDP2					
Planning/ intervention design	- project oversight	- technical design of sub-projects	-identification, prioritization and design sub-projects - right-of-way negotiations	For PO: - identification, prioritization and design sub-projects - right-of-way negotiations	
Financing/ Resource mobilization	- major fund source	- counterpart fund generation	- counterpart generation (primarily in-kind)		- FIs to provide loans to supplement the LGU counterpart - FIs and microfinance orgs to provide credit for agri and non-agri activities
On-site Preparation	- social mobilization and preparation in coordination with LGUs and NGO/POs	- social mobilization and preparation in coordination with DAR and NGO/POs		- assist in community mobilization, consultation and planning	- NGOs/service providers assist in community mobilization, consultation and planning
On-site Implementation	- implementation of large infra projects (primarily communal irrigation through NIA)	- implement and manage sub-projects construction by engaging private contractors - assist the ARCs in the maintenance of infra/ turned-over subprojects/facilities - undertake infra project (force account) in very special/limited circumstances	- implement and manage community sub-projects - maintenance of infra/ turned-over facilities in coordination with LGUs	For PO: - implement and manage community sub-projects - maintenance of infra/ turned-over facilities in coordination with LGUs	- local contractors undertake small infra projects
Technical assistance	- technical assistance and training to ARCs in planning, implementing and maintaining community projects and to LGUs to support ARCs - technical evaluation of community-proposed projects	- support ARCs in the design, implementation and mgt of community projects		assist ARCs in micro-enterprise and cooperative devt, tech choices	- provide technical and marketing assistance
Monitoring and Evaluation	- monitoring and evaluation of project	- monitoring and evaluation of subprojects			
B. MRDP2					

ABD Model/ Activity	Stakeholders' Roles				
	National Gov't	Regional/ Local Gov't Unit	Target Community/ Beneficiary	NGO/PO	Private Sector/ Business
Planning/ intervention design	- project oversight	- design RD programs	- ID and design household investment projects (e.g., agri/fisheries/value-adding)		
Financing/ Resource mobilization	- major fund source for LGUs and communities - provide performance-based grants to LGUs for FMR and communal irrigation based on local revenue generation targets	- provide counter-part resources - improve resource generation to access grants for infra projects			
On-site Preparation	- social mobilization in coordination with LGUs and NGOs/POs	- assist in social mobilization		- assist in social mobilization	
On-site Implementation		- supervise, undertake & maintain infra projects - implement and maintain upland and land use management interventions	- manage critical investments with the LGUs and the other stakeholders - implement and maintain upland and land use management interventions - implement household investment projects		
Technical assistance	- capacity building & technical assistance to LGUs and DA field units on devolved agri support services - capacity building of LGUs to supervise, undertake and maintain rural infrastructure projects - capability building of communities and LGUs to improve land management practices critical to protecting coastal areas	- local R&E		- service provider/ technical assistance to LGUs, community, target HHs or individuals	- service provider/ technical assistance to LGUs, community, target HHs or individuals
Monitoring and Evaluation	- monitoring and evaluation of project				

ABD Model/ Activity	Stakeholders' Roles				
	National Gov't	Regional/ Local Gov't Unit	Target Community/ Beneficiary	NGO/PO	Private Sector/ Business
C. CBEM/ CBRMP					
Planning/ intervention design	- project oversight	- design ENRM and livelihood projects with community	- design ENRM and livelihood projects with LGUs		
Financing/ Resource mobilization	- finance investments in ENRM through grants and loans to LGUs - establish rural/ENRM credit window in the MDFO where NG funds can be lent/channeled to LGUs	- provide credit for livelihood projects			
On-site Preparation	- social mobilization in coordination with LGUs and NGOs/POs	- assist in social mobilization		- assist in social mobilization	
On-site Implementation		- implement and manage ENRM and livelihood projects with community	- implement and manage ENRM and livelihood projects with LGUs - apply to DENR for tenurial instrument		
Technical assistance	- capacity building & technical assistance to LGUs and communities on NRM technologies and livelihood projects - provide tenurial instruments to legitimize community management of public lands/resources - capacity-building of LGUs and communities in planning and implementing sub-projects	- assist communities in the application for tenurial instruments			
Monitoring and Evaluation	- monitoring and evaluation of project	- monitoring and evaluation of sub-projects	- monitoring and evaluation of sub-projects		

ABD Model/ Activity	Stakeholders' Roles				
	National Gov't	Regional/ Local Gov't Unit	Target Community/ Beneficiary	NGO/PO	Private Sector/ Business
D. KALAHI-CIDSS					
Planning/ intervention design	- project oversight	- barangays design, poverty-reducing development activities with community			
Financing/ Resource mobilization	- provide grants to barangays for socioeconomic, infra and environment investments	- provide counterpart funds/ resources for NG grants			- micro-financing services
On-site Preparation	- social mobilization in coordination with LGUs and NGOs/POs	- assist in social mobilization		- assist in social mobilization	
On-site Implementation		- barangays implement and manage poverty- reducing development activities with community			
Technical assistance	- capacity building & technical assistance/ capacity building for poor barangays, and vulnerable groups to design, implement and manage development projects - community organizing, participatory community planning, sub-project preparation, project implementation, project monitoring and the preparation and completion of project reports - project planning, technical feasibility of subprojects, contracting, construction supervision, O&M, bookkeeping and financial management.			- contracted service provider - community organizing, participatory community planning, sub-project preparation, project implementation, project monitoring and the preparation and completion of project reports. - project planning, technical feasibility of subprojects, contracting, construction supervision, O&M, bookkeeping and financial management.	- contracted service provider - community organizing, participatory community planning, sub-project preparation, project implementation, project monitoring and the preparation and completion of project reports. - project planning, technical feasibility of subprojects, contracting, construction supervision, O&M, bookkeeping and financial management.
Monitoring and Evaluation	- monitoring and evaluation of project	- monitoring and evaluation of sub-projects			

ABD Model/ Activity	Stakeholders' Roles				
	National Gov't	Regional/ Local Gov't Unit	Target Community/ Beneficiary	NGO/PO	Private Sector/ Business
E. ASFP					
Planning/ intervention design	- project oversight		- design sub-projects chosen from a menu derived from previous development projects, allocation ceiling and barangay development plan	- design sub-projects	
Financing/ Resource mobilization	- major fund source	- provide resource counterpart to NG funds	- community cost-sharing in sub-projects		
On-site Preparation	- social mobilization in coordination with LGUs and NGOs/POs	- assist in social mobilization		- assist in social mobilization	
On-site Implementation		- procuring and managing infrastructure investments - improve delivery, transparency and accountability in public transactions and services	- implement and manage sub-projects chosen from a menu derived from previous development projects, allocation ceiling and barangay development plan - provide informal community-based education system	- implement and manage sub-projects	
Technical assistance	- provide on-demand capacity building & technical assistance to LGUs, communities, POs and vulnerable groups - capacity-building of line agencies in procuring, managing, and monitoring infrastructure investments				
Monitoring and Evaluation	- monitoring and evaluation of project	- monitoring infrastructure investments		- monitoring and evaluation	

Annex Table 10-2 Summary matrix on the roles of various stakeholders in international Area-Based Development (ABD) models and initiatives

ABD Model/ Activity	Stakeholders' Roles				
	National Gov't	Regional/ Local Gov't Unit	Target Community/ Beneficiary	NGO/PO	Private Sector/ Business
A. Mexico's micro-regions program					
Planning/ intervention design	- develops national/federal planning and financing guidelines/framework for federal government assistance - focal ministry coordinates planning and funding among participating ministries and with the states	- develops state-level planning and financing guidelines/framework to identify priority projects	- design sub-projects		
Financing/ Resource mobilization	- evaluates, prioritizes, and funds proposed micro-region-based sub-projects	- evaluates, prioritizes, and funds proposed micro-region -based sub-projects - endorse micro-region project proposals for federal funding	- provide community resource contribution for the project		
On-site Preparation					
On-site Implementation			- implement and manage sub-projects		
Technical assistance	- technical assistance to municipalities and micro-regions	- technical assistance to municipalities and micro-regions			
Monitoring and Evaluation	- monitoring and evaluation of projects				
B. Brazil's Cedula da Terra project					
Planning/ intervention design	- overall project management and coordination			- national coalition of NGOs participate in a national council which set program guidelines	

ABD Model/ Activity	Stakeholders' Roles				
	National Gov't	Regional/ Local Gov't Unit	Target Community/ Beneficiary	NGO/PO	Private Sector/ Business
Financing/ Resource mobilization	- main fund provider coursed through banks	- States negotiate their project allocation with the Federal government - State Land Institute reviews and endorses the community's land purchase project for financing	- provide labor or cash counterpart for sub-projects - pay loan share	community organizations : > ensure loan payment to bank > provide labor and/or cash counterpart for sub-projects	
On-site Preparation				- state and local representatives of NGO coalition undertake community mobilization and organization	
On-site Implementation				- community organizations : > negotiate land purchase with landowners > provide appropriate documentation of land purchase agreement to STUs > develop community investment plan for review by STU > negotiate with STUs for technical assistance identified in investment plan > apportion land and loan payment shares among members	
Technical assistance		- contracting and delivery of technical assistance to target communities by STU, e.g., studies, training		- state and local representatives of NGO coalition: > support program dissemination > provide support for the ID and negotiation of available properties, proposal preparation, program evaluation and technical assistance	
Monitoring and	- project impact evaluation,	- monitoring and reporting by			

ABD Model/ Activity	Stakeholders' Roles				
	National Gov't	Regional/ Local Gov't Unit	Target Community/ Beneficiary	NGO/PO	Private Sector/ Business
Evaluation	studies and dissemination of experiences	State Technical Unit (STU)			
C. Thailand's TBIRD					
Planning/ intervention design			- target rural village designs project/s in collaboration with sponsoring firms and NGO	- program coordinator and promoter - link between business and rural villages	
Financing/ Resource mobilization					- Financial assistance of target rural village
On-site Preparation				- orientation of prospective firm and village participants - capacity-building/ training of participating firms and villages	
On-site Implementation			- target rural village implements and manages project/s in collaboration with sponsoring firms and NGO		
Technical assistance				- orientation of prospective firm and village participants - capacity-building/ training of participating firms and villages	- technical/ marketing assistance and capacity-building/ training of target rural village
Monitoring and Evaluation				- project monitoring, evaluation and feedback	

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