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Guyana Strategies for Reducing Poverty

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Currency Equivalents

Guyana introduced a floating exchange rate in 1988. Average exchange rates prevailing during recent years, Guyanese dollars (G\$) per US1.00, period average:

1989	27
1990	40
1991	112
1992	125
1993	125

Fiscal Year

January 1 - December 31

Tables

Totals in tables do not always equal the sum of their components because of rounding.

Abbreviations and Acronyms

CARDI	Caribbean Agricultural Research Institute
CARIPEDA	Caribbean Peoples' Development Agency
CDN	Canadian Dollars
CFNI	Caribbean Food and Nutrition Institute
CHPA	Central Housing Planning Authority
CHS	Community High Schools
CIDA	Canadian International Development Agency
CPDC	Caribbean Policy Development Center
CPHA	Central Planning and Housing Authority
CPI	Consumer Price Index
CXC	Caribbean Examination Council
DTL	Demerara Timbers Limited
EC	European Community
ESOP	Employee Share Ownership Program
FAO	Food and Agriculture Organization
FGT	Foster-Greer-Thorbecke Poverty Measure
GAHEF	Guyana Agency for Health, Environment & Food
GAIBANK	Guyana Agricultural and Industrial Development Bank
GEC	Guyana Electric Company
GFC	Guyana Forestry Commission
GGMC	Guyana Geology and Mining Commission
GNCB	Guyana National Cooperative Bank
GPH	Georgetown Public Hospital
GS & WC	Georgetown Sewerage and Water Commissioner System
GSS	General Secondary School
GUYSUCO	Guyana Sugar Cane Corporation
GUYWA	Guyana Water Authority
HIES	Household Income and Expenditure Survey
HIV	Aids Virus
IDA	International Development Agency
IFAD	International Fund for Agricultural Development
IICA	Inter-American Institute for Cooperation in Agriculture
IPED	Institute for Private Enterprise Development
LIDCO	Livestock and Dairy Producers
LSMS	Living Standard Measurement Study
LINMINE	Linden Mining Enterprise
MCH	Maternal Child Health
MEC	Ministry of Education and Culture
MLHS	Ministry of Labor, Human Services, and Social Security
MMA	Mahaica-Mahaicony Arbury

MOA	Ministry of Agriculture
MOF	Ministry of Finance
MOH	Ministry of Health
MPLIS	Multipurpose Land Information System
MPWCRD	Ministry of Public Works, Community and Regional Development
NARI	National Agricultural Research Institute
NCERD	National Council for Education Research and Development
NGOs	Non Governmental Organizations
NIS	National Insurance Scheme
ORT	Oral Rehydration Therapy
ODA	Overseas Development Administration
PAHO	Pan American Health Organization
PEIP	Primary Education Improvement Project
PSDAC	Private Sector Development Adjustment Credit
PSR	Public Sector Review
RDC	Regional Democratic Councils
RPA	Rice Producers Association
RWD	Regional Water Divisions
SAR	Staff Appraisal Report
SILWFC	Sugar Industry Labor Welfare Fund Committee Systems
SIMAP	Social Impact Amelioration Program
SSEE	Secondary School Entrance Exam
SSPE II	Secondary School Proficiency Exam
STD	Sexually Transmitted Diseases
UFW	Unaccounted for Water
UNDP	United Nations Development Program
UNICEF	United Nations International Children's Education Fund
WFP	World Food Programme

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Contents

Executive Summary	
Strategies for Reducing Poverty in Guyana	v
1 Poverty Profile	1
Trends in Poverty	1
Poverty Under "Cooperative Socialism"	1
Poverty Under Adjustment Policies (1989-1993)	4
Measuring Welfare Today	6
Poverty Estimates	10
Characterizing Poor Households	11
Geographic Distribution	13
Demographic Characteristics of the Poor	16
Age Distribution	16
Gender and Family Composition	16
Ethnicity	17
Education	18
The Employed Poor	19
Those Out of the Labor Force	21
Consumption Patterns	23
2 Sustaining Growth and Promoting Economic Opportunities for the Poor	26
Maintaining and Consolidating a Sound Macroeconomic Framework and Incentive System	26
Refocusing Public Sector Expenditures and Investment	27
Promoting Private Sector Development	29
Diversifying Sources of Growth and Expanding Access to World Markets	30
Recommendations	33
3 Promoting Agricultural and Rural Development	35
Rural Coastal Areas	35
Agriculture Sector Overview	35
Poverty in the Agricultural Sector	36
Opportunities for Agricultural Growth	37
Constraints to Increased Production	38
Recommendations	42
The Rural Interior	44
The Amerindian Population	44
Economic Development in the Interior	45
Concerns for Future Economic Development	46
Recommendations	47

4 Delivering Social Services to the Poor: The Health, Nutrition, and Education Sectors	50
Equity and Access to Social Services	50
Health	51
Sector Overview	51
Health Indicators	52
Access Implications of the Deteriorated Quality of Services	54
Consumer Response to the Deteriorated Quality of Services	55
Constraints to Improved Quality of Health Care	57
Nutrition	59
Child Nutritional Status	60
Nutritional Programs	61
Recommendations for the Health and Nutrition Sectors	64
Education	67
Sector Overview	67
Educational Indicators	68
Equity Issues in Education	69
Parent Response to Deteriorating School Quality	70
Constraints to Quality and Equity Improvements	71
Recommendations for the Education Sector	75
5 Accessing Basic Infrastructure: The Housing and Water Sectors	78
Housing Sector Overview	78
Housing Policies and the Poor	80
Access to Services: Water and Sanitation	83
Water and Sanitation Policies and the Poor	85
Analysis of Sector Problems	86
Recommendations	87
6 Social Safety Nets	90
National Insurance Scheme (NIS)	90
Social Impact Amelioration Program (SIMAP)	93
Non-Governmental Organizations (NGOs)	96
Recommendations	97
7 Implementing a Poverty Reduction Strategy	100
Sustaining Government Commitment	100
Improving Donor Coordination	100
Fostering Community Participation	102
Improving the Information Base	103
Annexes	105
Previous Estimates of Poverty in Guyana	106
Low Cost Daily Food Basket, May 1993, 2400 Kilocalorie Diet	107
FGT Poverty Measures	108

Statistical Appendix 110
List of Tables 111

Map

Executive Summary

Strategies for Reducing Poverty in Guyana

Lessons from the Past and Prospects for the Future

- i. In Guyana, the period of "cooperative socialism" following independence to mid-1988 was, on the whole, characterized by economic and social decline caused by misdirected government policies and an over-extended role of the state. Real GDP grew at only 0.4 percent per annum on average -- less than population growth. Economic performance worsened significantly during the 1980s. Demand management policies were expansionary, the economy lost competitiveness, external balances came under pressure, and the government relied increasingly on price controls and quantitative restrictions on trade. This further reduced overall economic activity, while spawning a parallel market for foreign exchange that fed inflation. The country's infrastructure became dilapidated, real incomes dropped sharply, poverty increased, and the government became increasingly unable to provide basic social services.
- ii. To reverse the course of the preceding 20 years, in mid-1988 the government launched an economic recovery program (ERP) of broad adjustment measures and structural reforms to establish a market-oriented economy. The economy has responded well to the improved incentive framework with real GDP averaging 7 percent per year during 1991-1993 and inflation gradually declining from 82 percent in 1991 to 8 percent in 1993.
- iii. Notwithstanding the rapid economic recovery, poverty prevails. The government's capacity to deliver essential services has virtually collapsed. Infrastructure remains severely dilapidated. The supply of potable water is limited to a small proportion of the population, drainage and irrigation systems have deteriorated to the point that they are no longer useful, and health and education services have become so inadequate that social indicators for the country have fallen to among the lowest in the Caribbean.
- iv. The prolonged economic and social decline under "cooperative socialism" has left approximately 43 percent of the population living in poverty.¹ Roughly two-thirds of the poor, or 29 percent of the population can be further classified as extremely poor, with expenditure levels below that required to purchase a minimum low-cost diet.
- v. The majority of Guyana's poor live in rural areas, with extreme poverty concentrated in the interior regions. The rural poor are self-employed in agriculture or work as agricultural laborers. Poor rural households have access to adequate land resources, indicating that low productivity is a major cause of poverty. Along the coast, poor households are involved in subsistence agriculture and in small-scale rice production. In the interior,

¹ Based on HIES/LSMS survey, 1993. See Poverty Profile, Chapter 1.

subsistence farming is most prevalent. In urban areas, the poor include those employed as wage laborers in a variety of occupations, in small informal businesses, as public servants at the bottom end of the salary scale, and pensioners.

vi. Rates of employment among the poor are similar to those for the non-poor, suggesting that low income is related to low wages and underemployment rather than unemployment. Because the poorest 20 percent of the population work an average of only 10 days a month and few workers have second jobs, there is scope for increasing incomes through additional employment.

vii. Poor households tend to have more children and have attained lower levels of education than non-poor households. This fact is not surprising, given the high correlation between education levels and living standards. Levels of poverty are similar among male and female-headed households, indicating that female headship is not an effective criterion for targeting poor households. Overall, female labor force participation is only about half that of men with the majority of women involved primarily in domestic work. Across ethnic groups, the incidence of poverty is highest for the Amerindian population, though significant among the Afro-Guyanese, Indo-Guyanese and racially mixed households.

viii. The consumption patterns of the poor differ markedly from the non-poor, particularly in the proportion of total expenditures spent on food; 70 percent of the household budget is spent on food in the poorest households, while only 39 percent in the higher income ones. Home-grown food and international remittances from friends and relatives abroad has helped some Guyanese cope with poverty. Overall, 35 percent of households report receiving some form of international remittances which accounts for 33 percent of their total household income.

Strategies for Reducing Poverty

ix. Broad evidence from other developing economies suggests that rapid and politically sustainable progress on poverty can be achieved by pursuing a strategy with two equally important elements. First, promote productive use of the poor's most abundant asset -- labor -- through policies that harness market incentives, social and political institutions, infrastructure, and technology. Second, provide basic social services such as health, education, nutrition, family planning, and clean drinking water. Both elements are mutually reinforcing and necessary for poverty reduction.

x. For Guyana, the areas of highest priority include promoting rapid economic growth which will create employment, and improvements in the delivery of health, education and water services. Policies to ensure sound environmental management as a base for sustained development must also be put in place. As the poverty profile shows, policies that create job opportunities for the self-employed, wage laborers, youths just entering the labor force, and women in the home will help to reduce poverty. Programs targeted to the poorest -- the Amerindian population, subsistence farmers in rural areas, agricultural laborers, pensioners, public servants at the bottom end of the salary scale, and urban wage laborers in a variety of occupations are equally critical to improving living standards in the country.

Sustaining Growth and Promoting Economic Opportunities for the Poor

xi. Reducing poverty through the macroeconomic framework requires two strategies: first, ensuring that adequate policies continue to be in place so that the recent economic growth is sustainable, and second, that adequate targeting mechanisms for the poor are in place. Several areas for influencing economic policy have been identified to achieve these goals.

xii. The first involves **refocusing public expenditures**. Prioritizing investments in health, education and water will have the biggest impact on the poor. Though the poor have access to important services such as education and health care, they are inadequate because of a dilapidated infrastructure, lack of supplies, and shortages of personnel. The public sector, still involved in direct productive activities and heavily dominating social services, is overextended and inefficient. To improve service quality, government expenditures should be reallocated to the rehabilitation of infrastructure, and to operations and maintenance. Given the existing fiscal constraints, funding will have to come mainly from donor-financed projects. In the medium term, funds will increasingly have to come from cost recovery measures. Accelerating the IDA/ODA Public Administration Project is critical to improving the quality of service in the public sector through higher salaries to attract and retain trained staff. Without well-trained public sector employees, it will be impossible to operate effectively.

xiii. **Privatization** will also help stretch scarce government resources and increase the opportunities for new investments. The privatization process therefore should be resumed immediately. In privatizing, the government must ensure that the Employee Share Ownership Program (ESOP) under consideration, which will set aside at least 10 percent of a company's shares for acquisition by its employees, be carried out fairly and equitably. The government must therefore also ensure that if, in addition, any redundancies result, there is fair compensation for those who lose jobs, subject to existing laws and agreements. Privatization of the **financial sector** can also be oriented to reduce poverty. While privatization of government-owned banks and granting new licenses to commercial banks should, to some extent, do this, it is also necessary to promote further expansion of the successful IPED and Scotiabank "Grameen" model facility. Speeding up the IDB electricity project will also promote private sector development, since adequate and reliable electric service is critical for small-scale industries.

xiv. **Consumption taxes**, like import tariffs, can be structured to promote growth and channel benefits to the poor by setting a zero rate for key capital goods and basic needs goods. The government has announced a proposal in its 1994 budget speech that would exempt most goods consumed heavily by the poor from the consumption tax. The government must continue the fast-track approach to reducing tariffs under CARICOM's CET. This will increase the availability and lower the cost of goods consumed by the poor.

xv. **Pricing and subsidy policies** for basic services need to be urgently reformed. The lack of fiscal resources and demonstrated willingness to pay for services highlights the need for cost recovery schemes for water, drainage and irrigation, and health and education services. Appropriate user charges can actually benefit the poor by expanding the pool of resources available, by allowing more spending on underfunded programs, and by encouraging greater efficiency. As user charges are phased in, "full cost recovery" should be complemented by subsidies for the poorest. Specific recommendations are included in the sector discussions.

xvi. In order to sustain economic growth and thus reduce poverty, Guyana will have to become more competitive and increase and diversify exports. The government and the private sector need to cooperate to undertake market research and promote Guyanese exports. Such a venture should also identify key constraints and suggest appropriate solutions.

Promoting Rural and Agricultural Development

xvii. Guyana's vast natural resources ensure many opportunities for labor-intensive growth in the agricultural, mining, and forestry sectors. Agriculture in particular plays a significant role in poverty reduction because of the heavy concentration of the poor working in the sector. Agricultural growth will directly benefit small farmers and indirectly benefit wage earners from increased demand for farm labor and products and services supplied by the rural non-farm sector.

xviii. Increasing agricultural production will result from removing internal constraints on production. These include poor water management, a lack of information on cropping, farm management, and processing techniques, limited access to credit, and deteriorated feeder roads, which limit access to markets by small farmers.

xix. The responsiveness of farmers to the price incentives under the ERP, and the large number of small rice farmers, demonstrate that increasing the quantity and improving the quality of rice produced will help reduce poverty. Growth in the sugar industry also provides opportunities for the poor through the creation of jobs and eventual increase in the demand for related services. An increase in the production of other crops is important to economic growth in rural areas as well.

xx. Rehabilitation of the drainage and irrigation infrastructure is critical to increasing agricultural production. External financing is needed for major investments in the short-term. However, rehabilitation will only be sustainable if a transparent strategy is designed for operations and maintenance. This requires cooperation from local communities and farmers as well as implementation of a cost recovery scheme. A waiver system could allow farmers who cannot afford the fees to work off their share in maintenance.

xxi. Strengthening research and extension services will help poor farmers increase production through improved cropping and farm management. Intensifying research by providing technical assistance to the National Agricultural Research Institute (NARI) from FAO and UNDP can improve the level of technology available. Extension services can be strengthened by training field agents in effective communications, finance, and new technologies, and by improving the efficiency of field visits. Improving access to credit will enable farmers to finance higher production and/or on-farm investments. Reforms in both the banking and land registry systems will be necessary to ensure that land is valued at full market price and can be used as collateral for loans. Expansion to rural areas of the successful IPED and Scotiabank micro-enterprise program, which currently operate only in urban areas, will also improve small farmers' access to credit.

xxii. To expand export markets, the private sector needs increased assistance in marketing research and in identifying and creating markets for non-traditional exports, such as

tropical fruits and vegetables. In addition, Guyana should prepare to compete in a changing external environment where preferential markets arrangements will increasingly be eroded.

xxiii. Economic activity in the rural interior has recently begun to accelerate as foreign enterprises, such as the Barama timber company and OMAI gold mines, expand into the region. With abundant natural resources available, such activity is likely to increase. However, the environmental impact of development could have a negative impact on the Amerindian population through the contamination of their water sources, and the deleterious impact on the forests and wildlife on which they depend for many materials and products. Policies are needed to ensure that further concessions strike a balance between the environment and sustainable economic development and also assert the rights of the indigenous Amerindian population. To achieve this, the institutional and organizational capacity of the agencies concerned needs to be strengthened and a framework for monitoring and enforcing environmental policy developed. Furthermore, programs to provide basic health and education services and that promote opportunities for the Amerindians should be encouraged. Given limited government resources, this is an area where NGO's have a particularly crucial function.

Delivering Social Services to the Poor: The Health and Education Sectors

xxiv. The important role that health and education play in reducing poverty requires labeling investments in these sectors as high priority. Economic growth is a necessary, but not sufficient, condition for the reduction of poverty. Investments in human capital are also needed so that the poor can both productively participate in growth and ultimately benefit from expanded income-earning opportunities. There is overwhelming evidence that improvements in education, health, and nutrition and making social services accessible to all levels of society, are keys to reducing poverty. Efforts must therefore be made to ensure that social sector spending, which is currently regressive, is reoriented toward providing cost-effective services to benefit the poor, particularly primary and preventive health care, family planning, and basic education.

xxv. Rebuilding the health and education sectors will first require strategic medium to long-term plans that clarify the role of government in providing services, prioritize objectives, determine responsibility for implementation, and define procedures.

xxvi. In the health sector, the government must determine what essential services it can effectively provide. Focusing on the prevention and treatment of the most prevalent diseases in the country would include vector borne disease control, care for common serious illnesses of young children, services to ensure pregnancy-related care, and family planning services and treatment of sexually transmitted diseases, with other services covered by the private sector.

xxvii. The institutional capacity of the Ministry of Health and Regional Health Offices needs to be strengthened in order to plan, budget, and deliver health services. This will require establishing clear lines of authority and accountability, improving monitoring and communications linkages between central and regional health agencies, ensuring that regional offices are well-staffed, and improving the information base necessary for sector planning. Improvements in the ministry's planning capacity and regional administrations' implementation capacity will also require filling the vacant staff positions with qualified administrators, as well as providing extensive training in management and budget.

xxviii. Ensuring the regular supply and delivery of essential medicines is also critical to improving the quality of health care. Through developing a priority list of essential drugs and establishing inventory controls and regional storage facilities, the Ministry of Health will be better able to avoid drug shortages. The poor would also benefit from programs that emphasize breastfeeding and nutritional education.

xxix. Several sources will be required to finance improvements in the quality of care. These include donor assistance, increases in efficiency of health spending, and introduction of cost recovery measures. Cost recovery mechanisms can be designed for hospital and clinic care, while protecting the poor and encouraging greater reliance on a referral system by levying low or zero charges at health posts, health centers, and district hospitals.

xxx. The education sector faces formidable challenges as it tries to rebuild. The administrative capacity to plan, budget, implement and monitor educational policies needs to be improved at both the central and regional levels. Improvements to the system will also rely on increasing teacher salaries to retain and attract quality staff and providing opportunities for pre- and in-service training for enhancing teachers' skills. Access to textbooks improves student performance in developing countries all over the world; thus a mechanism for improving the procurement, storage and delivery of textbooks at the lowest price possible must be developed.

xxxi. The vast inequities in the quality of education indicate a need to strengthen efforts to improve the curriculum at the primary level and initiate a rationalization of the curriculum at the secondary level. Through unifying the secondary system, all students will be given an equal chance to attain the literacy and numeracy skills that affect their lifetime job opportunities.

xxxii. The severely dilapidated state of schools will require substantial donor assistance in the short run. Medium to long-term financing will rely on increasing allocations and improving efficiency. Greater efficiency can be achieved through redirecting resources away from high-cost tertiary institutions toward primary and secondary education, where the returns are highest and the majority of the poor will benefit. Strengthening central ministry control over regional budget and planning procedures will also increase efficiency. Clear lines of authority and accountability between the central and regional levels need to be established to ensure that sector policies are translated into action. Cost recovery, particularly at the tertiary level, will increase the resource base for financing quality improvements. The introduction of a textbook rental scheme can also help to recover costs.

Accessing Basic Infrastructure: The Housing, Water, and Sewerage Sectors

xxxiii. Access to adequate housing and clean drinking water strongly affects the poor's health, productivity, and quality of life. In Guyana, deficiencies in the housing, water, and sewerage sectors result in a substantial deterioration of the basic infrastructure and in widespread squatting. Though access to the physical infrastructure is high, in many areas the quality of services is erratic or non-existent. This low quality of service occurs across all welfare groups.

xxxiv. Given its limited resources, the government cannot afford to subsidize **housing**. The government should move toward a role that facilitates sector investments in partnership with the private sector and beneficiary groups. In promoting private sector participation, the

government will need to remove current constraints such as outdated zoning laws and inappropriate norms and standards. To ensure equity, the government should dispose of the existing low-cost rental units, which are costly to maintain but are largely inhabited by middle and upper income groups.

xxxv. In the water and sanitation sector, the IDA and IDB financed projects will go a long way toward rehabilitating the system, improving service quality, and reforming the sector institutions. There still is, however, a need for addressing medium and long-term policy issues, such as system expansion. As in the other sectors, the institutional capacity for carrying out such planning will need to be strengthened through improving the coordination between the Ministry of Health, GUYWA, the municipal/regional authorities and the Regional Democratic Councils, and through hiring well-qualified staff.

xxxvi. Proposals for reforming the cost recovery system for water services must ensure that policies are equitable and that collection efforts are enforced. The poor are already spending all of their limited resources on basic necessities; thus, tariff increases that are not progressive could promote further poverty. On the other hand, consumers at all levels have expressed a willingness to pay for reliable water services, indicating that there are important opportunities for cost recovery. Community groups also have an important role to play in maintaining the water and sewerage systems by providing shared labor. A structured partnership between the municipal authorities and the community could help ensure that the work is carried out and maintained on a regular basis at a minimal cost. Municipal authorities could provide the necessary supplies, equipment, and technical assistance, while the community could supply labor and the commitment to maintain improvements.

Ensuring Social Safety Nets for the Poor

xxxvii. Because it is inevitable that there will be subgroups among the poor who, for various reasons, will take a longer time or may never be able to directly benefit from economic growth and improvements in the provision of services, it is necessary to have safety nets in place. The groups most likely to require safety net assistance include retirees, the unemployed, the under-employed residents of certain remote and depressed interior communities, the disabled, and some unskilled and semi-skilled workers. While the safety nets that exist in Guyana cover many of the poor, the level of benefits is low. Strengthening these mechanisms will improve their impact on poverty reduction.

xxxviii. The National Insurance Scheme (NIS) is designed to provide benefits to all those formally employed for sickness, medical care, injury, disablement, survivors, and old-age. The majority of the poor, however, are excluded from coverage. Workers in small companies with few employees, the self-employed, independent workers, the informal sector and those not in the labor force, such as older youths who have recently left school, homemakers, and the handicapped are not generally covered by the NIS. In the short term, coverage and effectiveness of the NIS could be improved by assessing the contributions, benefits, and participants of the NIS and improving the institutional capacity to deliver benefits. Following a thorough assessment, the levels of contributions and benefits could be modified to reflect the participants' needs. Making the NIS more efficient will require improving the staff through training, achieving financial control of the system through a management information system, and creating

a supervisory body to advise and regulate NIS activities. As a long-term goal, policymakers should be aiming to ultimately redesign a system that will protect the old, be fiscally sustainable, and encourage economic growth.

xxxix. **SIMAP** was designed to cushion the economic effects of the ERP on the most vulnerable groups. Since its inception, SIMAP projects have benefited many through programs such as one-year cash transfers for pensioners, low-paid public servants, social assistance recipients, and mothers and children who are clients of health centers; one-year nutritional supplements for the elderly, pregnant and lactating mothers, and young children; provision of drugs and essential medical supplies to health centers; skills training; food-for-work projects; and rehabilitation of schools, feeder roads, markets, drainage and irrigation systems, community centers, potable water supply systems, and sanitation facilities.

xl. While SIMAP has assisted many, implementation of projects has been slow. In the absence of adequate data, SIMAP has not had the capacity to target projects to the poorest nor to monitor and evaluate the impact and significance of its interventions. With the recent availability of data from the Living Standards Measurement Survey (LSMS) and technical assistance, SIMAP will be in a better position to target projects more effectively. As a long-term goal, the government should work with the line ministries, NGOs, the private sector, and donor organizations to determine how long SIMAP will exist, the role for the agency when sustained growth is achieved, and how the line ministries will take over responsibility for SIMAP's activities. The government must ensure that its primary efforts are now focused on strengthening the line ministries' capacity to effectively deliver services, and must also ensure that bridging measures are in place to assist those who will still be in need and to stave off severe shocks.

xli. **Non-Governmental Organizations (NGOs)** are experiencing a resurgence in Guyana. The largest NGO, the **Futures Fund** (financed by CIDA) is funding subprojects in areas such as school rehabilitation, feeding programs, water supply, and drainage and irrigation rehabilitation. Most of the other NGOs are smaller working in the areas of social services and micro-enterprise development. In an attempt to strengthen the impact of NGOs on poverty, workshops should be held to help enhance their institutional capacity. These workshops could focus on demonstrating to local NGOs the value and importance of assessing their individual and collective efficiency, coverage, targeting success, effectiveness, appropriateness, institutional capabilities, and self-financing capacity, and ways to improve performance in all of these areas. An umbrella NGO organization should be established to provide ongoing support in implementing community projects and could provide training and technical assistance in areas that would strengthen performance and enhance self-sufficiency.

Implementing a Poverty Reduction Strategy

xlii. The strategies outlined above require a strong commitment from the government, the Guyanese population, and the donor community. The government's role in the process is to ensure that it maintains the macroeconomic and incentive framework set out in the ERP to support private sector-led growth, refocuses the role of the public sector and strengthens its ability to deliver social services, determines clear priorities and strategies to address the huge infrastructure constraints, and, finally, ensures sound environmental management as a base for

sustained development. A strengthening of **donor coordination** would improve efficiency in the use of resources available and reduce duplication. These issues could be addressed in the fora already in place, such as the Caribbean Group for Cooperation in Economic Development (CGCED) or the largely informal meetings of donor representatives in Georgetown, where the local UNDP office could play an important role in assisting in the sharing and coordination of information.

xliii. There is also scope for effective poverty reduction at the **community level**. Individuals could take on a more proactive role through providing "shared labor" in areas such as the maintenance of drainage and irrigation facilities, child care, and improving the water supply system with government assistance for materials. Funding for such inputs in the short term will have to come from donor-financed projects such as SIMAP. Individuals who provide assistance to improve living conditions in the community will also feel a sense of ownership and be willing to maintain community improvements.

xliv. Finally, additional data is critically needed in all sectors. Without sufficient information it is difficult to plan appropriately. Some of the data needs that have been identified include information on the labor force, demographic and health indicators, information on agricultural and farm management practices, the number and physical condition of school buildings, and periodic income and expenditure surveys such as the HIES/LSMS. To improve future data collection efforts, the Statistical Bureau should be strengthened. In addition, creating a Social Policy Unit to analyze social policy and integrate the findings into more effective social sector programs would benefit poverty management. Such a unit could serve to build institutional linkages between the Statistical Bureau, line ministries, SIMAP, and the University of Guyana, as well as disseminate information and coordinate training programs in the country.

Poverty Reduction Matrix

Poverty Concern	Time Frame	Recommended Strategy
Reaching the poor	I	- Refocus the role of the public sector and strengthen its ability to deliver social services.
	I	- Target programs and policies to the following subgroups: subsistence farmers, agricultural laborers, Amerindians, urban wage laborers, pensioners, and public servants at the bottom end of the salary scale.
<i>Macroeconomic, Incentive, and Regulatory Policies</i>		
Lack of economic opportunities	I	- Maintain economic and incentive framework under the ERP.
	I	- Promote rapid economic growth through increased private sector investment.
	I	- Resume privatization process.
	I	- Diversify exports.
	S	- Initiate joint government-private sector efforts to carry out market research.
	M	- Enhance access to export markets by small businesses, small farmers and employment intensive enterprises.
Unemployment and underemployment	I	- Expand private sector involvement in the economy.
	I	- Promote private sector employment, ensuring fair labor market policies.
Lack of access to credit	S	- Ensure that regulatory and supervisory reform, restructuring, and privatization all contribute to better access to credit by small businesses, small farmers, and potential home owners through privatization of commercial banks, expansion of IPED, and "Grameen" model facility.
Equity in policies	I	- Reduce regressive impact of consumption tax and import duties through simplification and lowering of tax rates, and exempting tax rates and tariffs on basic necessities which the poor consume most.
	S	- Consider options for raising the threshold on exemption of personal income tax.
Inadequate provision of basic services	I	- Prioritize public expenditures to health, education, and water sectors.
	I	- Accelerate implementation of the Public Administration Project.
	I	- Increase allocations for operations and maintenance, to be financed in the short term through donor-financed projects.
	M	- Increase resource base through pricing, cost recovery and subsidy policies, and ensure equity and universal coverage by providing vouchers or by exempting poor from user fees.

I=Immediate priority, 1994-1995
S=Short-term priority, 1996-1997
M=Medium-term priority, 1998-2000

Poverty Reduction Matrix (continued)

Poverty Concern	Time Frame	Recommended Strategy
<i>Agricultural Development, Coastal Areas</i>		
Low productivity for small farmers	I	<ul style="list-style-type: none"> - Improve the operations and maintenance of the drainage and irrigation system through institutional reform and capital investments. - Continue investments in new rice seed and other cropping technologies and ensure dissemination through extension agents. - Improve cropping and farm management techniques through strengthening of extension services.
	I	
	S	
Demand for agricultural products produced	S	<ul style="list-style-type: none"> - Expand external markets through investments in marketing research, advertising and sales promotion. - Identify opportunities for non-traditional exports. - Improve international transport services.
	S	
	M	
Limited access to credit for small farmers	S	<ul style="list-style-type: none"> - Reform financial sector to enable banks to make loans to small farmers. - Reform lands registry to increase land values and ensure that land can be used as collateral for loans.
	M	
Limited access to local markets	M	<ul style="list-style-type: none"> - Rehabilitate road network including selected feeder roads.
<i>Rural Development, Interior Areas</i>		
Balanced and sustained growth opportunities	I	<ul style="list-style-type: none"> - Strengthen institutional capacity and coordination to plan and monitor programs and policies in the MPWCRD, GFC, GGMC, Commissioner of Lands and Surveys, and Ministry of Amerindian Affairs. - Involve Amerindian communities in the decision making process.
	I	
Environmental sustainability	I	<ul style="list-style-type: none"> - Design policy framework for conservation and sustainable development of natural resources. - Monitor and enforce appropriate natural resource use.
	I	
Opportunities for the Amerindian population	S	<ul style="list-style-type: none"> - Improve provision of education and health services. - Strengthen markets in mining and logging centers for locally grown products. - Promote local industries such as handicrafts and eco-tourism.
	S	
	S	

I=Immediate priority, 1994-1995
S=Short-term priority, 1996-1997
M=Medium-term priority, 1998-2000

Poverty Reduction Matrix (continued)

Poverty Concern	Time Frame	Recommended Strategy
<i>The Health and Nutrition Sectors</i>		
Low quality of health care available in public facilities	I	- Clarify role of the public sector and ensure provision of minimum National Essential Health Package.
	I	- Improve human resource capacity through training and salary increases to attract and retain qualified staff.
	S	- Increase resources available to primary health centers through improved efficiency; design cost recovery mechanisms.
	S	- Strengthen institutional capacity at central and regional levels to plan and implement health programs and policies.
	M	- Introduce cost recovery.
Drug shortages	I	- Improve the supply and delivery of pharmaceuticals to rural clinics, health posts, health centers, and regional hospitals.
Bias on urban-based curative and hospital care	S	- Strengthen rural health posts and health centers through resource reallocation, and training of community health workers.
High fertility	M	- Improve family planning services available, particularly in rural areas.
Malnutrition	I	- Improve targeting of nutrition programs to areas where malnutrition is highest.
	I	- Improve water supply.
	S	- Focus programs on improved nutritional education, particularly on appropriate breastfeeding and weaning.
	M	- Improve national nutritional education campaign.
<i>The Education Sector</i>		
Low quality of education in primary and secondary schools	I	- Increase resource allocations to education and introduce cost recovery at the tertiary level.
	I	- Improve teaching quality through in-service training and salary increases to retain and attract qualified teachers.
	I	- Reallocate educational spending towards primary and secondary levels.
	I	- Strengthen institutional capacity at central and regional levels to effectively plan, budget, administer, and monitor educational programs and policies.
Dilapidated infrastructure	I	- Place priority for rehabilitation on schools in the poorest areas.
Inequities in educational opportunities	M	- Strengthen primary curriculum and rationalize secondary curriculum.
	M	- Introduce new secondary curriculum to community high schools and primary schools with secondary departments first.
Shortages of textbooks and other resource materials in schools	M	- Develop a strategy to procure and deliver textbooks with emphasis on primary level first and phase-in of secondary level. - Introduce textbook rental scheme at secondary school level so that more resources are available for primary level.

Poverty Reduction Matrix (continued)

Poverty Concern	Time Frame	Recommended Strategy
<i>The Housing, Water and Sewerage Sectors</i>		
Inequitable housing programs	I	- Government should end low-income rental housing through giving first option to purchase units to current tenants.
Widespread squatting	I	- Avoid illegal occupation of property through analysis of squatter profiles to understand problems and seek solutions, and institute greater vigilance and stronger legal actions against squatters.
Poor quality of water and sewerage services	I S S S	- Continue overall rehabilitation of the system and set minimum performance criteria levels. - Strengthen institutional capacity for sector operations. - Educate clients on proper use of system through public awareness campaign to avoid deliberate breaking of water mains. - Improve coordination between the Ministry of Health and water agencies to ensure policy consistency.
Equity in access	S	- Ensure that there is consistency in providing access to rural areas. In the short term, provide solutions such as water purification tablets and more sanitary storage containers to poorest areas.
Affordability of service	S S	- Improve cost recovery schemes and collection at all levels. - Ensure that proposed tariff increases are not too high for the poor.
<i>Safety Nets</i>		
Program Effectiveness	I I I	- Improve targeting of SIMAP and planning capacity, and increase rate of implementation. - Increase efficiency of NIS through staff training and expanded financial control. - Improve coordination among NGOs and provide training to strengthen implementation capacity.
Sustainability of Projects	I M	- Strengthen community participation through SIMAP community workers. - Design effective absorption of SIMAP responsibilities into line ministries.
Limited Coverage of NIS	I S	- Revise contribution and benefit levels to improve coverage and effectiveness for the poor. - Strengthen institutional capacity of NIS to deliver benefits.
Long-term provision of social security	M	- Develop a long-term strategy for sustaining a viable social security system. Address issues such as ensuring adequate old age pensions, role of government, and financing mechanisms through evaluation of future needs and cross-country experience.

I=Immediate priority, 1994-1995
S=Short-term priority, 1996-1997
M=Medium-term priority, 1998-2000

1

Poverty Profile

1.1 In designing programs and policies to improve the living conditions of the poor in Guyana it is necessary to identify patterns of poverty and vulnerable groups. The poverty profile, largely based on data from the 1993 LSMS/HIES survey, shows who the poor are, where they live, and their occupations, education levels, and consumption patterns. A brief methodological description provides a framework for understanding the information presented. To understand the causes of poverty, it is important to look at its trends and at the behavioral responses of the poor over time. In the case of Guyana, this is difficult because of large gaps in the data collected over the past two decades. It is, however, possible to draw some conclusions based on the country's macroeconomic performance and living standard indicators during this period.

Trends in Poverty

1.2 Despite the methodological shortcomings in the efforts to measure changes in the rate of poverty over the past two decades in Guyana, there is substantial evidence that levels of poverty increased significantly during the 1980s as a result of economic mismanagement and excessive government intervention. Concomitantly, living standards fell as the government ceased to provide essential services, and infrastructure deteriorated.

Poverty Under "Cooperative Socialism"

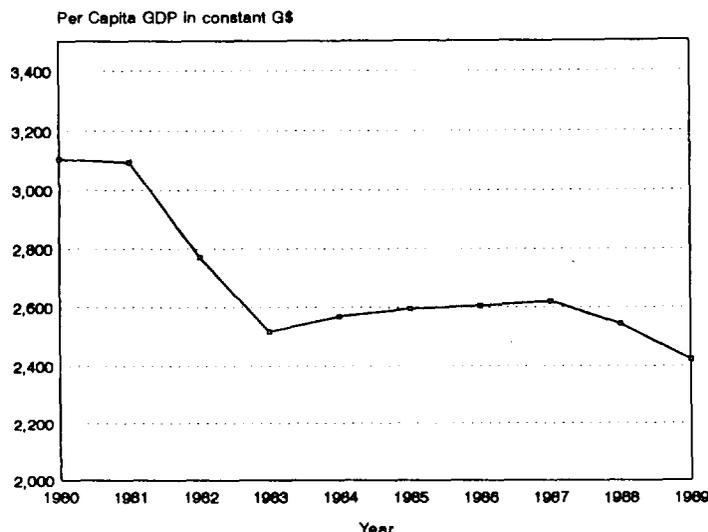
1.3 During the mid 1970s, Guyana adopted what it called "cooperative socialism," which increased state intervention in the economy. All major economic activities were state-dominated, either directly through state ownership or indirectly through price, credit, and foreign exchange controls. By 1988 the government controlled over 80 percent of recorded import and export trade and 85 percent of total investment.

1.4 Guyana's macroeconomic performance following independence was dismal. Real GDP grew at an average of only 0.4 percent per annum during 1966-1988 -- less than population growth. The benefits from the sugar boom of the early 1970s were squandered by the government. The sugar and bauxite industries, two pillars of the economy, weakened significantly after being nationalized. Economic performance deteriorated even further by the early 1980s. Policies were expansionary, the real exchange rate appreciated, and the government relied increasingly on price controls and quantitative restrictions on trade. This further reduced the performance of industry, while spawning a parallel market rate for foreign exchange that increased rapidly and fed inflation.

1.5 Though data are not available to precisely measure the increase in poverty during the 1980s, the decline in the standard of living at a minimum mirrored the decline in real per-capita

consumption. From 1980 to 1989, real GDP per capita fell at an average rate of 3.0 percent per year.

Figure 1.1: The Decline in Per Capita GDP, 1980-89



1.6 Available data indicate sharply declining real wages during the 1980s.² Average real wages in the central government declined by 18 percent between 1986 and 1991, while during the same period the Consumer Price Index increased from 41 to 603. The overall result has been a substantial increase in poverty. Those who could once afford to support their families on public service salaries became unable to afford even the minimum food basket.

1.7 With the economy in ruins, the government became increasingly unable to meet its commitment to providing basic social services. Schools, health services, water services, and sanitation all deteriorated. The government also neglected physical infrastructure, including roads, sea defenses, and the system of drainage and irrigation. The severe decline in living standards led to extensive migration of talented Guyanese to jobs abroad, significantly depleting the country's pool of skilled workers and professionals.

1.8 The drop in living standards during the 1980s is demonstrated by partial data on health and education. During this period infant mortality rates increased sharply, as did diseases spread by vectors and those caused by environmental problems. Between 1978 and 1988, infant mortality rose by 17 percent.³ Reported cases of gastroenteritis nearly doubled between 1984 and 1989, typhoid fever tripled, and from 1984-1991, reported cases of malaria increased nearly

² The minimum wage was valued at just over US\$1.00 per day in 1989, compared with US\$2.89 in 1980.

³ Guyana Statistical Bureau estimates infant mortality rose from 40 per 1000 live births in 1978 to 47 per 1000 live births in 1988.

twelve-fold.⁴ These increases in morbidity are attributed to the breakdown in basic services, particularly potable water delivery, waste removal, and provision of adequate sanitation. In education the pattern is similar, reflecting deterioration in the quality of services provided. Secondary school enrollment rates declined by almost 40 percent from 1980-1990, while the percentage of student passes in the Secondary School Entrance and CXC dropped significantly over the decade.⁵

1.9 Attempts to quantify levels of poverty in Guyana over the last two decades have been carried out by Boyd⁶, Ramprakash⁷, and the Pan-American Health Organization (PAHO)⁸ using income data from the 1980 Guyana Census and data from a PAHO nutrition survey carried out in 1971. In the absence of accurate household survey data, the techniques used were based on numerous assumptions and are believed to contain a substantial margin of error (see Annex I for details). The PAHO estimate reported that at least 50 percent of the population earned less than 55 percent of the mean income in 1971. Based on this distribution of income, it was estimated that approximately 38 percent of the population in 1971 fell below the poverty line.⁹ Boyd's calculation estimated that the poverty level had risen to include 65 percent of the population in 1988 and by 1989, taking in the effects of rapidly worsening inflation, 75 percent of the population had incomes below the poverty line.¹⁰ The Ramprakash study further calculated that if receiving official nutritional requirements was the underlying criterion, an estimated 86 percent of the population would fall below the poverty line.¹¹

1.10 The effects of negative growth rates on poverty can be calculated using data from the 1993 Household Income and Expenditure Survey (HIES)¹². This data set is comprised of a large representative sample of the population. During the period 1980-1990, real per capita GDP declined by approximately 29 percent. Assuming that the decline in per capita consumption was similar and that the distribution of welfare has remained the same, the incidence of poverty would have increased from approximately 26 percent in 1980 to an

⁴ Data from Ministry of Health as recorded in the 1993 Guyana PSR.

⁵ National Examinations Board, Guyana.

⁶ Boyd, IDB report 1989, also see Thomas, 1993, "Poverty in Guyana," mimeo.

⁷ Ramprakash, SIMAP draft, 1991.

⁸ Pan-American Health Organization (PAHO), 1976.

⁹ The poverty line was calculated by Boyd and retroactively adjusted for inflation; it came to G\$259 per capita per year in 1971.

¹⁰ Estimated at G\$10,212 (US\$376) per capita per year in 1989.

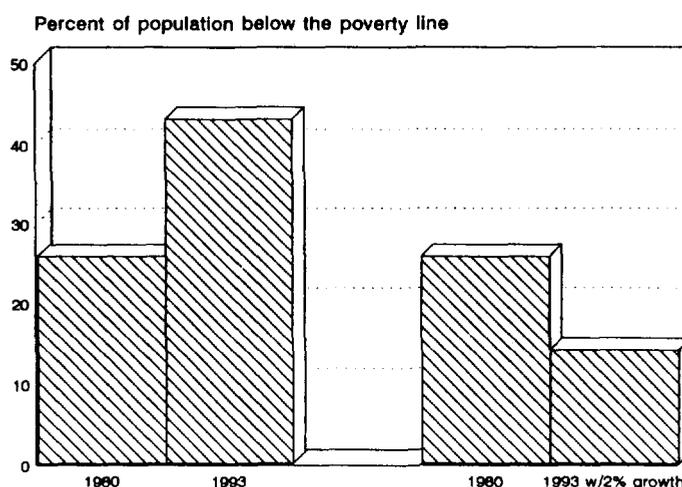
¹¹ Estimated at G\$13,500 (US\$497) per capita, per year in 1989.

¹² See the following section Measuring Welfare Today.

estimated 43 percent in 1990.¹³ Moreover, this increase is probably underestimated, given the fact that the fertility rate is higher for the poor and that research for other countries has shown that in the vast majority of cases economic recession was accompanied by rising inequality in the distribution of welfare.¹⁴ Using the same assumptions for measuring changes in poverty, if per capita GDP had increased by a plausible 2 percent per year instead of the 2.9 percent average annual decline, poverty would have been reduced from 26 percent to 14 percent during that period (see Figure 1.2).

1.11 Thus while there are considerable gaps in the data necessary to measure changes in poverty over time, the overall picture is clear: large increases in poverty occurred during the seventies and eighties as a direct result of declines in per capita GDP. Consequently, any strategy aimed at reducing poverty has to be firmly based within a sustainable growth oriented policy.

Figure 1.2: Estimated Changes in Poverty, 1980-93



Source: HIES/LSMS, 1993
Data for 1980 and 1993 w/ 2% growth are estimated, data for 1993 are actual.

Poverty Under Adjustment Policies (1989-1993)

1.12 The deteriorated state of the economy led the previous government to reverse its course of over twenty years and embark on an Economic Recovery Program (ERP) in mid-1988 supported by IDA and the IMF. The ERP consisted of broad macroeconomic adjustment measures and structural reforms to stabilize and realign relative prices, dismantle state controls, and establish a market-oriented economy. The government improved fiscal performance through

¹³ The 1993 poverty estimates were used for 1990. Though real growth has been positive during the 1990-1993 period (6-8%), prices increased dramatically between 1990 and 1992, which may have negated any resulting reduction in poverty. For the 1993 estimate, see the section on Measuring Welfare Today.

¹⁴ See World Bank, 1993: Washington, D.C. *Poverty and Income Distribution in Latin America: The Story of the 1980s*.

expenditure restraint and tax reforms; established a market-determined exchange rate regime; reduced tariffs and eliminated most import prohibitions; embarked on a privatization program divesting 14 out of the more than 40 public enterprises and introducing private management in the sugar and bauxite industries; and eliminated its arrears to the official lending agencies.

1.13 Stabilization policies, while necessary, often result in a decline in real incomes in the short run and inevitably affect the incomes of the poor. Guyana has been no exception, though the decline in real income seems to have been relatively short-lived. In 1989, exchange rate depreciations were passed through to most consumer prices by the rapid removal of price controls from "wage goods" -- such as kerosene, cooking gas, and flour -- as well as the removal of a long list of consumer goods from the "banned list" of imports. The result was a sudden increase in the prices of essential goods and services; rice rose by 224 percent, cooking gas by 244 percent, sugar by 308 percent, gasoline by 205 percent, bus and taxi fares (controlled) by 100 percent, and electricity by 112 percent.

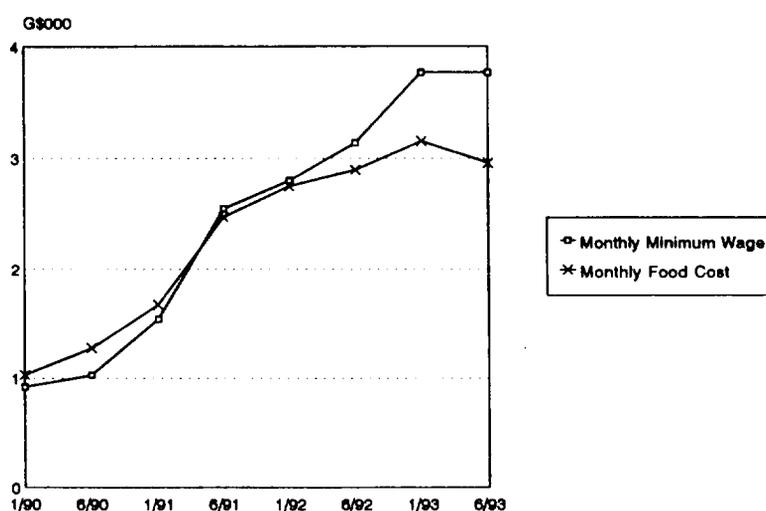
1.14 According to data available from the Statistical Bureau, consumer prices rose by 79 percent during the first half of 1989, followed by an estimated 15 percent increase during the second half of the year. CPI figures following 1989, which are based on Statistical Bureau and IMF estimates, show increases of 82 percent in 1991, and 14 percent in 1992.¹⁵ By 1993, inflation had fallen to 8 percent.

1.15 The adjustment of nominal wages and incomes to inflation has been uneven across sectors. Wages in government have increased much more slowly than wages in the formal private sector, incomes in the informal private sector, or incomes in agriculture. Bottom-end private sector wages are now perhaps 50 percent above bottom-end civil service wages, and top civil servants are paid small fractions of the salaries received by their private sector counterparts. Figure 1.3 shows a comparison of the trend in the minimum wage salary and the minimum cost of a 2400 calorie diet. As food prices stabilized in 1992, the gap between wages and prices began to widen.

1.16 Incomes in agriculture were faster to respond to the depreciation of the real exchange rate because G\$ revenues from exports of rice and sugar increased substantially and because domestic price controls on these and other agricultural products were removed. However, benefits from the relative price realignment have been relatively skewed towards large farmers and millers for several reasons. First, real net revenues of large farmers appear to have increased substantially, because (a) their supply response was stronger due to having undertaken investments in infrastructure and technology; (b) their costs increased by less than the rate of technology; and (c) they were able to sell their increased output because Guyana had fallen well below its quota allotments on preferential markets. Secondly, little of the rice produced by small farmers is of acceptable export quality and thus they do not fully benefit from higher international prices. It should be noted, however, that farm and plantation workers have benefited from the real exchange rate depreciation through increased employment as output has expanded to fill the rice and sugar export quotas.

¹⁵ Based on end of period averages. Source: *Statistical Bureau of Guyana and IMF estimates.*

Figure 1.3: A Comparison of Wages and Food Costs, 1990-93



Source: GAHEF, 1993

1.17 Stabilization does not seem to have generated large-scale unemployment, nor has it adversely affected industries in Guyana as it has in some other countries. The main firms that are still operating through government subsidy -- the Guyana Electric Company (GEC) and LINMINE, the bauxite operation -- were running at a loss long before the ERP was launched. Except for "voluntary" exit from public service employment due to the nominal wage freeze, stabilization policies have not generated much unemployment.¹⁶ This is partly due to the buffer role played by the large informal economy and to the fact that agriculture, the most employment-intensive sector aside from government and other services, benefited almost immediately from the ERP.

1.18 The informal sector has prospered since 1988, driven partly by necessity, as real wages deteriorated, and partly by opportunity. Under exchange controls and import restrictions, informal activity centered on black market exchange dealing, smuggling, and hawking. Much of this activity is being absorbed into the formal economy. Informal sector activity, together with remittances from abroad, may have softened the impact of adjustment measures for many.

Measuring Welfare Today

1.19 During 1992-1993 a national Household Income and Expenditure Survey (HIES) was carried out by the Statistical Bureau with supervision from the United Nations Development Program (UNDP). The survey was carried out in four subrounds and contains approximately 7,200 households. In order to provide more data on the social sectors, a Living Standards

¹⁶ Defined as unemployed individuals actively seeking jobs.

Measurement Study (LSMS) was implemented under the direction of the World Bank in conjunction with the third subround of the HIES. The LSMS includes 1,820 households¹⁷ nationwide and is directly linked to the HIES.¹⁸ The combined HIES/LSMS survey provides a wealth of information to enable in-depth analysis of the relationships between individual and household behavior, living standards, and policy.

1.20 The HIES/LSMS data is used in this report as the basis for measuring welfare. Household welfare is measured as total consumption, rather than income, for three reasons. First, it is difficult to measure the income of those working in the informal sector, self-employed workers, and those who receive in-kind payments such as food or housing. Second, survey respondents regard questions about consumption as less sensitive than questions about income and thus are likely to be more accurate. Finally, consumption is considered to more accurately represent long-term welfare because income may fluctuate over short periods.¹⁹

1.21 The consumption aggregate used consists of data on direct household expenditures, the value of home-produced food items, the value of payments in kind, housing expenditures including the rental value of owner-occupied housing, and expenditures on non-consumption items such as gifts, contributions, and interest. Two spatial price indices, one for food and one for non-food items, were created to measure how much a given standard of living costs in different locations. Though costs in the coastal areas tend to be similar across regions, prices are notably higher in the interior regions of the country.²⁰ The cost of transporting products to the interior, which is largely done by air, is high and is reflected in the price of goods there. The limited demand in remote areas only further inflates prices. For example, the cost of a pound of sugar purchased in Lethem, a town near the Brazilian border, is estimated to be nearly four times higher than in Georgetown. By using the spatial price index based on the 16 strata defined in the LSMS survey, it is possible to make standard comparisons of welfare across regions.

1.22 Mean per capita consumption adjusted for regional price differentials is estimated at G\$91,602 (US\$733). This figure is considerably higher than the GNP per capita estimate of US\$330 for 1992 (World Bank Atlas, 1993). The GNP per capita figure is calculated using the World Bank Atlas methodology, which measures the total domestic and foreign value added

¹⁷ The HIES/LSMS data set contains 7,950 individuals.

¹⁸ Because the full HIES contained a larger sample of over 7,200 households and extended throughout a full year, some differences may occur in comparing results from the two data sets (i.e. slight differences in consumption patterns, and regional distribution). The smaller sample size used in the third subround may account for a larger margin of error.

¹⁹ There is an inherent weakness in using either consumption or income data as the sole measure of welfare. Neither measure captures factors such as health status, life expectancy, literacy, and access to public services, which are critical to one's standard of living. Households with access to clean drinking water, for example, are better off than those without, even though their income or consumption level may be the same. To account for this, this report will also discuss other indicators of well-being, such as nutrition, life expectancy, and mortality, to the extent possible.

²⁰ Regions 1, 7, 8, and 9.

claimed by residents.²¹ It comprises GDP (the total output of goods and services for final use produced by residents and nonresidents, regardless of the allocation to domestic and foreign claims) plus net factor income from abroad, which is the income residents receive from abroad for factor services (labor and capital) less similar payments made to nonresidents who contributed to the domestic economy. GNP is then divided by the population estimate and converted to U.S. dollars using the official exchange rate.²² The discrepancy between per capita consumption and per capita GNP is due to several factors: (a) income is generally under-reported, which includes the under-reporting of the substantial international remittances received from expatriate Guyanese living abroad; (b) illegal activity such as smuggling is not reported; (c) there is undercounting of the informal sector (including subsistence farming); and (d) the population estimate used in 1992 was 802,000, even though the Guyana Statistical Bureau has estimated the population, based on the 1990 Census, at 730,000.

1.23 The welfare level reached by a household of a given consumption level will depend on the household's structure. To reflect this, it is preferable to use a per capita consumption aggregate based on household composition, or an equivalence scale, for comparative purposes. The simple value of household size will not account for some of the economies of scale associated with additional household members, particularly children. For example, clothing and other items can be handed down from older to younger children, durable goods such as stoves, refrigerators, etc. can be used by additional household members at no extra cost, and children consume less food than adults.²³

1.24 The adult equivalence scales are based on those previously calculated and used in several countries²⁴. A weight of 0.2 is assigned to children aged 0-6, 0.3 to children between ages 7-12, and 0.5 to children between the ages of 13 and 17. All household members over the age of 18 are assigned the weight of 1. The sum of all weights for each household is used to derive a value for adjusted per capita consumption.

1.25 Deciles are then constructed using the per capita consumption measure adjusted for household composition and regional price differentials. Decile one represents the poorest 10 percent of the welfare distribution, while decile 10 represents the richest 10 percent. Table 1.1 presents a comparison of the value and distribution of the unadjusted and adjusted per capita consumption aggregates. Though the adjustments have an impact on the actual value of the consumption aggregate, they do not change the overall distribution of welfare. The effect of the price adjustments is small because the populations most affected are in the interior and account for only a small percentage of the total population. For all three measures, the poorest 40

²¹ See 1993 World Development Report, Technical notes for description of Atlas Methodology.

²² In 1993, the official exchange rate was US\$1=G\$125.

²³ See Deaton and Muellbauer, 1980, Chapter 8, *Economics and Consumer Behaviour*, Cambridge University Press, and van der Gaag, J., 1982, "On Measuring the Cost of Children." *Children and Youth Services Review*. Vol. 4, No. 1, pp. 77-109.

²⁴ Calculated for Indonesia and Sri Lanka (see Deaton and Muellbauer 1986), and now used in other countries, for example Jamaica, Peru, and Cote d'Ivoire.

percent of the population account for 12 percent of total consumption, while the richest 20 percent accounts for approximately 55 percent of all wealth.

1.26 The inequality in the distribution of welfare is similar to the pattern in other countries. A World Bank study²⁵ comparing data on the distribution of income (and consumption) for 17 Latin American countries shows that in 1989 the percent share of total income for the bottom 20 percent of the population was less than 4.2 for 11 of the 17 countries, as is the case of Guyana. The Gini coefficient, an index representing inequality in the distribution of welfare, is estimated at 42.3 for Guyana, similar to estimates for Jamaica, Costa Rica, and Venezuela. Figure 1.4 reflects the distribution of welfare across the population based on the adjusted per capita consumption measure.

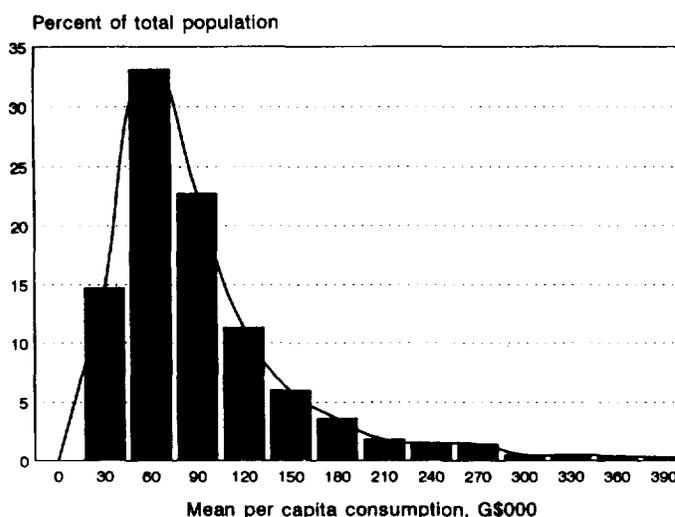
Table 1.1: The Distribution of Welfare Using Three Consumption Measures, 1993

Decile	Mean Per Capita Annual Consumption (in G\$)			Distribution of Consumption (%)		
	Unadjusted per Capita	Adjusted by RPI ¹	Adjusted by RPI and Equivalence Scales	Unadj.	Adjusted by RPI	Adjusted RPI & Equiv.
I	20,546	17,193	23,182	1.7	1.4	1.5
II	27,820	28,747	38,476	2.6	2.5	2.6
III	33,237	35,685	48,825	3.2	3.2	3.5
IV	45,173	42,035	54,933	4.5	4.6	4.7
V	53,131	49,563	65,608	5.6	5.6	5.9
VI	62,970	58,931	76,965	7.1	7.2	7.4
VII	72,318	67,698	90,423	8.1	8.2	8.6
VIII	87,177	81,961	108,365	10.3	10.4	10.7
IX	113,182	106,089	137,427	14.5	14.6	14.9
X	277,720	262,201	314,281	42.4	42.4	40.2

Source: 1993 HIES/LSMS Data. N = 7925. US\$1=G\$125.
Note: Decile I represents the poorest 10% of the population.
¹RPI=Regional Price Index

²⁵ See World Bank, 1993, *Poverty and Income Distribution in Latin America: The Story of the 1980s*.

Figure 1.4: The Distribution of Welfare, 1993



Source: HIES/LSMS, 1993

Poverty Estimates

1.27 There are several possible poverty lines that can be constructed for making comparisons in Guyana. In deriving the poverty line used in this report, the intention is to identify a standard measure to compare levels of poverty across subgroups of the population rather than to identify a single unequivocal number. For the purposes of the poverty comparisons in the report, a poverty line was derived based on the average price of a minimum low-cost food basket for a 2400 calorie diet and incorporating a modest allowance for non-food goods.

1.28 The minimum food basket, as collected by the Guyana Agency for Health, Environment, and Food (GAHEF) was estimated to cost an average of G\$96.3 per person per day during the survey period, or G\$35,150 per year (see Annex II). This basket is comprised of those foods available on the current market that provide the most nutrition for the lowest cost. A commonly accepted standard of 2400 calories is used as an average, based on the different amounts of energy required according to body size and composition, physical activity, age, and climate. While the Caribbean Food and Nutrition Institute (CFNI) daily recommended allowance for a male aged 16 to 19 is 3000 calories, it is only 1760 calories for a female aged 60-69 and 1360 calories for a child aged 1 to 3. The nutrient-cost index used is also developed by the Caribbean Food and Nutrition Institute.²⁶ Households with a per capita expenditure equivalent of G\$35,150 (US\$281) or below would be considered to be in extreme poverty.

1.29 The non-food consumption allowance was derived by averaging the total of non-food consumption expenditures from the HIES/LSMS data for the poorest 40 percent of the population. This came to 35 percent of total consumption and was added to the cost of the food

²⁶ A sample basket for May 1993 is included in Annex II.

basket. By annualizing these figures an absolute poverty line of G\$47,500 (US\$380) per capita may be estimated.²⁷ This figure corresponds closely to the US\$370 poverty line used in the 1990 *World Development Report*.

1.30 Three poverty measures are used for comparing poverty across subgroups: the headcount index, the poverty gap, and the Foster-Greer-Thorbecke P_2 measure (FGTP₂)²⁸. All fall into the set of Foster-Greer-Thorbecke indices, which evaluate the degree of poverty relative to a particular poverty line. The headcount index is simply the proportion of the population with a standard of living below the poverty line. The poverty gap index reflects the depth of poverty and calculates the mean proportionate distance of the poor's welfare from the poverty line. The FGTP₂ index reflects the severity of poverty in a population by weighting each poor individual according to his degree of deprivation, with the highest weight on the poorest of the poor (see Annex III for details on the FGT measures).

1.31 On a national average, 43.2 percent of the population, or approximately 315,360 people, fall below the G\$47,500 poverty line²⁹. Almost one third of the population, 29 percent, have consumption levels below the minimum required to purchase the nutritionally balanced low-cost food basket. The poverty gap is 16.2 percent, representing the average percentage shortfall of the poor to raise their incomes to the level of the poverty line. The severity of poverty as measured by the FGTP₂ relative to the poverty line is 8.2 percent, and 10.0 percent relative to the extreme poverty line (see Table 1.3 below, and Annex IV, Table 1 for extreme poverty). In order to evaluate the magnitude of these numbers, these measures will be further broken down by subgroup for comparison.

Characterizing Poor Households

1.32 The highest incidence of poverty in Guyana can be found in rural areas, particularly in the interior regions. The poor in rural areas are largely self-employed in agriculture or work as manual wage laborers. The incidence of poverty in urban areas is highest among the unemployed and those working as wage laborers in sectors such as construction. There is, on average, a higher number of wage earners per poor household than non-poor households³⁰; however, each worker in a poor household must support a larger number of children and other family members. Poor households have approximately 1.5 times as many people (see Table 1.2) as non-poor households.

²⁷ This methodology, called the Orshansky method (Orshansky, 1965, "Counting the Poor: Another Look at the Poverty Profile," *Social Security Bulletin* Vol 28, 1965, pp: 3-29.), follows the technique used to measure poverty in the USA. The main critique of the methodology is that the minimum cost of the reference food bundle at prevailing prices may entail a diet which is unacceptable to palate and/or culture. In reviewing those items selected in the GAHEF basket, all are common to local preferences.

²⁸ See James Foster, J. Greer and E. Thorbecke, A Class of Decomposable Poverty Measures. *Econometrica* 56(1984): 173-177.

²⁹ Using the per capita consumption data adjusted for spatial price variations only.

³⁰ Non-poor refers to those above the poverty line.

1.33 The heads of poor households have achieved lower levels of education and are slightly older, by approximately 4 years, than non-poor households. Though earning capacity is expected to increase over time, this effect appears to be negated in poor households by the lower levels of education. The proportion of poor households headed by females is similar to that in non-poor households indicating that female-headship is not a proxy for poverty. Characteristics of Guyanese households by per capita consumption quintiles are presented in Table 1.2.³¹

Table 1.2: Characteristics of Households by Quintile

Household	Per Capita Consumption Quintiles					
	All Guyana	I Poorest	II	III	IV	V
Area:						
Urban						
Georgetown	25.1	11.6	22.2	22.4	23.6	38.3
Other	11.8	4.3	7.2	12.8	15.8	15.2
Rural						
Coastal	54.4	52.4	64.6	59.3	56.7	42.9
Interior	8.8	31.8	6.0	5.5	3.9	3.6
Sex of Head of Household:						
Male	71.8	69.9	71.8	73.4	75.2	68.9
Female	28.2	28.2	26.6	24.8	31.1	28.2
Age of Head	44.2	45.7	48.3	45.5	44.1	42.8
Household Size	4.4	5.6	5.1	4.3	4.1	3.4
Number of Children¹	1.8	2.6	2.1	1.8	1.7	1.4
Number of Earners	1.5	1.9	1.6	1.4	1.4	1.3
Employment Status:						
Working	75.9	71.7	75.4	73.8	79.0	77.7
Seeking Employment	3.7	3.2	2.5	4.6	3.1	4.7
Inactive	20.4	25.1	22.1	21.6	17.9	17.6
Employment type:						
Self-emp. Non-agr.	23.0	15.3	15.7	18.0	27.7	32.5
Self-emp. Agriculture	14.2	33.4	13.5	12.3	9.8	8.6
Salaried/Wage Labor	28.9	20.0	34.8	33.5	27.7	27.3
Casual Labor	15.1	13.8	22.3	17.2	13.2	11.0
Others	18.8	17.4	13.8	19.1	21.5	20.6
¹ Less than age 17.						
Source: Third subround, 1993 HIES/LSMS Data. Quintiles are based on per capita consumption, adjusted by adult equivalency and a spatial price index. N=1816 households.						

³¹ Note that the first two quintiles (40% of the population) correspond roughly to the poor (43% of the population).

Geographic Distribution

1.34 When discussing spatial patterns in Guyana, the country can be divided into four distinct geographic areas: (1) the **Georgetown metropolitan area**, which accounts for 21 percent of the total population; (2) **other urban areas**, which include New Amsterdam, Linden, Anna Regina, and Corriverton and account for 11.2 percent of the population; (3) **rural coastal areas** in regions 2, 3, 4, 5, 6, and 10, which include 55.9 percent of the population; and (4) the sparsely populated **rural interior** including regions 1, 7, 8, and 9 and which includes 11.8 percent of the total population. More than 90 percent of the population lives along the narrow coastal strip where agriculture is the predominant activity. Most of the population living in the interior resides in traditional Amerindian villages and is engaged in subsistence farming. Because these areas are so inaccessible, participation in the cash economy is lower than in the rest of the country.³²

1.35 The disparity in wealth by geographic area is wide. Of the 43 percent of the population classified as poor, the largest proportion lives in rural areas. Among the 10 regions in the country, the highest incidence of poverty can be found in Regions 1, 8, and 9, all located in the interior. Though the population in these three regions only accounts for 9.2 percent of the country's total, the majority falls into the category of extreme poverty. Residents of these three regions are predominately Amerindians who have, historically, been among Guyana's poorest. The remoteness of hinterland communities makes providing basic services difficult. With the absence of all-weather roads through the heavily forested area, air and river transport are most common, though even these systems are interrupted during heavy rains. The rugged terrain and absence of telephone and telegraph services means some areas remain cut off for weeks. There has in recent years been an increase in mining and timber activity in the interior, though there have been costs related to the opportunities for employment. The jobs require that the men work away from their villages for long stretches, which affects their availability to tend their farms. In addition, workers often return to their villages with malaria or having spent much of their earnings on alcohol in the mining towns.

1.36 High transportation costs and a small market make prices in the interior higher relative to the rest of the country. The comparatively high wages paid by the foreign companies have attracted some small businesses, though prices for goods are higher than in Georgetown and the coastal areas. The level of basic services in the interior is low, with the biggest constraint being the availability of qualified staff. Trained teachers and health care workers prefer to live in the more accessible areas along the coast, which means services in the interior are of low quality or non-existent.

1.37 Rural poverty is also quite prevalent along the coast. Overall, the headcount index for the rural coastal area is 45.0, with the incidence of poverty over 50 percent in regions 2 and 5. A large majority of the rural poor, approximately 90 percent³³, have access to land. Most of

³² When comparing welfare levels of households in the interior to those in other areas it should be acknowledged that some of the differences may be due to alternate consumption patterns and variation in the imputed value of certain items.

³³ Estimate from 1993 HIES/LSMS survey. This figure refers to the percentage in the first quintile.

these households are involved in rice farming while producing smaller quantities of other food crops and livestock as well. The average size of land holding is considerable for the poor, roughly 2.5 acres, indicating that low agricultural productivity, rather than insufficient access to land, is a major cause of low income. In households with plots less than .5 acre, welfare levels are higher³⁴, probably because the vegetables and fruits typically grown on small plots can be more profitable than the produce of a small rice farm, and because those with small plots seek outside employment, such as planting and cane cutting on the sugar estates. Other determinants of living standards, such as access to public services, can be characterized by deteriorated quality -- for example, the absence of pumped water, poor health and educational facilities, and an unstable supply of electricity.

1.38 Though the incidence of poverty in urban areas is on the whole lower than other parts of the country, pockets of extreme poverty can be found. The availability of jobs has over the years attracted the rural population to Georgetown, though housing costs are high and may offset the absolute increases in earned income. Housing accounted for an average of 13 percent of total expenditures in Georgetown, almost double the national average of 7.6 percent (see Annex IV, Table 3). The urban poor are comprised of those employed as wage laborers in a variety of unskilled occupations and in small informal businesses, of public servants at the bottom of the salary scale, of the unemployed, and of pensioners. Public service provision is similar to that along the coast where the physical infrastructure exists, but is in such a dilapidated state that it is beyond repair or requires urgent and comprehensive rehabilitation. A substantial and growing proportion of the population, particularly in urban areas, relies on the private sector for the provision of social services.

1.39 Given the regional disparity in welfare, growth concentrated in rural regions would have a greater impact on overall poverty reduction than growth uniformly distributed or concentrated in urban areas only. An 8 percent increase (the rate of per capita GDP growth in 1992) in welfare uniformly distributed would lower the headcount index from 43 percent to 35 percent. If that same growth were distributed in rural areas only, overall poverty would be lowered even further, to 34 percent. Growth in urban areas only would have the least impact on poverty, reducing the headcount index to 36. The severity of poverty as measured by the FGTP₂ would be decreased from 8.2 to 4.5, if growth were concentrated in rural areas, as compared to a reduction from 8.2 to 7.2 when concentrated in urban areas. These results highlight the importance of economic growth in rural areas for overall poverty reduction.

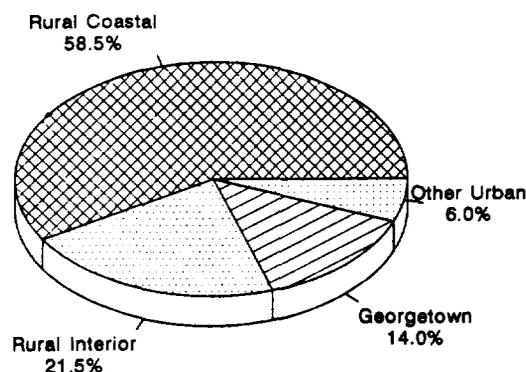
³⁴ International Fund for Agricultural Development (IFAD), 1993. Draft Study for Agricultural Support Services Program.

Table 1.3: Poverty Indices by Geographic Region Based on G\$47,500 Poverty Line

Region	Percent of Population ¹	Head Count	Poverty Gap	FGT ₂	Mean* Per Capita Consumption (in G\$)
ALL GUYANA	100.0	43.2	16.2	8.2	91,602
Urban Georgetown	21.0	28.9	8.7	3.6	136,687
Urban Other	11.2	23.1	6.3	2.5	106,965
Rural Coastal	56.0	45.1	14.7	6.3	75,923
Rural Interior	11.8	78.6	46.1	31.0	39,331
(1) Barima-Waini	3.5	78.9	45.7	29.7	45,144
(2) Pomeroon-Supenaam	6.7	55.0	23.8	12.6	78,737
(3) Essequibo Island-W. Demerara	10.9	45.8	14.9	6.4	75,456
(4) Demerara-Mahaica	39.8	32.0	9.6	4.0	112,386
(5) Mahaica-Berbice	7.5	56.4	18.8	7.9	80,242
(6) E. Berbice-Corentyne	17.0	37.2	9.7	3.3	74,123
(7) Cuyuni-Mazaruni	2.6	44.7	13.4	6.6	66,047
(8) Potaro-Siparuni	1.9	94.8	66.1	49.2	19,864
(9) Upper Takutu-Upper Essequibo	3.8	93.3	58.7	39.6	21,545
(10) Upper Demerara-Berbice	6.4	30.9	10.9	4.8	120,479

¹The distribution from the full HIES survey (including all four subrounds). Total population is estimated at 730,000.
 Source: 1993 HIES/LSMS Data. N=7925 individuals
 *Annual consumption figures adjusted by regional index only.

Figure 1.5: Geographical Distribution of the Poor



Source: HIES/LSMS, 1993

Demographic Characteristics of the Poor

Age Distribution

1.40 The age distribution of the population shows that approximately 23 percent of the population is under 10 years old, 24 percent is 10-19 years old, 33 percent is 20-39, 14 percent 40-59, and 6 percent is over the age of 60 (see Annex IV, Table 2 for distribution by quintile). The proportion of the poor is slightly higher in the under-20 and over-60 groups than the national average. This corresponds with Table 1.2, which shows that poor households have more children.

Gender and Family Composition

1.41 As was shown in Table 1.2, female-headed households represent 28 percent of all households.³⁵ The prevalence of female headship is much higher in urban areas, particularly Georgetown, where 45 percent of households are headed by women. Two-thirds of female-headed households have unmarried children under the age of 17, with the mean age of the head being slightly older than male-headed households -- 45.7 as compared with 43.5. Female headship is much more common among the Afro-Guyanese population than other ethnic groups. Overall, 40 percent of Afro-Guyanese households are headed by women, while 20 percent of Indo-Guyanese, 12 percent of Amerindian, and 38 percent of the racially mixed households are female-headed.

1.42 Female headship in Guyana does not emerge as a proxy for poverty. The distribution of female-headed households across welfare groups is similar to that of male-headed households (see Annex IV, Table 4). Using the G\$47,500 poverty line, 42.8 percent of individuals living in male-headed households are found to be poor, compared with 44.4 percent in female-headed households. This difference is not statistically significant ($t=-1.2$). The results are similar for extreme poverty; 29.8 percent of individuals in male-headed households can be classified as extremely poor, compared with 31.4 percent of individuals living in female-headed households. This means that programs using female headship as an indicator for targeting the poor may not be reaching the desired target group.

1.43 In Guyana female headship is not always related to abandonment but also to a woman's choice to raise a family alone, as well as to the country's high emigration rates. Migration data are not broken down by gender, but official estimates place emigration between 1980-1990 at approximately 153,000, or 21 percent of the total population. Unofficial estimates would be substantially higher.³⁶ It is believed that a substantial number of male partners have migrated with the hope of eventually sending for the rest of the family.³⁷ Data on the level of international remittances (including cash plus the imputed value of gifts and items received at concessional rates) would support this belief. On the whole, the share of total income coming

³⁵ Headship is defined by the survey respondents in the HIES/LSMS.

³⁶ Estimated by Statistical Bureau. Equivalent to net population increase less natural population increase.

³⁷ UNICEF 1993, *Analysis of the Situation of Children and Women in Guyana*.

from international remittances is 1.5 times higher for female-headed households than for male-headed households (see Table 1.11). Much of this money is probably sent by partners who have been unable to have the rest of the family join them because of problems with visas or finances or who have become involved in other unions.

1.44 The presence of a spouse or partner in the household does not appear to affect overall poverty. The headcount index in households with two parents was 46.6 as compared with 47.7 for single-parent households. There is, however, a substantial differential in the incidence of poverty between households with and without children. Average family size is 5.6 in the first quintile, as compared with 3.4 in the fifth quintile. Fertility rates for the poor in Guyana, as in most countries, are high. While the poor view children as a source of future income, high fertility strains the budgets of poor families, reducing resources for food, education, and health care. This relationship between poverty and fertility needs to be addressed by further education, and improved access to family planning services.

Table 1.4: Incidence of Poverty by Family Structure

Family Structure, Head of Household	Poverty Measures G\$47,500 Poverty Line			
	% of total HH	Head Count	Poverty Gap	FGTP ₂
Partner present, w/ children ¹	53.2.	46.6	18.2	9.6
Single parent, w/ children	18.5	47.7	16.4	7.6
Single, no children	16.9	23.9	8.1	3.6
Partner present, no children	11.4	22.3	7.3	3.3

¹ Classified as unmarried children.
Source: 1993 HIES/LSMS Data.

Ethnicity

1.45 Across ethnic groups the incidence of poverty is highest among the Amerindian population. Of the poorest 20 percent of the population, over one-third are Amerindians. Approximately 85 percent of Amerindians, the majority of whom live in the interior, fall below the poverty line.³⁸ Data on other ethnic groups indicate that the incidence of poverty among individuals living in Afro-Guyanese households is 43.0 percent, compared with 33.7 percent in households headed by Indo-Guyanese and 44.7 percent for households where the head is ethnically mixed (see Annex IV, Table 5). Afro-Guyanese households are equally located in urban and rural areas, while the Indo-Guyanese population is more heavily concentrated in rural

³⁸ The fact that the majority of Amerindians live in the interior and rely less on the cash economy should be highlighted.

areas, particularly along the coast. Overall, 73 percent of Indo-Guyanese live in rural areas as compared with 54 percent of Afro-Guyanese.

1.46 From the early colonial period to the 1950s, races have heavily stratified by occupation, with the Indo-Guyanese working in trade and agriculture (particularly rice and sugar) and the Afro-Guyanese working as subsistence farmers, in mining and service industries in urban areas, or in the public sector. The Afro-Guyanese population on the whole remains in school longer and is more likely to finish secondary school than other ethnic groups. This is probably linked to the fact that many more Afro-Guyanese live in urban areas, where formal education plays a more important role.

Table 1.5: Percent of Population Living in Households Headed by Various Ethnic Groups

Ethnicity	Quintiles					
	Total	I Poorest	II	III	IV	V
Indo-Guyanese	45.9	30.0	45.2	52.7	54.4	47.3
Afro-Guyanese	36.7	28.3	40.2	35.4	39.5	40.3
Amerindian	10.3	37.4	6.6	3.5	2.1	1.9
Mixed	6.2	4.1	7.4	8.0	3.2	8.3
Other	.9	.2	.6	.9	.8	2.2

Source: 1993 HIES/LSMS Data.

Education

1.47 Levels of education among poor households are lower than the population as a whole. This fact is not surprising, given the high correlation between education levels and living standards.³⁹ Less than 15 percent of the heads of poor households have completed a secondary or higher level of education. The majority, 58 percent, have achieved a primary school education. When educational achievement is further broken down by gender, female-headed households have achieved higher levels of education than male-headed households, a pattern common to the Caribbean region (see Annex IV, Table 6).

1.48 Educational attainment in rural areas, where many of the poor are located, is low. In the rural coastal region less than 15 percent of household heads have achieved a secondary or higher level of education, as compared with 50 percent in Georgetown (see Annex IV, Table 7). The rural poor are largely self-employed in agriculture or small family enterprises. Though the payoff to education is not as evident as in the wage sector, where the individual returns to

³⁹ See G. Psacharopoulos and M. Woodhall (1985), *Education for Development*, Washington, D.C.: World Bank, and J.B.G. Tilak (1988). *Education, Economic Growth, Poverty, and Income Distribution: A Survey of Evidence and Further Research*. Washington, D.C.: The World Bank.

education are consistently above returns to conventional investments, research has shown that better-educated farmers get a higher return on their land. Education also improves health and nutrition and ultimately affects productivity.

Table 1.6: Education Level by Head of Household

Highest Level Completed	Quintiles							
	Total	Male	Female	I	II	III	IV	V
Below Primary	16.3	15.8	14.0	28.0	19.0	18.0	14.0	8.0
Primary	58.3	60.1	56.1	62.0	64.5	59.6	62.7	47.5
Secondary	22.2	21.0	26.1	10.0	15.3	20.5	21.5	36.0
Post-secondary	3.2	3.0	3.7	0.0	1.2	1.9	1.8	8.5

Source: 1993 HIES/LSMS Data.

The Employed Poor

1.49 Labor force participation in the country is, on the whole, about 20 percent lower than it was in other countries in the region in 1992 such as Trinidad and Tobago (60 percent) and Jamaica (58 percent) due to the prolonged recession. One-half of the population over the age of 14 is working, 11 percent are unemployed⁴⁰, and the remaining 38 percent are involved primarily with domestic duties, in school, or are retired. Rates for the poorest 40 percent of the population display a similar pattern. Of those employed, approximately 40 percent are employed in the informal sector, 50 percent as regular salaried employees or wage laborers, and the remainder are working as casual laborers (see Annex IV, Table 8). The problem for the poor in Guyana is linked more closely to low wages and underemployment rather than unemployment. The rural poor are typically employed through subsistence agriculture and wage labor, though the level of underemployment is significant. Of those individuals over the age of 14 who consider themselves to be employed, the mean number of days worked during a 30 day recall period was only 13.7. For farmers, that rate was substantially lower -- only 3.1 days. The averages were, however, higher for other occupations. Agricultural laborers, clerks and service workers, professionals, construction workers, and miners worked approximately 20-22 days out of the last 30.

1.50 Wages in the public service are extremely low. A person earning the minimum wage of G\$131.50 per day (US\$1.05) and working an average 5-day work week would fall into the category of extreme poverty. Those employed at the Grade 1 level of the public salary scale would also fall below the poverty line, with salaries being as low as G\$3420 per month (US\$27.40), or G\$41,040 (US\$328.30) on an annual basis. Grade 1 positions account for approximately 22 percent of the 18,000 public service positions. Even those at higher levels of

⁴⁰ This includes those seeking employment. The job-seeker rate is comparable to the standard measure of unemployment.

the salary scale would fall under the poverty line when one considers that many individuals must support a family on a single income. The low salaries have caused many people, particularly

Table 1.7: Activity Status, Age 15 and Over

Activity Status	Per Capita Consumption Quintiles							
	Total	Male	Female	I	II	III	IV	V
Working	50.8	72.1	30.5	52.9	48.1	49.0	50.4	53.4
Seeking	11.1	8.7	13.5	12.7	11.8	11.7	10.9	8.8
Inactive								
Domestic only	25.5	1.0	52.7	20.8	25.0	26.9	28.9	27.1
Other	12.6	18.1	3.1	13.6	15.1	12.4	9.8	10.7

Source: 1993 HIES/LSMS Data. N=5170.

at the professional level, to leave public service and work either in the domestic private sector or at jobs overseas. As a result, vacancy rates in the public sector are about 35 percent in the ministries and 39 percent in both the constitutional agencies and regional administrations. This shortage of labor, particularly at the skilled levels, has impeded the operational as well as developmental activities of the public service.

1.51 Wages in other sectors vary. In agriculture, for example, unskilled workers earn G\$174.60 per day (US\$1.40) for cane cutting and loading⁴¹. The work is seasonal, which limits potential annual earnings. Unskilled workers in the OMAI gold mines earn between G\$103-G\$177 per hour (US\$.82-1.42), and are employed on a schedule of two weeks on and one week off⁴². With overtime, these wages can result in high monthly incomes if the work is steady. For example, a miner earning the average hourly wage (G\$140, US\$1.12) working 12 hours per day for 17 days per month could earn G\$35,000 per month (US\$280). Salaries in the public corporations such as GEC and GTC are 1.5 to 2 times greater than in the central government for support staff and low-level technicians and 3-5 times more for senior level management. These ratios are even higher for the private sector.⁴³ For example, the Linden Mining Enterprise, which is currently privatizing, revised its salary scale to begin with a base of G\$18,000 per month (US\$144) for unskilled workers.⁴⁴

⁴¹ Figure for 1992, from SAR Sugar Industry Restructuring and Privatization Project.

⁴² Miners often work 12 hours per day and earn 1.5 times their wages for hours in excess of 8. On Saturdays, Sundays and holidays, workers earn twice their usual hourly wage.

⁴³ SAR, Public Administration Project, 1993.

⁴⁴ Linden Mining Enterprise Limited, Review Report, September 1993.

1.52 A breakdown of employment by sector indicates that the largest number of people in Guyana are employed in agriculture (see Annex IV, Table 9). Those working in agriculture also account for the highest proportion of the poor, representing close to 60 percent of those in the bottom quintile. The linkage between employment sector and poverty is not as clear for the other sectors, with the exception of construction. This sector includes a substantial number of unskilled laborers working for low wages. In the public sector, almost one-third of those working in the civil service fall below the poverty line. This reflects the extremely low wages at the bottom end of the public salary scale. Conversely, welfare levels for those working in the informal sector in urban areas are higher than the average (see Annex IV, Table 10).

1.53 Most of the poor are self-employed in agriculture, with a smaller but substantial percentage working as agricultural laborers. Those represented in the category of small farmers would include Amerindians involved in subsistence agriculture in the interior regions, subsistence farmers in the coastal areas, and a large number of the estimated 24,000 small rice farmers along the coast. Agricultural laborers primarily include unskilled laborers working on the sugar estates and some of the large rice farms. The pay can be quite high, though the seasonal nature of the work results in low annual incomes.⁴⁵ The other disproportionately poor category includes mining, construction, and other manual labor; approximately half of the population working in these professions falls below the poverty line. Profitable occupations include managers, professionals, technical or administrative positions, and the urban self-employed.

1.54 Of the employed population, only 5.5 percent of those surveyed report having second jobs. The low figures both for the average number of days worked and percent having second jobs demonstrates that the potential for reducing poverty through additional employment for those already in the labor force is huge. Another source of potential household income is the female labor force. Labor force participation by women is only about half of that of men (Table

1.7). In the formal sector women are highly represented in professions such as teaching, nursing, clerical work, and service work. In the informal sector women are engaged in small-scale activity such as trading, which may not be that lucrative but offers flexibility for women whose schedules are restricted due to child-care responsibilities.

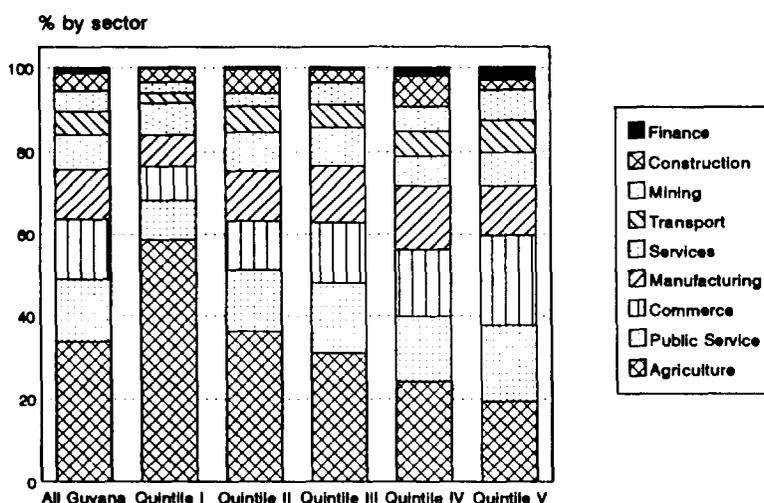
Those Out of the Labor Force

1.55 Though unemployment is lower than in other countries in the region, there is still a need to pursue policies that would generate opportunities for the poor. Approximately 11 percent of the population over the age of 14 is seeking employment, more than half of them women. Across welfare groups, more of the poor (close to 13 percent) are looking for work as compared with only 9 percent of those in the fifth quintile. The highest number of those seeking employment falls into the 15-19 age group, where rates are as high as 18.9 percent (see Annex

⁴⁵ In mid-1992, basic wages at GUYSUCO were G\$238 per day, with sugar production incentives allowing workers to earn additional pay based on individual estate weekly production targets. In the larger rice farms, salaries average as high as G\$1,000 per day during the harvest period.

IV, Table 11). By area, rates are highest for Georgetown, though over one-half of those seeking employment live in rural areas along the coast where agriculture predominates and the number of jobs in the formal sector is lower. The unemployed have achieved similar levels of education as those who are working; approximately 70 percent have completed primary school or less, 28 percent have finished secondary school, and 1.2 percent have completed some form of post-secondary education. The profile of the unemployed implies that targeting training and job opportunities for those just entering the labor force and for women would have the greatest impact on reducing the unemployment rate.

Figure 1.6: Employment by Sector and Welfare Group



Source: HIES/LSMS, 1993

Table 1.8: Occupation Group, Whole Population Age 15 and Over

Occupational Group	Quintiles						Mean p.c. consum.
	Total	I	II	III	IV	V	
Craftsmen/Operatives	23.3	15.6	23.9	22.2	28.9	26.3	114,394
Agriculture (Farmers)	19.5	42.4	18.1	15.2	12.2	9.8	74,718
Agricultural Labor	11.7	13.8	13.9	14.8	10.8	5.6	76,269
Office Clerk/Retail	15.9	7.2	16.3	19.9	18.3	18.0	109,359
Informal Sector/Service	14.1	11.0	12.7	14.2	14.9	17.3	101,959
Professionals	10.4	5.4	7.0	6.8	10.6	21.2	167,894
Mining/Construction/Labor	5.1	4.6	8.0	7.0	4.3	1.8	72,699

Source: 1993 HIES/LSMS Data. N = 2650.

1.56 Most women are involved primarily in domestic activities. This category includes not only household and child care duties, but also activities such as free-collection of vegetables, roots, firewood, and cattle feed. Though these activities are extremely important to maintaining family welfare, targeting income-generating activities for women in rural areas could supplement household income and have a substantial impact on poverty reduction. Traditional female roles, particularly among the Indo-Guyanese population, have been a factor in limiting female labor force participation. While 38 percent of Afro-Guyanese women and 45 percent of Amerindian women work, only 22.3 percent of Indo-Guyanese women are employed.

Table 1.9: The Population Out of the Labor Force

Characteristic	Seeking Employment (%)	Domestic Activities Only (%)
All Guyana	11.1	25.5
Sex		
Male	62.0	5.5
Female	38.0	94.5
Mean age	25.1	34.5
Area		
Urban Georgetown	25.7	15.1
Urban Other	14.4	10.9
Rural Coastal	53.8	66.2
Rural Interior	<u>6.1</u>	<u>7.9</u>
	100.0	100.0
<i>Source: 1993 HIES/LSMS Data.</i>		

Consumption Patterns

1.57 The household consumption patterns of the poor differ markedly from those of the rich. The greatest difference lies in the proportion of total expenditures spent on food. For the poorest 20 percent of individuals, food accounts for 67 percent of all household expenditures, whereas for the richest quintile this share is only 44 percent. Other major consumption items for the poor include fuel (primarily kerosene), household supplies, and housing.

1.58 Of total food consumption, the largest proportion is purchased, while approximately 9 percent of the value of all food products comes from home-grown sources. On a national basis a large number of households, 57 percent, produce at least some of their own food. The poor, particularly in the interior regions, rely even more heavily on home-produced food, with 70 percent of households in the first quintile growing at least a portion of the food they consume. For those households, the imputed value of home-grown products accounted for over one third of total food consumption. In regions 8 and 9, this proportion was even higher -- 96 percent

of all households produce their food, which accounted, on average, for 68 percent of total food expenditures. This highlights the important role of subsistence farming for these families.

1.59 The items most prevalent in the diet of the poor include white rice, flour, chow mein noodles, dried peas, frozen chicken, banga maree fish, eggs, fresh milk, powdered milk, fry oil, coconut oil, pumpkin, tomato, squash, plantain, bora, cassava, eddo, banana, coconut, sugar, and tea. Most of these items are locally produced, with the exception of frozen chicken⁴⁶, powdered milk, some cooking oil, and tea (see Annex IV, Table 12). Reducing or eliminating import tariffs on these items, which run as high as 30-45 percent, would benefit the poor.

1.60 A major cushion for households during the period of stabilization has been cash remittances and commodities from friends and family abroad. With high emigration over the past two decades, most Guyanese families have at least one member who is living abroad. Though the economic recession in North America has likely had an impact on the amount and frequency of assistance sent home to Guyana, these remittances continue to account for a substantial source of household income, particularly among rich households.

1.61 Roughly one-third of all households record some form of international remittances (including cash plus the imputed value of gifts and items received at concessional rates) (see Table 1.11). The value and even existence of these remittances may be underestimated because of survey respondents' sensitivity to income-related questions. For those households who report receiving some form of income from cash or concessionary sources, the value was, on average, equivalent to one-third of total household income.

1.62 For poor households in the first quintile, 13 percent report receiving some international remittances, which account for 23 percent of total household income. The mean value of the remittances in these households is approximately G\$39,000 (US\$312). In rich households (in the fifth quintile), 50 percent receive some form of international remittances, which average G\$174,600 (US\$1397) and account for 37 percent of total household income.

⁴⁶ Duties on the less desirable back and neck pieces of imported frozen chicken are zero, making them a relatively affordable protein source for the poor. These parts are packaged and distributed separately from the higher priced breasts and thighs, which are subject to import duties as high as 45 percent.

Table 1.10: Household Expenditures by Quintile

Shares	Quintiles					
	Total	I	II	III	IV	V
Food	55.2	67.0	61.1	56.8	53.1	44.4
Fuel/hh Supplies	10.2	12.1	11.5	10.8	9.9	8.0
Housing	7.6	5.3	6.3	7.1	7.1	10.6
Durables	2.2	.8	1.2	1.8	2.8	3.5
Personal Care	4.4	3.8	4.5	4.6	4.3	4.3
Health Care	1.8	1.2	1.3	2.2	1.9	2.0
Clothing, etc	5.8	2.7	4.5	5.3	7.5	7.7
Transportation	3.9	2.7	3.6	3.0	4.0	5.6
Education/Rec.	2.4	1.6	2.0	2.3	2.5	3.1
Misc.	2.1	1.1	1.5	2.2	2.3	2.7
Non-consumption	4.5	1.6	2.4	4.0	4.6	8.0
Mean household consumption (G\$)	317,780	123,666	189,172	238,148	307,151	591,377
Home Grown Food Products Households Producing (%):	57.3	70.0	58.6	56.2	59.2	50.4
For Households Producing, Share of Total Food Consumption:	15.8	35.3	14.4	13.0	9.3	9.2

Source: 1993 HIES/LSMS Data. N = 1816 households.

Table 1.11: Income from International Remittances

	Quintiles					
	All Guyana	I Poorest	II	III	IV	V
% of HH Receiving International Remittances	35.5	13.4	29.2	35.8	39.0	49.7
Share of Total HH Inc.	33.0	23.3	25.6	31.9	34.6	37.2
Mean reported ¹ value (G\$)	108,520	39,280	54,830	69,900	90,630	174,460
Share of total hh income by sex of head ²						
Male	29.5	22.4	24.1	29.3	30.5	32.4
Female	39.8	24.2	29.1	37.2	44.7	45.1

¹These estimates are based on the data reported as income received from international sources during the last 365 days on the HIES/LSMS survey. The values are likely to be lower than actual values due to the sensitivity perceived by respondents in answering this question.
²For households receiving international remittances.
Source: 1993 HIES/LSMS Data.

2

Sustaining Growth and Promoting Economic Opportunities for the Poor

2.1 The success of Guyana's poverty reduction efforts depends principally on sustaining the rapid economic growth that has taken place over the last three years, and on developing well-targeted programs for the poor. Policies to sustain growth have been discussed in detail in previous World Bank reports.⁴⁷ This chapter will briefly discuss selected policies, focusing on their implications for the poor.

2.2 The ERP reforms have had a positive impact on the economy. Real GDP growth averaged over 7 percent per year during 1991-93, contrasting with the stagnation since 1966; fiscal and monetary policies are in place; inflation has decreased; the exchange rate has stabilized at a free-market equilibrium; external assistance and private capital inflows have resumed; and international reserves have increased substantially. Sustainability of this remarkable performance depends on deepening the ERP's reforms. It requires following four closely linked elements: (i) maintaining and consolidating a sound macroeconomic framework and incentive system; (ii) refocusing public sector expenditures and investment; (iii) promoting private sector development; and (iv) diversifying sources of growth and expanding access to world markets. The following sections discuss these four elements.

Maintaining and Consolidating a Sound Macroeconomic Framework and Incentive System

2.3 The ERP has put in place the basic macroeconomic framework and incentive system required to restore growth. The next step is to maintain and consolidate the framework and to further refine policies that will sustain growth. In this regard, the government needs to ensure that (i) the budget deficit and government share in the economy continues to decline; (ii) monetary growth remains under control; (iii) interest and exchange rates remain flexible and free of interference; (iv) liberalization of prices and the trade regime continues; and (v) external debt is carefully managed. In this context, several policies have particular importance to the poor, including tax, pricing, and trade policies.

2.4 **Tax Reform.** The effect of the personal income tax on the poor is negligible. The first G\$120,000 (US\$960) of personal income is tax-exempt. The mean annual household consumption for the poorest 10 percent of the population is G\$96,660, below the G\$120,000 threshold. The remaining 30 percent of the poor, however, are subject to personal income taxes using mean annual consumption as a proxy for income. Average household consumption was G\$148,250 for those in the second decile, G\$178,175 for those in the third decile, and G\$200,000 for those in the fourth decile. All of these households fall below the poverty line.

⁴⁷ Guyana: Public Sector Review (1993), and Guyana: Private Sector Development (1993)

2.5 The primary area of concern is with the consumption tax, the most important tax, which accounted for almost 28 percent of tax revenues in 1992. This tax has some regressive implications, since the poor spend a higher proportion of their disposable income on consumption goods. In Guyana, the consumption tax schedule is not formulated to address this concern. The rate varies by category, but is most commonly 30 percent. The tax applies to the sale of manufactured goods, both domestically produced and imported, on the basis of their factory prices including commissions, import duties, and excise taxes. The basic flaw with this consumption tax is that it has too many different rates and exemptions and its coverage is too narrow. The government, together with IDA, has studied the consumption tax issue carefully and has designed a reform that would promote growth as well as channel benefits to the poor by setting a zero rate for key capital goods and basic needs goods. The basic needs goods being considered are those most prominent in the consumption baskets of the poor. Rates on other items would be rationalized and the number of bands reduced, with the base rate lowered to 15 percent. The new schedule is expected to generate economic and social benefits without reducing yields of the consumption tax.

2.6 *Pricing, User Fees, and Subsidies.* Almost all public services have been offered partly or totally free of charge. However, the government lacks funds to maintain their quality or expand them. With services offered by the public sector declining in quality or becoming nonexistent, consumers have turned to private sources in areas such as health care and education. This trend indicates that consumers in general are willing and, in most cases, able to pay for services received and that the revenue potential from cost recovery is large and remains virtually untapped. While concern for the welfare of the poor is legitimate, the present system is not targeted to them and thus becomes unnecessarily costly (See Chapters 3-5). As a general principle, the government should adopt an approach that its services will not be provided free, except to the very poor and vulnerable.

2.7 *External Tariffs.* The government recently adopted the CARICOM Common External Tariff (CET), and the first phase of the new schedule was implemented effective January 1, 1994. Under the CET, tariff rates will gradually be reduced to a range of 0-20 percent by January 1, 1997. Lower tariffs could reduce tariff revenues by as much as 28 percent by 1997. On the other hand, tariff revenues could substantially increase with the removal of exemptions; in 1991 such exemptions were estimated to have reduced tariff revenues by 60 percent. The net effect of full compliance with CET and removal of exemptions would be a revenue increase of at least 18 percent. Given its competitive exchange rate, Guyana should benefit considerably from a fast-track implementation of the CET. Lower tariffs will increase the availability and lower the cost of goods consumed by the poor.

Refocusing Public Sector Expenditures and Investment

2.8 An emphasis on improving personnel emoluments and operations and maintenance of existing infrastructure, with a focus on investments in the health, education, and water sectors, will have the biggest impact on the poor. Given existing fiscal constraints, the government will also need to increasingly rely on the private sector to provide services.

2.9 *Public Sector Investment.* As public sector investment shifts toward economic and social infrastructure, the poor should have a greater opportunity to benefit. Although the poor already

have access to such as education and health care services, these are inadequate because of a dilapidated infrastructure, lack of supplies, and shortages of personnel. Thus, the priority for public sector investment should be to allocate it toward rehabilitation of infrastructure. This would directly benefit the poor.

2.10 Implementation of projects that have already secured financing should be speeded up in order to realize their full benefits. In this respect, the government will need to coordinate closely with donors to consolidate project execution units and to grant these units more autonomy. Other measures should also be pursued, including setting up a task force of high-level officials to speed up implementation of selected priority projects; shifting and pooling resources for counterpart funds; implementing a project cycle management system; increasing private sector participation in the project cycle; and, particularly relevant to the poor, providing block grants so that communities and NGOs can undertake rehabilitation work. More of the poor would benefit from limited funds if such funds are spread widely, to be supplemented by wage goods such as those granted by the World Food Programme, or by carrying out public works, where feasible, by labor-intensive methods rather than machinery.

2.11 *Personnel Emoluments.* A principal cause of the deterioration of the quality of public services to the poor is the sharp decrease in real emoluments, estimated at some 50 percent during 1987-89 alone. This has resulted in the current high level of vacancies for skilled employees. As indicated in the previous chapter, this sharp decrease in real income has also created an untenable situation, in which public servants at the lowest end of the salary scale are poor. The issues are being addressed through the IDA/ODA-funded Public Administration Project (PAP), which includes decompression and upgrading of the current salary scale, integration of all special remuneration practices, rationalization of allowances, reduction of labor redundancies, and repatriation of skilled Guyanese from abroad to work in the public sector. Salary increases will affect the poor directly, while the higher quality of service that results from increasing the number of trained staff will benefit the poor indirectly.

2.12 *Operations and Maintenance.* Another major cause of the deterioration in the quality of public services to the poor is the sharp decline in expenditures for operations and maintenance. Although they have recovered somewhat since 1991, in 1993 such expenditures still amounted to less than two-thirds of their 1987 level in real terms. Further increases in these expenditures are clearly needed. Given the fiscal constraints, funding for such increases in the short run will have to come mainly from reallocations within the budget and donor-financed projects. The former could be partly accomplished if transfers to public sector enterprises, such as the GEC, are sharply reduced or eliminated. In this regard, it is important to reverse the current deterioration in the performance of public enterprises. In the longer term, necessary funds will have to come increasingly from cost recovery measures. Recommendations such as those in the agriculture, water, and education sectors would also require an increased role of the local community in the operation and maintenance of drainage and irrigation systems, water and sanitation systems, and schools. Consideration also needs to be given to further contracting out operations and maintenance to the private sector.

2.13 *Privatization.* One of the objectives of privatization is to redeploy scarce government resources, both financial and administrative. The privatization program, halted since November 1992, should be resumed immediately. Privatization will improve public savings, encourage

foreign investment inflows, and increase the opportunities to expand export markets. Two particularly relevant areas of privatization are the employee share ownership plan (ESOP), and potential labor redundancies.

2.14 A key of the government's privatization policy is the inclusion of a ESOP scheme, in which at least 10 percent of a company's shares are set aside for acquisition by its employees. Although no final arrangements have been made as to how and at what prices employees can acquire these shares, the design of an ESOP should recognize that all Guyanese, including the employees of the enterprise to be privatized, are the ultimate owners of the enterprise. Thus, only subsidizing employee acquisition of shares would in effect be unfair treatment of other Guyanese, including the poor, who are not given an opportunity to buy shares at such a price.

2.15 Privatization so far has not created large-scale redundancies because of labor shortages in Guyana. In some privatized units, wages have significantly risen. For example, after privatization, Demerara Woods raised wages by over 120 percent in 1991 and another 55 percent in 1992. However, the possibility of redundancies should not be ruled out. There is a need to look carefully at this issue to ensure fair compensation, subject to existing laws or collective and individual bargaining agreements, for those who lose jobs. Such compensation should be clearly spelled out prior to privatization to permit private owners to make an informed valuation of the property. In any case, it will not be desirable to urge new owners to retain unneeded workers.

Promoting Private Sector Development

2.16 The ERP has already established the required incentive system. Promoting further private sector development needs additional refinement of policies, especially there is concern for a wide distribution. Moreover, good governance is crucial to promoting private sector development and poverty reduction. Related to this, there is also an issue of an outdated legal framework. Although a new Companies Act which updates the legal framework was passed in 1991, it has not yet been made effective.

2.17 *Financial Sector Reform.* Specific concerns of the poor relate to an apparent aversion to using bank credit by small farmers and lack of access to credit for those who want it. As indicated in the IFAD survey, there is a general dislike for credit and a perception that interest rates are too high. Privatizing government-owned banks and granting new licenses to commercial banks should, to some extent, resolve the issue. A lack of access to credit is attributable to insufficient collateral by potential small borrowers. In this regard, the recommendation in Chapter 3 regarding land registry and market has particular relevance. For small borrowers without land holdings, two windows of credit are worth encouragement. First, the private, non-profit and tax-exempt Institute for Private Enterprise Development (IPED) has granted loans to small- and medium-scale enterprises. Subject to necessary oversight, this institution, or others with a similar mandate, should be encouraged to expand. Second, at least one commercial bank, the Scotiabank, Georgetown branch, has opened a "Grameen" model facility, through which groups of individuals borrow on the basis of pledges extended by the group (see Box 2.1). Despite an effective interest rate of 45 percent, this facility has proved very popular, mostly among street traders, most of them women. The default rate has been negligible, reconfirming the experience in Bangladesh where such a facility first originated.

2.18 Another avenue for maximizing opportunities for all Guyanese to participate in country's growth is through a **stock exchange**. Although a full-fledged stock exchange will take time to develop and the poor as such may not be able to participate as fully in it as other segments of the population, it is an important institution in a growing economy for savings and capital mobilization and for spreading the opportunities for ownership of assets in the country. It is therefore not too early to think of the next step for moving the present "call exchange" toward a stock market.

2.19 *Electricity Supply*. As the government continues to shift its resources toward rehabilitating infrastructure, the current infrastructural bottlenecks will gradually be reduced. Having an adequate and reliable supply of electricity is critical for promotion of small-scale industries. This is because small businesses, having little resources to acquire the means to generate electricity on their own, depend relatively more on the bulk supplier such as GEC. Even if they find the means to generate their own electricity, the cost associated with it will be invariably high. It may be noted in this context also that generating electricity on their own, which unnecessarily adds to the cost of production, should be avoided if Guyana is to focus on export markets as the impetus for sustaining growth.

Diversifying Sources of Growth and Expanding Access to World Markets

2.20 World markets have always been particularly important for the Guyanese economy. Exports of bauxite, sugar, rice, gold, etc., have been the sources of growth for these industries as well as for foreign exchange that the country needs. Being a small economy, future growth will depend principally on the external markets. Having a preferential access to certain markets has been particularly important for some industries, such as sugar and rice. Trends in international trade agreements, however, indicate that such specific preferential arrangements will be increasingly eroded. As a result, Guyanese exports will find more intense competition. Appropriate responses for Guyana in this situation are to **increase productivity** of its export industries and **diversify export products**.

2.21 Guyana will shortly start the process of preparing a medium-term development strategy, together with a long-term development "vision." In this preparation, it is important to start from a premise along the lines indicated above and reemphasize that achieving such a vision depends crucially on rapid growth led by the private sector and increased efficiency of government services. A good basis for attaining an export-led growth economy has already been laid. ERP components, such as maintaining a free and flexible exchange rate and a liberalized trade regime, provide some of the most important necessary conditions for such an economy. Measures to **increase productivity** of the present export industries such as bauxite, sugar, and rice are already being implemented. These industries employ large numbers of the poor.

2.22 With regard to **finding new markets**, both for the present export industries and for the potential new ones, many rapidly growing economies have found it useful to set up a joint arrangement between the government and the private sector to spearhead the efforts. Once the arrangement works well, the role of the government is reduced. The main functions of such an effort are to gather and disseminate market information or do market research and to promote products in foreign markets. In addition, it may also be used for identifying key constraints for exports and suggesting appropriate solutions. Another common vehicle for finding new markets

is through foreign companies that invest in the exporting country. Besides generating marketing access and providing marketing know-how, such companies are also very important in providing capital, technology, and training. In this context, the government should speedily proceed with operationalization of GO-Invest, whose main functions are to promote and facilitate foreign investment in Guyana.

Box 2.1: The Scotia Enterprise: A "Grameen" Model Bank in Guyana

Scotia Enterprise, a micro-credit division of The Bank of Nova Scotia initiated a program designed to provide credit to microentrepreneurs in May 1993. The Scotia Enterprise caters to a variety of micro-businesses including shoemakers, tailors, seamstresses, barbers, mechanics, carpenters, masons, artisans, food vendors, and general small scale retailers. Loans are generally made for working capital requirements to individuals who are 18 or older, have operated their own business for which the loan is required for a minimum of 6 months, and who derive their income principally from the business. No collateral is required.

Individuals who meet the criteria are required to form groups of five with a chairperson selected to ensure that payments are made on time. Group members are then responsible for each other's financial obligations until loans are paid in full. Before the loan application is made, group members must attend an orientation session to review policies and terms of repayment. Interest rates are 25% per annum. This is lower than what micro-entrepreneurs have traditionally paid on loans from moneylenders and suppliers of raw materials whose effective rates of interest range from 5 to 20% per week. The maximum amount available for a first loan is G\$15,000. Subsequent loans can be increased to G\$25,000, then to G\$40,000, G\$60,000 and finally G\$100,000. Loan repayments are structured on a bi-weekly basis, with working capital loans made available for 4-12 month terms and fixed asset loans for terms of 12-24 months. Upon successful repayment of each loan, group members may apply for increases in the next loan cycle. Saving is encouraged with a savings account opened for every borrower.

These micro-businesses, run mostly by women, have proven to be excellent credit risks. Quick access to loans and an incremental loan structure encourage borrowers to pay promptly. If all payments are made on time, subsequent loans are ready for disbursement on the day of the last payment on the previous loans. Contrary to the practice of formal finance, lending to the poor is based on group responsibility where access to credit depends on group repayment behavior. Group lending uses peer pressure to monitor and enforce contracts and helps screen good borrowers from bad ones. In addition, because micro-entrepreneurs have traditionally been denied access to formal sector credit, they are eager to prove themselves.

The "self-selection" method of targeting the poor is effective in that only those who are willing to bear the costs of group formation, monitoring of each other's activities, and those who are satisfied with the relatively small sums they can borrow and repay. An assessment of the Grameen Bank in Bangladesh indicates that the model has generated a number of benefits both at the household and village level. At the household level, benefits from program participation include changes in income, employment, assets accumulation, networth, and other household welfare indicators. Program participation has enabled members to enhance their assets and network.

2.23 To diversify export products is to a great extent synonymous with diversifying the sources of growth, a premise for maximizing the opportunities for all Guyanese to participate in the growth process. Because of its importance both in terms of its share in the economy and in terms of its large employment of the rural poor, agriculture is discussed in Chapter 3. This section suggests areas of future growth, such as non-traditional export crops. This is particularly important at this juncture, when Guyana is preparing its long-term development "vision." This should not be interpreted as advocating that the government start picking "winners"; that should be up to the market and the private sector. However, in a long-term "vision," identifying broad areas where the country has a comparative advantage would help facilitate formulating other policies and investment, such as in education and skill training.

2.24 **Manufacturing** has played a relatively minor role in the economy so far, accounting for less than 12 percent of GDP during the past five years (1989-93). This sector has the potential to grow significantly. Recent experiences of other fast-growing economies indicate that this sector provides the most rapid growth, starting from light industries such as textiles, shoes, and assembly of light engineering and electronic goods. In most of these instances, the countries themselves do not have their own raw materials. These experiences also indicate that such industries employ a lot of youth and women, who comprise a substantial part of the poor. With a sound macroeconomic environment in place, supported by a free and stable exchange rate, a liberal trade regime, low inflation, and a low wage level, Guyana could also develop along that path. Aside from East Asian countries that are often referred to, an example of a small country with an economic and social structure much similar to Guyana is Mauritius, which has been able to grow rapidly on a path beginning with exporting light industries. In many of these high-growth countries, foreign capital, largely through joint ventures, played a key role in providing the initial impetus.

2.25 A few industries for which Guyana has raw materials are particularly worth examining. Some of them are labor- and skill-intensive, which should create opportunities for employment at relatively high wages for many Guyanese workers. First, **wooden furniture**, which is an established industry. With more forests targeted for harvesting, this industry will have abundant raw materials. The problems relating to high moisture in the wood, quality of products, and market access to a great extent can be solved through foreign investors who could supply technology, add skill training and quality control, and find markets. Second, with gold and diamonds mined in the country, processing them into **jewelry** appears to be a logical step to add value. Again, constraints regarding capital, skills, and market could be overcome with the participation of foreign investors. Third, with sugar markets becoming more constraining, expanding/diversifying **rum** markets and other sugar-based products such as alcohol are other possibilities. Fourth, with the ready availability of raw materials such as rice, fruits, etc., **food products**, such as biscuits, ready-to-eat noodles, and jams, which are based on relatively simple technology, should have potential to compete in the export markets.

2.26 Another potential source of growth for Guyana is **tourism**. With a small base, tourism has the potential to grow rapidly. On the basis of Guyana's resources and experiences in other countries, it is not suggested here, however, that Guyana appeal to the mass market, which tends to fluctuate rather widely and could have a serious environmental impact. What Guyana should aim for is **eco-tourism**, which appeals to the limited high-income market. With this approach,

it would be less difficult to balance between the need for protecting the environment, which itself is the commodity being marketed, and the need for high value added (see Chapter 3).

Recommendations

2.27 Within the context of sustaining the rapid pace of economic growth that has taken place in Guyana over the last three years, and ensuring that the benefits from this growth are distributed equitably, several areas for affecting policy exist.

2.28 ***Refocus Public Sector Expenditures and Investments and Increase the Efficiency of Public Services.*** While the fiscal discipline is maintained, placing priorities for spending in the water sector and social sectors will have the biggest impact on the poor. Accelerating implementation of the Public Administration Project will directly affect the poor who work in the public sector by raising salaries, while service improvements that result from an increase in trained staff will indirectly benefit the poor. An increase in spending for operations and maintenance is also recommended to enhance service quality. Given the existing fiscal constraints, funding for such increases in the short-run will have to come mainly from reallocations within the budget and donor-financed projects. In the longer term, funds will have to come increasingly from cost recovery measures. Recommendations such as those for the agriculture, water, and education sectors would also require an increased role of the local community in the operations and maintenance of drainage and irrigation systems, water and sanitation systems, and schools.

2.29 Privatization will help to stretch scarce government resources. It is recommended that the privatization process be resumed immediately. In privatizing, the government must ensure that the ESOP scheme now being considered be carried out fairly and equitably. The government must also ensure that as the private sector eliminates redundancies in the workplace, fair compensation is provided for those who lose their jobs, subject to existing laws or collective and individual bargain agreements.

2.30 ***Promote Private Sector Development.*** In order to promote further private sector development, there is a need to first establish governance that preserves accountability, transparency, and efficiency. Financial sector reform must make an effort to provide access to credit for the poor. While privatization of government-owned banks and granting new licenses to commercial banks should, to some extent do this, it is also necessary to promote further expansion of the successful IPED and Scotiabank "Grameen" type facility.

2.31 ***Introduce Cost Recovery Schemes.*** As a general principle, the government should accept the premise that its services will not be provided free, except to the very poor and vulnerable, and must educate the public accordingly.

2.32 ***Promote Tax Reform.*** Since the consumption tax, which tends to be regressive, contributes the greatest share of tax revenue, its reform is important. The government should reform the consumption tax along the lines currently proposed in the short term. The exemption of a defined basket of basic needs goods for the poor is important for promoting equity.

2.33 To promote further progressivity of personal income taxes, the government should also consider raising the exemption threshold level of G\$120,000 to G\$150,000 which would provide exemptions for a larger proportion of the poor.

2.34 *Reform External Tariffs.* Guyana's commitment to tariff reductions under CARICOM's CET should lower the cost and increase the availability of goods consumed by the poor. It is therefore, recommended that the government adopt a fast track approach to removing exemptions, except those required for health and safety and by treaty. Tariffs on basic needs goods that are consumed by the poor should also be investigated. Based on a review of such goods, exemptions on certain items may be considered for the poorest.

2.35 *Sustain Rapid Economic Growth.* A rapid economic growth with maximum job creation is the most important factor in poverty reduction. To achieve this, it will be necessary for Guyana to **increase productivity** of its present export industries and thus become more competitive in the traditional markets; **find new markets**; and **diversify export products**. A joint group involving the government and the private sector should be established to gather and disseminate market information or do market research and to promote products in foreign markets. In addition, the group may be used for identifying key constraints on exports and suggesting appropriate solutions.

2.36 To **diversify export products** new areas such as non-traditional export crops, eco-tourism, and labor-intensive manufacturing should be pursued. Those industries for which Guyana has raw materials should be first examined for their potential for growth. These include areas such as wooden furniture, jewelry, and sugar- and rice-based products.

Promoting Agricultural and Rural Development

3.1 Countries that have succeeded in reducing poverty over the long term have encouraged broadly based rural development and thereby increased the returns on small-farm production and wage labor. The opportunities for growth in rural areas in the agricultural, mining, and forestry sectors are immense in Guyana, given the country's rich natural resource endowment. Policies must, however, ensure that the poor benefit from growth by increasing their access to land, credit, and public infrastructure and services.

3.2 Due to the wide diversity between rural areas in Guyana, strategies to reduce poverty are best divided into two subgroups, those which address the needs of the poor living in the rural coastal areas, and those focusing on issues specific to the rural interior regions.

Rural Coastal Areas

3.3 Although the country has a land area of about 83,000 square miles, an estimated 90 percent of the population lives along a narrow coastal strip 80 miles long and 20 miles wide. Because this area is located below sea level, an extensive system of sea-defence structures protects the coastal areas, while in the interior large embankments keep swampland waters from the coastal settlements and serve as reservoirs for irrigation. Subsistence farmers (who mainly produce rice and ground provisions) live along the main roads, on islands, and along the river banks of the coastal lands. While the national population density is about 9 persons per square mile, the density along the coastal area is about 400, making it similar to some Caribbean countries in this regard. The majority of the country's poor, an estimated 184,500 (58.5%) individuals live in the rural coastal areas with most employed in the agricultural sector, both in small-scale farming and as wage laborers.

Agriculture Sector Overview

3.4 Agriculture continues to rank as the predominant sector in the economy and accounts for approximately 25 percent of GDP and 40-50 percent of total registered exports and employs more than one-third of the total workforce. Most of the country's agricultural production is concentrated along the coastal zone, with a large proportion of the cultivated area served by a series of irrigation and drainage canals and protected from saline water by sea defenses. In terms of area, value of production, and contribution to export earnings, rice and sugar are the leading crops. Most sugar production is currently under the parastatal GUYSUCO. Rice is produced wholly in the private sector. The majority of farms are small, below 25 acres, with a few large farms of over a thousand cultivated acres.⁴⁸

3.5 Since the 1970s the government has intervened in the agricultural sector as with other sectors of the economy. The sugar industry was nationalized in 1976 (under the name of

* The last sample census of agriculture was for 1978, when nearly 90 percent of the 24,635 farm households cultivated less than 25 acres.

GUYSUCO), government monopolies were established for importing and distributing agricultural inputs, and restrictive trade and pricing policies were established for most of the key commodities including rice, sugar, and milk. The result was a sharp decline in agricultural production and reduction in the income of all growers, particularly the small ones, which eventually led an estimated 20,000 (primarily rice) farmers to discontinue their operations. A large number emigrated. In addition to heavy government intervention in the sector, the disintegration of agricultural infrastructure, a sharp reduction in real expenditure in agricultural support services (extension, research, marketing and transport), inflation, and the overall decline in the economy led to a marked increase in rural poverty.

3.6 After two decades of decline, agricultural production has surged since market incentives were reintroduced under the ERP. In 1992 real agricultural output grew by 25 percent as a result of strong performance in the sugar and rice subsectors. Incomes in agriculture were faster to respond to devaluation because G\$ revenues from exports of rice and sugar increased by a fully offsetting percentage, and also because domestic price controls on these and other agricultural products were removed. As foreign management was introduced in the sugar subsector, acreage under cultivation increased, replanting schemes were reintroduced, and good relations between labor and management prevented the strikes that had become common in the industry. The sugar industry now employs approximately 30,000 people. In the rice subsector, previous high production levels have not yet been reached, though there is export growth potential if the quality can be improved. It is estimated that approximately 24,000 households are now active in rice production. Sugar and rice currently account for over 75 percent of agricultural output and up to 50 percent of total export revenue.

Poverty in the Agricultural Sector

3.7 As was discussed in the poverty profile, almost one-half of the population living in the rural coastal areas is poor. Poverty can be found in all coastal regions, with noted concentrations in the East Coast Demerara, the Mahaica-Mahaicony-Arbary (MMA) frontlands, and the Black Bush frontlands.⁴⁹ Most farmers have access to land, with the average size of land holding for the poorest 20 percent being approximately 3 acres (see Table 3.1).

3.8 Though poverty is not linked to specific crops, given the large proportion of small rice farmers it is possible to say that most poor farmers are involved in rice production. Most small rice farmers also produce limited quantities of vegetables and hold some cattle. During harvest periods, small farmers customarily cooperate and exchange labor. Wage labor is only institutionalized at the sugar estates, where most of the work is task based. Because cane cutting is strenuous, many will work for wages in the morning and reserve the rest of the day to work on their own plot of land.

⁴⁹ International Fund for Agricultural Development (IFAD) Survey, 1993.

Table 3.1: Mean Acreage Owned or Possessed in Rural Coastal Areas

Household Characteristic	Per Capita Consumption Quintiles					
	Total	I	II	III	IV	V
Percent Landholders*	80.2	85.0	89.0	77.9	78.5	72.1
Mean Acreage Owned	3.9	3.0	2.0	2.6	5.7	6.3
Mean Acreage Possessed	3.7	2.9	1.8	2.4	4.8	6.9
<i>Source: HIES/LSMS data, 1993. N=988 households.</i>						
*Owned or Possessed						

Opportunities for Agricultural Growth

3.9 Both the significant role that agriculture plays in the economy and the heavy concentration of the poor working in the sector underscore the importance of promoting growth through increased agricultural production. Small farmers will benefit directly from growth, while wage earners will benefit indirectly from increased demand for farm labor and for non-farm products and services. Investments and policy decisions directed at expanding access to external markets for Guyanese products and removing the constraints that have been identified as impediments to increasing production for small farmers will maximize the effect that these choices have on poverty reduction.

3.10 The responsiveness of farmers to the price incentives under the ERP, and the large number of small rice farmers, demonstrate that improving the quantity and quality of rice produced would help reduce poverty. Currently, most of the rice produced for the higher-priced export market is supplied by a very small number of large farmers -- perhaps as few as 10. Several of these large farmers are also millers with direct access to export facilities. The smaller farmers are cut off from export markets partly because they depend on millers to buy and market their crops, but more importantly because they produce low quality rice.

3.11 Only a small proportion of the rice produced is suitable for the highest-priced export market: The EC currently buys approximately 125,000 tons from Guyana and Suriname combined at US\$350 per ton. The world price is much lower. The preferential EC price could be affected by the 1993 Uruguay Round.

3.12 Growth in the sugar industry also provides opportunities for the poor. The sector, however, will require investments in excess of US\$100 million to sustain production. Improvements in efficiency are needed as well as a strategy to deal with the vulnerable long-term prospects for preferential export quotas. Currently, GUYSUOCO, managed under contract by the UK firm Booker Tate, employs about 22,000 people. Under Booker Tate management wages, employment, and output have increased. The potential for further increases in output and employment depend on the world market for sugar. Guyana's highest-priced market is the EC, which presently allocates a quota of 157,000 tons at a price of US\$590 per ton. In 1992 and 1993 Guyana produced more than enough sugar to fill this quota for the first time in several

years. Because of the Uruguay Round, all U.S. and other OECD countries' quotas on sugar and other agricultural products will be converted to tariffs. When this takes place, the most efficient producers will benefit the most from the protected markets, and the less efficient ones will be displaced. Thus it is essential for Guyana to improve productivity and rapidly reduce costs to continue to benefit from those preferential arrangements. The next highest-priced market is the United States, which recently has bought from 12,000-20,000 tons annually depending on U.S. production. The U.S. price, like the EC price, is well above the world price. Finally, overflow production from the EC and US quotas can be sold to the CARICOM market, which is protected by a 40 percent tariff on non-member sugar imports, or can be sold on spot markets at the much lower world price. There is also a domestic market of about 38,000 tons per year.

3.13 Expansion of sugar production can be profitable if costs can be reduced sharply. Marginal costs of production are well below average costs; thus unit costs fall as production increases. Marginal costs are well below \$250 per ton. Moreover, unit costs can be reduced by plant modernization and further management efficiencies. Increased production would ultimately benefit the poor through the creation of jobs and eventual increase in the demand for related services.

3.14 An increase in the production of other crops, also dependent on expanded export markets, is important to economic growth in rural areas as well. Fruits and vegetables now sold on local markets command competitive prices. However, projections indicate that prices will start to decrease in the near future if production continues to increase and producers fail to find export markets. Identifying crops that have a comparative advantage is critical because increased output will create exportable surpluses. Until there are substantial improvements in infrastructure and in the supply of electricity, however, there is limited scope for agro-processing and other industrial development in rural areas.

Constraints to Increased Production

3.15 To ensure that the poor benefit from growth opportunities in the agricultural sector, it is crucial to focus policy choices on impediments to increasing production, particularly for small farmers. Constraints that impede production include poor water management, particularly in the area of **drainage and irrigation**, a **lack of updated information on cropping, farm management and processing techniques**, **limited access to credit**, and **deteriorated feeder roads**, which impede access to markets.

3.16 *Deteriorated Drainage and Irrigation Infrastructure.* The deteriorated condition of the drainage and irrigation (D&I) systems in Guyana is the primary constraint to increased agricultural production. The system, originally designed for sugar and coffee estates, works most efficiently when independent farmers can regulate water use as needed. Many of the large estates were subdivided into small plots around the turn of the century to buy out indentures of East Indian workers. The owning or leasing of small plots of land by a large number of farms has made the effective management of the drainage and irrigation systems dependent on the coordination of regional authorities, local authorities, and farmers (see Box 3.1).

3.17 Economies of scale favor large farmers who can manage their land as the former estate owners once did. Where large areas of farmland are still under one management, as in the GUYSUCO estates or in large rice holdings, the system is, in general, still well-maintained. For the large majority of small landholders the system does not function properly because there is little coordination among farmers in operations and maintenance. Crop yields for rice of over 5 ton/ha for large farmers, as compared with 3 ton/ha for small farmers, demonstrate the importance of proper operations and maintenance of the systems.

3.18 The operations and maintenance of D&I schemes is supposed to take place through a system of vested works. Water Conservancy Boards are responsible for the maintenance of the conservancies and the release of water from the conservancies. The Regional Democratic Councils (RDCs) are responsible for the functions of the Drainage and Irrigation Boards. They are responsible for maintenance and operation of the drainage and irrigation systems on which most of Guyanese agriculture depends. Local authorities are then required by the Drainage and Irrigation Act to assess the level of the D&I rates per acre on Declared D&I areas and levy charges on landowners. Revenues are used to pay for the operation and maintenance of the D&I works. Collection rates are, however, extremely low -- below 6 percent in 1990. The system could function properly if all fees were collected, the management of operations and maintenance were coordinated, and the services were provided for. This is not, however, the case.

3.19 Complications arise as not all works in a given declared D&I area are vested and not all D&I areas are "declared." Above all, years of negligence have eroded the level of cooperation among the various regional authorities and between the regional authorities and the farmers. Farmers expect the government to provide the services before they pay the fees, yet the lack of coordination and resources prevents efficient operations. In addition, no sanctions are enforced on those who refuse to contribute, which eliminates any incentive to pay.

3.20 *Limited Research and Extension Services.* A second reason for low productivity among farmers is a lack of knowledge about effective farm management and cropping techniques that could increase yields and improve the quality of goods produced. Although farmers do not face an absolute shortage of seed, there is a lack of quality seed. Technological improvements in agricultural activities have been extremely limited as the public sector's research and extension activities suffered from the country's common budgetary and administrative problems. The National Agricultural Research Institute (NARI), the country's most important research center, has responsibility for research on livestock and all crops except sugar, which remains under the direction of GUYSUCO. Other research institutes, the Caribbean Agricultural Research Development Institute, LIDCO (livestock and dairy produces), and the Inter-American Institute for Cooperation in Agriculture work in collaboration with NARI. Because NARI is underfunded and requires substantial strengthening, its capacity to develop new varieties and production technologies is constrained.

3.21 The government provides limited extension services through the Ministry of Agriculture under the Crops and Livestock division, though low salaries caused about one half of the 100 positions to be vacant at the end of 1993. The regional extension staff is largely responsible for the transfer of technology. The decentralization process has, however, resulted in separation of technology generation from dissemination. The regional agents submit project proposals to

Box 3.1: Drainage and Irrigation Systems

The D&I schemes in Guyana consist of an extensive system of drainage and irrigation canals. There are very few control structures along the main canals and distributor canals, with flows into the secondary canals being controlled by headgates. Farmers drive water from secondary canals through wooden boxes by gravity. Minor drains are interspersed with secondary canals, which drain directly to the sea through sluice gates, or to a facade drain which itself is drained to the sea at regular intervals. Sluice gates are opened twice a day at low times. All structures are manually operated with the exception of a few self-operating flat gates in Region 2.

Use of the water is allowed according to a schedule for a given area, which requires that all users in a secondary system must carry out field operations simultaneously. The operation of the system is also dependent on regular maintenance. Canals require weeding and clearing at least three times a year. If this does not take place, vegetation impedes water flow and this in turn causes canals to silt up more quickly, which further slows down the flow. Within a few years a system can deteriorate, requiring extensive re-working if it is to operate efficiently again.

Rehabilitation and maintenance of D&I systems is economically feasible, particularly for rice farming. An evaluation of recently completed SIMAP and IFAD projects shows that if the system is in a very deteriorated state only one crop per year is possible, as irrigation will depend mainly on rainfall, resulting in yields of approximately 20-22 bags of rice per acre. With a rehabilitated system, 2-3 crops are possible, with yields of 28-30 bags per acre.

The execution of both SIMAP and IFAD drainage and irrigation projects has, however, encountered problems in designing an efficient collection system of fees for D&I. Within the IFAD project, efforts were made to organize the farmers to maintain the D&I system by themselves. A contract for the works was set up based on cost estimates that afterwards turned out to be too low with regard to the remuneration of the labor that the contracting farmer had to provide. A wage of G\$300 per day was proposed in the contract, while it is known that task workers earn G\$1,000 per day.

the central Ministry of Agriculture officer for approval and funding. As a result, the Ministry of Agriculture has assumed financial management of the extension services, but does not have direct authority to focus its activities.

3.22 Some extension services are also available in "agri-centers" set up by private firms that sell agricultural inputs such as fertilizers, seeds, pesticides, chemicals, and agricultural equipment, to inform farmers about the appropriate use of their products. The Rice Producers Association is currently in the process of setting up their own extension service to be financed out of the 3 percent levy on rice exports that is charged by the Guyana Rice Export Board.

3.23 *Limited Access to Credit for Small Farmers.* Small farmers in Guyana have very limited access to credit. With increased access, farmers would be able to finance higher production levels or investments on their own land, such as improved water systems. As the system now functions, the primary constraint to obtaining credit is the banks' perception that farmers lack assets. This perception does not, however, reflect reality. The majority of small farmers have access to land and a high proportion own their property. As agricultural production becomes

more profitable, the value of those assets increases. Land is, however, currently undervalued because of underdeveloped financial markets in rural areas and because of inadequate land registration by the Lands and Survey Commission.

3.24 Limited rural financial markets result from underdevelopment of the financial sector in Guyana as a whole and from low demand for these services. Recent interviews with 750 rural households⁵⁰ indicate that small farmers place a high value on self-sufficiency, dislike bank credit, and perceive interest rates as being too high. Over 90 percent of the people interviewed did not wish to borrow from a commercial bank.

3.25 Commercial banks have been slow to get involved in the agricultural sector in spite of the increased profitability of agriculture since the start of the ERP. Commercial bank loans to agriculture only amount to about 10 percent of total private sector lending. Loans are available through commercial banks and the state-owned Guyana Agricultural and Industrial Development Bank (GAIBANK). The institutional infrastructure within the commercial banks is, however, not sufficient to make substantial loans to farms. At current production levels, crops in the field represent an investment of about G\$8 billion. Currently most crops are self-financed; the formal credit system is financing less than 20 percent.

3.26 The second reason for the underdeveloped land market is administrative constraints. The Lands and Survey Commission currently lacks personnel and equipment to carry out its surveying duties. Most land is leased on a 25-year basis; a large portion is leased provisionally because it has not been properly surveyed. Furthermore, the legal infrastructure for land administration barely functions. Under the existing system it is difficult to process the sale, mortgage, or sublease of state land not yet surveyed, or to register security claims against collateral. Similarly, legal constraints often prevent the mortgage, sale, or lease of untitled freehold properties. And finally, without an adequate legal infrastructure and administrative land registry, opportunities for fraud and abuse exist (see Box 3.2).

3.27 *Limited Access to Markets.* Another important area for promoting equitable growth in the agricultural sector is the system of feeder roads leading to the coast. In order to transport crops to markets, the majority of small rice farmers must depend on large farmers to hire a tractor at the end of the harvest and transport their produce to the mills. The poor condition of the roads makes it difficult to transport other crops that are harvested more frequently to markets.

⁵⁰ IFAD Survey, 1993

Box 3.2: Land Registry System

Land with freehold title is administrated by the Registrar of Deeds Office under the direction of the Attorney General. Records of buying and selling of properties are handwritten and were kept in an efficient way until about ten years ago. Since then budgetary constraints caused deficiencies in record storage so that documents have crumbled from humidity. The "Sub-Registry" in the vault in New Amsterdam was built during the colonial Dutch period. The vault, which is supposed to safeguard documents, is subject to flooding.

There is currently a backlog of about 5000 titles yet to be processed. As a result, changes in ownership by sale or inheritance take a long time before they are properly recorded. The current situation effectively discourages smallholders from even attempting to get a title to their land or applying for a lease; this in turn prevents them from getting credit. The situation also deters large landholders from selling their land in smaller, more affordable plots.

Recommendations

3.28 Increasing agricultural production is key to reducing poverty in Guyana. Small farmers will benefit directly from growth, while wage earners will benefit indirectly from increased demand for farm labor and for products and services in the rural non-farm sector. The following recommendations therefore are centered on creating opportunities for expanding production in the agricultural sector.

3.29 Expand Export Markets for Guyanese Agricultural Products. Prospects for agricultural growth rely on the demand for Guyanese agricultural products abroad. Investments in market research, advertising, and sales promotion of exports, as well as in more efficient transportation (e.g., more frequent and reliable air service to Guyana's main non-CARICOM export markets) is necessary. Particular attention should be paid to identifying and creating markets for non-traditional exports such as profitable tropical fruits and vegetables.

3.30 Rehabilitate the Drainage and Irrigation Infrastructure. Overall rehabilitation of the drainage and irrigation infrastructure is critical to increasing agricultural production. Such a scheme will, however, only be sustainable if a transparent institutional and organizational strategy is designed for the operation and maintenance of the system. Such a strategy must involve the cooperation of local communities and farmers as well as implementation of a viable cost recovery scheme. By involving farmers in the financing and management of the system, they will feel an increased responsibility towards maintaining it. For the poorest, a waiver system could be introduced whereby those farmers who cannot afford the fees for service would work off their share in providing additional assistance in maintenance efforts. To ensure this participation, a revised set of regulations for the use and maintenance of the system must be established by the government, along with an organizational structure with explicitly stated responsibilities. The system must enforce sanctions if fees are not paid or maintenance is not completed. Without such a system in place, externally funded D&I projects will only provide

temporary solutions and might create isolated areas of relative progress without an institutionalized mechanism for sustainability.

3.31 Strengthen Agricultural Research and Extension Services. Given the large potential for increasing rice and other crop production, particularly for small farmers, continuing research on variety improvements such as the Guyana 91 rice seed will be crucial. NARI could improve its capacity to carry out agricultural research through increased technical assistance from FAO and UNDP and through concentrating resources on rice, livestock, and domestic crops. Additional resources for research could be made available through a 1 percent levy on the value of paddy production collected at milling.

3.32 As improved varieties become available they must be widely distributed, particularly to small farmers. The decentralized extension service causes unnecessary gaps between invention of technology and its dissemination and between the supply and demand of the information provided. Overall extension responsibilities should be centralized in the MOA, provided that adequate linkages with NARI are established. NARI should consider reducing the size of its costly research stations and concentrate its efforts in three areas; rice, livestock, and domestic crops.

3.33 Extension workers would benefit from more broad-based training, as well as training in areas such as effective communication techniques and finance. Field agents now receive training at the School of Agriculture in Georgetown and tend to be highly specialized. As a result, several different extension workers may make visits to a farmer who grows several different crops. This is inefficient use of time and resources, particularly because the extension workers must rely on public transport to visit farmers. With a broader based training program, one extension worker could be sent to the field and, for example, calculate the costs and benefits from various seed types and reproduction/fertilization techniques to share with farmers. Optimally, the extension worker could custom design such a calculation for each farmer to suit their needs.

3.34 A final area of concern is a lack of awareness about environmentally safe farming techniques. Many farmers, particularly the poor and less educated, tend to disregard safety procedures by using chemicals without protective clothing and overusing chemicals that can contaminate the water system. Extension agents need to put emphasis on educating farmers on the appropriate use of these chemicals.

3.35 Increase Access to Credit. The development of a market for land is important for increasing assets for small farmers. This will in turn enable them to acquire the collateral needed for improved access to credit. Reforms in the system of land registry and the modernization and development of rural financial markets are necessary for ensuring that land is valued at full market price and can be used as collateral for loans.

3.36 In a report on land tenure in Guyana (Hendrix 1993), an elaborate recommendation is made for improvement of the registry system into a broader land information management system (multipurpose land information system or MPLIS), which would allow the government to manage its extensive resource base scientifically and transparently. A recommendation is also

made to provide for technical assistance to encourage a policy dialogue to establish consensus on land management issues such as privatization of state lands and extension of lease terms.

3.37 Improvement of the mapping capacity of the Commissioner of Lands and Surveys is also important for the design of an improved D&I management system. Confirmed (instead of provisional) and marketable land titles will encourage farmers to invest in their lands and might increase a farmer's willingness to participate in the maintenance of the drainage and irrigation infrastructure. It is also crucial that the surveying capacity of the government be improved in order to solve land disputes.

3.38 Simultaneous reforms in the banking sector will be necessary to improve rural access to credit as discussed in Chapter 2. An expansion of the successful "Grameen" model bank should also be promoted in rural areas.

3.39 Improve Access to Markets. The planned rehabilitation of the main road sections by IDA, IDB, and CDB over the next five years will effectively return Guyana's main road network system to acceptable standards. Additional investments will, however be needed in the long-term to rehabilitate feeder roads as well.

The Rural Interior

3.40 Inaccessibility, low population density, and the limited development of mining, agriculture, forestry, and roads explain the relatively undisturbed nature of much of the interior. Guyana remains one of the few developing countries where population pressure on its natural resources is low. Reducing poverty in the interior will involve careful planning to ensure that the development process fosters full respect for the cultural uniqueness and **rights of the indigenous population**, provides opportunities for them to **participate in increased economic activity**, ensures access to basic social services as in other parts of the country, and **protects the vulnerable ecosystem**.

The Amerindian Population

3.41 The interior has historically been inhabited by the indigenous Amerindian population. Currently there are nine tribes⁵¹ that reside along the northwestern coast or move between Suriname, Brazil, Guyana, and Venezuela. The Amerindians, numbered at roughly 75,000, account for 10.3 percent of the total population; more than half live in regions 1 and 9. As discussed in the poverty profile, across ethnic groups the incidence of poverty is highest for the Amerindian population. Though access to basic health and primary education is as high in the interior as other parts of the country, the quality of services provided is low. Malnutrition is high and educational opportunities are limited.

3.42 Based on the report of the Amerindian Lands Commission of 1969, legal land titles were granted in communal ownership to most of the Amerindian villages. Areas totaling 1.4 million hectares have been reserved for the exclusive use of the Amerindians. The land is distributed

⁵¹ the Arawaks, Warraus, Caribs, Akawaios, Arekunas, Makushis, Wapishanas, Patamunas, and Wai-Wais.

among 65 Amerindian villages located throughout Guyana. The lands are described by natural boundaries such as creeks, rivers, and mountains, but have not been surveyed. As a result, no effective settlement of land disputes can take place. The boundaries were established according to the amount of land the village needed to sustain its way of living based on the traditional activities of hunting, fishing, gathering, and slash and burn agriculture.

3.43 The population within a village is led by a captain who heads a chosen council. Several organizations have been formed to represent the Amerindian population as a whole, however, these organizations are sometimes met with suspicion as they are often urban based and seem to be partially motivated by international attention for the indigenous cause. Amerindians still live a tribal life, speak their own dialect, and preserve their own culture. Many of their resources come from the forest; posts, boards, wattles, and palm leaves for housing; wood for fuel, canoes, and paddles required for river transport; nibbi and rattan for furniture; and cotton and dyes for hammocks and clothing. Shifting agriculture or a fallow system are used for food production.

3.44 To a significant degree Amerindians have increasingly become involved in modern coastal society. A considerable number have intermarried and many have entered into commercial relationships with non-Amerindian timbermen, selling trees off their lands when cash is required. As communal lands cannot be used as collateral for bank loans, more Amerindian individuals seek private land titles.

Economic Development in the Interior

3.45 The country's economic recovery has spurred increased economic activity in the interior of Guyana. Most of the activities are linked to foreign-owned investments attracted by the ERP, which can be illustrated by some recent developments in mining and forestry.

3.46 Most of the **mining** activity in the interior is concentrated on gold. There has been a long history of gold mining and migration in the northwest of Guyana since the gold rush in the early 1930s. It is still the mainstay of the regional economy, providing jobs, markets, and some transport. The inaccessibility of the Northwest region has limited the extent to which miners operate, a situation which will change with the development of a road network by the Barama Company. The environmental damage of such developments could become severe because of the effects of dredging the rivers, chemicals used in the extraction process, and diesel fuel used to run the dredging machines.

3.47 The OMAI company operates a large industrial gold mine employing 875 workers of which approximately 15 percent are Amerindians. During the investment phase, workers were employed for two or three month periods at a stretch. Workers now are employed on a schedule of two weeks of work and one week off. They work 12 hours per day, of which 4 hours are paid as overtime (50 percent extra payment); on Sundays and official holidays a 100 percent overtime is paid. Wages vary between G\$103 and G\$177 per hour.

3.48 Small-scale mining also exists in the Essequibo River basin employing roughly 10,000-20,000 in land based forms of gold mining (locally called "pork-knocking"), plus 350-500

dredges (with approximately 12 people per dredge) working in the rivers and streams at any one time. Approximately 60 percent of the people working on the dredges are Amerindians.

3.49 Demerara Timbers Limited (DTL) has a 50-year timber concession in an area where no Amerindian villages hold land titles. The majority of the 700 workers come from the Linden area. About 50 Amerindian workers, most of whom come from villages from the Northwest coast, are employed to carry out pre-inventory studies of tree species. Workers are employed for a period of 12 days and then have about 3 to 4 days off. Wages vary between G\$30 to G\$90 per hour, and workers receive one free meal per day. DTL has set up a company town of about 1,500 people in the Mabura area, which now includes a school, church, supermarket, and police office. All utilities are provided free of charge.

3.50 The Barama Company has been granted a concession of about 1.7 million hectares of forest in the North West District (Region 1) which provides only for the harvesting of timber. Within the boundaries of the Barama concession, there are four Amerindian villages. All Amerindians lands are specifically excluded from the concession, but some disputes have arisen with regard to the boundaries.

3.51 Both Barama and DTL have committed themselves to sustainable forestry management. The basic strategy will provide for selective log extraction, with 8 to 12 trees to be cut in each hectare within a period of 25 years. Both companies have sought cooperation with independent university research centers, which monitor their operations through resident forestry researchers. Their mandate includes a multi-disciplinary approach combining technical forestry and environmental research with social and economic research. It is perceived that because of tax exemptions the new foreign timber companies enjoy substantial economic advantages compared to established local enterprises and are gaining strong market positions both on international and local markets at the cost of the local logging and sawmill companies. In addition, there are concerns about sustainable forestry management as currently practiced. There is little known about the regenerative capacity of Guyana's forests.⁵² Areas that were burned over 60 years ago have remained scrubland.

Concerns for Future Economic Development

3.52 As the interior provides many economic opportunities for the country, it is likely that activity will continue to expand. It also likely that the Amerindians, who have become accustomed to many aspects of modern life, will continue to assimilate rather than pursue traditional ways of life. Policies therefore need to be oriented towards safeguarding a balanced growth which incorporates sustainable economic development, ensures the rights of the indigenous population, and prevents environmental degradation. The limiting factor to the successful development of medium to long-term strategy for interior development is the institutional weakness of government agencies. This will require strengthening to ensure balanced growth.

⁵² The forests are thought to be quite fragile because they grow on white and red sand soils.

3.53 *Weak Institutional and Organizational Capacity.* Several Government entities are involved in the planning and coordination of economic development in the interior. These include the Ministry of Public Works, Communication, and Regional Development, the Ministry of Amerindian Affairs, the Guyana Forestry Commission, the Guyana Geology and Mines Commission, and the Commissioner of Lands and Surveys. The forestry commission and the geology and mining commission are supervised by the Guyana Natural Resources Agency. There are human resource shortages in all of these agencies, as in other sectors of the economy, which severely impedes the effectiveness of their activities.

3.54 The Guyana Forestry Commission is a semi-autonomous entity with responsibility for the administration of the permanent forest resources, which include about 14 million hectares of commercially viable forests. The commission grants leases and timber sales agreements with operators who are generally granted exclusive rights for 15 to 25 years. The Guyana Geology and Mines Commission is an autonomous entity responsible for granting licenses to operators to engage in mining operations other than bauxite.

3.55 Coordination between agencies is lacking and further complicates clear lines of responsibility and obstructs policy-making. For example, the Geology and Mines Commission can give mining concessions in areas where the Forestry Commission has already given logging concessions without clear regulations on how both activities can take place simultaneously. Furthermore, the cadastral maps produced by the Commissioner of Lands and Surveys are not linked with maps produced by the mines or forestry commissions.

3.56 *Environmental Degradation.* Economic activity in the interior has until now had a limited environmental impact on Guyana's vast resources though with increased development the impact could be devastating. Of the 80 percent of the country covered by rain forest, less than 1 percent has been deforested. Large-scale gold mining has only begun recently and because of the foreign ownership of OMAI the company adheres to international mining standards. Small-scale mining has, over the years, caused some environmental degradation though the extent is unknown.

3.57 There is no doubt that expanded forestry and mining activity and the construction of the proposed Guyana Brazil Road (also referred to as the Mabura-Lethem Road) will have an increased environmental impact on the interior. The national environmental policy adopted by the government and the ongoing environmental assessment on the impact of the road on the interior and Amerindian population are important first steps towards environmental sustainability in the country. The capacity to implement such a policy is, however, lacking.

Recommendations

3.58 *Strengthen Institutional and Organizational Capacity.* A transparent structure of institutional organization needs to be developed for the sustainable use of the interior lands. Planning and implementation capacity is weak both within and between agencies. There is an urgent need for a policy framework for conservation and sustainable development of natural resources, integrated land use planning, incentives for improved forest management, and mechanisms for environmental assessment, monitoring, and control. The Amerindian Act is outdated as well and should be revised to reflect these concerns.

3.59 Each responsible agency must review existing legislation to ensure that it reflects current concerns. For example, there are no environmental regulations on mining and mitigation of mining impacts, which should include environmental management agreements between miners and Guyana Geology and Mines commission, including procedures for land restoration, pollution control, and forest use and clearance.

3.60 The government also needs to clearly identify the nature and extent of its responsibility in the development of infrastructure within company towns. Given that these towns potentially will become centers of economic development in the interior, questions of maintenance and sustainability are foreseen. While the companies have provided for some basic services, local governments must be involved in issues related to cost recovery and long-term maintenance. Efforts should be concentrated to enable these settlements eventually to become independent from the company as the sole financier of their utilities and its economy.

3.61 *Promote Environmental Sustainability.* As economic activity in the interior increases, it is essential to ensure environmentally sound management. The government is working on a National Environmental Action Plan that will focus on sustainable development in the interior. In order to further develop, implement, and monitor environmental policies, the existing institutional capacity needs to be strengthened. This will require increasing salaries, training, and additional staffing. In addition, there is a need for further information on existing resources and resource use conflicts such as forestry vs. mining.

3.62 *Expand Economic Opportunities for the Amerindians.* To prevent dependency on monocultures and encourage the development of balanced local economies there are several areas which will facilitate economic activity and are potentially income-generating. **Local handicrafts**, for example, have definite marketing possibilities both locally and internationally. An improvement in the **market facilities** in the centers of economic activity in the interior (e.g. company towns) would encourage the supply and sale of locally grown and produced foodstuff and promote initiatives for agricultural development. Supplying more foods locally would be more efficient than the current practice of transporting foodstuffs from the coast. **Small scale logging** could also provide income though proper training and support for this would be necessary first.

3.63 Guyana's biodiversity offers opportunities for further development of specialized **eco-tourism**. The country's tropical forests, birdlife, fishing resources, and water resources are appealing to many. The few interior "resorts" managed by Amerindian families are doing well, largely as a result of the increase in donor activity. To promote additional tourism these kinds of activities need to be packaged for small groups and will require relatively complex arrangements. Furthermore, general conditions in the country, such as the reliability of health services and the control of malaria and other diseases, will become important. To promote such tourism, the government will also need to set aside protected areas/reserves. The management of such areas could provide limited employment for the Amerindians as well.

3.64 Finally, as discussed in Chapter 4, ensuring access to improved quality of basic health and education services is critical to poverty reduction in the interior. In addition to quality improvements in the system overall, nutrition, education, and preventive health care programs targeted at the Amerindian population would have a positive impact on increasing their

productive capacity and future opportunities. Given the government's limited resources, funding will have to come from other sources. This is an area where NGO's have a particularly important role to play. Small-scale projects can be designed to address the specific needs of the Amerindian population living in the remote and difficult to reach areas.

Delivering Social Services to the Poor: The Health, Nutrition, and Education Sectors

4.1 The most important goal of economic development is to improve human welfare. Economic growth is necessary for development, but not sufficient for the reduction of poverty. Investments in human capital are also needed so that the poor can both productively participate in growth and ultimately benefit from expanded income-earning opportunities. There is overwhelming evidence that improvement in education, health, and nutrition and making social services accessible to all levels of society, are keys to reducing poverty.

4.2 All governments in Guyana since independence have expressed a commitment to guaranteeing broad access to health and education to every citizen. However, in the absence of economic management, progress in fulfilling this commitment has become difficult to achieve. In the late 1960s the government began to subsidize all education and health services; private providers were absorbed into the public system, and user charges, customarily levied by all public sector health care facilities to cover part of operating costs, were abolished. With the growing economic difficulties in the 1970s and 1980s the government became unable to meet its commitments. Faced with deteriorating public finances, resources allocated to the social sectors decreased during the 1980s from 10 percent of GDP in 1986 to 5 percent in 1992.

4.3 Declining government resources have made it impossible to maintain standards. The quality of health and education services provided through the public system has deteriorated sharply. Because operations and maintenance were virtually suspended for 20 years, the physical infrastructure is either totally beyond repair or requires comprehensive rehabilitation. Materials and equipment are invariably insufficient, broken, or obsolete. Resources have not been enough to adequately compensate teachers, health workers, and social sector civil servants. A combination of poor working conditions and low salaries has caused skilled workers to leave the social sectors and work in the private sector or at jobs abroad. As a result the ministries of health and education are understaffed at all levels, inhibiting their capacity for planning, budgeting, and implementing sectoral policies. Guyana's education and health indicators are now among the lowest in the Caribbean region.

Equity and Access to Social Services

4.4 Access to basic education and health services is high across all welfare groups in Guyana. In the poorest quintile, 98 percent of children under the age of 11 attend school, while approximately two-thirds of the poorest income group seek health care for illness or injury. Equity of access to quality services is, however, not as universal. The poor, limited by welfare and geographic constraints, have been particularly affected by the decline in the quality of education and health services offered through the public system. They cannot afford to seek the improved services now offered by the private sector, and largely live in rural areas where only the lower level of services is available. For example, the nationwide shortage of qualified primary school teachers is most acutely felt in the rural interior areas, where poverty is highest.

In 1990, 38 percent of primary school teachers were unqualified or untrained, but in regions 1, 7, 8, and 9 the figures were as high as 64, 77, 76, and 67 percent respectively.⁵³ In health, the ratio of trained physicians per person is 1:2,500. In Regions 1, 7, 8, and 9 these ratios are substantially higher.

4.5 The bias in public funding toward expensive, hospital-based medical care has channeled resources away from the lower-level facilities designed to provide basic health care in rural areas. Disparities in the amount of the recurrent budget allocated to the regions on a per capita basis highlights these inequities. In 1993, three of the four regions to receive the lowest per capita allocation in both health and education were 1, 8, and 9, regions with the highest incidence of poverty (see Annex IV, Table 14).

4.6 Improvements in the quality of education, health, and nutrition are urgently required to reverse the 20-year deterioration in services. Improving quality will require increased investment, a more efficient use of existing resources, a strengthening of institutional capacity, and better provision of essential medicines and learning materials. These efforts must also ensure that the poor benefit equitably from the improved living conditions.

Health

Sector Overview

4.7 In theory Guyana's health care system has been well designed for the country's geographical and demographic characteristics. The system has been structured so that it can emphasize primary health care. It consists of five levels of service, each providing increasingly sophisticated services with staffing suited accordingly. Community health posts located in rural coastal and interior areas are staffed by community health workers and provide preventive care. Cases not treatable at health posts are referred to health care centers, the second service level, which are usually located in small towns. Here a wider range of services are provided by Medex practitioners, who receive 18 months of supplementary training following nursing school, as well as by nursing assistants, dental nurses, and midwives.

4.8 District hospitals, which serve a geographically defined area of about 10,000 people, provide the third level of service. Designed mainly for out-patient care, district hospitals are meant to provide limited in-patient services such as basic surgery, obstetrics and gynecology, and radiological and laboratory services as well as preventive and curative dental care. The fourth level of care is provided by regional hospitals, which were designed to dispense emergency care, routine surgery, gynecological services, and dental care. Regional hospitals are designed to have laboratory, X-ray, pharmacy, and dietetic services. The fifth, and highest, referral level consist of several specialized facilities, the foremost of which is the public hospital in Georgetown. Among the other specialized facilities are a geriatric hospital, leprosy hospital, mental hospital, and a rehabilitation center for children.

⁵³ Ministry of Education and Culture.

4.9 Health care delivery was decentralized to the 10 regional administrations in 1985. Although they continue to be totally funded by the central treasury, the regional administrations are responsible for constructing and maintaining medical facilities, administering the operation of facilities in their jurisdiction, and paying personnel. The Ministry of Health (MOH) is responsible for monitoring health indicators in the country, acting to ensure that health quality does not differ markedly across regions, maintaining the Georgetown Public Hospital and other specialist hospitals, procuring and delivering all pharmaceuticals, providing dental care for the country at large, and maintaining equipment in the regions. The Guyana Agency for Health, Environment and Food (GAHEF), which has traditionally had the responsibility of developing and implementing policies on environmental health and nutrition, is being restructured and is proposed to be absorbed by the MOH.

4.10 The private sector has expanded rapidly in recent years and is now responsible for providing approximately one-half of all health care in Guyana. Services range from private physicians to private hospital care.

Health Indicators

4.11 *General Indicators.* The country's poor health indicators reflect the deteriorated quality of public health services. Crude birth rates and crude death rates remained constant over the 1980s, with the latter fluctuating from 6.6 per thousand in 1985 to 8.0 in 1988 and 7.0 per thousand in 1992. Life expectancy was 64.9 years in 1992 as compared with 73 for Jamaica, 71 for Trinidad and Tobago, and 70 for Venezuela. Infant mortality rates have risen from 43.8 per thousand live births in 1985 to 47 in 1988, and then declined to 42.9 in 1992.⁵⁴

4.12 In 1990 the leading cause of death for infants under one year of age was conditions originating in the perinatal period (which accounted for 31 percent of reported deaths). Intestinal infectious diseases were the second major cause of infant mortality and nutritional deficiencies the third. All of these causes are generally avoidable through effective preventive care.⁵⁵

4.13 Mortality under age five, an important indicator of the wider health situation, is also the highest in the region at 69 per thousand (see table 4.1). This rate reflects several factors, including maternal health awareness, immunization levels, oral rehydration therapy use, access to MCH, food availability and consumption, and water and sanitation.

4.14 *Preventable Disorders.* Efforts to combat immune-preventable diseases have resulted in improved BCG, DPT, OPV, and measles immunization rates. Though coverage rates reach about 80 percent, sharp regional differences persist, with generally lower rates found in regions 1, 5, and 8. In contrast there has been a resurgence in vector-transmitted diseases. Dengue, filaria, and malaria are now major problems. Malaria is the most prevalent disease in the country, with the number of reported cases increasing from 3,600 in 1984 to 42,204 in 1991.

⁵⁴ Source: Statistical Bureau. These data vary by source (UNDP's estimate for 1991 was 50 per 1000).

⁵⁵ PAHO (1993) Health Conditions in the Americas: Guyana. Mimeo, June 1993 draft.

Table 4.1: Regional Comparison of Infant and Under Five Mortality Rates

	<u>Under 5 Mortality Rate</u>	<u>Infant Mortality Rate</u>
Guyana	69	50
Suriname	37	30
Trinidad & Tobago	23	20
Jamaica	19	15

Source: UNICEF (1993) *State of the World's Children 1993*.

4.15 The limited data available on the incidence of AIDS suggests a worsening situation. The total number of confirmed AIDS cases has increased from 10 in 1987 to 390 in 1992. Antenatal monitoring in Georgetown, Linden, and New Amsterdam for sexually transmitted diseases (STD) indicates a 2 percent HIV infection rate. Twenty-one percent of STD clinic patients tested HIV positive, and 2 percent of 4,081 blood donors and 13 percent of applicants for U.S. visas were HIV positive.⁵⁶

4.16 Though population control is not a major issue in Guyana, given the country's low population density rate and high out-migration, fertility rates are highest for the poor. Total fertility was estimated to be 2.9 percent in 1989, comparable to other countries in the region.⁵⁷ Contraceptives are available free of charge in most health centers throughout the country. Attendance at family planning clinics is nevertheless low, in part because of poor education and public attitudes toward contraceptive use.⁵⁸ Overall, less than one-third (29 percent) of females aged 15-49 used contraception.⁵⁹ This rate is much lower than other countries in the region.⁶⁰ As a result of the low use of contraception, abortions, though illegal in Guyana, are common.⁶¹

⁵⁶ The perceived wisdom that HIV/AIDS is a health problem caused by foreigners is not corroborated by recent data. A 1993 study of female sex workers revealed that 25 percent were HIV infected and those with Guyanese customers only had a statistically higher infection rate than those who only had foreign clients. See Keith Carter (1993) *Female Sex Workers' Seroprevalence Survey*, PAHO, mimeo.

⁵⁷ The total fertility rate was 2.7 in Jamaica, 3.1 in the Dominican Republic, and 2.8 in Trinidad and Tobago (Source: *1993 World Development Report*)

⁵⁸ The 1992 Guyana Contraceptive Prevalence Survey (CPS) indicated 4 out of 5 teenagers in-union and 7 out of 10 in the 20-24 age group did not use contraceptives.

⁵⁹ HIES/LSMS, 1993.

⁶⁰ Contraceptive prevalence among married women of childbearing age was recorded by the UNDP Human Development Report, 1992, as 31 percent for Guyana, 47 percent for Belize, 52 percent for Jamaica, and 53 percent for Trinidad and Tobago.

⁶¹ The Ministry of Health estimates that there are 100-150 abortions for every 100 live births.

Access Implications of the Deteriorated Quality of Services

4.17 Access to health services in Guyana is on the whole, **high**. Nationally, over half of the individuals who reported illness or injury sought some form of health care, with this pattern being relatively consistent across welfare groups (with the exception of Quintile II, see Table 4.2).⁶² This is substantially higher than rates reported in other countries; for example, in Jamaica, 39 percent of those ill or injured sought care (SLC, 1991) and in Peru that rate was even lower, at 34 percent (Peru LSMS, 1990).⁶³

4.18 Access to preventive care is, however, more skewed across welfare groups. Though nationally, rates are high -- 43 percent of those interviewed sought some form of preventive care (including immunization, pre/post natal care, and medical check-ups), for the poorest 20 percent the rate was lower -- 34 percent (Table 4.2). These differences were particularly pronounced for access to immunizations and pre- and post-natal care. For example, data on births by type of birth attendant and ethnic group show that almost 40 percent of Amerindian births were attended by an unqualified assistant. Among the Afro-Guyanese and Indo-Guyanese population (with a lower overall incidence of poverty) less than 5 percent of births were attended by unqualified assistants.⁶⁴ Much of this difference is due to the geographical constraints in access for the Amerindian population.

4.19 Variation in the use of contraception is also high across welfare groups. In the poorest quintile, only 12 percent use contraception, compared with 34 percent in the wealthiest quintile. The methods most used, however, were similar; the majority of women used the pill (36 percent) followed by the IUD, (21.4 percent). Contraceptives are obtained mainly at family planning clinics (34.2 percent) and to a lesser extent, at drugstores, (14.9 percent), with slightly over one-third of women paying for contraception. With regard to pharmaceuticals, the absence of essential medicines in most clinics has meant that individuals must purchase their own medication. While 43 percent of the population purchased medication for illness nationally, only 20 percent of the poor were able to do so.

4.20 These differences in health care consumption, coupled with the fact that the proportion of poor individuals not seeking curative care for expense and distance factors is eight times greater than wealthy individuals, indicate that equity in the provision of health care is a major concern.

⁶² The variation in the percent reporting illness or injury suggests a difference in the perception of illness across welfare groups. The higher mean number of days that the poor were unable to carry out their usual activities suggests that the illness was more severe.

⁶³ See Baker, J. and van der Gaag, J. "Equity in Health Care and Health Care Financing: Evidence from Five Developing Countries" in Doorslaer, Wagstaff and Rutten (Eds.) *Equity in the Finance and Delivery of Health Care: An International Perspective*. (Oxford: Oxford University Press, 1993).

⁶⁴ See World Bank, Public Sector Review, Table 13.18.

Table 4.2: Access to Health Services by Welfare Group

Characteristic	Per Capita Consumption Quintile					
	All Guyana	I Poorest	II	III	IV	V
Percent reporting illness or injury	22	19	18	25	24	24
Mean number of days inactive due to illness	5.2	6.5	5.5	5.3	4.4	4.1
Of those ill, percent seeking care	55	63	45	58	54	53
Percent of total population seeking preventive care; TOTAL	43	34	40	48	49	45
Immunization	10	8	9	8	10	12
Medical check-up	17	17	14	16	18	19
Pre/post natal care	3	2	3	3	3	3
Other	14	7	13	19	17	12
None	<u>57</u>	<u>66</u>	<u>60</u>	<u>52</u>	<u>51</u>	<u>55</u>
	100	100	100	100	100	100
Percent not seeking care for ill./inj. due to expense or distance factors	11	24	19	10	7	3
Contraceptive use (N=1420)	29	12	27	34	33	34

Source: HIES/LSMS Data 1993, N=7700.

Consumer Response to the Deteriorated Quality of Services

4.21 The deteriorated quality of health care services provided by the public sector has led to a **breakdown in the health referral system**, and an **expansion of the private health sector**. The referral system, designed to include five levels of care, is now characterized by an overall limited use of public health centers and health posts and an increase in the use of specialized hospital care. Many individuals will bypass local facilities to seek care at the Georgetown Public Hospital or private hospitals where they receive better medical attention. Overall, 43 percent of the population sought care in a public or private hospital for their illness or injury. The use of private hospitals was particularly pronounced for the wealthy -- 16 percent of individuals in the top quintile visited a private hospital, compared with 1 percent for the poorest 20 percent of the population. The poor were much more likely to seek care in the health centers and health posts, indicating that the strengthening of these services would have a much greater impact on poverty reduction than investments in other services.

4.22 A further indication of both the breakdown of the referral system and inequity in the health system is related to the type of health care worker the patient was treated by. Nationally, almost two-thirds of the care was delivered by a doctor. For the poorest, closer to one third were treated by a doctor while almost half received care from a community health worker or Medex whose levels of training are well below that of a doctor.

Table 4.3: Type of Health Facility Used, by Quintile

Of those ill/injured and seeking care:	Per Capita Consumption Quintile					
	All Guyana	I Poorest	II	III	IV	V
Type of facility:						
Public hospital	31	24	39	32	32	29
Public health center	12	21	9	9	13	9
Public health post	5	16	5	1	2	3
Private hospital	12	1	13	12	17	16
Private clinic	5	2	3	4	3	9
Private doctor	21	10	23	24	24	23
Industrial health center	5	3	2	5	6	5
Other*	<u>9</u>	<u>23</u>	<u>6</u>	<u>13</u>	<u>3</u>	<u>6</u>
	100	100	100	100	100	100

Source: 1993 HIES/LSMS Data, N=920 (individuals ill or injured, and seeking care).
 *Other includes traditional medicine and to a lesser extent dispenser's home/office, patient's home, or private drugstore.

4.23 Consumers who have lost confidence in the public sector's capacity to provide adequate health care services have also assumed a greater welfare responsibility demonstrated through a strong willingness to pay and to travel to urban centers in order to access the best services for themselves and their family members. Approximately 50 percent of all health care provision is now through the private sector with an average of approximately G\$1574 (US\$12.6) being spent per illness on medical consultation, medication and travel costs (this is equivalent to 21 percent of monthly mean per capita consumption).

Table 4.4: Type of Health Care Worker Delivering Treatment, by Quintile

Of those ill/injured and seeking care:	Per Capita Consumption Quintiles					
	All Guyana	I Poorest	II	III	IV	V
Type of health care worker (%):						
Doctor	62	37	67	70	67	67
Nurse	7	10	7	5	5	11
Medex	16	22	17	15	16	13
Community Health Worker	7	24	2	0	6	1
Dispenser	5	3	6	5	6	5
Pharmacist	2	1	0	4	0	2
Other*	<u>1</u>	<u>3</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>
	100	100	100	100	100	100

Source: 1993 HIES/LSMS Data, N=920 (individuals ill or injured, and seeking care).
 *Other includes midwife and healer.

4.24 Deterioration in the health care system has had the biggest impact on the poor, who cannot afford the cost of private health services, medication, or the travel costs of bypassing the health centers and health posts. The large majority of the poor, more than 60 percent, continue to seek care in public facilities despite the low quality of services provided. The provision of medication in public facilities, for example, is almost nonexistent, yet the proportion of the poor purchasing medication was only half the national average. This indicates that the pharmaceutical needs of the poor are not being met.

Constraints to Improved Quality of Health Care

4.25 The primary constraints to improving the quality of services provided through the public health care system are related to **inefficiencies, skilled manpower shortages, weak institutional capacity, and a lack of medium and long-term planning.**

4.26 *Inefficient Budgetary Allocation.* Public spending on health care has declined as a result of the worsening economic conditions in the country, though as a share of GDP is comparable to other countries in the region.⁶⁵ In 1992, the total health budget was approximately US\$13 million (of which 60 percent was allocated to recurrent expenditures). Recurrent expenditures were equivalent to approximately 3 percent of GDP.

4.27 Inefficiencies in the system, including the current bias of resources toward high cost curative care, exacerbate the problem of limited resources. In 1990-1992, G\$821 (US\$6.6 million) was allocated to the Georgetown Public Hospital (GPH) program while only G\$67 million (US\$536,000) was spent on rural health centers, the Medex program, and referral hospitals. Similarly, over the 1993-1996 period, approximately 86 percent of funds committed to the health sector investment program will go to further work at the GPH. When the GPH project is finished it will require US\$2 million to operate, an amount equivalent to 20 percent of the 1993 health sector budget. Even though health sector allocations are expected to continue rising over the foreseeable future, GPH recurrent costs represent a heavy financial burden and drain resources from the provision of primary and preventive care.

4.28 *Weak Institutional Capacity.* When the government decentralized the health system, the expectation was that regional administrations would provide better services because of their proximity to beneficiaries and their ability to account for regional differences. This has not, however, been realized. Under the decentralized system Regional Administrations (RAs) have acquired undue autonomy with no clear distribution of responsibilities. There is little incentive in the system to respond to local concerns because RAs are fully funded from the treasury and do not levy taxes locally. RAs are also affected by weak central ministry planning. The Ministry of Health has limited capacity to develop medium and long-term strategic plans outlining key priorities and objectives. The resulting low quality of services has had the biggest impact on the poor, who rely most heavily on the public system.

⁶⁵ In 1990 health expenditures as a share of GDP were 2.6% for Guyana, 2.0% for Trinidad and Tobago, and 1990, and 2.7% for Jamaica.

Table 4.5: Health Care Consumption

Of those ill/injured and seeking care:	Per Capita Consumption Quintile					
	All Guyana	I Poorest	II	III	IV	V
Type of Facility (%):						
Private	43	16	41	45	50	53
Public	48	61	53	42	47	41
Other*	9	23	6	3	3	6
Percent purchasing medication	43	20	37	47	46	57
Medical Expenditures:						
Mean total per illness/injury (G\$)	G\$1574	G\$878	G\$1228	G\$1625	G\$2025	G\$1893
Proportion spent on:						
Consultation	34	12	26	18	47	50
Medicine	59	80	67	76	47	42
Travel	<u>7</u>	<u>8</u>	<u>7</u>	<u>6</u>	<u>6</u>	<u>8</u>
	100	100	100	100	100	100
<p><i>Source:</i> 1993 HIES/LSMS Data, N=920 (individuals ill or injured, and seeking care). *Other includes traditional medicine, and to a lesser extent dispenser's home/office, patient's home, or private drugstore.</p>						

4.29 Human Resource Shortages. The Ministry of Health is characterized by an overall shortage of skilled staff both at the central and regional level, the result of low salaries and poor working conditions. Large numbers of qualified personnel have gone to the private sector or migrated to jobs abroad, leaving high vacancy rates. The Personnel Department, for example, has 12 full-time positions, of which only five were filled in mid-1993. The highest vacancy rates for skilled staff are in rural areas, where the incidence of poverty is also highest.

4.30 Essential Medicine Shortages. The drug purchasing system in Guyana has essentially collapsed. Although the MOH is responsible for the purchase and regional distribution of pharmaceuticals, purchases are not linked to a well-developed, flexible planning model and the stock-keeping system is weak. Large quantities of expired pharmaceuticals in the central bond have had to be destroyed, despite chronic drug shortages elsewhere, because of inadequate distribution. The distribution problems have particularly affected the poor in the most remote areas. The weak distribution of essential drugs is further exacerbated by the absence of an effective essential drugs list. Because no reliable study of the country's epidemiological profile has been undertaken, there is no basis upon which to assess pharmaceutical needs; therefore, large sums are wasted on the purchase of inappropriate drugs while usable drugs are often in short supply.

4.31 The gap in the supply of drugs has largely been filled by private sector pharmacies. The poor, however, are less able to afford the cost of pharmaceuticals and thus do not always obtain the medication they require. In the interior regions there are no private pharmacies, so even if the poor could find resources to purchase medication they would nevertheless have to rely on the public system.

Box 4.1: The Bartica Hospital

Bartica is located at the confluence of the Essequibo and Mazaruni rivers, the two main water highways into the Cuyuni-Mazaruni hinterland. Bartica's geography should guarantee its role as a route and service center for many of those travelling to gold and timber concessions in the region. The Bartica hospital is a case example of what happens when low quality services are provided.

The hospital was established over 100 years ago. Though extensions have been added, the basic wooden structure has not been altered significantly. Today the buildings are somewhat run down, and it was reported that G\$1 million a year is required for maintenance while the regional health budget is only G\$14 million. Basic materials are in low supply and the services provided are limited. For example, surgery is restricted because there are no blood transfusions because of a lack of laboratory technicians for HIV testing and because the blood bank does not have a regular electricity supply.

Despite the fact that the hospital is the only one in the area, Bartica Hospital is underused. Many people bypass Bartica and go straight to Georgetown. Estimates from the hospital staff indicate that approximately one person per day from Bartica goes to Georgetown for medical care. The travel cost of a return fare per person is around G\$1,500. The average trip will require an overnight stay, with the cost of accommodation and food totalling an additional G\$2,000 per day. Assuming the average cost of each visit is approximately G\$4,000, this amount is equivalent to more than half the average monthly per capita consumption. If 360 patients make the trip to Georgetown annually spending an average of G\$4,000, the cost in travel and accommodation totals G\$1.5 million for the year. This is more than is currently spent on maintenance.

Another result of the low quality of services is the use of private clinics in the area. When one man with a broken arm could not be treated in the public hospital because of a shortage of X-ray film, he paid G\$10,000 to have his arm set at a private clinic. The hospital administrator estimates that over half the patients from Bartica use private health services regularly.

Source: Poverty Assessment Interviews, 1993

Nutrition

4.32 The causes of malnutrition have been linked to insufficient dietary intake and disease, which result from economic difficulties, food shortages, lack of nutritional education, and lack of access to clean drinking water and satisfactory health care. In Guyana, given the high incidence of poverty and the deteriorated condition of the water and health systems, it is not surprising to find the prevalence of malnutrition to be substantially higher than other countries in the region.

Child Nutritional Status

4.33 Recent data on malnutrition is available from a GAHEF survey carried out in 1991 and the 1993 HIES/LSMS survey. The GAHEF⁶⁶ survey found that 3.0 percent of children under 5 were severely malnourished and 23.6 percent were moderately malnourished.⁶⁷ The 1991 survey showed that malnutrition appears to be most severe in regions 5, 6, and 8 where between 4 and 5 percent of children surveyed suffered from severe malnutrition. The lowest rates recorded were in regions 2 and 10.

4.34 Data on birth weights, a proxy indicator for the mother's nutritional status, is also available from the 1991 GAHEF survey. This data indicates that there was an apparent decline in nutritional status during the period 1987-1991. The incidence of low birth weights increased from 17 percent of children in 1987 to 18.3 percent in 1991.⁶⁸ This rate is equivalent to that of Haiti and twice that found in Jamaica (8 percent). The rise in food prices during this period may have been one of the causes of the decline in nutritional status.

4.35 Additional data on malnutrition is available from the 1993 HIES/LSMS survey. Though this data cannot be used to measure changes in malnutrition over time⁶⁹, it is useful for evaluating the linkages between malnutrition and economic and demographic factors in Guyana. As expected, the data reveal that malnutrition is highest for the poor in Guyana.⁷⁰ In the first quintile, a substantial proportion -- over one-third of the children -- were classified as suffering from mild or severe malnutrition.⁷¹ Furthermore, this figure is most likely underestimated because a large number of the poor are located in regions 1, 8, and 9, which were not included in the anthropometric sample.⁷²

4.36 An age breakdown shows a process of nutritional deterioration occurring during the first two years. The prevalence of malnutrition is very low in the age category 0-5 months, and increases sharply to close to 24 percent for the 12-23 month category. Causes of this deterioration may be due to weaning practices and the low incidence of breast feeding. Children

⁶⁶ The survey included a nationwide sample of 2,555 women between the ages of 15 and 45 and 3,698 children under the age of 5.

⁶⁷ Severe malnutrition is classified as below 60 percent of expected weight for age and moderate malnutrition is classified as those falling within the range of 60-80 percent of expected weight for age.

⁶⁸ These figures are underestimated, given that approximately 10 percent of births were unrecorded, especially in the economically depressed parts of the country.

⁶⁹ It is not comparable with the GAHEF survey because it does not contain anthropometric data for regions 1, 8, and 9.

⁷⁰ Using Z scores for the weight for age measurement.

⁷¹ The classification of <-2s.d. weight for age as used by UNICEF.

⁷² These regions were omitted from the anthropometric sample due to the difficulty in accessing those areas by LSMS/HIES anthropometrists.

who are weaned at an early age are denied the nutritional and immunological benefits of breast milk while running a greater risk of diarrhea and infectious diseases because of the lack of safe water.

Table 4.6: Levels of Malnutrition in Children Under Five by Quintile, Region

Characteristic	% Severely Malnourished -3 to -5 sd w/a ¹	% Mildly Malnourished -2 to -3 sd w/a ¹	N
Total for Regions 2,3,4,5,6,7,10.	2.2	16.1	581
Region			
2	4.2	14.6	48
3	1.2	18.7	80
4	1.6	15.8	254
5	1.6	15.9	63
6	2.3	18.8	85
7	4.8	9.5	21
10	3.3	13.3	30
Consumption Quintile			
I (Poorest)	3.5	28.2	85*
II	1.6	17.6	125
III	3.4	16.0	119
IV	2.5	11.5	122
V	0.8	10.1	129
<p><i>Source:</i> 1993, HIES/LSMS. N=581. ¹Weight for Age Measurement. *This number does not fully represent 20 percent of the population because anthropometric data for regions 1, 8, and 9, where many of the poor live, was not available.</p>			

4.37 Other characteristics related to malnutrition in Guyana include the mother's level of education and the source of drinking water. Approximately 20 percent of the children under 5 of mothers whose educational attainment was below primary school suffered from severe or mild malnutrition. For mothers with a post-secondary education, the level of malnutrition was less than 8 percent. By source of drinking water, rates of severe malnutrition were highest for private catchment and public standpipe. Those who use standpipes are largely the poor, who live in the inner city slum areas, or squatters.

Nutritional Programs

4.38 There are several small-scale nutrition programs in Guyana that have been run through the Ministry of Health and donor agencies. Wheat flour is the only basic food staple that is

currently fortified in the country.⁷³ The Maternal and Child Health Programs of the Ministry of Health include a nutrition component; ante-natal care involves hemoglobin control and iron and vitamin supplementation, and the health center check-ups for infants and children under 5 cover growth monitoring, nutrition education for mothers, immunization, and control of diarrhea and respiratory diseases. The Ministry of Health in collaboration with PAHO, UNICEF, and the Caribbean Food and Nutrition Institute also administers a program aimed to increase growth that monitors 60,000 to 95,000 children.

4.39 Likewise the Ministry of Health, PAHO, and CFNI have collaborated on a community resource person project. A pilot scheme in nine communities with high malnutrition, this project trains community-based workers on issues such as child growth, health, and nutrition with the objective of increasing coverage of maternal and child health programs. According to a project evaluation, there are encouraging results with higher degrees of awareness of balanced nutrition and health practices in the targeted communities and increased attendance of children at health clinics.

4.40 The World Food Program (WFP) also supports school feeding programs in nursery and primary schools. The project, initiated in 1983 and renewed subsequently in 1991, aims to alleviate hunger and to improve and sustain school attendance. Roughly 75,000 primary school children and 25,000 nursery school children are scheduled to receive a half-pint of dried milk and 4 nutritious biscuits daily. Distribution difficulties, logistical problems over biscuit supply, and government food policies restricted coverage during the 1980s. Coverage has, however, increased since 1991.⁷⁴ The incidence of benefits from this program, though targeted to the poor, are regressive. In nursery, primary, and primary schools with secondary departments, only 33 percent of the students receiving the milk and biscuits are in the bottom two quintiles. The remainder of students receiving the benefits are above the poverty line (see Table 4.8). This may largely be due to the difficulty in distribution to rural areas, where the incidence of poverty is highest.

4.41 The Social Impact Amelioration Program (SIMAP) administers two types of nutrition programs: one that distributes monthly take-home food supplements and one that provides cooked foods to children under 5 in day care centers. Nutritional education is provided to parents, particularly those with malnourished children. An evaluation of SIMAP projects would need to be carried out to determine how effective these programs are (see Chapter 6).

⁷³ Imported wheat flour is enriched with calcium, iron, and B vitamins.

⁷⁴ The WFP programs cover 195 school days per year. Milk and biscuits are distributed from the center to three regional distribution centers. Distribution is then carried out by four full-time workers funded by the Ministry of Education using three vehicles. School headteachers are responsible for the program at the school level. Biscuits and milk are scheduled for delivery every three weeks. However, it was ascertained by the mission that delivery is often unreliable and that on average milk and biscuits are unavailable for four weeks out of every 12-week term. Additional problems are the lack of utensils as well as the potability of the water supply when supplies exist on site. The priority therefore is to improve program reliability in coastal areas before extending coverage to areas of difficult access in the hinterland, which will demand additional logistic and organizational skills.

Table 4.7: Characteristics of Malnutrition in Children Under Five

Characteristic	% Severely Malnourished -3 to -5 sd ¹	% Mildly Malnourished -2 to -3 sd	N
Age:			
0-5 months	0.0	5.3	38
6-11 months	4.8	8.1	62
12-23 months	3.1	20.8	130
24-35 months	3.8	17.3	104
36-47 months	0.7	13.3	135
48-60 months	0.9	21.0	114
Sex:			
Boys	2.6	17.0	311
Girls	1.8	15.1	272
Mother Present in Household	2.1	15.3	535
Mother not Present	4.2	25.0	48
Educational Attainment of Mother			
Below Primary	3.1	17.3	352
Primary	0.9	18.0	111
Secondary	1.7	13.3	60
> Secondary	0.0	7.8	51
Source of Water Supply			
Private piped into dwelling	2.8	8.3	36
Private catchment, not piped	3.6	12.5	56
Public, piped into dwelling	0.0	11.5	52
Public, piped into yard	2.9	13.1	207
Public standpipe	3.3	24.4	90
Public well or tank	1.8	21.8	55
¹ Using weight for age measurement.			
Source: 1993 HIES/LSMS Data. N=580.			
*Anthropometric data was not collected for regions 1, 8, and 9, where the incidence of poverty is highest.			

Table 4.8: The Incidence of Benefits for the Milk and Biscuit School Feeding Program by Type of School

	Total % Participating	Per Capita Consumption Quintile					Total
		I	II	III	IV	V	
Percentage of Students Receiving Milk and Biscuits:							
Nursery School (12%)*	67	11	20	23	25	22	100
Primary School (36%)	47	13	20	20	26	21	100
Primary w/Secondary Dept. (21%)	36	23	13	26	28	10	100
Source: 1993 HIES/LSMS Data, N=1470 in the three types of schools.							
*Percent of total school attenders.							

Recommendations for the Health and Nutrition Sectors

4.42 The new government has expressed its commitment to strengthen the existing health system. Priority areas include the rehabilitation and maintenance of health infrastructure with a focus on regional and community health facilities, vehicle maintenance, retention of qualified staff, and improved preventive care.⁷⁵ The MOH has also committed itself to rebuilding the primary health care system despite significant existing commitments to curative health care.

4.43 Further to this, efforts must be made to ensure that the poor benefit from overall quality improvements in the system through emphasizing basic primary and preventive care, family planning, and nutritional education. Targeted health and nutrition programs, particularly to rural areas, will increase the productivity of the poor and ultimately raise their living standards.

4.44 In order to carry out these objectives, the system will require not only additional funding, but a more efficient use of recurrent resources and clarification of the role of the public sector. Reforms will also require a strengthening of the administrative capacity in the sector so that planning and implementation of policies can be carried out.

4.45 *Clarify the Role of the Public Sector.* In focusing on primary and preventive care, the government must determine what essential services it can effectively provide. These services should focus on the prevention and treatment of the most prevalent diseases in the country. A minimum national essential health package would need to include: a) vector-borne disease control; b) care for common serious illnesses of young children; c) services to ensure pregnancy-related care; and d) family planning services and treatment of sexually transmitted diseases (See Box 4.2).

4.46 *Improve Efficiency in Health Care Spending.* Substantial improvements in health service delivery are possible through a more efficient use of public funds. Spending in the sector is currently regressive; it is biased toward high-cost curative care, with the largest proportion of resources being spent on the Georgetown Public Hospital. Primary and preventive care, particularly important for the poor, have been largely neglected. In order to improve overall quality within the public system, the MOH will need to narrow the range of services offered to focus on primary and preventive care (including family planning services) rather than curative services, and ensure that resources are allocated in the most cost-effective way. Information on the use of health care facilities demonstrates that improving the care at public health centers and health posts would have the most impact on the poor. Improving public information and educational programs would also be important complements to improving efficiency in the system.

4.47 Additional funding is needed to invest in capital infrastructure. In the short term, these funds are likely to come from donor-financed projects such as the current IDB Health Project II and the proposed World Bank Health Project.

⁷⁵ Government of Guyana (1993) Budget Speech by Asgar Ally, M.P. Senior Minister of Finance.

4.48 The medium and long-term sustainability of quality improvements will, however, require additional public financing. There is potential to increase revenues in the health sector through cost-recovery measures. This is widely demonstrated by the fact that large numbers already use private clinics and hospitals, which cover their operating costs through fees, patients visiting public sector facilities purchase drugs and other supplies because they are unavailable in the public sector, and patients are willing to bypass local facilities and incur the travel costs to obtain a better quality of service. The HIES/LSMS survey indicates that 1.8 percent of the average household budget is already being spent on health care (See Table 1.10). This translates to a mean expenditure of G\$6220 (US\$50) per household per year, or close to US\$8.4 million for the country as a whole.

4.49 If appropriately designed and administered, user charges can actually benefit the poor by allowing more spending on underfunded programs and by encouraging greater efficiency. To ensure that cost recovery programs are sustainable they must be accompanied by immediate quality improvements through adequate staffing, infrastructure rehabilitation, and the provision of supplies and pharmaceuticals. The design of a cost recovery scheme must also ensure that some provision be made for those who cannot afford to pay. To protect the poor and encourage a greater reliance on a revitalized referral system, lower or even zero charges should be levied in health posts and district hospitals. Examples of fee waiver programs in the region can be found in Belize and the Dominican Republic and in the free health insurance program in Costa Rica.⁷⁶ With improvements in quality, services could also be contracted out to the private sector. For example, contracting out the use of the new GPH facilities such as the sterilizing or laundry unit to private health facilities could provide a potential source of revenue.

4.50 *Strengthen Institutional Capacity.* Through strengthening the institutional capacity in the MOH and regional administration, the system will be better able to develop a medium to long-term health policy and implement sector goals. This will require establishing clear lines of authority and accountability, improving monitoring and communications linkages between central and regional health agencies, ensuring that regional offices are well-staffed, and improving the information base necessary for sector planning. Improvements in the ministry's planning capacity and the regional administrations' implementation capacity will also require filling the vacant staff positions with qualified administrators, as well as providing extensive training in management and budgeting. The poor, who use the public health services the most, will ultimately be the beneficiaries of an improved health care system.

4.51 *Increase Human Resource Capacity.* Low salaries and low staff morale have caused a decline in the quality of health services. Ensuring that salaries are commensurate with the private sector will help stem the outflow of skilled personnel; salary increases are required across the board and not just at the top levels. The salary structure should be regularized through the removal of existing emoluments and introduction of a systemic job classification system. Resources for salary increases will need to come from efficiency improvements in health spending. In addition, it is necessary to improve the working conditions for the staff by providing adequate supplies for them to do their jobs properly.

⁷⁶ See M. Grosh, 1994, Administering Targeted Social Programs in Latin America: From Platitudes to Practice, The World Bank, Washington, D.C.

4.52 Staffing can also be improved through increasing the flexibility allowed for private practice and through providing incentives for those willing to work in remote and rural areas. Community-based facilities should initiate an accelerated training program for locally recruited health workers to retain the estimated 85 percent of the 182 community health workers in Amerindian communities who remain in the public health system.⁷⁷

4.53 *Improve the Supply and Delivery of Pharmaceuticals.* There is a need for the MOH both to improve the supply and distribution of essential drugs and to increase the efficiency of the system to prevent the current levels of wastage. A list of essential drugs developed by the World Health Organization could serve as a basis for a revised the MOH List of Essential Drugs. Through improved selection, the MOH could achieve savings in pharmaceutical expenditures.

4.54 Additional savings could be achieved through charging a centrally-established fee for drugs with a waiver system for the poor at the hospital or clinic level. This would discourage inappropriate prescription, over-prescription, and wastage of drugs. The storage and distribution of pharmaceuticals will require developing a central and regional system for inventory control, improving regional storage facilities, and establishing a standard nationwide system of stock control. Given the limited institutional capacity of the MOH and the complications involved in the transportation of drugs, it may be more effective to contract with private firms to deliver drugs to regional centers. Through improvements in the storage and distribution of essential drugs and using resources made available by increased efficiency, the MOH could ensure the delivery of essential medicines to the poor.

4.55 *Improve Targeting of Nutrition Programs.* Targeting nutrition programs to the poor will have the biggest impact on reducing levels of malnutrition in the country. A critical period for nutrition in Guyana is from 6-12, months when infants are weaned from breast milk and provided with other foods. This is also when the sharpest declines in growth occur, leading to short stature which is not corrected later in life. Thus an effective priority in nutrition programs is to promote exclusive breastfeeding of infants through 4 to 6 months of age and ensure that weaning foods are adequate to sustain growth. Programs to promote appropriate breastfeeding and weaning include maternal and child health care and nutrition information, education, and communications programs. Programs that currently distribute food supplements must also be accompanied with nutritional education and ongoing monitoring. In addition, introducing a wider campaign through health clinics, schools, and appropriate media would promote nutritional education. Finally, sustaining efforts to improve the water supply will also have a positive impact on reducing malnutrition in the long term.

⁷⁷ UNICEF (1993) op cit

Box 4.2: A Minimum National Essential Health Package	
Clusters of Interventions	Main disease conditions addressed
Public Health:	
Expanded program on immunizations	Measles, rubella, poliomyelitis, diphtheria, tetanus, whooping cough
School health program	Intestinal worms
AIDS prevention program	Sexually transmitted diseases and AIDS
Breast Feeding and nutrition education	Malnutrition and infectious diseases, cardiovascular disease
Vector-borne disease control	Malaria, filaria
Clinical:	
Management of the sick child	Diarrheal diseases, pneumonia and other respiratory infections, measles, and malnutrition
Prenatal and delivery care	Perinatal mortality and morbidity, complications of pregnancy and delivery, low birth weight, unwanted pregnancies, and congenital syphilis and gonorrhoea
Family planning	Perinatal and infant mortality and maternal mortality and morbidity
Treatment of sexually transmitted diseases	AIDS, syphilis, gonorrhoea, chlamydia, and other sexually transmitted diseases
Limited care (mainly for adults)	Pain control, infection and minor trauma treatment, diabetes, cardiovascular disease, respiratory infections, sexually transmitted diseases, malaria, filaria
<i>Source: Adapted from World Development Report, 1993, World Bank.</i>	

Education

Sector Overview

4.56 Guyana's education system provides for nursery school, six years of primary school, four to six years of secondary school, and between three and four years of higher academic or pre-vocational education. With schooling mandatory up to the age of 14 1/2, all students should complete primary school and at least two years of secondary education. The secondary school system is divided into three subsystems; General Secondary Schools (GSS), Community High Schools (CHS), and Secondary Departments of Primary Schools ("primary tops"). A student's entry into these schools depends on the scores received on the Secondary School Entrance Examination (SSEE). Those with scores in the top 2 percent are eligible for the President's College, an elite residential school with an enrollment in 1993 of approximately 300. Others who score within the top 40 percent are admitted to the General Secondary Schools. The remainder of students attend either the vocational-oriented community high schools or remain in secondary departments of primary schools. Though the "primary tops" supposedly have a secondary curriculum, most repeat their primary curriculum. Students who do not take the exam

(a minority) have no option but to continue in the secondary departments of their primary schools.

4.57 Entrance to tertiary level education depends on the type of secondary school attended and scores attained in Caribbean-wide examinations. Students from community high schools can pursue technical level courses at vocational and technical colleges. General academic graduates are able to attend either the Cyril Potter Teacher Training College or the University of Guyana.

4.58 The education system was decentralized in 1985 so that the 10 Regional Administrations now hold much of the responsibility for providing education. They construct and maintain schools in their jurisdictions, allocate resources to different school sites and levels, recruit and pay teachers, and ensure that schools operate in accordance with regional and national objectives. The Ministry of Education and Culture's (MEC) principal functions are to monitor educational indicators across regions so that large variations in education quality do not arise, to procure and deliver textbooks to all schools, to coordinate key primary and secondary school examinations, and to control the operation of schools in the central Georgetown area. Most of the institutions of higher education also fall under the responsibility of the ministry.

4.59 Until 1992 regulations prohibited private schools in Guyana. Since then, one private nursery/primary school has opened and is reported to be full to capacity.

Educational Indicators

4.60 As in the health sector, the neglect of investments in the education system over the past 20 years has resulted in a severe deterioration in the provision of services. The education system, once considered one of the finest in the Caribbean, is probably now the weakest. Today learning standards are low, a large proportion of the teaching staff is unqualified and untrained, there is a high teacher turnover, many schools are overcrowded, and textbooks and other teaching materials are rarely available. Most school buildings are in an advanced state of disrepair and the majority do not have adequate sanitation and water. The decline in the education system has, in one way or another, affected all students.

4.61 Student scores on national and Caribbean-wide examinations provide the clearest measure of student learning and educational efficiency. Three key examinations furnish this information: the nationally administered Secondary School Entrance Examination (SSEE) taken by students in their final year of primary school, the Secondary Schools Proficiency Examination (SSPE II) written by secondary students in community/vocational schools in their final year, and the Caribbean-wide Caribbean Examination Council (CXC) examinations written by students in their fifth year of general academic secondary school.

4.62 Nationally, scores on all of these exams have declined significantly during the 1980s. The percentage of primary students passing the SSEE in 1990 was only 19 percent in English, 18 percent in mathematics, and 19 percent in social studies. The failure to learn basic skills at the primary level translates into poor student preparation for secondary school. For the CXC examination, pass rates in 1992 were only 9 percent for English, 5 percent for social studies, and 18 percent in Mathematics. These rates reflect a 1.8 percent decline per year in English pass rates and .4 percent annual decline in mathematics over the past 10 years. Pass rates also

compare poorly with other Caribbean countries. Furthermore, it should be noted that only the highest achievers actually take the CXC exam.

4.63 There is no direct data on total dropout and repetition rates, but enrollment for different grades can be compared to give an approximate idea of the dropout rates in the secondary system. Crude estimates indicate that 80 percent of students entering secondary school are still in Form III, but that only 32 percent persist to Form V.⁷⁸ The dropout rate is higher for boys than girls in all types of secondary schools. Roughly 5 percent of those currently enrolled in school report having repeated a year at the primary level and another 4.1 percent have repeated a year at the secondary level.⁷⁹

Equity Issues in Education

4.64 Access to primary school is nearly universal. Large numbers across all welfare groups also attend secondary school until the compulsory age of 14 (see Table 4.9). Despite the high coverage for both the primary and secondary school levels, there are severe deficiencies in the quality of education provided all students, with the greatest impact on the poor.

4.65 Inputs to the system, such as teacher training and the availability of resource materials, are skewed across regions. At both the primary and secondary level the number of unqualified teachers in the interior regions is double the national average. The percentage of students provided with textbooks, while exceedingly low overall, is only half the national average in the interior regions.

4.66 The current tracking system at the secondary level causes further inequities in education. There are large disparities in teacher qualifications, instructional quality, learning materials, institutional support, and resource allocation among the three types of secondary schools. At age 11 a student is placed in one of the three types of schools based on SSEE test scores, which ultimately determine the type of educational achievement and life-time employment opportunities that child will receive. Students who can afford the cost of extra tutoring or live in areas where the quality of schools is better are more likely to do well on the SSEE and ultimately be placed in the more selective General Secondary Schools (GSS).

4.67 Once the tracking system determines what type of secondary school the student will attend, the disparities in the quality of education provided widen even further. A comparison of quality indicators between the GSS and CHS systems highlight the inequities. On teacher quality, only 7 percent of CHS teachers have degrees, compared with 20 percent of GSS teachers. The physical condition of school buildings appears to be dismal for both systems -- approximately 45 percent of CHS buildings and 55 percent of GSS buildings are classified as being in poor condition. Although a small number of CHS schools have impressive physical plants with once-well-equipped libraries, laboratories, and shops, most of such schools are in the GSS system. On curriculum development most of the National Council for Education

⁷⁸ Ministry of Education and Culture.

⁷⁹ HIES/LSMS 1993.

Research and Development's (NCERD) efforts appear to have been concentrated on the GSS system. Likewise, textbooks are now actively being provided to GSS students but not to CHS students. Though data are unavailable on quality inputs for the primary schools with secondary departments, it is widely accepted that these schools have the lowest standards of secondary education.

4.68 Almost one-half of the poorest students attend the primary schools with secondary departments ("primary tops"), while only 8 percent attend general secondary schools. An extremely low proportion, 4 percent, of poor students are attending a post-secondary institution, compared with 14 percent of students in the fifth quintile.

Parent Response to Deteriorating School Quality

4.69 As in the health sector, the deterioration in education has resulted in a demonstrated willingness from parents to pay tuition to receive better quality service and to send their children long distances to attend better schools. This again has disadvantages for the poor, who cannot afford the cost of additional classes or the travel and boarding costs incurred when attending better schools away from home.

4.70 Though there is only one private school in Guyana, private tutoring has become common. The payment of fees for extra classes is commonplace throughout the school system but is most prevalent during the primary and secondary years when SSEE and CXC examinations are taken. Costs of tuition vary widely -- parents will pay up to G\$1,000 per month per subject for private tutoring for the CXC examinations, or as low as G\$200 a month for large group classes in school after hours. At the cheapest rate, tuition classes would amount to approximately 10 percent of a lower-level grade 5 civil servant's monthly salary. In addition to the need to improve the quality of student's education, there are additional reasons why private education has prospered. Not only have teachers encouraged the growth of tuition classes to supplement their meager salaries but working mothers also view after-hour classes as a way of acquiring additional child care (see Box 4.3).

4.71 Regulations restrict children's travel time to no more than half an hour or the equivalent of a 5-mile journey to school. In choosing schools many parents nevertheless disregard these restrictions. Busing has become an established practice, particularly in and around Georgetown with the choice provided by the large number of schools. It is not unknown for Linden children also to bus daily to school in Georgetown.

4.72 Dilapidated schools have seen their numbers fall precipitously. Though this in part is related to out-migration, it is also because parents have sent their children to better-equipped schools. School authorities in the Agricola/St Anne's area south of Georgetown, for example, report that about 100 students travel out of the community to go to school in central Georgetown. The estimated average cost in bus fares per student per year for that trip is just over G\$2,000.

Table 4.9: School Attendance by Age, School Type, and Quintile

Characteristic	Per Capita Consumption Quintile					
	All Guyana	I Poorest	II	III	IV	V
Percent attending school by age group:						
3-4 (2.7% of pop.)	92	100	84	95	94	90
5-11 (17.0% of pop.)	98	98	99	96	98	100
12-14 (8.3% of pop.)	90	87	90	86	92	94
15-18 (11.0% of pop.)	35	24	34	29	41	49
19+ (60.5% of pop.)	2	1	1	2	2	5
School attendance by type:						
Nursery	12	10	12	15	12	12
Primary	36	29	40	36	40	35
Primary w/secondary dept.	21	45	16	22	16	9
General Secondary	17	8	15	14	19	25
Community High School	6	4	10	5	6	5
Teachers Training	1	2	1	0	0	1
Tech/Vocational School	3	1	3	5	3	5
University	1	0	1	1	0	5
Other	<u>3</u>	<u>1</u>	<u>2</u>	<u>2</u>	<u>4</u>	<u>3</u>
	100	100	100	100	100	100
Mean # of days attended last week	4.0	3.8	4.0	3.8	4.3	3.9
<i>Source: 1993 HIES/LSMS Data, N=2160 students</i>						

4.73 Students from poor families are further disadvantaged because they cannot afford the cost of extra tuition, textbooks, or other supplies, nor the cost of transport to the better schools. On the whole, 42 percent of students pay for tuition. In the lowest quintile, that number is only 20 percent. Households in the wealthiest quintile are four times as likely to buy books as poor households, and spend approximately 12 times as much on them. Travel costs for the poorest students were negligible as compared with the wealthiest quintile, indicating that it is the wealthier students who are able to travel to the more select schools (see Table 4.10).

Constraints to Quality and Equity Improvements

4.74 The constraints to improvements in the quality of the education system are based on **inequities in educational opportunities, insufficient fiscal resources, regressive spending patterns, low teacher quality, poor physical infrastructure, and the lack of educational resource materials.** Given the importance that education plays in poverty reduction, strategies which are aimed at improving these constraints will be critical.

Box 4.3: The Tuition System

Extra classes are now a common phenomenon in all schools throughout Guyana. Residents in the North Sophia squatting settlement report that they pay G\$200 per month per child for after-school tuition classes at the local Bel Air primary school. The extra classes mean that children stay at school until 5 p.m. three days a week. In a community where approximately 40 percent of women go into the center of Georgetown to work and in the absence of other forms of child care facilities, additional tuition classes are welcome. Some women are less concerned about whether their children learn anything additional, since they perceive tuition classes as a cheap form of institutional child care.

At the other end of the spectrum, extra tuition can be a costly business. Aspiring parents are prepared to pay considerable sums in order to improve the examination chances of their children. One respondent reported outgoings of G\$8,000 per month on additional tuition. He paid G\$1,000 per month for his 11-year-old son to help prepare for the SSEE, and G\$7,000 per month (G\$1,000 per subject) to prepare his 14-year-old son to take 7 subjects at CXC. He expressed his intention to continue to pay for additional classes right up to the GCE "A" level.

Table 4.10: Expenditures in Education

Characteristic	Per Capita Consumption Quintile					
	Total	I	II	III	IV	V
Mean annual expenditures per student (G\$)						
Tuition and Contributions	271	85	164	284	267	536
Uniforms	1700	1084	1512	1802	1763	2280
Books	318	61	182	287	275	713
Other Supplies	644	416	516	652	742	896
Exam Fees	181	19	86	133	227	400
Lunch and Snacks	22	8	19	12	25	41
Boarding & Lodging	109	15	0	62	27	419
Travel	<u>1251</u>	<u>238</u>	<u>926</u>	<u>1134</u>	<u>1417</u>	<u>2489</u>
TOTAL	4496	1926	2405	4366	4743	7774
% of students paying tuition or contributions	42	20	38	45	47	55
% of students purchasing books:						
Full set	3	0	3	4	2	4
Partial set	17	8	11	16	18	28
None	80	92	85	80	79	67
Distance to school (% traveling):						
< 1 mile	72	75	76	78	73	60
1-3 miles	11	11	12	10	10	13
3-5 miles	8	6	6	5	6	14
> 5 miles	9	8	6	7	11	13

Source: 1993 HIES/LSMS Data, N=2160 students

4.75 **Insufficient resources and inequitable resource allocations.** The disintegration of the education system reflects the decreasing resources available for the sector. Recurrent expenditures as a percentage of the budget and GDP steadily declined during the 1980s and are now the lowest in the Caribbean Region. By 1992 recurrent education spending amount to only 2 percent of GDP, compared with 5.6 percent in Trinidad and Tobago, 5.4 percent in Barbados, and 4.1 percent in Jamaica.

4.76 Capital spending on education has only recently increased as a result of the IDB Primary Education Project and IDB/World Bank SIMAP projects. Because of these projects the proportion of capital expenditures externally financed in education was 73 percent in 1993. The need for significant improvements in physical infrastructure continues, however. A limited survey of the infrastructure in 1991 showed only 10 percent of schools to be in satisfactory condition, while 40 percent were identified as needing substantial repairs. In their present state school buildings pose a physical danger to students and teachers and form a serious impediment to learning.

4.77 It is well established that the quality of **primary** education is key to improved performances elsewhere in the education system and in the economy overall. The allocation of resources is, however, severely skewed toward higher education. Annual expenditures in 1993 were only US\$26 per primary school student, US\$54 per secondary student, US\$146 for non-university tertiary student, and US\$858 per student at the university level. In unit cost terms secondary education is about twice as costly as primary education, while university education is 33 times as costly. Moreover, allocations to primary schools have continued to fall while the amount of money spent on technical institutes has continued to increase.

4.78 Within the **secondary** level, spending patterns promote further inequities in the education system. Public subsidies strongly favor the more prestigious GSS, where slightly less than 50 percent of the secondary students are enrolled. Less than 5 percent of the 15-19 age cohort (all enrolled in the GSS track) are given the opportunity to write the CXC examinations, yet more than one-third of total secondary school recurrent spending goes to subsidizing student examination fees for the exam and supporting the one elite GSS (President's College) which is attended by only 2 percent of secondary school students.

4.79 A breakdown of the major education investment projects implemented over the 1990-92 period shows that tertiary education facilities and centers of secondary excellence, such as President's College, were allocated nearly four times as much money as the primary education system. The government's allocation of G\$62.5 million to fund the construction of President's College benefits 300 students, while its allocation of G\$55.5 million to fund construction and rehabilitation of nursery, primary, and secondary schools benefited more than 175,000 students. President's College students were subsidized approximately G\$208,000 per capita, while the rest of the student population was subsidized by G\$371 per capita.

4.80 Donors have also tended to support tertiary and secondary education more generously than primary education. For example, IDB allocations to the Primary Education Improvement Project (PEIP) are substantially below those invested in centers of higher education during the late 1980s and early 1990s. The intention to rehabilitate and construct primary schools is an important first step towards improvement of the primary school learning environment. But when

completed the project will have rehabilitated only 36 primary schools out of a total of 428. Though the number of primary schools rehabilitated by the end of 1995 will be augmented by SIMAP efforts, the balance of unrehabilitated primary schools will still total around 350.

4.81 *Weak Institutional Capacity.* The intent of decentralizing the education system was to enhance educational quality, ensure greater responsiveness at the community level, and improve efficiency of resource use. Not only have these goals not been achieved, but additional sectoral problems have been created. The system has confused lines of authority between central and regional agencies, placed the responsibility of educational planning and sector operations in the hands of regional administration officials who know little of education matters, and failed to build in mechanisms to ensure financial and operational accountability of regional officials to their clients. The poor communications and flow of information between the Regional Administrations and the ministry means that the latter has only limited information with which to develop a national policy framework. Budgeting and educational provision in the regions is thus carried without relation to broader national education objectives. Interior regions suffer from additional problems. Regional administrations are more prone to be understaffed and less likely to have competent education officers. These weaknesses have clear implications on educational efficiency and equity across regions.

4.82 *Poor Teaching Quality.* The quality of teachers in both primary and secondary schools is on the whole very low. Because salaries are inadequate there is a growing dependence on untrained and unqualified teachers. Graduate teachers' salaries fell by more than 50 percent in real terms between 1985 and 1990. Though substantial salary increases in 1992 have brought salaries nearly up to 1985 levels, there are few signs the system is now able to retain experienced teachers or regain teachers who have left.

4.83 A plan to create a scheme for in-service training for unqualified teachers looks more promising. This is based on the premise that experienced, unqualified teachers are more likely to enroll for local training if salaries are continued during the duration of the course. The scheme therefore envisages the creation of regional training centers in Bartica and the Essequibo region to complement existing centers in Linden and New Amsterdam.

4.84 *The Lack of Textbooks and Other Resource Materials.* When the state abolished private education it assumed responsibility for providing textbooks, exercise books, and teaching materials. Spending on classroom supplies has, however, traditionally been low. In 1991 the Ministry of Education allocated only 6 percent of recurrent expenditures for these items. In practical terms this means that much of the teaching has been reduced to a blackboard and exercise book operation. Canada has committed to a 5-year C\$3.5 million program to provide exercise books to the schools and the Ministry of Education, UNESCO, and UNDP are currently collaborating on a secondary school textbook project. This project will provide 8,000 sets of textbooks for Forms II and III.

4.85 The Ministry has also been unable to meet its obligations to provide textbooks. Only 11 percent of all students receive a full set of textbooks at school. Many schools try to compensate for missing textbooks through PTA-organized fundraising events. The small amount of money collected does not, however, make up for much of the shortfall. The 20 percent of parents who purchase a full or partial set of textbooks does not compensate for the students who do not

receive books at school. For poor households, the number of students having access to textbooks is low. Approximately 9 percent receive a full set in school, and only 8 percent of parents can afford to purchase full or partial sets (see Table 4.10).

Recommendations for the Education Sector

4.86 Improvements in the access and quality of primary and secondary education will lead to increases in literacy and numeracy at all levels, with the biggest impact on the poor. Because the education system has been deteriorating gradually, it is realistic to expect that its rehabilitation, reform, and rebuilding will also take a substantial period to complete. The turnaround of the education system and its elevation back to the position it once held requires long-term, programmatic commitments from government and donors alike. Without such commitments, the prospect becomes more remote that the education system will be able to produce the type of school graduates with the skills required to sustain economic growth and to distribute broadly and equitably the fruits of growth.

4.87 *Increase Resources and Rationalize Educational Spending.* If the education sector is to play a central role in a strategy to reduce the impact of poverty there is need to both increase budgetary allocations for education and to reform current resource use. Spending is low at all levels, with the sector's weaknesses exacerbated by the effect of regressive educational subsidies. Subsidies to secondary and tertiary level students are higher than to primary level students. Since the majority of those attending post-secondary institutions are wealthy, the equity effects are severe. Greater efficiency and equity can be achieved through redirecting investments away from costly tertiary institutions toward primary education, where the returns are highest.

4.88 In order to increase the revenue base the share of public resources committed to education must also increase. Because this is only likely to occur gradually, given the government's existing fiscal constraints, other sources of revenue must be sought. Cost recovery for selected educational services and instructional items is one potential source. Cost-recovery options under consideration include introducing fees at the university with the simultaneous strengthening of the recently introduced student loan program, encouraging support from local communities and private businesses for rehabilitating and equipping schools, and promoting an expansion of the private school system. With more students attending private schools, public education resources would not have to be stretched as far. In fact, the one existing private school (nursery and primary) has been so successful in its first two years of operation that the school has had to relocate to accommodate its classes and even then has turned away prospective students because of space limitations.

4.89 *Strengthen Institutional Capacity.* The administrative capacity to plan, budget, implement, and monitor educational policies needs to be improved at both the central and regional levels. First the MEC needs to further develop its medium to long-term objectives. Such a task requires strengthening the administrative staff at the central level through salary increases, additional hiring, and training opportunities. Second, the lines of authority and accountability at the regional level must be re-established to ensure that sector policies are translated into programmatic actions. Responsibility for implementing education programs should be transferred to regional education offices, with regional education officers reporting directly to the MEC and not Regional Authorities. The work of the regional education officers would

thus be monitored and evaluated by the MEC and audited regularly by the Ministry of Finance. Additional training in basic management, planning, monitoring, and budgeting would be required for all regional staff. Improved salaries and incentives would also be necessary to retain and recruit skilled staff.

4.90 *Improve Teaching Quality.* The large number of untrained and unqualified teachers has had a major impact on student learning. Increasing teacher salaries is important in attracting and retaining better qualified and experienced staff. The current system of emoluments should be replaced with a basic salary scale with incentives for good performance and incentives to acquire additional qualifications and experience.

4.91 Opportunities must also be created for increasing pre- and in-service teacher training. Given the immediate need to upgrade the teaching core and resource limitations, an emphasis on in-service training in the short-term would be most effective. Successful experiences of many developing countries attest to the fact that appropriately designed in-service training can be highly cost effective.

4.92 *Provide Textbooks and Other Resource Materials.* Any improvements in student learning will also require inputs such as textbooks and teaching materials. Access to textbooks and resource materials has been consistently and positively associated with improved student performance in developing countries.⁸⁰ The MEC needs to formulate a strategy for the provision of textbooks that outlines a standard method for the procurement of textbooks at the lowest possible prices, describes how purchases should be financed, offers guidance for efficient storage, delivery, and inventory, and how a textbook program is to be managed and sustained. As illustrated above, the wealthier are more likely to purchase textbooks than the poor. Therefore, schools in the poorest areas, such as the rural interior, should be targeted initially. The provision of textbooks to other areas could be phased in as resources become available.

4.93 To finance the provision of textbooks and other teaching aids and resource materials, donor funding in the short-run would be essential. Sustaining those efforts could be carried out through the introduction of a textbook rental scheme with waivers for the poor and increasing community support.

4.94 *Improve Educational Opportunities for the Poor.* The vast inequities in the quality of education across welfare groups indicate a need to maintain ongoing efforts to strengthen the curriculum at the primary level and to initiate a rationalization of the curriculum at the secondary level. Though the education system needs to ensure accommodation for students with varying ability levels, the current tracking system at age 11 does not achieve this. Through unifying the secondary system with an improved curriculum, those students now enrolled in General Secondary Schools will benefit from the improved quality and those attending Community High Schools and "primary tops" will benefit from the equity in access to a unified curriculum.

⁸⁰ See Marlaine E. Lockheed, Adrian M. Verspoor, et al. Improving Primary Education in Developing Countries: A Review of Policy Options, Oxford University Press, 1991.

4.95 New programs are also recommended to deal with the growing remedial problem among those who have already passed through the schools system. A long-term goal for improving educational standards could include the targeting of continuing education programs to poor areas, which will enable those who did not achieve literacy or numerical skills during the years of compulsory school attendance a second opportunity.

5

Accessing Basic Infrastructure: The Housing and Water Sectors

5.1 Adequate housing and clean drinking water affect health, productivity, and quality of life. Guyana is deficient in both sectors, causing widespread squatting by all income groups, a misallocation of "targeted" resources, and a decline in the availability of potable water as measured by a nationwide increase in the incidence of waterborne diseases. Between 1989 and 1990, the number of cases of typhoid increased by 16 percent, hepatitis by 62 percent, and amebiasis by 350 percent.⁸¹

5.2 Data on access to housing, water, and sewerage indicates that access does not vary substantially by welfare group. For shelter, approximately 60 percent of the population own their dwelling units, with a balanced distribution of ownership among the different income groups.⁸² Given the limited fiscal resources, the government does not have adequate resources to subsidize housing and thus should not attempt to do so. There is however, scope for facilitating private investment in the sector.

5.3 Access to water is approximately 84 percent and to sanitation facilities approximately 96 percent. Service is, however, erratic or non-existent in many areas due to the combination of years of neglect, budgetary and staffing constraints, lack of electric power, fuel, and spare parts to operate the equipment, beneficiary destruction of mains (to collect residual water), and poor cost-recovery practices. To compensate for the lack of a regular water supply, the population relies on water from cisterns, barrels, and other containers that collect and store rain water from roofs; from streams, ponds and rivers; and have improvised methods to extract water from trunk lines. The negative health impact of using these sources of water, as well as the health risk in using the back siphonage of polluted water due to low pressure and faulty joints from the taps, is very great. With the assistance of donors and lenders, the government is addressing water sector problems under the IDA and IDB water rehabilitation projects. Sanitation facilities comprise mostly pit latrines and septic tanks; these also suffer from disrepair and outdated technology and pose a significant health risk.

Housing Sector Overview

5.4 Responsibility for housing sector activities lies primarily with the Central Housing and Planning Authority (CHPA), which is under the jurisdiction of the Ministry of Labor, Human Services, and Social Security (MLHS), with the Central Board of Health, Ministry of Public Works, Town and City Councils, and Regional Authorities having lesser roles. The CHPA has a chief executive officer who reports to a 15-person board. The board is made up of nine ministerial and six municipal representatives. In 1990, CPHA underwent a reorganization in

⁸¹ Appraisal report of the IDA Water Supply and Rehabilitation project, 1993.

⁸² Intra-group comparisons of such factors as unit size, services and amenities, space per person, physical condition of the unit, location, and other qualitative data are not available.

which staff positions were reduced from 200 to 52. Measured against its authorized staff positions, CHPA is currently grossly understaffed, especially at the planning, technical, and administrative levels.

5.5 A sample profile of the housing stock in Guyana is shown in Annex IV, Tables 15-21.⁴³ As the tables indicate, about 80 percent of these units are wooden structures and an estimated 90 percent have roofs of zinc sheet. One striking feature is their age; an estimated 33 percent of the housing stock is over 24 years old; most has not been properly maintained over the past two decades because of various reasons, including scarcity of foreign exchange to buy paint and other materials and tools, declining income, and absentee ownership.

5.6 Approximately 61 percent of families own their houses, 23 percent pay to rent their units, and about 16 percent live in rent-free units. It is, however, difficult to determine the type of land ownership households have. For example, it is customary for householders to have no legal title or similar document proving ownership to the property, yet they are seen as owners rather than squatters. In most of these cases, the family may have resided there for generations, but for a variety of reasons (ignorance of procedures, high cost, time needed, or original acquisition by squatting) do not have documents establishing legal ownership.

5.7 Details on sources of housing finance are not available. The HIES/LSMS indicates that housing accounts for an average of 8 percent of overall expenditures nationally, and 5-6 percent for the lowest 40 percent of households. This is relatively low in comparison with other countries, where housing expenditures are approximately 15-25 percent of total consumption.⁴⁴ Discussions with the officials of various housing-finance entities and interviews with homeowners indicate that apart from those in the upper quintile, housing finance has generally been through the informal sector. Finance is usually provided from the resources of the homeowner and in some cases with the assistance of relatives, especially those living abroad. Lack of legal documents to provide collateral to banks is one reason for this practice. Other reasons include a suspicion of banks and reluctance to incur debts, relatively high down payment and debt-servicing requirements, the need for established employment to assure debt repayment and to permit deduction of mortgage payment at the source, and formal approval of designs, norms, standards, and other requirements by the appropriate authorities.

5.8 Rental units have not been popular among many lower and middle-income groups in Guyana because of two factors: First, Guyana has various rent-control laws dating from colonial times; although these laws are not currently enforced in any active way, their presence does not encourage investors to enter the market. Second, the process of evicting tenants is time-consuming and expensive, and can take years.

5.9 There are no accurate figures on the magnitude of squatting today. The Housing Authority carried out a comprehensive survey of several squatting areas in 1983. At that time, for Regions 3 and 4, it was found that about 1,000 squatter families had occupied just over 112

⁴³ The lack of reliable data on the number of housing units is discussed later in this chapter.

⁴⁴ See for example, Housing: Enabling Markets to Work. A World Bank Policy Paper, May 1992.

acres of government land in various areas along the coast. The practice of squatting on public lands is very old, partly because the government owns extensive tracts throughout the country with no full documentation of area, status, use, and other such data. Recent changes in ownership and consolidation in the sugar estates also appear to have been factors encouraging squatting. The sugar estates own or lease much of the land bordering established settlements, which has thwarted the outward expansion of housing in many areas, especially in Region 4. With nationalization of the sugar companies, recent closure of some of them, and consolidation of operations in others, significant large-scale squatting problems emerged on the sugar estate lands. The vigilance with which the sugar companies once prevented such illegal occupation does not appear to be matched by the government.

5.10 Another area for large-scale squatting is the strips of land which served as railway rights-of-way for two routes along the East and West Coasts. The former extends for about 100 miles, while the latter runs about 18 miles. Both tracts have several sections located in close proximity to coastal roads and established settlements with access to electricity and water. When the railways were in operation, permission was granted to many small farmers to grow crops near the tracks. With the scrapping of the railway system, these lands became vacant government property, most of which was quickly claimed by squatters.

5.11 While squatting is seen by many as a way of meeting their housing needs, it has created legal and socioeconomic problems for others. Included among such problems are: violation of property rights, the high cost of providing services (water, electricity, roads) and facilities (schools, health clinics) in occupied sites, relocation for those displaced by such regularization works, and the appearance of rewarding those who violate the law at the expense of those who seek to acquire land legally. The prevalence of this practice, especially in Regions 3 and 4, has attracted widespread attention from housing officials and nearby residents.⁸⁵

Housing Policies and the Poor

5.12 *Demand vs. Need.* In sector debates and discussions several policymakers use the terms "demand" and "need" interchangeably. As a result of this they do not consider whether or not families have enough resources to match their housing aspirations. The mean annual household consumption expenditure for the country is approximately G\$317,500 (US\$2,540), of which 55 percent is already being spent on food. Housing cost data show that the minimum cost of a unit in the market is about US\$4,000, well above mean consumption.

5.13 Among the first four deciles, housing accounts for between 5-6 percent of their total expenditures. In cross-country comparisons of housing expenditures at similar income levels, figures from Guyana show consistency with other countries. As real income rises, it is expected that those in the upper deciles would spend about 15-25 percent of their income for housing. However, given current ownership patterns and the relatively low level of formal housing

⁸⁵ Squatted areas are viewed both as a breeding ground for criminal activity and as contributing to the decline of property values in their neighborhoods.

finance and rental housing in Guyana, the situation may not reach such levels until a larger share of the population obtains bank financing for housing or more middle-income units are rented.

5.14 *Affordability.* In the absence of detailed housing data about the poor, one approach is to look at affordability. With about 72,000 households barely able to finance their food and minimum needs through the income they receive, attempts to provide housing units, and lots to poor households would have to be almost wholly subsidized. Among the first four deciles of households, approximately 10 percent do not own their units and thus could be eligible for such subsidy assistance.

5.15 Even if they are given free lots, these groups would have to find relatively large sums of money to build and maintain housing. Assume for the moment that there are no obstacles impeding identification and selection of needy beneficiaries and that they obtain serviced plots from the government. The value of these plots would vary by location and access to amenities. However, based upon conservative estimates by officials of CHPA, the market value of a plot would be at least US\$1,300 without services and about US\$2,000 with services. For households in the first decile of income distribution, this amounts to a multiple of about two times their mean annual income.⁸⁶ Even for the second, third, and fourth deciles, these multiples are 1.7, 1.5, and 1.4 respectively. When put in this perspective, it is not difficult to understand why households would strive to acquire as many of these free plots as they could, even to the point of giving up lower-paying jobs in pursuit of such a windfall. Results in other countries show that after the first few years 20-40 percent of beneficiaries sell, rent, or otherwise dispose of their assets at discounted prices in order to purchase other necessities. This practice tends to seriously undermine the effectiveness of the goal of most public housing programs, namely, to provide shelter for the needy.

5.16 *Budgetary Implications.* One implication of the preceding analysis is that, at best, most beneficiaries who get a plot of land would not be able to erect any substantial structure on it unless they are from relatively wealthy households or obtain additional governmental assistance. The government has received about US\$4.5 million from the Venezuelan oil facility, which it is considering using to subsidize the interest on housing loans. While in conceptual terms this appears to be a positive step geared to making housing more affordable, given the estimated payment gap for even a basic housing unit and the estimated number of households who would have such needs, US\$4.5 million is not expected to have much of an impact. On the other hand, if larger sums could be found and these were allocated to such subsidies, experience in several countries (e.g., Peru, Argentina, and Brazil), indicates that such actions have far-reaching negative consequences, not only on housing finance but also on the entire financial sector.⁸⁷ While there are usually a few lucky beneficiaries who receive subsidized loans, far more would not enjoy such benefits. At the same time, such policies tend to distort sector operations and lead to credit rationing and other abuses while the original problem worsens.

⁸⁶ In this case, it is assumed that total expenditure is a proxy for income.

⁸⁷ Housing: Enabling Markets to Work, op. cit., has several examples of this situation.

5.17 Policy Consistency. Currently one of the criteria used by the Ministry of Labor for allocating free land is that the beneficiary must demonstrate that he or she can build a structure on the land within a short time. To a large degree such a policy runs counter to the government's stated goal of assisting the poorest households and sends mixed signals to the population. The Housing Ministry itself has a wealth of evidence that applicants tailor their responses on income and assets to suit the goal of favorable consideration.

5.18 A similar apparent contradiction can be seen in the government's rental housing policy program. The original goal of this program was to help low-income families obtain decent shelter. Over the last three decades almost 2,000 units were rented out to low-income families in about 15 areas of the country. Both the sample survey and spot checks conducted by CHPA show that, contrary to the original aims of the government, beneficiaries of the public housing program are now found in all income strata and many of them sublet their units for significant income while making no attempt to pay even the nominal rents they are charged. This is a common situation in almost all countries having such public rental programs. Although the rents charged were subsidized, they had some relation to market conditions during the 1950s when they were initially instituted. However, today these rents average US\$0.05 to US\$0.29 per month and most of the units are in varying states of disrepair.

5.19 The ministry has no current information on the status of the units. However, it has repaired about 36 of 48 units in one complex at an average per unit cost of US\$10,500. After extensive discussions and negotiations with the residents, it has agreed to charge US\$32 per month for the renovated units. Assuming that all rents are paid and 100 percent rental collection, this sum yields a negative 3 percent rate of return to the government on its investment, without taking any repair and maintenance costs into account. If all of the rental units were to be renovated at a similar cost, the budgetary outlay for 2,000 households would amount to about US\$21 million. Another implication of the US\$32 per month rent charged for the renovated rental units is that if we assume that it is about 11 percent of the family's income, it means that the family has to earn US\$290 per month in order to afford the unit; this figure puts such a family into the upper end of the income distribution.

5.20 Compensation Bundling. Some officials cite anecdotal evidence to argue that there are no affordable housing alternatives for most low, middle, or even upper-income groups, including civil servants, whose incomes have been eroded substantially by inflation. They argue that because affordable alternatives are not available, people are forced to become squatters. When the subject is couched in this form, apart from the fact that the extent of such cases is not known, the argument essentially changes from a housing crisis issue to one involving the system of compensation in the country. If the government attempts to "balance" low wages and salaries with in-kind packages such as the imputed value of squatted land, this can quickly become a morass as more and more in-kind considerations are packaged and substituted for what should be a straightforward financial transaction based on skills level and productivity, or, for the poorest strata, a welfare situation that merits a different set of considerations. Parenthetically, it should be noted that this is one of the problems that many former socialist states are now trying to untangle.

Access to Services: Water and Sanitation

5.21 In the water sector the Guyana Water Authority (GUYWA) has primary responsibility for sector planning and control, although there are several other sector entities with duplicative functions and roles that are not very clearly defined. GUYWA is under the jurisdiction of the Ministry of Public Works, Communications and Regional Development (MPWCRD), and while it addresses water-related issues in the sector, responsibility for sewerage and sanitation activities lies with the Ministry of Health. In 1984 the government enacted a decentralization program and handed over responsibility for provision of water services from GUYWA to the 10 Regional Democratic Councils (RDCs) in the country. The RDCs work through Regional Water Divisions (RWDs) to provide water in the regions; however, these RWDs do not provide services everywhere. Instead, there are several other institutions that function autonomously and cover several large population centers.⁸⁸ As with several other sectors, staffing problems, poor cost recovery, poor maintenance practices, lack of fuel, spare parts and chemicals, and power outages have been chronic.

5.22 The lack of an overall policy framework and proliferation of sector entities with widespread fragmentation and overlapping of responsibilities is being addressed to some degree through IDA and IDB rehabilitation projects, which are currently underway through GUYWA, the GS&WC, and the New Amsterdam system. Under these projects there are medium-term plans to centralize and clarify the roles and responsibilities of the various entities, improve their staffing and develop sustainable maintenance programs, have user charges that more reasonably reflect the cost of providing services, and various other improvements. However, since these actions would not be focussed upon all of the different sector institutions, they should be considered as necessary first steps that would require further overall policy clarification aimed at greater system integration, consistency, and coordination.

5.23 Overall, water connections are very high; about 84 percent of households throughout Guyana have connections to piped water either in their yards or houses (see Annex IV, Table 25).⁸⁹ At about 93 percent and 91 percent, respectively, the rate of water connection for houses in Georgetown and New Amsterdam is much higher than for rural areas. However, in the sugar estates and mining settlements the connection rate is also close to 100 percent because water has customarily been provided by the employer with little or no user charge. Apart from a few houses in the larger urban areas, most homes have barrels, cisterns, and other facilities for collecting rain water. In the rural areas, this has traditionally been the primary source of potable water. However, after connections to piped water became available during the past three decades, rain water was used primarily as a backup source and for laundry, since well water

⁸⁸ These are: the Georgetown Sewerage and Water Commissioners System (GS&WC), serving Georgetown and its environs; the New Amsterdam Town Council System, serving that city; the Linden Mining Enterprise (LINMINE), which provides water for the mining area; and the Sugar Industry Labor Welfare Fund Committee Systems (SILWFC), which serve residents in various sugar estates.

⁸⁹ The appraisal report of the IDA Water Supply and Rehabilitation Project has overall access figures of 93-95 percent for potable water through house connections and standpipes. Part of the discrepancy could be in the "other" category of the HIES study.

usually has a high iron content and surface water is not usually treated, which results in discoloration of laundered material.

5.24 Quality and overall service reliability have deteriorated dramatically, to the point where the system is almost non-existent in most communities (especially those not served by the sugar estate and mining systems). This situation adds to health risks as users try to siphon contaminated residual water from trunk lines using hoses, pumps, and other devices inserted into ruptured lines, many of which are made of asbestos. Because of wide variation among the different water systems and frequent breakdowns, it is not easy to estimate Unaccounted-For Water (UFW); however, according to one study,⁹⁰ estimates of UFW range between 50 percent and 75 percent. Apart from ongoing rehabilitation of the water systems in Georgetown, Linden, and New Amsterdam, even when piped water is available it is not consistently treated because of lack of chemicals, frequent power outages, lack of fuel to operate diesel pumps and other equipment, and mechanical and staffing problems.

5.25 Deterioration of systems, power outages, resource constraints, and other problems, similarly affect residents of all income groups and locations. Those in squatter settlements suffer relatively more, since they generally do not have a distribution system within such areas. They have to spend an inordinate amount of time traveling to locations with water (streams, cisterns, taps, or broken mains) and wait for long periods to collect the water. This practice is especially tedious and difficult for women, children, and older residents, who cannot fetch water over long distances.

5.26 Access to sanitation facilities is also high. Nationally, about 96 percent of the population has some type of established disposal system, with about 61 percent relying on pit latrines, 25 percent on septic tanks, and about 9 percent on sewer connections (with no treatment of the effluent). The IDB socioeconomic survey indicates that in Georgetown, Linden, New Amsterdam, and Corriverton from 8-19 percent of the households share toilet facilities, though this is uncommon in rural areas. The high access rate to pit latrines and septic tanks does not provide an accurate picture of sanitary conditions and service quality. For example, discussions with housing ministry officials and field visits in Regions 3 and 4 show that most of the pit latrines are in disrepair and lack many simple technological features, such as the insect control and improved sanitation devices found in Vented Improved Pit Latrines (VIPS).⁹¹ Even for houses with septic tanks or sewer connections, residents complain that they usually have to flush waste by pouring water into the toilet bowl because of low water pressure or the unavailability of water in the system.

5.27 Although data on solid waste services are not available for all areas, the IDB survey shows that the service level is very low, even in the main cities where some type of formal collection and disposal system exists. For example, in Georgetown only about 9 percent of the residents have frequent and regular service, while for Linden, New Amsterdam, and other areas

⁹⁰ Dennis Brown, "Guyana. Poverty, its Social Setting and the Environment." World Bank, August, 1993.

⁹¹ There is such widespread deterioration of toilet facilities in many schools that SIMAP decided to include a renovation component in its operations.

comparable coverage figures are 2-8 percent. The presence of huge piles of decaying garbage in many areas, especially in urban centers and market zones, contributes to vermin infestations. Moreover, the solid waste clogs drainage systems, causing floods when it rains. Flooded pit latrines and septic tanks and the resulting unsanitary conditions have been blamed for much of the decline in health and the rise in serious illness, especially among children.⁹² Because the risk of epidemics is so great, sanitation issues deserve special attention from the authorities involved in sector operations.

Water and Sanitation Policies and the Poor

5.28 As discussed earlier, survey results show that since the poorest strata are already spending as much as 80 percent of their income for food, fuel, and transport, there is very little adjustment they can make to meet additional outlays. To the degree that current expenditures can be used more efficiently (e.g., instead of buying one tank of water at a highly inflated price they can pay the same amount for better municipal services), negative cost recovery effects would not be great. However, in cases where such adjustments are not possible, if cost recovery is to occur, increased housing payments, water tariffs, and other such charges would probably be at the expense of other expenditures, assuming that household income level does not significantly increase. More detailed analyses of such adjustments should be made in order to develop appropriate policies and make adequate provisions to assist vulnerable groups.

5.29 *Affordability.* Currently, with the exception of Georgetown, expenditures for water by most households, which average 3-5 percent of gross income in other countries, are conspicuous by their absence. Reasons for this include water rates that have not been adjusted since 1972, high arrears, and the practice by the mining and sugar estate authorities of providing water at almost no charge. In Georgetown, for example, the water tariff amounts to about US\$9 annually, while for the sugar estates it ranges from US\$0 to US\$0.53 per year. In all cases collections are a problem; LINMINE recently instituted a new tariff scheme but faces resistance from users who feel that water should be provided at little or no cost to them.

5.30 Under the IDA Water Supply and Rehabilitation project, the government has agreed to institute a new tariff system and financial structure in phases. As part of the first phase, in order to cultivate the discipline of paying for water service, all customers in the GUYWA affiliated system would be required to pay a flat rate of approximately US\$10 per year, starting in 1994. Initial rehabilitation levels would assure such customers about 8 hours of service per day. As the system becomes more fully operational and reliable, the flat charge would increase to about US\$40 per year and the service level would increase to about 12 hours per day. The expectation is that by the end of this decade the system would recover enough to be self-sustaining. It is also expected that by that time the sugar estates and mining systems would be unified with that of GUYWA. Until then, only the users under the GUYWA system (approximately 44 percent of all users) would be subject to the new tariff structure and direct reform measures.

⁹² Ibid.

5.31 Since households among the first decile of income distribution currently spend an average of US\$942 annually, a water tariff of US\$10 per year during 1994 (for GUYWA users) would be about 1 percent of expenditures and should not be too onerous. Even at US\$40 per year the planned water payment would be a little above 4 percent of annual household expenditures, even if incomes do not rise.⁹³ Compared to customary ratios for such expenditures, the proposed tariff increases under the IDA Rehabilitation project are not expected to be an excessive burden. However, it is clear that since most of the lowest income groups currently pay nothing for water, any regular payment, no matter how small, would have to be matched by a reductions elsewhere. Without much more detailed analysis, it is impossible to predict whether such reductions would be made in food and related "essential" expenditures or in other areas. As another complication, if the experience of the LINMINE tariff increase is to be any guide, the majority of users would probably continue to ignore their water bill until they were forced to pay or seek other sources. The fact that a large majority in the sugar estates would not have to pay similar tariff increases until much later may also have sociopolitical implications that could influence the results.

Analysis of Sector Problems

5.32 *Data shortages.* As with many other sectors in Guyana today, the absence of basic data in the housing and water sectors precludes detailed rigorous quantitative analysis of several topics. For example, in the absence of information on the number of housing units in the country, average unit size, number of persons per room, and number and other basic profile of squatters, an analysis of such topics as housing scarcity and policy response is difficult to develop. Similarly, in the water sector, without such data as characteristics of underground and surface water sources, hours of service of the current system, quality of water, and effective demand estimates, questions such as what actions to take and how to measure achievements cannot be answered with any confidence. Ongoing surveys and studies by the Statistical Bureau and other entities are expected to improve the situation to some extent.

5.33 *Lack of housing policy.* Available evidence indicates that the main problem in the housing sector today is the lack absence of an overall policy framework within which various actions can be taken. As is common to other sectors of the economy, many problems reflect the need for a more comprehensive and basic structural response to such issues as the role of the private versus the public sector; poor or nonexistent data and diagnosis of sector issues; inconsistency among short, medium, and long-term perspectives; basic financial, legal, and institutional reforms; and human resource allocation. Because of these shortcomings, most of the current housing sector activities can be seen as crisis management responses within a fragmented and compartmentalized system.

5.34 *Poor water supply.* Although there are serious technical, administrative, financial, and other problems in the water sector, assistance from IDB, IDA, and other lenders and donors appears to have introduced some overall structure and direction in sector activities. For example, as described in the appraisal report for the IDA water supply and rehabilitation project,

⁹³ Questions regarding the proportion of costs covered by such a tariff structure are discussed in the appraisal report of the IDA project.

there are clear short, medium, and long-term project objectives that are generally well-integrated and consistent and that form part of an overall policy framework. The government has agreed to take several important actions aimed at rehabilitating the system, strengthening institutional, financial, technical, and related areas; rationalizing tariff policies, and consolidating overall sector operations in the longer term.

Recommendations

5.35 The main issue in the **housing** sector is the need for the government to end its subsidy policies. Other issues include the government's lack of reliable data and facilities to analyze and diagnose sector problems; the absence of a clear-cut sector policy and the tendency to regard short-term targets and goals as such sector policies; lack of an appropriate institutional framework for addressing sector issues; and quantitative and qualitative staffing constraints in existing sector institutions. In the **water and sewerage** sectors, the goal is to improve the overall capacity to supply services. The IDA and IDB projects will achieve this, though the government also needs to ensure that qualified GUYWA personnel will be available to implement and manage sector objectives and that the proposed phasing in of tariff increases is adhered to.

5.36 ***End Regressive Subsidy Policies.*** Given its limited resources, the government cannot afford to subsidize housing. The government should move toward a role that facilitates sector investments in partnership with the private sector and beneficiary groups.

5.37 ***Develop Policy Orientation in the Water Sector.*** For the water sector, the IDB and IDA projects currently underway would go a long way toward recentralizing and reforming many of the main sector institutions and rehabilitating the system, improving service quality, and addressing the most acute short-term problems. Still, for the medium and long-term horizon, there is a need to address such issues as further sector consolidation, system expansion, and the implications of privatization.

5.38 ***Promote Private Sector Participation.*** The private sector has a very active role to play in any self-sustaining housing operation. Because of this, the government should develop a policy that clearly defines such a role and should actively encourage private sector participation within a clearly defined framework aimed at removing obstacles to such participation (e.g., archaic zoning laws, inappropriate designs, norms, and standards, wage and interest rate policies, and landlord-tenant relations). Such actions do not call for the granting of special concessions to the private sector; rather, what is called for is a removal of onerous and costly constraints that do not assist households but drive up costs, frustrate initiatives, and prevent the market from functioning, thus making sector activities unattractive from both a supply and demand point of view. For the water sector, private sector issues do not arise with the same urgency as in the housing sector. However, to the extent that the government could encourage private sector participation in such areas as billing, maintenance, and perhaps in the long term operations, this would help to resolve many of the current technical and staffing problems.

5.39 ***Develop Squatting Policies.*** A first priority related to squatting must be to determine the overall dimensions of the problem. Policies can then be designed to ensure that those who can afford to pay for land do so, and that targeted programs are available for the poor. The situation

of existing squatters needs to be regularized and legalized. Moreover, with adequate housing policies in place, the government should discourage squatting as an option. Unchecked squatting rewards those who violate the law and sends the wrong signals to those who save and make sacrifices to legally acquire their property. Currently the judicial system does not appear to be well-equipped to deal with widespread squatting.

5.40 *Improve Data Collection.* Reliable data for almost all sectors are not readily available and this is a significant obstacle to more in-depth analysis. Examples of some of the needed housing sector data include: 1) basic statistics on population profile, characteristics of the formal and informal housing sectors, housing stock profile, construction and financing activities, construction costs, market demand, and bottlenecks to greater private sector participation; 2) design, cost, beneficiary profile, implementation schedule, and other such details on the main areas of focus of current government programs (land-grant schemes, titling programs, renovation works, and hire-purchase programs); 3) the overall dimensions of the squatting problem, origin and number of squatters, size of squatted plot, squatter profile, employment and income record, economic status, and so forth; and 4), basic operational data in the water sector, including coverage, quality, regularity of service, system losses, revenues, and costs. For the water sector, ongoing projects provide for studies, data collection, and analysis of a wide variety of indices, including unaccounted-for water, production costs, consumption patterns, billing and collection, and tariffs. However, the primary focus is upon GUYWA-related entities and basic rehabilitation works. Extending this to a sector-wide focus is needed.

5.41 *Strengthen Human Resource Capacity.* A precondition for successful implementation of water, housing, and almost all other sector reforms in the country requires immediate action aimed at hiring and paying appropriately skilled staff throughout the system. To some degree, an ongoing IDA loan (PAP) is addressing these issues, while the recently-approved Water Supply and Rehabilitation Project also includes many of these aspects of sector reform. However, since details of the status and coverage of the PAP are still to be finalized, there may be need for attention to be focused especially upon the housing sector.

5.42 *Reform Institutional and Legal Framework.* In line with an enabling approach, the Central Housing and Planning Authority (CHPA) should be restructured. The Town and Country Planning Department should have adequate technical personnel to carry out its functions throughout the country, and some decentralization of its functions should be considered in light of existing communications problems and the need for more on-site presence and dialogue with the Regional Authorities. The Housing Department should recruit capable staff for a planning and policy unit to help in formulating a well-defined, focused, and cohesive policy framework with appropriate and consistent short, medium, and long-term perspectives. It should also have a strong statistical unit that coordinates with the Statistical Bureau to ensure that the necessary sector data are available.

5.43 Another area that needs modification is passage of housing sector legislation to facilitate wider use of all forms of home ownership in Guyana. This would also help the government dispose of its rental units by selling them to their present residents or other buyers if the current residents do not wish to purchase the units. Given the disrepair of rental units and the high per-unit costs already incurred in renovations, the government can save a substantial sum by selling these units at a nominal cost or even giving them away as an outright grant.

5.44 For the water sector, ongoing projects aim to implement many of the needed short-term reforms involving consolidation and streamlining of sector responsibilities, technical assistance for staff improvement, system operation, and cost recovery. As these short-term measures are addressed, there would also be need to consider the financial and legal (including regulatory) implications of privatization for the system, whether such privatization occurs for specific operations (e.g., billing, maintenance), or departments within a quasi-public sector framework or on a more comprehensive basis.

5.45 *Revise Norms and Standards.* Several modifications may be needed as the weaknesses of current practices are documented. For example, in housing, existing building codes, norms, and standards contribute to the existence of large tracts of unused interlot and right-of-way reserves, which are generally covered with bushes and garbage. Additionally, many owners subdivide their lots, which defeats the purpose of maintaining minimum dimensions; requiring large lots results in lower density and fewer owners to share infrastructure costs. Although some attempts have already been made to modify these standards, this should be done as a common task among the affected entities so that changes reflect local conditions, avoid confusion, and encourage compliance. For water sector activities, several changes are currently underway. These include replacing asbestos pipes with PVC and reviewing various service standards. Use of smaller diameter lines for areas having less need, differential consumption patterns in demand estimates, and other such practices can result in significant cost savings without adversely affecting beneficiaries.

5.46 *Strengthen Community/NGO Participation.* The combination of a wide range of basic needs, limited government resources, and a large proportion of the population below the poverty line calls for creative ways of addressing such needs. Community and NGO participation could compensate for many of these constraints since they include beneficiaries as active participants. The beneficiaries can then help set priorities they feel most important, add value to construction by providing volunteer labor, and will likely take better care of facilities about which they feel a sense of ownership. In housing, water, and other sectors, the participation of beneficiary groups is essential for achieving progress in many areas. For example, if residents continue to rupture water mains in order to get water when the pressure is low or the service is not in operation, effectiveness of any rehabilitation will be seriously impaired. Similarly, if residents in a community can be enlisted to help prevent squatting, this practice has a better chance of being stopped. Community participation is still largely untapped in Guyana; it should be used in a more organized and focused manner to enhance the results of efforts to improve living conditions in various communities.

6 Social Safety Nets

6.1 There are subgroups among the poor who, for various reasons, will take longer than others or may never directly benefit from economic growth and improved social services. These groups include retirees above age 60, the unemployed, residents of certain remote and depressed communities, the disabled, and some unskilled and semi-skilled workers.

6.2 In the effort to reduce poverty, it is necessary to ensure that effective safety nets exist to help vulnerable groups. There are several "formal" safety nets in Guyana that have provided some assistance, including the National Insurance Scheme, SIMAP, and a large number of non-governmental organizations. Other "informal" coping mechanisms, such as help from relatives abroad, also exist and provide an important safety net in Guyana. Some individuals, however, are still left out of the network. This indicates that there is a need to improve the coverage and effectiveness of each safety net mechanism, as well as increase the level of coordination between organizations to optimize the use of total resources available to the poor.

National Insurance Scheme (NIS)

6.3 *Description.* The National Insurance Scheme (NIS), a social security scheme intended to provide benefits to contributors by virtue of their employment was introduced in Guyana in 1969. The scheme covers three categories of individuals: those employed and receiving salaries; the self-employed; and voluntary contributors, who are primarily retired civil servants too young to receive benefits. Benefits are provided for old age pensioners, permanent disability, survivors, funeral, sickness, extended medical care, maternity care, and industrial injury, disability, and death.

6.4 The NIS Board, which is appointed by the Ministry of Finance, sets the policies and formulas for contributions and payments. The NIS is a system of contractual savings that provides both short-term, long-term, and industrial benefits (see Table 6.1). The long-term benefits include old age pensions, permanent disability benefits, and survivors and funeral benefits. Short-term benefits include coverage for sickness, extended medical care, and maternity care. Industrial benefits provide coverage in the event of injury, disability, and death. There are no unemployment benefits. Participation in the NIS is compulsory for all employed persons between the ages of 16 and 60, including both public and private sector employees, and the self-employed (totalling 2.5 percent of contributors).

6.5 NIS contributions amount to 11 percent of insurable earnings, of which 6.6 percent is paid by the employer and 4.4 percent by the employee. As of September 1, 1993, the maximum insurable monthly ceiling is G\$14,000 per month (US\$111), or about four times the minimum wage. For those earning below G\$14,000/month, the 11 percent total is paid on whatever is earned. Self-employed workers contribute 9.55 percent of insurable earnings to the NIS. The 11 percent (or 9.55 percent) is allocated to three funds: 8.0 percent for pension benefits, 1.55 percent for short-term benefits, and 1.45 percent for industrial benefits. The average monthly earnings of active contributing employees is G\$6,532 per month (US\$51), with roughly 23

percent earning less than G\$4000, 25 percent earning between G\$4,000 and G\$6,000, 31 percent between G\$6,000 and G\$10,000, 12 percent between G\$10,000 and G\$14,000, and 9 percent with incomes over G\$14,000.

6.6 Eligible pensioners are entitled to 40 percent of their average insurable monthly earnings every month. For every 50 contributions beyond the 750 contributions required for a pension, the pensioner gets one percentage point more of his or her average insurable earnings, beginning at 41 percent. The maximum return is 60 percent of average insurable earnings. If a worker does not qualify for a pension, he or she might qualify for a lump sum payment. NIS will use what a worker has contributed as the basis for supplying a grant to the individual. Old age pensions are paid at age 60 and are calculated based on the highest three years of salary or income received of the last five years of working.

6.7 NIS reports that there are currently 121,861 (1993) active contributors to the scheme. This figure is, however, believed to be overestimated. Many employers either do not make the necessary contributions or make them at a lower level than required. The NIS has no means of enforcing compliance with contribution requirements, as there are no operating procedures, supervisory mechanisms, or penal actions geared to this compliance.

6.8 As reported in the recently completed review of the NIS²⁴, the scheme's total financial portfolio as of July 1993 was G\$1.8 billion, which is invested primarily in government instruments including debentures (51 percent of total NIS portfolio), Treasury bills (12 percent of total portfolio), and bonds. Thirty-four percent of the NIS portfolio is placed in fixed deposits and two percent is held as cash. An important portion of the NIS investments carry below-market rates of interest and have non-market characteristics. Also, new contributions to NIS have been constrained by real wage depression. With 650 staff members and 13 branch offices, the administrative cost of NIS are equivalent to 27 percent of total expenditures.

6.9 *Coverage and Effectiveness.* Employees of almost all large private and public companies are covered by the NIS; the major groups that are not covered include those working in the informal sector, small companies with few employees (usually less than 10), independent workers, and those not in the labor force, such as older youths who have recently left school, female homemakers, and the handicapped. The lack of local NIS offices in many parts of the country, especially in rural areas, makes it difficult to achieve full coverage, particularly because a high percentage of the Guyanese population lives in rural areas.

6.10 As of 1991, the NIS reports that it was providing benefits to 18,000 old age pensioners, 900 invalidity pensioners, 2,900 survivor pensioners, 1,300 disabled pensioners, and 430 industrial death pensioners, including widows, parents, and orphans. The distribution of those both making contributions and receiving benefits across welfare groups indicates that participation in the NIS is substantially higher for the rich (see Table 6.1).

²⁴ "Review and Analysis of the National Insurance Scheme of Guyana," by Socimer International Corporation and International Links, Ltd. January 1993, Draft mimeo.

Table 6.1: NIS Contributors and Beneficiaries by Quintile

Characteristic	Quintiles					
	Total	I	II	III	IV	V
% making NIS contributions	19.7	9.6	17.8	21.0	23.6	25.8
% receiving NIS benefits	9.3	6.2	6.8	11.4	11.1	11.0
The incidence of NIS benefits (row %)	100.0	12.6	14.3	25.0	23.6	24.5

Source: HIES/LSMS, 1993. For population over the age of 16, N=4493.

6.11 The 1990 NIS Annual Report suggests that the scheme is primarily an old age pension program. Eighty percent of the beneficiaries in 1991 received old age pensions, using 70 percent of the total funds allocated for that year (see Table 6.2). The proportionate extent to which the elderly receive benefits under the other NIS benefits needs to be examined. Short-term medical care and sickness benefits comprise the second-largest category, accounting for 21 percent of benefits. Medical care and daily indemnity equal to 70 percent of the relevant daily wage are paid for a period of up to 26 weeks. The cost of paying medical benefits has increased rapidly in recent years leading to a growing deficit for the NIS' health care branch. Rising costs in this area are due to increases in the cost of providing health care services, and increases in the rate of use of this benefit. The data show that more men than women receive benefits from NIS, except in the areas of maternity and death.

6.12 Aside from coverage being very limited, the impact of NIS benefits is not completely understood. No research has been carried out to assess the overall effectiveness and impact of NIS on those few people who do receive benefits from the scheme. Thus it is not known if the benefits are adequate to offset severe hardship or to prevent people from falling into poverty. In 1993 the annual minimum pension was G\$22,568, well below the poverty line. Some critics of NIS argue that the benefits are so small in some cases that they do not make a meaningful difference. Inflation has also severely eroded the value of the payments received by NIS beneficiaries. NIS has no built-in mechanism to make cost-of-living adjustments to pensions or other NIS payments. There have also been complaints about the difficulty of having claims settled, and about the administrative costs of processing claims, which are passed on to NIS pensioners.

6.13 The NIS resources are being mismanaged and their value is being eroded by inflation.⁹⁵ The NIS Board is not allowed the freedom to invest the NIS contributions at its disposal in the most profitable manner, and as a result income received from its frozen investments in

⁹⁵ Concerns have also been expressed over fraudulent payments. During the 1990 Audit, it was discovered that benefit payment vouchers were recycled in fraudulent payments in 1989 and 1990. Attempts to quantify the amount involved in these fraudulent payments proved futile as a high percentage of the paid vouchers selected for investigation could not be produced. No provision was made in the accounts for the loss sustained. Source: World Bank Private Sector Development Report, 1993.

government securities have been well below the rate of inflation, and what NIS would otherwise have earned. For example, the returns in 1989 and 1990 were 14.3 percent and 16.7 percent respectively, compared with inflation rates estimated at 89.7 percent and 63.6 percent. Investing in government securities may provide resources to the government for fiscal purposes. The overall efficiency of such a practice could, however, be extremely low if alternative investments could bring much higher returns. There is no institutional investor or an investment committee charged with producing maximum return on the funds received as contributions attached to the NIS Board.

6.14 The constraints to coverage, effectiveness, and efficiency noted above are largely caused by the organizational and administrative structure of NIS, its placement within government operations, and the absence of clarity concerning NIS goals and objectives in the context of all social security systems in the country.

6.15 Maintaining an effective social security program will require long-term policy choices about the role of the government, ways of extending coverage to the poor, methods for ensuring old-age pensions for the population as life expectancy increases, whether the system should be voluntary or mandatory, and who should bear the risk of unexpected outcomes.⁹⁶

Social Impact Amelioration Program (SIMAP)

6.16 *Description.* The Government of Guyana created the Social Impact Amelioration Program (SIMAP) as a short-term social emergency fund to cushion the economic effects of the ERP on the most vulnerable groups. It is also designed to encourage vulnerable groups to help themselves through their own organized efforts and thus regain a footing in Guyana's development process. SIMAP effectively began operations in 1991 with funding from the Inter-American Development Bank. IDB supported the initiation of SIMAP with a US\$2.8 million program and the World Bank subsequently followed in 1992 with a US\$10.3 million program. The IDB recently committed an additional US\$13.5 million for SIMAP. These loans, combined with a significant amount of donor assistance (totalling approximately US\$20 million) will total approximately US\$45 million by September 1994. While most of this funding has been allocated to specific activities, only about US\$14 million has been spent thus far. Because SIMAP's resources and funds come from multiple and diverse sources with various conditions and terms for the use of the funds, the priorities presented by the donors may not always coincide.

6.17 The criteria for SIMAP project funding stems from agreements negotiated by the Government of Guyana and the donating agencies. Projects proposals have thus far originated from community groups, NGOs, local authorities, non-governmental organizations, regional administrations, and municipalities. Projects have also been identified by SIMAP's staff and with the assistance of SIMAP consultants. This strategy was intended to facilitate a bottom-up approach and a degree of broad-based participation. The kinds of projects being funded by

⁹⁶ See McGreevey, William, 1990. Social Security in Latin America, World Bank Discussion Paper, and "Income Security for Old Age," World Bank draft mimeo.

Table 6.2: NIS Benefits

Type of Benefit	% of benefits paid	Description of Benefit
Long-Term:	70%	
Old Age	59%	a lump-sum payment or periodic payments to an insured person who has reached 60.
Invalidity	4%	a lump-sum payment or periodic payments to an insured person who becomes permanently incapable of working other than as a result of employment injury.
Survivors	6%	a lump-sum payment or periodic payments made to survivor(s) of an insured person who dies and who immediately before death was receiving old age or invalidity benefits, provided that the person did not die from an employment related injury or illness.
Funeral	1%	a payment (currently fixed at G\$3,000, (US\$24)) made upon the death of an insured person to a survivor whose relationship to the insured person meets prescribed guidelines.
Short-term:	26%	
Sickness	3%	periodic payments to an insured person rendered temporarily incapable of work due to an illness or injury that is not employment-related.
Medical Care	21%	payment(s) to cover the costs of medical care required by a person rendered temporarily incapable of work due to an illness or injury that is not employment related.
Maternity	2%	payments to an insured woman temporarily rendered unable to work due to pregnancy. A lump-sum maternity benefit of G\$300 for each child is also paid to a woman who is insured or whose husband is insured.
Industrial:	4%	
Injury	3%	periodic payments to an insured person who suffers injury caused by an accident arising out of and in the course of insurable employment or who develops a disease due to the nature of employment. The injured person also receives free medical care.
Disablement	1%	a lump-sum payment or periodic payment made to an employed person who has lost the use of a bodily or mental function due to a work-related injury, illness, or occupational disease.
Death	.5%	periodic payments made to the survivor(s) of an insured person who dies as a result of a work-related injury or disease.
<p><i>Source:</i> Review and Analysis of the National Insurance Scheme of Guyana, Socimer International Corporation and International Links Ltd, January 1993, Draft mimeo.</p>		

SIMAP can be classified into two broad categories: 1) public physical infrastructure projects; and 2) social services projects. More specifically, the SIMAP program provides:

- a) Short-term (12 month) cash payments to supplement basic needs of approximately 158,000 people. SIMAP pays a G\$550 as a supplement to families and pensioners whose monthly income falls below G\$6,000. This supplement is, however, so small that it has little effect as a form of short-term relief.
- b) Short-term (between 3-8 months) employment as a result of the jobs generated by SIMAP projects. The level of employment so generated is estimated to be on average 90,000 person-days per annum, or 346 full-time jobs a year (where a person works 5 days a week and 52 weeks a year).
- c) Short-term (12 months) nutrition supplements to institutions, day care centers, health centers, and community centers geared towards administering nutritional supplements to the indigent, senior citizens, and young children.
- d) Short-term (6 months) skills training, monthly stipends, and basic tools to male and female youths who are out of school and unemployed.
- e) Medical supplies and improved primary health care services to communities, most of which would have had to incur significant costs in securing alternative health care services. Approximately 120,000 people have benefitted.
- f) Direct benefits to poor communities through the construction or rehabilitation of community assets and infrastructure. Approximately 150,000 citizens have benefitted.
- g) Food aid for participants in community development projects, sea defence, and agricultural workers. Roughly 14,000 people have benefitted.

6.18 It was thought that the need for SIMAP would diminish once the adjustment targets were met and sustained economic growth was achieved. This still remains an unanswered question among some of SIMAP's staff, various policy makers, and potential beneficiaries.

6.19 *Coverage and Effectiveness.* In general, SIMAP has helped many low-income households. This is especially true in the primary and nursery school rehabilitation projects, day care, and health and nutrition centers.⁹⁷ The program does not, however, necessarily reach or benefit the most poor and vulnerable groups in Guyana. Due to the lack of data until now, the agency has not developed its capacity to target its projects to benefit those who are most needy. Nor has SIMAP developed its capacity to monitor and evaluate the impact and significance of its interventions. While SIMAP will now be able to target projects more effectively with the availability of the HIES/LSMS, ongoing data collection efforts will be necessary for the evaluation of completed projects.

⁹⁷ SIMAP Project Evaluation, IDB consultant report, Draft, August 1993.

6.20 The beneficiaries of SIMAP are either 1) those communities or client groups who have been targeted for interventions by SIMAP's professional staff following a selection criteria process which considers socio-economic conditions, geographic location, ethnic composition where applicable, and institutional capacity, or 2) those who can best articulate their needs through the application process formalized through the agency. The application process for accessing funds is necessarily somewhat complex to facilitate effective selection of projects. In some cases, this process is complicated enough to prevent poor and vulnerable people, who often possess limited skills, from preparing an application. Individuals who are economically better off and likely possess stronger literacy skills are in a better position to prepare applications or to arrange for assistance in preparing them than their lesser advantaged counterparts.

6.21 Furthermore, the effectiveness of subprojects is tempered because of slow implementation. The time between receiving a project proposal and executing that project is often longer than a year.

6.22 Of the 37 professional staff positions at SIMAP, there is only one community development position. This is limiting to the agency's ability to develop the community capacity to maintain and build upon the infrastructure put in place. Another concern about sustainability of SIMAP projects is related to the fact that the agency does not currently structure any of its programs to recover costs. Some of the productive activities have the capacity to generate surpluses large enough such that the SIMAP investment can be remitted in full over an adequate time frame. Furthermore, if beneficiaries contributed something, for example a rotating fund and a fee collection system for certain services, more people could benefit from SIMAP. The issue of cost recovery is a policy decision which will need to be taken by the government and thus SIMAP cannot currently institute any user fees.

Non-Governmental Organizations (NGOs)

6.23 *Description.* It appears that NGOs in Guyana are experiencing a resurgence as economic liberalization expands. This resurgence is concurrent with recognition that the country's ongoing recovery from severe economic deterioration requires a massive effort, one that the central government could not shoulder on its own. Broad-based participation in the development process, which entails both rights and responsibilities for civil society, has long been desired by the population in Guyana. Increasingly, government and donors encourage NGO participation in Guyana for increased political stability, cost sharing, and development effectiveness and sustainability.

6.24 The Guyana Directory of Non-Governmental Organizations, assembled by UNDP in 1992, briefly describes 338 local NGOs in Guyana. In addition, 42 international NGOs that work in Guyana are included. NGOs that work in areas relevant to poverty reduction are indirectly identified. The activity areas in which the most NGOs in Guyana work are social services, economic development (small enterprise and cooperative development), and education. These areas of activity are consistent with poverty reduction efforts. The target audience served by the most NGOs is comprised of communities, children, and individuals and households. Again, the target audience includes the poor, but there is no additional detail provided. The geographic focus of the highest number of NGOs is national rather than regional. The two

regions with the highest number of inhabitants, regions 4 and 6, have the highest number of NGOs focusing on them.

6.25 The directory does not include the full extent of churches and religious institutions, which also provide informal assistance to many. Religious organizations have historically been a strong force for social, political, and economic reform in Guyana, and have been central, independent actors providing individual, household and community support and assistance, particularly in times of sickness and need. This has been especially significant for poor communities, which do not have easy access to market or government provided services.

6.26 The largest of the NGO's is the **Futures Fund**. Between 1991-1995, CIDA allocated US\$11.5 million to the fund to finance agricultural and rural development and urban-based projects. As of December 1993, approximately 220 projects located all over the country, including a large number in the interior, were in the pipeline.

6.27 Three Caribbean regional organizations carry out some coordination functions, both within Guyana and other Caribbean countries and across the Caribbean Region. They include the Caribbean Network for Integrated Rural Development, headquartered in Trinidad and Tobago; Caribbean Policy Development Center (CPDC), headquartered in Barbados; and Caribbean Rights, headquartered in Barbados. All three of these organizations direct much of their attention to the needs of the poor. The Caribbean People's Development Agency (CARIPEDA), based in St. Vincent, is a regional body that focuses on strengthening the institutional capabilities of NGOs.

6.28 *Coverage and Effectiveness.* A thorough evaluation of the NGOs in Guyana would be required to ascertain the coverage of NGOs and their effectiveness as a conduit for reducing poverty. While it is true that NGOs working on issues related to poverty are working in all regions of the country, information on the number of people who benefit and on the nature, quality and significance of the benefits is not available.

6.29 There is no apparent NGO umbrella organization in Guyana that coordinates the activities of the NGOs focused on poverty reduction or of NGOs in general. Such coordination could strengthen the potential collective power of NGOs, improve the process of information sharing among NGOs, reduce redundancy of activities, improve the total effectiveness of targeting the poor, and increase the power and influence of civil society as represented through the NGOs. Though donors have offered to underwrite the organizational cost of forging a local umbrella NGO through which they could channel resources for institutional strengthening and program activities, no such local body has yet emerged.

Recommendations

6.30 *Improve Coverage and Effectiveness of NIS Benefits.* As the only national social security scheme, the NIS has an important role to play in poverty reduction. To improve the coverage and effectiveness of the system, a thorough assessment of contributions, benefits, and participants in the NIS is needed. Then the levels of contributions and benefits can be modified accordingly to reflect the participants needs.

6.31 *Strengthen the Institutional Capacity of the NIS.* Current administrative and financial inefficiencies in the system have limited the effectiveness of the NIS. To improve the institutional capacity of the NIS, there is a need to increase the human resource capacity through in-house training, achieve financial control through introducing a management information system and introducing (and enforcing) an appropriate regulatory framework, and separating the three branches of the NIS to help avoid cross-subsidies between the branches. Resources could be increased through investing in government securities, and US or UK treasury bills.

6.32 As a medium-term goal, there is a need to create a supervisory body, a superintendency, in the MOF to set policies, provide long-term planning, and provide supervision and control of the NIS (including investment constraints). The superintendency should be composed of specialized professionals and should be given full responsibility for supervision of the NIS, providing guidelines for managing investment reserves, and for enforcing compliance with laws and regulations. The NIS should, however, be managed as an independent entity in order to improve performance, enhance operational autonomy, help eliminate conflicts of interest, and ensure that resources are devoted solely to supporting benefit programs.

6.33 *Develop Long-Term Strategy for the NIS.* As the demographic structure of the population changes, there will be increasing demands on social security for the old. The long-term goal should be a system that will protect the old, be fiscally sustainable, and encourage economic growth. As the efficiency of the system is improved in the short term, it is recommended that these longer-term issues be addressed by policy makers with substantial consideration of the successes of other countries in providing an effective safety net.

6.34 *Improve Targeting of SIMAP Beneficiaries.* In order to increase the overall effectiveness of SIMAP projects in reducing poverty, there is a need for establishing a more methodical system for targeting beneficiaries, as well as a need to improve the Agency's planning capacity. With the recent availability of the HIES/LSMS data, SIMAP will be in a better position to do this. An institute such as the Social Policy Unit recommended in Chapter 7 (working closely with the Statistical Bureau and the University of Guyana) could provide SIMAP with guidance on appropriate targeting mechanisms. Once needs and priorities are assessed in different communities, SIMAP staff can then help communities apply for the funds if necessary. SIMAP will also need to establish more rigorous criteria for funding recipients and activities. There are often difficult policy choices to make regarding the tradeoffs between helping the poorest groups in the interior, which is very costly, and less costly projects that benefit a larger number of those who may be slightly better-off.

6.35 *Support Community Development with SIMAP.* SIMAP should strengthen its own capacity to assist with community development and not solely individual and discrete projects. With community empowerment, SIMAP would also need to assist communities to attain the appropriate degree of authority and representation at the regional and national levels. This will require interacting with the Ministry of Public Works and Regional Development, as it concerns local and regional elections, funding to local communities from regional and national authorities, and authentic participation in decisions that affect local communities but are traditionally made at the regional or national level.

6.36 *Design Phase-out of SIMAP.* SIMAP was created to address the short-term social costs of the government's economic policies while macroeconomic conditions stabilized. Thus the need for an agency with the mandate of SIMAP will be limited in the future, assuming that the line ministries are strengthened to the point that they can effectively deliver basic services. The government should work with the line ministries, NGOs, the private sector, and donor organizations to determine how long SIMAP will exist, if there is a future role for the Agency once the ERP targets are met, and how the line ministries will take over responsibility for SIMAP's activities. The government must ensure that its primary efforts are now focused on strengthening the line ministries' capacity to effectively deliver services and ensure that bridging measures are in place to assist those who will still be in need and to stave off severe shocks.

6.37 *Enhance the Capability of NGOs to Reduce Poverty.* NGOs are experiencing a resurgence in Guyana as the process of political and social democratization deepens and economic liberalization expands. In an attempt to strengthen the impact that NGOs can have on poverty reduction and prevention, it is recommended that a seminar/workshop be held to assist NGOs in enhancing their institutional capacity. The workshop could be focused on demonstrating the value and importance of assessing NGOs' individual and collective efficiency, coverage, targeting success, effectiveness, appropriateness, institutional capabilities, and self-financing capacity, and the ways to improve performance in all of these areas. This seminar could be organized by donors in collaboration with the Caribbean People's Development Agency (CARIPEDA) to accommodate NGOs that operate in Guyana and are potentially interested in attending.

6.38 *Create an Umbrella NGO Organization to Provide Support to Individual NGOs.* A central organization could provide ongoing support to NGOs in implementing community projects and provide training and technical assistance in areas that would strengthen performance and enhance the possibility for self-sufficiency.

Implementing a Poverty Reduction Strategy

7.1 Recommended strategies for promoting equitable growth and reducing poverty through effective policies within the sectors have been discussed in previous chapters. Implementing such a strategy will require a strong commitment from the government, the Guyanese population, and the donor community. In addition, implementing these policies will require a stronger information base to be able to monitor and evaluate key poverty problems over time and formulate strategies to address them.

Sustaining Government Commitment

7.2 The government has emphasized its commitment to achieving sustained growth to improve living standards and poverty alleviation through pursuing the fundamental principles of the ERP and market-oriented sectoral policies. It recognizes the pivotal role of the private sector and the need to strengthen the state's ability to provide basic services to the population. To sustain that commitment, the government must ensure that it maintains and deepens the macroeconomic and incentive framework elaborated in the ERP to continue private sector-led growth, refocuses the role of the public sector and strengthens its ability to deliver social services, determines clear priorities and strategies to address the huge infrastructure constraints, and ensures sound environmental management as a base for sustained development. Though the development agenda is long, poverty reduction is achievable through focusing efforts on implementing the policies required.

Improving Donor Coordination

7.3 Implementation of the ERP has led to a significant increase in donor support. This is indicated by the aid flows that Guyana received during the period following the launch of the ERP (1989-93).

7.4 Guyana received US\$936 million in debt relief. This amount is relatively large considering that the recorded GNP during these five years was not more than US\$1.5 billion. The increase in donor support in terms of additional inflows was US\$290 million for 1989-93, or about US\$58 million per year or US\$795 per capita, per year.

7.5 Most of these aid inflows have gone to support the balance of payments and to finance rehabilitation of infrastructure and the development of human resources. These expenditures have had a impact on poverty reduction through higher economic growth and improvements in the availability of water supply and social services. In addition, there are several projects explicitly aimed at poverty reduction. The SIMAP project is financed by IDA (US\$10.2 million) and IDB (US\$13.5 million), EC, CIDA, the French government (see chapter 6). The World Food Programme (WFP) is implementing a four-year (1993-97), US\$5.7 million multi-purpose agriculture and community development program where food commodities are provided as wage supplements to support three sub-projects (agricultural production, community development, and social development). WFP also administers a school feeding program

(US\$6.5 million for 1993-97), which provides food supplements (a nutritious bun and milk) to 25,000 nursery and 75,000 primary school students.

Table 7.1: Aid Flows to Guyana, 1984-1993

	(in US\$ Millions)	
	<u>1984-88</u>	<u>1989-93</u>
Disbursements from ML&T	221	207
Debt relief	-	936
Balance of payments support	-	304
Total	221	1447

7.6 The Caribbean Development Bank (CDB) is implementing a Basic Needs Trust Fund grant of US\$5 million (1993-95) for financing of small-scale (upper limit of about US\$4,000), community-based projects in such areas as health, education, and community infrastructure. CIDA administers two poverty-related projects: The Futures Fund (CDN\$16 million, 1991-1995), which supports projects designed to benefit disadvantaged and vulnerable groups (see chapter 6), and The Canada Fund (CDN\$0.2 million for 1993-94), which finances small-scale projects (CDN\$10,000-20,000) in micro-enterprises, community development, agriculture, women in development, income generation, and skill training. UNDP has committed support (1992-96 - US\$13.9 million) to an Improved Quality and Delivery of Social Services program which aims to assist in upgrading services in depressed areas, improving quality of teacher training, and improving health and nutrition. The EC is financing a Small Business Credit Initiative project (US\$300,000), which offers micro-credit facilities to formally non-creditworthy entrepreneurs and is being implemented by a British NGO in collaboration with GUYBANK and the Red Thread Women's Development Unit.

7.7 Though a certain amount of duplication and overlapping of donor efforts is inevitable, there is currently a need for stronger coordination among donors in Guyana. For example, government officials now spend a substantial amount of time dealing with missions and representatives of these agencies, who often seek similar information and decisions. Although fora are effectively in place to deal with aid coordination issues, such as the Caribbean Group for Cooperation in Economic Development (CGCED) or the largely informal meetings of representatives of donors in Georgetown, they are not geared toward reducing duplication and overlapping. Recently the EC has helped coordinate donor support for the restoration and maintenance of the sea defense system. A similar approach should be initiated by the government in coordination with the local UNDP office in other areas.

7.8 Other relatively simple steps that would improve donor coordination and reduce some of the burdens on already stretched government officials could include the collection of all relevant documents and reports on Guyana and relevant registers, such as the inventory of NGOs, central planning calendars for international meetings and missions of international agencies and reports forthcoming, regular information on expected disbursement patterns, and regular evaluation on

actually disbursed loans and grants. The local UNDP office could also play a major role in this effort.

Fostering Community Participation

7.9 The combination of a wide range of basic needs, limited government resources, and a large proportion of the population in poverty calls for creative ways of addressing such needs. Community and NGO participation could be one way of compensating for many of these constraints because they include beneficiaries as active participants in setting priorities and providing "shared labor" and encourage them to take better care of the facilities to which they attach a sense of ownership. For example, in the maintenance of drainage and irrigation, sharing of child care responsibilities, maintenance of the water supply, and other activities, the participation of beneficiary groups has the potential for improving living conditions and achieving improved economic opportunities.

7.10 While not a panacea, the role of community groups in various activities can determine the degree of success that results. In general, experience has shown that such partnerships are relatively more cost-effective for renovating works in established communities than in constructing new works, where professional crews and machinery can work more efficiently. Still, in all cases community groups can help to set priorities within an environment of scarce resources, and the vested interest of the groups generally helps to ensure that the priorities reflect their needs. A good example of this situation can be found in discussions with the representatives of squatters. In many areas where the government is trying to regularize squatting schemes, the blueprint calls for traditional norms and standards (minimum lot size, setbacks, and road width and quality). However, the residents challenge the need for wider roads, larger lots, and other such requirements. Instead, their priorities are for water and electricity connections, schools, and similar facilities. With limited human and financial resources, the government could significantly reduce its regularization costs by discussing these priorities with residents. It could further reduce such costs by accepting the offer of many such residents to supply the labor for laying pipes, roadworks, and other such tasks and even to pay for some of the materials.

7.11 Another example is related to frequent and extensive flooding after rainstorms. Throughout much of Georgetown and in other urban areas, the combination of uncollected refuse, overgrown drainage and reserve areas, and deteriorating drainage systems has caused flooding of cemeteries, yards, latrines, septic tanks, and even living spaces in some homes. Many community groups have tried to join forces to clean and maintain the drainage facilities. However, since the system is interconnected, such works cannot be done in independent sections. Moreover, even if an entire section can be cleared, the refuse has to be taken away from the site before it clogs the system with the next rainfall. A partnership between the municipal authorities and the community in cleaning these drains and disposing of the refuse would help in several ways. In addition to using community labor and so making the explicit costs lower, works such as these reduce flooding with its associated health risks and other losses arising from the flooding. Additionally, such experiences teach residents to become more directly aware of the cost of improper waste disposal and of the importance of keeping drainage ditches and reserves free of weeds.

7.12 One drawback to the concept of self-help and cooperative action in Guyana today is that it has been so politicized in the past that any attempts at community involvement are viewed with skepticism. While special efforts may be needed to gain credibility, cooperative action can succeed if politics is kept out of the process and, instead of advocating massive bureaucratic structures and lofty principles for such groups, practitioners seek loose affiliation of residents with focus upon specific tasks that directly affect their well being. For example, with a large number of footbridges in a state of disrepair, users of these bridges could be given the opportunity to join forces for one or two days to repair them, with the municipality providing technical guidance and perhaps materials. The area of community participation is still largely untapped in Guyana; it should be used in a more organized and focused manner to enhance the results of efforts aimed at improving living conditions.

Improving the Information Base

7.13 The need for additional data has been identified as a priority in all sectors. Without sufficient information, it is difficult to plan appropriately to suit the needs of the poor. Appropriate information can reduce waste and mistargeted subsidies and spending, ultimately enhancing growth as distortions are reduced.

7.14 Furthermore, the collection of relevant information, such as that collected in the recent HIES/LSMS, can provide a basis for analyzing the country's key poverty problems, tracking them over time, and formulating and implementing well-conceived strategies to address them. Much of the information presented in this report, for example the identification of the regional location of the poor and assessment of their access to social services, exemplifies the importance of relevant data.

7.15 In order to improve future data collection efforts in the country, further strengthening of the Statistical Bureau is necessary. Despite the Bureau's recent revitalization, it still faces institutional weaknesses due to its small staff. These weaknesses are particularly evident in the area of timeliness of data availability (results from the 1990 Census have not yet been released) and the area of data analysis. As with other government agencies, it is difficult for the bureau to retain and attract qualified personnel because salaries are low. The bureau is currently benefitting from several technical advisors under a UNDP sponsored program; however, when the project is completed it will be left with a very small staff. Additional resources need to be allocated to the bureau to continue data collection and strengthen its ability to carry out data analysis. In the short term, it is likely that such funding will need to come from donor-financed projects.

7.16 Some of the data needs that have been identified include: information on the labor force (a labor force survey is currently scheduled for 1994), demographic and health indicators, information on agricultural and farm management practices, the number and physical condition of school buildings (ongoing), a profile of the housing stock, details on the squatting problem, and periodic income and expenditure surveys such as the HIES/LSMS.

7.17 Effective poverty management will require establishing a Social Policy Unit to undertake sophisticated social policy analysis and integrate the findings to formulate more effective and targeted social sector programs. Such a unit could serve to build institutional linkages between

the Statistical Bureau, line ministries, and the University of Guyana; carry out in-house analysis and contract additional research as needed; disseminate information; and coordinate training programs.

Annexes

Previous Estimates of Poverty in Guyana

The 1989 Boyd (IDB consultant) estimate of a poverty line was derived using data on a food basket provided by the Federation of Industrial Trade Union of Guyana in 1984. This basket was adjusted for possible overestimation, inflation and for an average household size estimated at 5.4 persons as compared with the 6.1 previously used in a PAHO study. The technique then assumed that people on average spent 70 percent of their income on food, estimating that the poverty line (with the added reciprocal share of other expenditures) would be G\$405 per person, per month. In 1989, that estimate was G\$851 per person, per month, or G\$55,145 per annum for the average household.

In the absence of data on income distribution, the methodology fit the 1988 GDP at current prices to the closed economy national identity. Private sector expenditures were disaggregated into household and corporate expenditures on the basis of an estimate by Thomas (1989) indicating that the private sector accounted for approximately 20 percent of the output recorded in the official GDP. The corporate sector was assumed to appropriate 25 percent of total government expenditure. He further estimated that household income was understated by 50 percent in the official statistics, also using Thomas' estimate of the size of the informal economy. The relative income shares were derived using Sri Lanka shares as a proxy for Guyana shares. The rationale for using Sri Lanka was that both countries placed considerable importance on minimizing income inequality. The calculations produced an estimate of 65 percent of the population below the poverty line in 1988. In 1989, taking into account the effects of the rapidly worsening inflation in that year, the estimated head-count index was increased to 75 percent of the population.

The Ramprakash study (SIMAP consultant) calculated an estimate of poverty using the 1989 Boyd poverty line and one based on the officially derived costs of minimum subsistence requirements, estimated at G\$1,125 per person, per month in 1989. To estimate the distribution of income, data was derived from the gross annual income recorded in the 1980 Population Census. The average income per head of population (G\$1,700) was only about 10 percent lower than the per capita GDP at current market prices (G\$1,902). To account for the discrepancies attributed to understatement and non-reporting of incomes in the census and differences in coverage and definitions between the national accounts and household incomes, the reported levels of income in the Census were raised by 8 percent. The official estimates of incomes in 1988 and 1989 were arbitrarily increased by a further 15 percent to account for the deficiency in the estimated size of GNP due to inadequate coverage of activities in the parallel economy (the black market and barrel donations to Guyanese overseas) and the overstatement of price increase measured in the Lasepeyre CPI during periods of rising relative prices.⁹⁸ Using this distribution of income, the estimates of poverty came to 67 percent for the G\$851 poverty line, and 86 percent for the G\$1,125 poverty line.

⁹⁸ The Census figures are believed to contain substantial margins of error because 1) only one question on income was used in the questionnaire; and 2) the data were collected by enumeration and not by personal interview; and 3) the data used were 10 years old.

Low Cost Daily Food Basket, May 1993, 2400 Kilocalorie Diet

	Amount (oz)	Amount (gr)	Energy (kcal)	Cost G\$
rice, mill, raw enriched	2.32	66	238.5	2.61
flour, all p/pose, enrchd	2.32	66	239.1	3.62
spagh, macaroni, unenrched	2.32	66	242.4	6.52
cassava, fresh root	3.99	113	123.1	3.74
plantain, green	3.99	113	103.1	3.74
sw/potato, fr, color vars	3.99	113	109.8	4.99
sugar, dark brown, crude	2.27	64	240.0	3.69
red peas, wh seeds, dry	1.48	42	141.7	3.24
split pea, no sd ct, raw	1.48	42	146.3	4.17
pumpkin, mature, raw	1.98	56	8.9	1.24
amaranth leaves, calaloo	1.98	56	15.1	2.84
okra	1.98	56	12.4	2.48
tomato, ripe	1.98	56	11.5	2.48
guava, whole	1.71	49	32.1	1.61
banana, ripe	1.71	49	30.2	2.14
mango, ripe	1.71	49	28.5	4.28
water melon, fresh fruit	1.71	49	5.2	2.68
codfish, salt, semi dry	0.83	23	52.6	5.17
beef retail, medium fat	0.83	23	52.5	3.41
tongue, beef, medium fat	0.83	23	48.5	3.10
flying fish	0.83	23	13.2	2.58
milk, cow, dry, fortified	0.83	23	84.3	8.26
shrimp, raw	0.83	23	13.9	2.75
pork, retail, medium fat	0.83	23	50.6	4.13
chicken breast	0.83	23	20.4	4.39
oil, pure, all kinds	0.74	21	185.2	2.40
margarine, fortified	0.74	21	150.8	4.85

Diet Composition

Water (G)	=	160.90
Energy (KCAL)	=	2400.00
Protein (G)	=	84.10
Fat (G)	=	55.10
Carbohydrate (G)	=	397.90
Fibre (G)	=	9.60
Calcium (MG)	=	712.50
Iron (MG)	=	20.90
Vitamin a (R.E.)	=	1528.30
Thiamin (MG)	=	1.90
Riboflavin (MG)	=	1.71
Niacin (MG)	=	18.20
Vitamin C (MG)	=	269.70
Total Cost (\$)	=	97.11
Total Amount (LB)	=	2.94
Total Amount (KG)	=	1.33

Source: GAHEF, 1993

FGT Poverty Measures⁹⁹

The Headcount index, Poverty Gap and FGT P₂ measure belong to a class of poverty measures proposed by Foster, Greer and Thorbecke¹⁰⁰ (FGT). The FGT measures are derived by the following formula:

$$P_n = \frac{1}{n} \sum_{i=1}^q \left(\frac{[z - y_i]}{z} \right)^\alpha$$

where q = the number of poor individuals
 n = the size of the entire population
 z = the poverty line
 y_i = the income of poor person i
 α = a non-negative parameter which reflects the weight given to the degree of poverty of the individual

As α increases, the weight given to the poorest person in the population when calculating the poverty measure also increases. Three values of α were used;

α = 0 Headcount measure
 α = 1 Poverty Gap
 α = 2 FGT P₂ Measure

The *Headcount* measure is simply the proportion of the population whose income is below the poverty line. The *Poverty Gap* is used to measure the depth of poverty for the population as a whole; it represents the amount necessary to raise the income of all poor individuals to the level of the poverty line, as a proportion of the poverty line. In other words, it is the aggregate poverty deficit relative to the poverty line. The *FGT P₂* measure is distributionally sensitive in that it is able to give weight to those who are very poor relative to the "mildly poor." Each individual is weighted by their degree of poverty, representing the aggregate of the square of each poor individual's poverty gap, as a proportion of the entire population size. Though it is difficult to interpret the P₂ measure in an intuitive sense, it is useful for making comparisons across groups.

The FGT measures are very useful for poverty analysis due to several reasons. First, this class of measures is decomposable -- the population can be broken down into mutually exclusive subgroups for analysis. This is useful for making poverty profiles of specific groups within the population and then comparing this profile to that of the population as a whole. Second, for values of α=1 or higher, the FGT class of measures satisfies the *monotonicity*

⁹⁹ This annex extracts from World Bank (1993). *Poverty and Income Distribution in Latin America, The Story of the 1980s*.

¹⁰⁰ See James Foster, J. Greer and E. Thorbecke, A Class of Decomposable Poverty Measures, *Econometrica* 56(1984):173-177.

axiom and *transfer axiom* as defined by Sen¹⁰¹. The monotonicity axiom states that, all other things being equal, the poverty measure must increase (or decrease) if the income of a poor family is reduced (or increased). The transfer axiom states that, all other things being equal, the poverty measure must increase (decrease) with any transfer of income from a poor household to a non-poor household. Finally, for values of $\alpha=2$ or higher, the FGT measure satisfies the *transfer sensitivity axiom* as proposed by Kakwani¹⁰² which states that, for transfers from a richer person to a poorer person within the poor population, the magnitude of the decrease in poverty must be greater for larger transfers. This is because individuals closer to the bottom of the income distribution of the poor population are weighted more heavily in the poverty measure when $\alpha=2$ or higher.

¹⁰¹ See Amartya Sen, Poverty: an Ordinal Approach to Measurement. Econometrica 44(1976): 437-446.

¹⁰² See Nanak Kakwani, On a Class of Poverty Measures. Econometrica 48(1980):437-446.

Statistical Appendix

List of Tables

Table No.		Page No.
1	Poverty Measures by Geographic Area for Extreme Poverty Line	112
2	Age Distribution by Quintile	112
3	Consumption Shares by Geographic Area	113
4	Head of Household by Gender and Quintile	113
5	Poverty Measures by Ethnic Group	114
6	Education Level by Gender of Head of Household	114
7	Education Level by Geographic Area	114
8	Employment type, Whole Population Age 15 and Over	115
9	Employment by Sector, Whole Population Age 15 and Over	115
10	Primary Employment Status by Sector and Type	116
11	Individuals Seeking Employment by Quintile and Age Group	116
12	Mean Annual Household Expenditures on Selected Food Items by Quintile	117
13	Percent of Students Receiving Textbooks, by Quintile	117
14	Per Capita Recurrent Spending in Health and Education by Region	118
15	Ownership of Dwellings	119
16	Building Type	119
17	Type of Housing Ownership	120
18	Type of Building	120
19	Year of Construction	121
20	Wall Material of Houses	121
21	Roof Material of Houses	122
22	Cooking Facility	122
23	Toilet Facility	123
24	Bathing Facility	123
25	Wastewater and Drainage Facility	124
26	Water Supply Facility	124
27	Lighting Facilities	125
28	Survey of Squatters in Regions 3 and 4	125
29	Mean Annual Household Expenditures by Category and Deciles	126

Table 1: Poverty Measures by Geographic Area for Extreme Poverty Line (G\$35,150)

Region	% of population ¹	Head Count	Poverty Gap	FGT ₂
ALL GUYANA	100.0	27.7	8.9	4.2
Urban Georgetown	21.0	15.7	3.8	1.4
Urban Other	11.2	12.2	2.5	.9
Rural Coastal	56.0	27.9	6.9	2.5
Rural Interior	11.8	70.8	36.5	22.0
(1) Barima-Waini	3.5	73.9	35.5	20.1
(2) Pomeroon-Supenaam	6.7	43.8	15.0	6.6
(3) Essequibo Island-W. Demerara	10.9	29.8	6.8	2.6
(4) Demerara-Mahaica	39.8	18.3	4.3	1.5
(5) Mahaica-Berbice	7.5	34.1	8.9	2.8
(6) E. Berbice-Corentyne	17.0	16.0	3.0	8.3
(7) Cuyuni-Mazaruni	2.6	26.2	6.7	3.6
(8) Potaro-Siparuni	1.9	90.2	57.3	38.5
(9) Upper Takutu-Upper Essequibo	3.8	88.7	47.3	28.0
(10) Upper Demerara-Berbice	6.4	24.8	5.2	1.9

¹ This distribution is from the full HIES survey (including all four subrounds.) The distribution for the third subround is slightly different. Total population is estimated at 730,000.
Source: 1993 HIES/LSMS Survey. N=7925 individuals.

Table 2: Age Distribution by Quintile

Age Group	Per Capita Consumption Quintile					
	All Guyana	I Poorest	II	III	IV	V
0-9	23.2	24.3	24.6	22.5	23.9	20.9
10-19	24.6	26.1	24.0	23.9	21.8	23.3
20-39	32.0	28.4	30.8	33.1	34.1	33.8
40-59	14.4	13.8	13.9	13.6	14.5	15.9
60+	6.6	7.3	6.6	7.0	5.6	6.3
	100.0	100.0	100.0	100.0	100.0	100.0

Source: 1993 HIES/LSMS Survey.

Table 3: Consumption Shares by Geographic Area

Share	Area				
	Total	George- town	Other Urban	Rural Coast	Rural Interior
Food	55.2	46.8	49.5	58.0	69.1
Fuel/hh Supplies	10.2	10.8	9.4	9.9	11.5
Housing	7.6	12.9	7.7	5.5	5.3
Durables	2.2	1.6	4.1	2.1	1.4
Personal Care	4.4	5.4	5.2	3.9	2.9
Health Care	1.8	2.2	2.0	1.7	.7
Clothing, etc	5.8	4.3	9.4	6.1	3.4
Transportation	3.9	5.4	3.5	3.8	1.3
Education/Rec.	2.4	3.5	2.8	2.0	1.2
Misc.	2.1	2.6	2.2	1.9	1.4
Non-consumption	4.5	4.6	4.1	5.0	1.7
Home Grown Food Products					
Households producing (%)	57.3	26.8	58.9	66.7	83.6
For households producing; Share of total food consumption	15.8	7.9	5.4	12.3	49.9

Source: 1993 HIES/LSMS Survey.

Table 4: Head of Household by Gender and Quintile

	All	Quintiles					
		Total	I	II	III	IV	V
Male	71.6	100%	15.0	17.5	20.5	22.2	24.7
Female	28.4	100%	16.0	17.9	18.9	18.5	28.7

Source: 1993 HIES/LSMS Survey.

Table 5: Poverty Measures by Ethnic Group

Region	% of population ¹	Head Count	Poverty Gap	FGT ₂
ALL GUYANA	100.0	27.7	8.9	4.2
Indo-Guyanese	45.9	33.7	10.3	4.3
Afro-Guyanese	36.7	43.0	13.9	6.0
Amerindian	10.3	87.5	53.9	3.6
Mixed	6.2	44.7	12.7	5.3

Source: 1993 HIES/LSMS Survey. N=7925 individuals.

Table 6: Education Level by Gender of Head of Household

Educational Achievement		Quintiles				
		I	II	III	IV	V
Male	All Male					
Below Primary	15.8	26.3	18.6	18.6	13.5	7.9
Primary	60.1	65.8	67.6	58.7	63.3	49.8
Secondary	21.0	7.9	13.5	20.8	21.1	34.1
> Secondary	3.0	0	.1	2.0	2.1	8.2
Female	All Female					
Below Primary	14.0	25.9	18.3	12.4	13.7	5.5
Primary	56.1	59.2	60.2	6.4	62.1	43.2
Secondary	26.1	14.8	19.4	21.6	23.2	41.8
> Secondary	3.7	0	2.1	2.1	1.0	9.6

Source: 1993 HIES/LSMS Survey.

Table 7: Education Level by Geographic Area

Highest Level Completed	Total	George-town	Other Urban	Rural Coastal	Rural Interior
Below Primary	16.3	3.9	14.8	20.5	27.0
Primary	58.3	45.6	54.6	64.1	64.1
Secondary	22.2	45.0	22.7	13.7	8.8
Post-secondary	3.2	5.5	7.9	1.7	.1

Source: 1993 HIES/LSMS Survey.

Table 8: Employment type, Whole Population Age 15 and Over

Employment type	Quintiles					
	All Guyana	I	II	III	IV	V
Self Employed	41.9	56.9	33.5	34.7	39.5	41.9
Regular salaried/wage	51.2	32.4	58.4	59.0	54.3	51.2
Casual Labor	6.9	10.7	8.0	6.3	6.1	6.9

Source: 1993 HIES/LSMS Survey.

Table 9: Employment by Sector, Whole Population Age 15 and Over

Sector of Employment	Quintiles					
	All Guyana	I	II	III	IV	V
Agriculture	33.8	58.6	36.3	31.1	24.2	19.4
Public service	15.1	9.7	14.9	16.9	15.7	18.4
Commerce	14.7	8.2	12.0	14.8	16.3	21.9
Manufacturing	12.2	7.4	12.2	13.8	15.6	12.1
Services	8.2	7.6	9.2	9.1	7.1	8.0
Transport	5.6	2.4	6.2	5.5	5.9	7.7
Mining	4.9	2.6	3.2	5.3	5.9	7.2
Construction	4.2	3.2	5.6	3.0	7.3	2.4
Finance	1.3	.4	.6	.6	2.0	3.0

Source: 1993 HIES/LSMS Survey.

Table 10: Primary Employment Status by Sector and Type

Sector	Self Employment Act.	Regular Salaried/ Wage Labor	Casual Wage Labor	Total
Agriculture	55.6	35.4	9.0	33.9
Mining	29.0	61.1	9.9	4.9
Manufacturing	37.3	59.2	3.5	11.9
Construction	31.3	53.1	15.9	4.3
Commerce	77.9	21.6	0.5	14.8
Service	20.0	65.0	15.0	8.3
Transport	27.4	63.7	8.9	5.5
Finance	2.9	94.1	2.9	1.3
Public Service	4.8	94.2	1.0	15.0

Source: 1993 HIES/LSMS Survey. N= 2653 individuals.

Table 11: Individuals Seeking Employment by Quintile and Age Group

Age Group	Quintiles					
	All Guyana	I	II	III	IV	V
15-19	18.6	22.7	18.4	20.7	19.1	13.4
20-24	16.3	19.3	16.2	16.0	18.2	13.5
25-34	23.2	13.4	12.3	11.0	11.6	9.2
35-44	18.6	4.7	7.5	76.7	7.1	6.3
45-59	13.3	3.5	7.0	7.2	4.4	6.3
60+	10.0	5.0	1.9	4.7	2.2	2.1
All Guyana, Unemployed	11.1	12.7	11.8	11.7	10.9	8.8

Source: 1993 HIES/LSMS Survey.

Table 12: Mean Annual Household Expenditures on Selected Food Items by Quintile

Item	Quintiles					
	Total	I Poorest	II	III	IV	V
White Rice	10,075	11,364	10,651	10,862	10,592	7,946
Brown Rice	13,871	14,150	14,032	14,029	14,651	12,705
Flour	9,135	8,073	9,816	9,581	9,668	8,329
Chowmein	2,475	1,800	2,300	2,461	2,781	2,557
Blackeye Peas	2,333	2,366	2,347	2,242	2,303	2,400
Split Peas	2,368	2,151	2,127	2,566	2,619	2,228
Stew Beef	8,096	6,067	6,649	6,751	8,364	10,052
Frozen Chicken	12,563	6,666	9,823	11,803	13,758	16,052
Banga Maree	4,220	2,841	3,518	4,142	4,967	4,956
Eggs	4,269	2,410	3,610	4,109	4,651	5,020
Powdered Milk	9,942	5,358	8,725	8,605	10,380	12,604
Fry oil	4,798	3,741	4,368	4,971	5,168	5,023
Tomato Paste	1,533	1,241	1,299	1,505	1,659	1,666
Boulangier	2,236	1,558	2,048	2,275	2,444	2,439
Callalu	2,122	2,516	1,821	1,929	2,041	2,364

Source: 1993 HIES/LSMS Survey.

Table 13: Percent of Students Receiving Textbooks, by Quintile

Characteristic	Per Capita Consumption Quintile					
	All Guyana	I Poorest	II	III	IV	V
% receiving textbooks at school						
Full set	11	9	13	11	9	13
Partial set	38	56	36	31	33	34
None	51	35	51	58	58	53

Source: 1993 HIES/LSMS Survey. N=2160 students.

Table 14: Per Capita Recurrent Spending in Health and Education by Region

Region	Per capita recurrent spending, 1993 (G\$)		Head Count Index
	Health	Education	
1	555*	1500*	.79*
2	1741	4479	.55
3	2825	7835	.46
4	2897	6635	.32
5	1647	3148	.56
6	7756	7005	.37
7	771	1226*	.45
8	128*	575*	.95*
9	611*	1477*	.93*
10	528*	3403	.31

*Lowest per capita spending, poorest regions.
Source: Recurrent Expenditures, Government of Guyana, 1993 Budget. Head Count Index, HIES/LSMS, 1993.

Table 15: Ownership of Dwellings (%)

QUINTILES	Owned	Rented	None	Others
1	11.61	1.87	0.06	2.04
2	11.78	3.47	0.11	1.98
3	12.33	4.57	0.00	3.25
4	11.50	5.17	0.06	4.79
5	13.70	7.43	0.00	4.29
Total	60.92	22.51	0.23	16.35
REGIONS	Owned	Rented	None	Others
1	2.37	0.06	0.00	0.22
2	5.45	0.11	0.06	0.55
3	7.43	1.98	0.00	1.76
4	19.21	15.74	0.11	8.42
5	5.34	0.28	0.00	0.99
6	12.77	2.26	0.00	2.20
7	1.32	0.50	0.00	0.33
8	1.21	0.00	0.00	0.11
9	2.53	0.00	0.00	0.11
10	3.30	1.60	0.06	1.65
Total	60.93	22.53	0.23	16.34

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 16: Building Type (%)

QUINTILES	Undivided Pvre Hse.	Part of Pvre Hse.	Flat or Apt.	Townhouse	Duplex	Business/Dwelling	Barracks	Others
1	12.66	1.54	0.66	0.06	0.00	0.00	0.44	0.11
2	13.48	2.59	0.77	0.06	0.00	0.00	0.11	0.06
3	14.64	3.74	1.05	0.06	0.17	0.17	0.11	0.06
4	14.97	4.95	1.05	0.00	0.06	0.11	0.06	0.11
5	17.12	5.94	1.27	0.06	0.00	0.61	0.06	0.11
Total	72.87	18.76	4.80	0.24	0.23	0.89	0.78	0.45
REGIONS	Undivided Pvre Hse.	Part of Pvre Hse.	Flat or Apt.	Townhouse	Duplex	Business/Dwelling	Barracks	Others
1	2.31	0.17	0.17	0.00	0.00	0.00	0.00	0.00
2	5.45	0.50	0.00	0.00	0.00	0.22	0.00	0.00
3	9.36	1.32	0.17	0.00	0.11	0.17	0.00	0.06
4	25.54	11.83	3.69	0.22	0.11	0.28	0.77	0.17
5	6.16	0.39	0.06	0.00	0.00	0.00	0.00	0.00
6	14.69	1.76	0.28	0.00	0.00	0.22	0.00	0.11
7	1.49	0.39	0.28	0.00	0.00	0.00	0.00	0.00
8	1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	2.53	0.06	0.00	0.00	0.00	0.00	0.00	0.06
10	4.02	2.37	0.17	0.00	0.00	0.00	0.00	0.06
Total	72.87	18.79	4.82	0.22	0.22	0.89	0.77	0.46

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 17: Type of Housing Ownership (%)

QUINTILES	Owned	Squatted	Rented Pvte	Rented Govt.	Leased	Rent Free	Others
1	11.45	0.11	1.38	0.39	0.00	2.04	0.11
2	11.56	0.00	3.08	0.33	0.00	2.26	0.00
3	12.22	0.11	4.35	0.39	0.00	3.08	0.00
4	11.94	0.28	4.46	0.28	0.00	4.13	0.33
5	13.43	0.33	6.55	0.50	0.06	4.29	0.11
Total	60.60	0.83	19.82	1.89	0.06	15.80	0.55
REGIONS:	Owned	Squatted	Rented Pvte	Rented Govt.	Leased	Rent Free	Others
1	2.42	0.00	0.00	0.00	0.00	0.22	0.00
2	5.45	0.00	0.11	0.00	0.00	0.61	0.00
3	7.32	0.06	1.82	0.06	0.06	1.76	0.11
4	18.93	0.66	13.43	1.65	0.00	8.09	0.33
5	5.17	0.00	0.44	0.00	0.00	0.94	0.06
6	12.77	0.11	2.04	0.11	0.00	2.15	0.00
7	1.38	0.00	0.50	0.00	0.00	0.28	0.00
8	1.27	0.00	0.00	0.00	0.00	0.06	0.00
9	2.48	0.00	0.00	0.00	0.00	0.17	0.00
10	3.41	0.00	1.49	0.06	0.00	1.54	0.06
Total	60.60	0.83	19.83	1.88	0.06	15.82	0.56

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 18: Type of Building

QUINTILES	Residential	Resid/Facto ry	Resid/Shop	Mixed Use	Others
1	15.19	0.00	0.06	0.00	0.11
2	16.95	0.00	0.06	0.00	0.06
3	19.92	0.06	0.06	0.00	0.11
4	20.91	0.06	0.06	0.00	0.28
5	24.44	0.00	0.39	0.11	0.28
Total	97.41	0.12	0.63	0.11	0.84
REGIONS	Residential	Resid/Facto ry	Resid/Shop	Mixed Use	Others
1	2.53	0.00	0.11	0.00	0.00
2	6.11	0.00	0.06	0.00	0.00
3	10.79	0.00	0.17	0.00	0.22
4	41.72	0.11	0.17	0.11	0.61
5	6.55	0.00	0.06	0.00	0.00
6	17.12	0.00	0.06	0.00	0.00
7	2.09	0.00	0.00	0.00	0.00
8	1.32	0.00	0.00	0.00	0.00
9	2.59	0.00	0.00	0.00	0.00
10	6.60	0.00	0.00	0.00	0.00
Total	97.42	0.11	0.63	0.11	0.83

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 19: Year of Construction (%)

QUINTILES	Pre 1960	1960-69	1970-79	1980-89	Post 1990	Unknown
1	3.25	1.76	3.25	3.03	1.43	2.09
2	2.86	2.48	4.02	2.92	1.43	2.75
3	4.07	3.36	3.91	2.64	1.10	4.68
4	4.13	3.47	5.06	2.42	0.77	4.79
5	3.80	4.35	5.78	3.36	0.88	6.27
Total	18.11	15.42	22.02	14.37	5.61	20.58

REGIONS	Pre 1960	1960-69	1970-79	1980-89	Post 1990	Unknown
1	0.06	0.17	0.11	0.88	1.05	0.39
2	0.83	1.21	1.27	2.20	0.44	0.11
3	1.32	1.10	2.04	1.71	0.61	4.18
4	6.93	8.59	10.57	3.96	1.71	9.14
5	2.31	0.99	1.38	1.10	0.22	0.39
6	4.79	2.26	3.58	2.09	0.77	3.63
7	0.99	0.17	0.33	0.11	0.22	0.33
8	0.06	0.06	0.33	0.66	0.06	0.17
9	0.22	0.00	0.94	1.16	0.28	0.06
10	0.61	0.88	1.49	0.50	0.28	2.20
Total	18.12	15.43	22.04	14.37	5.64	20.60

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 20: Wall Material of Houses (%)

QUINTILES	Wood	Concrete	Wood Concrete	Stone	Brick	Adobe	Makeshift	Others
1	11.56	0.50	0.99	0.00	0.44	1.16	0.22	0.50
2	14.58	0.72	0.88	0.00	0.11	0.44	0.11	0.17
3	17.12	0.83	1.21	0.00	0.28	0.28	0.28	0.11
4	17.34	0.94	2.20	0.06	0.11	0.17	0.11	0.33
5	18.60	2.75	3.14	0.00	0.17	0.11	0.00	0.39
Total	79.20	5.74	8.42	0.06	1.11	2.16	0.72	1.50

REGIONS	Wood	Concrete	Wood Concrete	Stone	Brick	Adobe	Makeshift	Others
1	2.09	0.28	0.00	0.00	0.00	0.00	0.17	0.06
2	5.50	0.11	0.50	0.00	0.00	0.00	0.06	0.00
3	10.46	0.39	0.33	0.00	0.00	0.00	0.00	0.00
4	33.63	3.63	4.79	0.06	0.00	0.11	0.17	0.06
5	6.44	0.06	0.06	0.00	0.00	0.00	0.00	0.06
6	15.80	0.39	0.66	0.00	0.00	0.00	0.28	0.06
7	1.60	0.28	0.11	0.00	0.00	0.00	0.06	0.11
8	0.06	0.00	0.00	0.00	0.00	0.77	0.00	0.50
9	0.39	0.06	0.06	0.00	0.55	1.27	0.00	0.33
10	3.25	0.55	1.93	0.00	0.55	0.00	0.00	0.33
Total	79.22	5.75	8.44	0.06	1.10	2.15	0.74	1.51

Source: 1993 HIES/LSMS Survey. n = 1816 households.

Table 21: Roof Material of Houses (%)

QUINTILES	Zinc or Alumin.	Asphalt Shingle	Wood Shingle	Other Shingle	Concrete	Make Shift	Others
1	11.12	0.11	0.11	0.06	0.22	0.44	3.36
2	15.30	0.11	0.00	0.00	0.06	0.22	1.32
3	18.77	0.06	0.11	0.06	0.00	0.33	0.72
4	19.92	0.11	0.22	0.00	0.06	0.11	0.61
5	24.33	0.06	0.17	0.00	0.00	0.00	0.33
Total	89.44	0.45	0.61	0.12	0.34	1.10	6.34
REGIONS:							
REGIONS:	Zinc or Alumin.	Asphalt Shingle	Wood Shingle	Other Shingle	Concrete	Make Shift	Others
1	1.05	0.00	0.00	0.00	0.00	0.39	1.21
2	5.01	0.11	0.00	0.00	0.00	0.00	0.99
3	10.73	0.00	0.00	0.00	0.06	0.06	0.22
4	41.28	0.33	0.00	0.00	0.00	0.06	0.39
5	6.44	0.00	0.00	0.00	0.00	0.00	0.17
6	16.68	0.00	0.00	0.00	0.00	0.28	0.22
7	1.87	0.00	0.06	0.00	0.00	0.11	0.11
8	0.17	0.00	0.39	0.00	0.00	0.17	0.61
9	0.22	0.00	0.00	0.06	0.28	0.06	1.98
10	6.00	0.00	0.17	0.00	0.00	0.00	0.44
Total	89.45	0.44	0.62	0.06	0.34	1.13	6.34

Source: 1993 HIES/LSMS Survey.
N = 1816 households.

Table 22: Cooking Facility (%)

QUINTILES	Coal	Wood	Gas	Kerosene	Electricity	Other
1	0.66	8.09	0.66	5.50	0.11	0.33
2	0.72	5.89	0.88	9.08	0.28	0.22
3	0.66	4.73	2.20	12.00	0.17	0.28
4	0.66	3.58	3.14	13.10	0.50	0.22
5	0.66	1.82	8.26	12.60	1.05	0.50
Total	3.36	24.11	15.14	52.28	2.11	1.55
REGIONS:						
REGIONS:	Coal	Wood	Gas	Kerosene	Electricity	Other
1	0.00	1.76	0.00	0.88	0.00	0.00
2	0.17	3.63	0.50	1.82	0.06	0.00
3	0.17	2.86	1.21	6.71	0.06	0.00
4	1.10	2.37	11.17	27.02	0.22	0.61
5	0.28	2.64	0.17	2.64	0.00	0.88
6	0.33	6.71	1.49	8.48	0.06	0.00
7	0.11	0.28	0.22	1.43	0.06	0.06
8	0.00	1.32	0.00	0.00	0.00	0.00
9	0.00	2.31	0.11	0.22	0.00	0.00
10	1.21	0.22	0.28	3.08	1.65	0.00
Total	3.37	24.10	15.15	52.28	2.11	1.55

Source: 1993 HIES/LSMS Survey. N = 1816 households.

**Table 23: Toilet Facility
(%)**

QUINTILES	WC With Sewer	WC Cesspit/ Septic tank	Pit Latrine	None	Other
1	0.44	1.71	11.67	1.43	0.17
2	1.24	3.25	11.94	0.61	0.11
3	1.65	4.40	13.21	0.88	0.00
4	1.87	6.00	12.99	0.44	0.00
5	4.18	9.69	11.12	0.17	0.11
Total	9.38	25.05	60.93	3.53	0.39
REGIONS:	WC With Sewer	WC Cesspit/ Septic tank	Pit Latrine	None	Other
1	0.00	0.22	2.15	0.22	0.06
2	0.06	0.50	5.06	0.55	0.00
3	0.00	1.49	9.58	0.11	0.00
4	7.65	15.47	19.15	0.44	0.06
5	0.11	0.50	5.94	0.00	0.06
6	0.72	2.64	13.32	0.44	0.06
7	0.11	0.77	1.10	0.17	0.00
8	0.00	0.00	0.44	0.88	0.00
9	0.00	0.11	1.87	0.50	0.17
10	0.72	3.36	2.31	0.22	0.00
Total	9.37	25.06	60.92	3.53	0.41

Source 1993 HIES/LSMS Survey. N = 1816 households.

**Table 24: Bathing Facility
(%)**

QUINTILES	No Bathroom	Attached Bathroom	Detached Bathroom	Others
1	3.36	2.15	9.69	0.00
2	1.65	4.02	11.23	0.06
3	1.54	6.44	11.94	0.00
4	0.83	7.59	12.60	0.11
5	0.55	13.81	10.62	0.00
Total	7.93	34.01	56.08	0.17
REGIONS:	No Bathroom	Attached Bathroom	Detached Bathroom	Others
1	1.38	0.22	0.88	0.00
2	1.27	0.44	4.24	0.00
3	0.22	1.82	9.08	0.00
4	1.27	22.12	19.15	0.00
5	0.00	0.55	6.00	0.00
6	0.83	3.74	12.55	0.00
7	0.22	1.05	0.83	0.00
8	0.94	0.00	0.06	0.17
9	1.38	0.06	1.21	0.00
10	0.44	4.02	2.09	0.00
Total	7.95	34.02	56.09	0.17

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 25: Wastewater and Drainage System (%)

QUINTILES	Underground System	Open System	None
1	1.05	2.81	11.01
2	1.76	3.91	10.57
3	3.03	5.67	10.46
4	3.36	5.23	12.11
5	7.48	5.67	11.50
Total	16.68	23.29	55.65
REGIONS:	Underground System	Open System	None
1	0.20	0.17	0.26
2	0.00	0.00	6.05
3	0.17	2.97	8.04
4	13.65	9.85	18.55
5	0.17	1.10	5.34
6	1.16	8.37	5.06
7	0.28	0.00	1.82
8	0.00	0.06	1.10
9	0.11	0.33	2.20
10	0.94	0.44	5.23
Total	16.68	23.29	53.65

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 26: Water Supply Facility (%)

QUINTILES	Private Piped into		Public Piped into		Public Piped into		Public Well	
	House	Private Catchment	House	Yard	Public Stand Pipe	or Tank	Others	
1	0.5	1.3	1.1	3.0	1.7	2.2	5.6	
2	0.9	2.0	1.0	5.7	2.5	2.2	2.9	
3	1.9	1.5	1.7	7.9	2.3	1.5	3.3	
4	1.4	2.1	2.2	9.4	2.3	1.2	2.7	
5	3.7	2.2	3.9	10.3	1.9	0.6	2.4	
Total	8.4	9.0	9.9	36.2	10.8	7.7	16.8	
REGIONS:	Private Piped into		Public Piped into		Public Piped into		Public Well	
	House	Private Catchment	House	Yard	Public Stand Pipe	or Tank	Others	
1	0.0	0.1	0.0	0.0	0.0	0.0	2.5	
2	0.1	2.3	0.2	0.4	0.2	0.1	2.7	
3	0.2	4.1	0.8	3.3	1.6	0.1	1.1	
4	5.5	1.4	4.7	23.0	3.0	0.3	4.6	
5	0.1	0.2	0.1	1.5	1.0	3.3	0.4	
6	1.7	0.4	0.1	5.9	4.8	3.0	1.2	
7	0.3	0.2	0.8	0.6	0.0	0.0	0.3	
8	0.0	0.0	0.0	0.0	0.0	0.0	1.3	
9	0.1	0.1	0.0	0.0	0.0	0.9	1.6	
10	0.5	0.2	3.3	1.5	0.1	0.0	1.1	
Total	8.4	9.0	9.9	36.2	10.8	7.7	16.8	

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 27: Lighting Facilities (%)

QUINTILES	Gas	Kerosene	Electricity	Others
1	0.06	7.87	6.55	0.11
2	0.11	5.61	10.84	0.11
3	0.00	6.00	13.54	0.17
4	17.00	3.63	17.06	0.28
5	0.17	2.97	21.85	0.06
Total	17.34	26.08	69.84	0.73
REGIONS:	Gas	Kerosene	Electricity	Others
1	0.00	2.31	0.22	0.06
2	0.00	2.92	3.14	0.00
3	0.00	3.25	7.93	0.00
4	0.11	5.94	36.10	0.06
5	0.11	2.53	3.91	0.00
6	0.06	5.94	11.17	0.00
7	0.00	0.39	1.65	0.00
8	0.00	0.17	0.00	0.61
9	0.00	1.87	0.11	0.00
10	0.22	0.77	5.61	0.00
Total	0.50	26.09	69.84	0.73

Source: 1993 HIES/LSMS Survey. N = 1816 households.

Table 28: 1983 Survey of Squatters in Regions 3 and 4

	Average Family Income per Month (G\$)	Acres Occupied	Owned By	Total Units	Occupied Units (#)		Average Area (sqft)	
					Units	Families	Unit	Land
CITIES								
Vriesland	341	9.88	Govt.	93	93	98	261	4000
Goed Fortuin	339	16	Govt.	84	82	82	206	2822
Windsor Forest	295	1.38	Govt.	24	24	24	211	NA
La Jalousie/C.I.	353	12.8	Govt.	94	89	93	252	3089
Anna Catherina:								
South	363	5	Guysuco	43	42	42	210	2475
Sideline Dam	336	2.53	Govt.	20	18	19	250	NA
Public Road	355	6.5	Govt.	85	82	85	289	2791
Squatter Area	350	8.3	Govt.	9	8	8	NA	NA
Groenveldt	350	0.35	Govt.	10	10	10	148	795
Seafield	417		Govt.	6	6	6	286	2689
Leonora S/ville	358	4.8	Govt.	41	39	48	NA	1223
Stewartville	344	2.2	Govt.	37	34	34	228	2589
S/Ville/Uitvlugt	228	7.35	Govt.	70	68	68	352	3200
Met-en-Meer Zorg A	358	19.3	Govt.	132	128	131	222	NA
B	410	1.08	Govt.	14	11	11	254	4018
Zeelught	381		Govt.	73	62	64	231	NA
Tuschen A	350	13.7	Govt.	48	46	47	221	5174
B	430	1.25	Govt.	23	22	22	248	4411
Greenwich Park	342		Govt.	25	24	27	211	NA
Total	352.6	112.42		931	888	919	240	3021.23077

Source: 1983 Squatting Survey, Housing Authority.

Table 29: Mean Annual Household Expenditures by Category and Deciles

CATEGORY	OVERALL		DECILES							
	US\$	% of Total	1		2		3		4	
			US\$	% of Total	US\$	% of Total	US\$	% of Total	US\$	% of Total
Food and Beverage	1123	55	718	70	755	65	808	61	901	61
Fuel and HH Supplies	177	10	86	13	113	12	131	11	146	12
Housing	228	8	35	5	61	5	88	6	95	6
HH Durable Goods	58	2	8	1	11	1	19	1	15	1
Personal Care	83	4	23	3	42	4	56	5	56	4
Health Care	49	2	9	1	21	2	20	1	20	1
Clothing/Footwear	133	6	23	3	33	3	52	4	74	5
Transportation	149	4	16	2	43	3	49	4	61	4
Education/Recreation	67	2	8	1	20	2	29	2	34	2
Miscellaneous	43	2	7	1	13	1	17	1	20	2

CATEGORY	DECILES											
	5		6		7		8		9		10	
	US\$	% of Total	US\$	% of Total	US\$	% of Total	US\$	% of Total	US\$	% of Total	US\$	% of Total
Food and Beverage	994	58	1019	56	1159	53	1271	53	1411	50	1661	39
Fuel and HH Supplies	162	11	160	10	180	10	192	10	227	9	278	7
Housing	115	6	141	8	143	7	173	7	214	7	858	13
HH Durable Goods	31	2	29	2	54	3	66	3	95	3	167	3
Personal Care	67	5	73	5	79	4	87	4	113	5	164	4
Health Care	47	3	35	2	46	2	48	2	55	2	135	2
Clothing/Footwear	76	5	102	6	139	7	178	8	195	7	307	8
Transportation	51	3	60	3	102	4	100	4	128	4	624	7
Education/Recreation	41	2	49	2	54	2	75	3	113	3	167	3
Miscellaneous	24	2	34	2	38	3	41	2	46	2	130	3

Source: 1993 HIES/LSMS Survey. N = 1816 households.

