



1. Project Data

Project ID

P110959

Project Name

PNG Productive Partnerships in Agr.

Country

Papua New Guinea

Practice Area(Lead)

Agriculture and Food

L/C/TF Number(s)

COFN-C1240,COFN-C1370,IDA-47160,IDA-54110,TF-17577

Closing Date (Original)

30-Jun-2016

Total Project Cost (USD)

55,653,066.00

Bank Approval Date

29-Apr-2010

Closing Date (Actual)

31-May-2021

IBRD/IDA (USD)

Grants (USD)

Original Commitment

25,000,000.00

0.00

Revised Commitment

25,000,000.00

0.00

Actual

55,724,862.24

0.00

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2. Project Objectives and Components

a. Objectives

As per the Project Appraisal Document (PAD) (par. 20) and the original Financing Agreement (page 5) of 2010, the Project Development Objective (PDO) was to improve the livelihoods of smallholder cocoa and coffee producers through the improvement of the performance and sustainability of value chains in the cocoa-growing areas and the coffee-growing areas.



The PDO was simplified at restructuring and Additional Financing (AF) in 2014: as per the Amendment to the Original Financing Agreement (page 6), the PDO was amended to: improve the livelihoods of smallholder cocoa and coffee producers supported by the project.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

28-Feb-2014

c. Will a split evaluation be undertaken?

No

d. Components

Component 1: Institutional Strengthening and Industry Coordination

(Appraisal Estimate US\$5.7 million; Actual at Project Closing US\$18.0 million)

The specific objective of this component was to improve the performance of sector institutions and to enhance industry coordination in the cocoa and coffee sectors. It included four subcomponents: industry coordination & policy development, communication and information management systems, quality and sustainability management, and project management and monitoring & evaluation.

Component 2: Productive Partnerships

(Appraisal Estimate US\$9.2 million; Actual at Project Closing US\$19.8 million)

The specific objective of this component was to foster the integration of a greater number of smallholder producers in performing and remunerative value chains, by developing and implementing productive alliances between smallholders and the private sector aiming at improving market linkages in the project areas. Partnerships were demand-driven and consistent with the specific priorities of the coffee and cocoa sectors. This component was split into one subcomponent for cocoa and one for coffee, with both subcomponents aiming to increase commodity productivity, quality and sustainability, but their implementation under responsibility of different institutions.

Component 3: Market Access Infrastructure

(Appraisal Estimate US\$10.1 million; Actual at Project Closing US\$12.6 million)

The specific objective of this component was to improve market access for smallholder cocoa and coffee growers in the areas targeted under Component 2 of the project. It comprised identifying, selecting and financing priority investments to rehabilitate and maintain transport infrastructure.



Note: as noted in Annex 3 of the ICR, the sum of actual component costs differs from the total project cost in the data sheet due to exchange rate application differences between the World Bank system and the client's accounting.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost

Total project cost at appraisal was US\$46.3 million. Through AF at restructuring, this was increased to a total of US\$119.3 million.

Financing and Borrower Contribution

At appraisal, the project was financed by an International Development Association (IDA) Specific Investment Credit of US\$25 million, an International Fund for Agricultural Development (IFAD) Loan of US\$14 million, and financing from the Government of Papua New Guinea (GoPNG – US\$1.5 million) and beneficiaries (US\$5.8 million). At restructuring, AF was provided by each of these parties (IDA Credit of US\$30 million; IFAD co-financing of US\$22 million; financing from GoPNG (US\$4.5 million) and the beneficiaries (US\$10.1 million)), further complemented by a European Union Recipient-Executed Trust Fund (RETF) of US\$6.4 million. Actual disbursement at project closure stood at 86.7%, with particular shortfalls for beneficiaries (only 8% disbursed). The ICR attributes these shortfalls to elevated and varying co-payments amounts for farmers that were causing multiple delays and subsequently reduced (ICR par. 85) and to contributions from local governments and communities that were in kind, not systematically tracked and overestimated at project design (ICR par. 89).

Project Restructurings and Dates

The project was approved on April 29, 2010, and became effective on February 7, 2011. The original closing date was June 30, 2016, while the project effectively closed on May 31, 2021.

The project was restructured five times:

- **First Restructuring (February 28, 2014).** This major restructuring (Level 1) followed the mid-term review of November 2013. First, it encompassed revisions of the PDO and Results Framework (see above) which increased the project's level of ambition. Second, through the AF the project was scaled up, including budget increases for all three components, additional activities (such as enhancing the focus on poverty and gender, and increasing the geographic scope) and corresponding revisions to implementation arrangements. Third, the restructuring involved an extension of the closing date from June 30, 2016, to June 30, 2019, to allow completion of all activities under the three components. In subsequent sections, the term "restructuring" will refer to this first restructuring, except when specified otherwise.
- **Second Restructuring (May 13, 2019).** A smaller restructuring (Level 2) encompassed (i) a six-month extension of the project closing date to December 31, 2019, to compensate for a variety of delays (see ICR Table 2); (ii) a reallocation of proceeds between disbursement categories; and (iii) a reduction of two intermediate indicator targets.
- **Third Restructuring (December 16, 2019), Fourth Restructuring (June 15, 2020) and Fifth Restructuring (December 15, 2020).** Finally, the project closing date was further extended thrice



(first to June 30, 2020, then to December 31, 2020, and finally to May 31, 2021) to allow full project completion, given delays in specific activities as well as constraints linked to COVID-19.

Rationale for not applying a split rating

The PDO was revised at restructuring as specified above. Concurrently, PDO indicators and their targets were revised (see ICR Table 1):

PDO indicators at project appraisal:

1. Number of smallholder farmers adopting improved farming practices
2. Number and coverage of productive partnerships successfully implemented and/or scaled up and likely to be sustained
3. Net incomes of smallholder cocoa and coffee growing households in the project areas
4. Share of the export price including quality premium received by smallholder farmers in the project area

PDO indicators after restructuring in 2014:

1. Number of beneficiaries segregated by gender
2. Number of partnerships funded by the project and likely to be sustained
3. Net incomes of smallholder cocoa and coffee growers supported by the project
4. Cocoa and coffee yield among project beneficiaries

The AF and restructuring added to the scope of the project, extending the project's geographic coverage to new provinces and intensifying activities in existing provinces. This increased the project's ambition, and correspondingly several indicator targets were increased. The PDO was revised but did not change fundamentally; it was rather sharpened, maintaining the outcome part and dropping the intermediate outcome / output part in the "through" clause. In line with OPCS and IEG guidelines, a split rating is not warranted, and project achievement will be assessed based on the revised objective and targets. This conclusion is also adequately explained in the ICR (par. 20).

3. Relevance of Objectives

Rationale

The ICR contains an excellent description of the alignment of the Productive Partnerships in Agriculture Project (PPAP) with World Bank and national development priorities. The ICR convincingly illustrates the project's continued relevance for World Bank priorities in PNG throughout its 10-year implementation period up to closure: PPAP directly contributed to the FY08-11 Country Assistance Strategy (CAS) (ICR par. 7), was recognized as a strategically important operation in the FY13-16 Country Partnership Strategy (CPS) (ICR par. 21) and remained aligned with the FY19-23 Country Partnership Framework (CPF) (ICR par. 4 and 21). Similarly, the ICR demonstrates continued alignment with the GoPNG's national development plans (examples listed in ICR par. 22). The PDO is also appropriately pitched given the country's



institutional, political and economic development. Furthermore, it linked PPAP with other World Bank engagements (ICR par. 7) and PPAP explicitly informed its successor project (P166222).

It should be noted though that there is no mention of alignment with the country SCD of 2018 nor with related World Bank strategies and priorities in the agricultural sector beyond PNG. In addition, the ICR could have expanded on how key contextual factors for PPAP at appraisal (such as climate change-related hazards, fragility and conflict, weak governance) evolved over time, and in turn what this implied for project relevance. The relevance of targeting specific provinces could have been elaborated in ICR paragraph 15 (instead of only in paragraph 79); it was better justified in the PAD (paragraphs 4 and 80) which clarifies that these provinces represent 90% and 70% of coffee and cocoa production, respectively).

Rating

High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Improve the livelihoods of smallholder cocoa and coffee producers supported by the project

Rationale

Theory of Change

An explicit Results Chain / Theory of Change (ToC) was unavailable at appraisal as it was not yet required in the PAD (see ICR footnote 5). The project restructuring largely revolved around project upscaling in terms of geographical coverage; as the ICR argues in paragraph 20 “(...) the AF and the restructurings resulted in minor modifications to the implicit ToC and did not affect the original results chain”. The ToC as reconstructed by the ICR was clear, well-structured, comprehensive (including a set of assumptions), and convincing in its causal chain logic (except for how the outcome “Women have greater involvement in...” follows from the outputs under Component 2).

The ToC assumes that the PDO is achieved through a combination of three sub-results chains, each corresponding to a project component and each having their own outcome. The ICR assesses the achievement of the PDO indirectly through assessing achievement of these three underlying outcomes (ICR par. 24), rather than assessing the PDO directly. This strongly depends on the validity of the final step in the ToC (from outcomes to the extent of PDO achievement), on the interaction between the three pathways / outcomes (which is not discussed in the ICR), on the ToC’s underlying assumptions, and on the impact of exogenous factors. These caveats spill over to the Results Framework, which lacks a direct measurement of the achievement of the project’s PDO. While emphasizing this as a shortcoming in the ICR, this Review will similarly organize this Section along the three sub-results chains and corresponding outcomes but in addition



justify an overall conclusion on the extent to which the PDO (“improve the livelihoods of smallholder cocoa and coffee producers”) was achieved.

Achievement for Outcome 1 – Improved productivity and quality of coffee and cocoa delivered by smallholder farmers resulting in improved income

The ICR lists four “PDO indicators” to assess achievement within this sub-results chain, while only one is effectively at the outcome level according to the ToC. They are rather spread along the results chain, covering outcome level (net smallholder income), intermediate outcome level (yield) and output level (project beneficiaries and partnerships funded). Their designation as “PDO indicators” in the PAD (par. 22) and in the ICR (par. 11 and 17) created confusion, also in terms of their order in the results chain as compared to the “intermediate outcome indicators” listed in Annex 1 of the ICR.

Through these four indicators, the ICR argues along the lines of the results chain – although implicitly. Moving from outputs over intermediate outcomes to the outcome, indicator achievements are listed for:

- Partnerships funded and likely to be sustained: 57 compared to target of 50
- Project beneficiaries: 60,494 compared to target of 60,000 – Female project beneficiaries: 4,567 compared to target of 24,000
- Cocoa yield among project beneficiaries: 1,249 kg/ha compared to 600 kg/ha target and 169 kg/ha baseline. Yield increases are attributed to the new technological package and trainings provided by PPAP partnerships.
- Coffee yield among project beneficiaries: 853 kg/ha compared to 600 kg/ha target and 382 kg/ha baseline. Yield increases are attributed to the new technological package and trainings provided by PPAP partnerships, as well as PPAP efforts on market empowerment.
- Net income of smallholder cocoa growers: US\$2,618 compared to US\$1,800 target and US\$1271 baseline. Income increases are attributed to higher yields and quality.
- Net income of smallholder coffee growers: US\$3,832 compared to US\$3,700 target and US\$2000 baseline. Income increases are attributed to higher yields, quality and prices

The last five targets all increased at restructuring. In combination with statistical comparisons to non-PPAP farmers and with further qualitative clarifications and arguments, the ICR builds a strong case for attributing the achievement of Outcome 1 to the project. The ICR (paragraphs 37-38) and interview IEG held with the World Bank project team for the ICRR, provided insights on how partnerships were at the center of the project’s intervention strategy towards increased productivity and incomes. According to the Bank’s project team anecdotal evidence shows partnerships provided demand-driven knowledge and technologies at larger scale than the underfinanced, top-down public extension system that had failed to revive cocoa and coffee production. The impact evaluation shows farmer satisfaction rates of 78% to 99% with trainings and seedlings provided through the partnerships. Furthermore, partnerships empowered farmers’ human and social capital, and provided market linkages. Some farmer groups even took over the operation and management of PPAP-financed communal facilities (such as the cocoa solar dryers, coffee storing building and wet mills).

Further notable observations nuance the success story:

- It is notable that the target for the number of partnerships (50) was not increased at restructuring, despite the AF and corresponding extension of geographical coverage. This contradicts the ICR claim of increased ambition at restructuring. The World Bank project team clarified during an interview held



- with IEG for the ICRR that the difficulties for private partners to engage and operate in remote areas may have been underestimated during project preparation, and correspondingly that the original target of 50 partnerships was unrealistically high. Hence, the target was simply maintained at restructuring rather than increased. Nevertheless, it was eventually surpassed with an achieved number of 57.
- Yield and net income achievements were much stronger for cacao than for coffee. For coffee, indicator values for PPAP farmers are only marginally better than for non-PPAP farmers. Limited achievement is principally attributed to a 5-year delay in approval of the PNG Coffee Grades and Standards and corresponding lack of price incentives (ICR par. 28), while there were also spillover project effects to non-PPAP farmers. For cacao, the ICR attributes income effects exclusively to yield and quality increases (ICR par. 27), while omitting to comment on potential effects of export price evolutions over the extensive project implementation period. Although cocoa price trends found in Annex 4 indicate substantial fluctuation over the implementation period, prices levels at baseline and end line measurement are relatively comparable.
 - While almost all “PDO indicator” targets were achieved, this was not the case for all “intermediate outcome indicator” targets. This may relate to the above-mentioned issue of poor correspondence of these terms with the actual results chain and/or to target setting issues. In any case, targets for indicators such as number of hectares of cocoa replanted/rejuvenated (80% of target), number of hectares of coffee applying improved management practices (51% of target), coffee quality premium recipients (33% of target) and number of female project beneficiaries (19%) were not achieved. Although underlying reasons are discussed in the ICR and further expanded by the World Bank project team during an interview held with IEG for the ICRR, the lack of achievement suggests doubt about the sustainable and inclusive achievement of the outcome.
 - The project restructuring replaced the indicator on “Number of households adopting improved farming practices” with “Number of project beneficiaries”, increasing the target from 24,000 to 60,000 and claiming this reflects higher ambition (ICR par. 17). However, it is problematic for IEG that the ICR equates the level of ambition of these indicators (ICR par. 20) since the former is at an intermediate outcome level while the latter is only at an output level. Nevertheless, the Bank project team advised that , “the definition of beneficiaries also means being committed to and actually adopting improved farming practices”..
 - Only half of the “commercial lead partnerships” has continued beyond the completion of project support and is assessed as likely to be sustained. The World Bank project team clarified during an interview held with IEG for the ICRR that this level was acceptable, considering there were no formal agreements within the partnership on marketing arrangements (to allow farmers liberty to sell their produce to buyers offering a better price than the lead partner, in a context of vast unmet demand of coffee and cocoa) and services provisioning.

On the other hand, the ICR makes a valid case for widespread outcome impacts on “non-beneficiaries” in paragraph 49 and for the realization of improved livelihoods in the project area due to the project’s full maturation after its closure (paragraphs 34-35).

Achievement for Outcome 2 – Improved market access in selected areas

The Results Framework is very thin for this sub-results chain, with only an indicator at output level:

- Roads rehabilitated: 121 km compared to 115 km target (200 km original target)



The low value achieved relative to the extensive geographical coverage implies that no significant effect on transport times or costs was found across the entire sample in the quantitative impact evaluation. Furthermore, the degree of maintenance varies across the roads rehabilitated and systematic data on maintenance are lacking.

The ICR does note, based on the qualitative survey, significant and widespread effects on people living close to roads – including increased market sales and revenues – as well as rehabilitation of roads in other areas. Effects on market sales and revenues do suggest a contribution of the project to the intended outcome (“improved market access”) in targeted areas.

Achievement for Outcome 3 – Improved policies, coordination and information in the cocoa and coffee industries

The Results Framework provides no evidence for the achievement of the outcome for this sub-results chain. There is only one indicator at output level:

- Number of policy, strategy, and regulatory measures adopted or implemented: 10 compared to target of 6

The argumentation in paragraph 56 relies largely on theoretical discourse and assumptions. While the claim in footnote 25 that “the ICR shows how these outputs contributed to achieving PPAP PDO and outcomes” is unsubstantiated given the lack of evidence, the degree of association between these project inputs and outputs with intended outcomes and impacts is plausible.

In summary:

- Incomes for cocoa and coffee farmers increased to above the project targets due to the successful productive partnerships, and hence Outcome 1 was achieved, although targets for some other indicators within the sub-results chain were not achieved.
- No outcome indicators were available for Outcome 2; whereas the road rehabilitation target was achieved, there is no evidence in the ICR that it led to a substantial reduction in transport times while evidence on road maintenance was highly variable. Achievements are further only discussed in qualitative terms.
- No outcome indicators were available for Outcome 3; but it is plausible that there was some association between policy, strategy, and regulatory measures adopted or implemented, and the achievement at outcome/PDO level.

Given these, the ICR claim in paragraph 57 that “the project has almost fully achieved its intended outcomes and delivered the main benefits to the beneficiaries” is not entirely substantiated by the evidence provided.

Nevertheless, it is noted that the ICR adds confusion by embedding the indicator “increased net income” within the sub-results chain for Outcome 1 (see ToC on page 8 of the ICR), while it is not only determined by productivity but also by market access and institutional arrangements. The ICR actually implies this as well in paragraph 65, where it suddenly gives high weight to this indicator and correspondingly to outcome 1, while a difference in importance of the three outcomes is implied nowhere else (see for instance ICR par. 24 and 118 and the ToC). This ICR Review considers “increased net income” an appropriate measurement of the project objective of “improving livelihoods”. As the targets for this indicator have been achieved – presumably through



a combination of the three sub-results chains rather than merely through productivity enhancement - Efficacy for the project objective of “improving livelihoods” is therefore rated **Substantial**.

Rating
Substantial

OVERALL EFFICACY

Rationale

Given there is only one objective, the overall rating follows from the rating of this singular objective.

Overall Efficacy Rating

Substantial

5. Efficiency

Economic and financial analyses

An economic and financial analysis was carried out in the PAD, Restructuring Paper and ICR:

- At project appraisal, the total investment was estimated to result in an economic rate of return (ERR) of 14% and an internal rate of return (IRR) of 28%. Cost per beneficiary was estimated at US\$1,842.
- At project restructuring, the ERR and IRR at appraisal were revised to 20% and 34%, respectively, based on updated data and costs and on correction of a few errors. For the AF, the ERR was calculated at 28%, the IRR at 44% and the estimated cost per beneficiary at US\$1,665.
- At project closure, the ICR reported an ERR of 22%. The estimated cost per beneficiary amounted to US\$1,515. The economic net present value (NPV) was calculated at US\$14.4 million at a discount rate of 13%.

Operational efficiency

The disbursement rate of World Bank, EU and IFAD financing amounted to 90.1%, with an underspending in US\$ terms and an overspending in Papua New Guinea Kina (PGK) terms. Despite lower project expenditures than budgeted, the project still achieved almost all the PDO indicators as amended at restructuring.

In terms of aspects of project design and implementation that influenced project efficiency, the ICR mentions that weak capacities of GoPNG agencies led to delays but not cost overruns.



Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	20.00	0 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	22.00	0 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The relevance of objectives is rated high on the basis of the PDO being highly relevant to the government development strategy and Bank assistance strategy, and it being appropriately pitched. Efficacy is rated substantial since the PDO was effectively achieved. Efficiency is also rated substantial because, despite some institutional weaknesses, the project's economic rate of return was 22% at its close. This project thus had no shortcomings in the relevance of its objective and minor shortcomings in its efficacy and efficiency. The project's overall outcome is therefore rated Satisfactory.

a. Outcome Rating

Satisfactory

7. Risk to Development Outcome

The ICR candidly reports on a set of risks (and mitigation measures) to outcome sustainability, including:

- Technical risks: degraded road conditions and inadequate maintenance of rehabilitated roads.
- Environmental risks: although PPAP developed pest control methods, substantial extension efforts will be required to enable farmer adoption. Moreover, PNG is one of the countries at highest risk for natural disasters; while PPAP similarly developed some adaptation measures, further long-term adaptation measures are required for increasing household resilience.
- Institutional risks: the sustainability of partnerships and farmer organizations established under PPAP is fragile.
- Other risks: incursion of oil palm development onto cocoa cultivation areas and lack of resources for corresponding legal action.



8. Assessment of Bank Performance

a. Quality-at-Entry

The project was designed in line with World Bank development priorities and on-going engagements in PNG, as well as with national development plans. Project design capitalized on prior World Bank experience and on value chain diagnostics (funded with a grant mobilized by the team), although the ICR candidly reports there were still a few shortcomings in design (ICR par. 80 and 109). The PDO was relatively straightforward – especially after restructuring - and project components and activities designed in a clear and relevant way for achieving it. The PAD was clear on objectives and outcomes (PAD par. 20-21). Commodity and regional targeting were appropriate (ICR par. 79), as were the implementation arrangements (ICR par. 81). M&E was extensive in design, although data collection issues were not anticipated, and the Results Framework had several moderate shortcomings (see Section 9).

Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

The World Bank team provided strong implementation support to the project – including fiduciary, safeguards and M&E – thereby building strong relationships with the PCU/PMU and implementing agencies. Comprehensive Aide Memoires were prepared after biannual Implementation Support Missions jointly with IFAD, and their frequency increased when implementation progress was rated Moderately Unsatisfactory. The project was successfully restructured to scale up impact and add relevant activities on gender, disadvantaged groups and road maintenance. M&E challenges were overcome, allowing to collect an extensive set of M&E data which were proactively used in project management and adaptation (see Section 9).

Nevertheless, the project had to deal with severe delays, including (i) lead time for achieving effectiveness and setting up the PCU and PMUs; (ii) a 28-month administrative delay in signing the amended Financing Agreement and final Disbursement Letter; (iii) a 24-month delay in distributing CPB-tolerant plant clones; (iv) delayed procurement and safeguards assessments for feeder road rehabilitation; and (v) a 5-year delay in approval of the PNG Coffee Grades and Standards. These delays caused repeated extensions of the project closing date – leading to an implementation period of 10 years instead of the 5 years initially foreseen – while also severely impacting upon achievements of results (such as weaker achievements for coffee - ICR par. 28). Although the ICR attributes these to weak GoPNG agency capacities (ICR par. 91), the extensive length of these delays and their timing relatively late in project implementation raises the question whether the World Bank could not have anticipated better or acted more proactively to reduce them. The World Bank project team re-emphasized during an interview held with IEG for the ICRR the institutional weaknesses, capacity constraints and multitude of stakeholders involved, which in combination led to these delays. The team also indicated the WB anticipated these delays and acted proactively in organizing weekly meetings and increasing ISM frequency.



On a related note, financial management was Moderately Unsatisfactory due to delays and slow disbursement (see Section 10).

Quality of Supervision Rating

Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

M&E was extensive in design, including panel surveys (baseline, year 3, year 5), separate monitoring mechanisms for Components 2 and 3, and management information systems. The PAD was clear in assigning M&E roles to different parties, although the ICR mentions it underestimated the various challenges for data collection at partner level. The PAD (par. 53) stated that “an outcome-oriented approach (...) has been developed that would allow corrections during implementation to achieve the objectives and efficient incorporation of lessons learned”.

The Results Framework (Annex 3 in PAD) contained “PDO indicators” and “intermediate outcome indicators”, yet as noted in the Efficacy section above, the PDO was not directly measured nor did these terms appropriately reflect measurement along the causal chain. The Results Framework was relatively extensive, yet without it being mapped to any results chain or theory of change, its logic and comprehensiveness is hard to assess. Further Results Framework shortcomings have been discussed in the Efficacy section.

b. M&E Implementation

The original Results Framework was revised and simplified at restructuring, through streamlining, combining, revising or dropping a substantial number of indicators. The resulting indicator set was largely clear and measurable, although the ICR notes some indicators could have benefitted from additional specification. However, as the causal chain was only postulated in the ICR, and even there not linked to the Results Framework, it was insufficiently recognized that the Results Framework almost exclusively focused on Component 2. This hindered proper assessment of project progress and attribution for Components 1 and 3, as noted in the Efficacy section, and it would have probably been better to retain or add more indicators at restructuring.

The ICR notes the project team managed to develop a working M&E system overcoming the data collection challenges at partner level. This was done through the commodity-specific management information systems and through proactivity in identifying bottlenecks and solutions, reviewing and refining processes, and recruiting adequate technical staff. Both sectors demonstrated commitment to future deployment of the systems.



At project closure, the ICR used several data sources for assessment, as the project M&E system was further supplemented by a GoPNG completion report and an end-of-project impact evaluation. The latter was a full-fledged evaluation (baseline – midterm – end term), consisting of an extensive quantitative survey, focus group discussions, key informant interviews and a survey of non-beneficiaries, along with methodological and compensatory approaches for correcting biases. This impact evaluation allowed for statistical impact results, analysis of contributing factors and assessment of spillover effects. Moreover, the ICR is very explicit on corroborating and triangulation information (ICR par. 25).

c. M&E Utilization

The M&E system was used for steering implementation partners, through discussing performance and identifying measures for improvement. The impact evaluation was utilized at different stages: *(i)* results from the baseline survey helped in designing the project restructuring; *(ii)* results from the midterm survey induced a more thorough assessment of spillover effects; and *(iii)* the end-term survey provided orientations for the follow-up project P166222.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was classified as category “B” and triggered the following safeguards:

- Environmental Assessment (OP/BP 4.01)
- Pest Management (OP 4.09)
- Indigenous Peoples (OP/BP 4.10)
- Involuntary Resettlement (OP/BP 4.12)

The ICR notes that the Environmental and Social Management Framework (ESMF) and associated documents adequately outlined requirements, implementing arrangements and resources. Some concerns were raised on adverse environmental impacts associated with pest management, coffee processing facilities and feeder road rehabilitation, but all have been addressed in line with the ESMF although compliance is not explicitly assured in the ICR. Similarly, all social safeguard requirements have been satisfactorily complied with, including informed consultations, community land use agreements and right-of-way consent. Right to compensation was largely waived by affected people, nor has there been involuntary land acquisition. Compliance with social safeguards was explicitly stated in the ICR (par. 105).

According to the Restructuring Paper of 2014, the scaling up with AF did not involve a change in the environmental assessment category nor trigger any new safeguard policies.



b. Fiduciary Compliance

The ICR notes fiduciary compliance was only Moderately Satisfactory, due to a complex multi-level fiduciary arrangement, a lack of experienced procurement officers in the PMUs, and limited engagement between the PMUs

Financial management was rated Moderately Unsatisfactory at project closure, due to late report submissions, slow disbursement, and limited project management skills and familiarity with World Bank fiduciary procedures. The lack of replacement of the international financial advisor in 2016 contributed to delays and compliance gaps.

Procurement was rated Moderately Satisfactory from 2016 to 2021. Initial problems included lack of PMU proactivity, lengthy delays with contract approval and awarding, slow adoption of the Systematic Tracking of Exchanges in Procurement (STEP) system, and variable quality of goods procurement. These all improved over time.

c. Unintended impacts (Positive or Negative)

The ICR lists a range of project spillovers and unintended impacts:

- Trainings were opened and partnership benefits extended to non-PPAP farmers as well (ICR par. 49).
- The commodity boards adopted technological improvements and training materials nationwide (ICR par. 49).
- Through road rehabilitation: access to various public services, access to supplies, benefits accruing to women specifically and rehabilitation of roads in other areas (ICR par. 52).
- Capacity building of the commodity boards and institutionalizing public-private partnerships (ICR par. 68). It is remarkable though that this central element to the approach should be considered a spillover, raising the question why it was not explicitly integrated into the components, ToC and Results Framework.
- Mobilizing private sector financing (ICR par. 69) and capacity building of commercial partners (ICR par. 75). Similarly, it is remarkable that this key element was not included as an indicator in the Results Framework, despite the PDO being exclusively farmer centered.
- Communal facilities built or rehabilitated with PPAP funding are now providing services to non-PPAP farmers in the vicinity as well (ICR par. 73). Similarly, PPAP participants shared knowledge with their communities (ICR par. 74).
- Replication of partnership modalities and extension models by other donors and research institutes (ICR par. 77).

d. Other

Gender

At restructuring, participation of women and other disadvantaged groups was strengthened to ensure they would fully share project benefits. This was enabled through capacity building to lead partners and



extension agents, through revising implementation and M&E processes for mainstreaming gender aspects, and through literacy training and nutrition education. A total of 50,706 women received training organized by PPAP (127% of target). The small pilot intervention on child nutrition and breastfeeding demonstrated high potential for upscaling through national systems.

A shifted balance of within-household gender roles was reported, with women’s participation in agricultural practices, farming oversight and domestic finances increasing.

Nutrition

While not foreseen in the project design, a small pilot nutrition program was introduced after the midterm review because of the high levels of child malnutrition. It had positive impact and high potential for upscaling through national systems (par. 72).

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Satisfactory	Satisfactory	
Bank Performance	Satisfactory	Satisfactory	
Quality of M&E	Substantial	Substantial	
Quality of ICR	---	Substantial	

12. Lessons

The ICR contained six lessons. The following three lessons are emphasized from the ICR with adaptation of language:

- **Productive partnerships – either with a commercial agribusiness firm or in the form of farmer organizations – constitute an effective model for expanding farmers’ access to services and markets and for securing reliable and high-quality supplies to buyers.** The partnership model delivers mutual benefits to both parties. On the one hand, it provides farmers with services that enable them to increase production volumes and quality in line with market demand, on a substantially larger scale than through public extension (ICR par. 37-38). On the other hand, by offsetting risks it allows buyers to engage with smallholders for sourcing produce.
- **Improved technologies may only increase yield and income when complemented with farmers’ market empowerment and supportive institutional reforms.** Project implementation demonstrated that optimal support packages combine best management practices with marketing empowerment, under an improved policy and coordination framework (ICR par. 118).
- **Feeder road rehabilitation typically leads to widespread spillover effects and is often the most appreciated intervention in rural areas; projects can enhance their utility by**



focusing on road designs that minimize maintenance needs after project closure as maintenance is often difficult to achieve. Road rehabilitation leads to significant and widespread effects on people living close to roads, including market sales and revenues but also spillover effects such as access to various public services, access to supplies, benefits accruing to women specifically and rehabilitation of roads in other areas (ICR par. 52). To get more impact for available resources, priority needs to be given to spot improvements, full rehabilitation of short stretches, and maintenance-free improvements (ICR par. 121).

The following lesson is added by IEG:

- **Lack of explicit Results Frameworks mapping to a results chain or ToC can lead to improper indicator labelling, to inadequate coverage of sub-results chains and to inability for assessing project progress and attribution.** As expanded upon in Section 4 of this review, none of the “PDO indicators” measured the achievement of the PDO explicitly comparing to the ToC. Moreover, they all covered the same sub-results chain, while few indicators were proposed for measuring achievements in the other two sub-results chains.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR is generally well-written, appropriately structured and comprehensive, with a solid and detailed discourse, adequate clarifications (including in footnotes) and rich in information (including elaborate sections that are not explicitly rated, such as Section II.E on other outcomes and impacts and Section III on key factors that affected implementation and outcome). It provides substantial evidence and adequate analysis beyond the Results Framework in numerous sections, while Section IV.E contains well-defined and evidence-based lessons elaborated with concrete specifications. In particular the full-fledged impact evaluation is highly appreciated. The non-application of a split rating is logically justified.

However, the ICR could have been more concise, with the main text amounting to 36 pages (compared to a typical maximum of 15 pages prescribed by OPCS Guidance on ICR for IPF operations). Information is regularly repeated and/or dispersed throughout the document, while several paragraphs are long and cumbersome to read. Moreover, cross-references gave the impression of being from a previous version and were hence often not logical or interpretable, whereas further confusion is added by the different numbering of corresponding outcomes and components.

a. Quality of ICR Rating

Substantial

