



Investing in rural people

Executive Board

President's memorandum

Proposed additional financing to

Republic of the Philippines

Value Chain Innovation for Sustainable Transformation in Agrarian Reform Communities Project (VISTA)

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Action: The Executive Board is invited to approve the recommendation for the proposed additional financing contained in paragraph 65.

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Financing summary

Initiating institution:	IFAD
Borrower/recipient:	Republic of the Philippines
Executing agency:	Department of Agrarian Reform
Total project cost:	EUR 135.36 million (equivalent to US\$146.5 million)
Amount of original IFAD loan 1:	EUR 23.12 million (equivalent to US\$25.0 million – performance-based allocation system [PBAS])
Terms of original IFAD loan 1:	Ordinary terms: 27 years, including a grace period of 8 years, subject to interest at a rate equal to the IFAD reference interest rate including a variable spread
Amount of original IFAD loan 2:	EUR 55.50 million (equivalent to US\$60.0 million – Borrowed Resource Access Mechanism [BRAM])
Terms of original IFAD loan 2:	Ordinary terms: 27 years, including a grace period of 8 years, subject to interest at a rate equal to the IFAD reference interest rate including a variable spread
Amount of additional IFAD financing:	EUR 18.38 million (equivalent to US\$20.0 million [BRAM])
Terms of additional IFAD financing:	Ordinary terms: 27 years, including a grace period of 8 years, subject to interest at a rate equal to the IFAD reference interest rate including a variable spread
Contribution of borrower/recipient:	EUR 34.99 million (equivalent to US\$37.9 million)
Contribution of beneficiaries:	EUR 3.37 million (equivalent to US\$3.6 million)
Amount of original IFAD climate finance:	EUR 44.56 million (equivalent to US\$48.2 million)
Amount of additional IFAD climate finance:	EUR 9.19 million (equivalent to US\$10.0 million)
Cooperating institution:	Directly supervised by IFAD

I. Background and project description

A. Background

1. The Value Chain Innovation for Sustainable Transformation in Agrarian Reform Communities Project (VISTA) was approved by IFAD's Executive Board on 24 April 2024. The project financing agreement entered into force on 10 July 2024. The original project completion date was set at 30 September 2030 and the financing closing date at 31 March 2031.
2. The original total project cost was EUR 104.35 million, including IFAD financing of EUR 78.62 million (PBAS: EUR 23.12 million; BRAM: EUR 55.50 million); local government contribution of EUR 8.09 million; National Government contribution of EUR 14.27 million; and beneficiary contribution of EUR 3.37 million. The project has a total duration of six years.
3. The Government of the Republic of the Philippines officially requested additional financing in the amount of US\$20 million in 2023. Subsequently, IFAD confirmed the allocation of US\$20 million to VISTA. Since these additional funds were secured after the initial project submission to the Government, they were not included in the original design and financial plan approved by the Executive Board in April 2024. In August 2024, the Government submitted an official letter, seeking to avail itself of the US\$20 million to support VISTA. This was followed by an additional letter in November 2024 indicating the preference to borrow in euros. This proposal seeks to utilize the additional EUR 18.38 million (equivalent to US\$20 million) to maximize the project's impact and outreach.

B. Original project description

4. The project goal for VISTA is to reduce rural poverty and increase food security while protecting and enhancing the natural ecosystems in vulnerable upland areas. The project development objective is to increase the income and employment of target groups in fragile upland areas, including women, youth and Indigenous Peoples, by strengthening inclusive value chains through conservation, sustainable use of natural resources and climate-resilient practices.
5. The project's main outcomes include: (i) project beneficiaries, including women, youth and Indigenous Peoples, have improved access to a protected and enhanced natural resource base from restored agroforests, enhanced soil management, improved water resources and the conservation of biodiversity; (ii) smallholder farmers adopt sustainable and climate-resilient technologies and practices, thereby improving their capacity to effectively manage natural resources for sustainable production systems and cope with the negative impacts of climate change; (iii) the capacities of producers' organizations and their smallholder members are strengthened for improved market and financial access and commercial partnerships in value chains in an environmentally sustainable manner; and (iv) smallholders adopting new farming practices and technologies are integrated into value chains by improving their share of markets and profits and adding value through increased volume and quality of production and increased nutrition, with sustainable use of natural resources.

II. Rationale for additional financing

A. Rationale

6. No new activities will be introduced with the additional financing. Rather, the planned rehabilitation of farm-to-market roads (FMRs) will be expanded. This expansion is warranted, as there is an urgent need to improve transportation infrastructure to boost agricultural productivity, reduce transportation costs and enhance market accessibility for farmers. Improving these roads and designing them to be resilient is essential for reducing post-harvest losses, lowering vehicle

operating costs and saving travel time and costs for road users, thereby significantly benefiting the rural economy.

7. The rural areas in the country, particularly the barangays¹ where agricultural production occurs, face challenges with deteriorated and impassable dirt roads. These existing roads, crucial for transporting farm products, have been neglected owing to fiscal difficulties faced by municipal local government units (MLGUs). The project's primary focus is on rehabilitating and improving these roads rather than constructing new ones, as these routes are already being used for various means of transportation, especially during the rainy season. The design of roads and structures also needs to be resilient to floods and heavy rains, which exacerbate slope erosion and landslide risks (e.g. cross-drainage structures across small creeks to handle 100-year flood events instead of the standard 50-year flood scenario).
8. Analysis indicates that each barangay requires approximately 2 km of road rehabilitation and improvement, which translates to about 10 km per agrarian reform community (ARC). This estimate is based on comprehensive assessments, including under the National Program Support for Agrarian Reform funded by the World Bank and regional data on Region XII and the Cordillera Administrative Region from the Department of Public Works and Highways. These analyses highlight the significant gaps in infrastructure, emphasizing the necessity of improved FMRs to enhance economic activities and market access.
9. The original VISTA design and funding only cover about 80 km, or 2.3 km per ARC, for 35 ARCs, which falls short of the estimated need for 10 km per ARC. This shortfall adversely impacts agricultural logistics and market access, leading to increased transportation costs and limited access to essential services for farmers.
10. Reducing this infrastructure gap is critical to the success of VISTA. The additional investment of EUR 18.38 million will be wholly used to rehabilitate and improve an additional 87 km of deteriorated FMRs in areas that are impassable, especially during the rainy season. This focused investment will not only reduce the existing insufficiency of good FMRs, but will also ensure that each ARC has much better road infrastructure to support sustainable and inclusive agricultural development and economic growth.
11. The strategic deployment of the additional EUR 18.38 million is expected to significantly enhance the development impact of VISTA. VISTA is already a comprehensive initiative addressing various aspects of rural development, and the additional investment in FMRs, which is an existing activity planned under subcomponent 2.3 (value chain-related infrastructure support) of the original VISTA design, will clearly enhance the impact of that subcomponent. FMRs have been identified in local and national development plans as critical to rural economic growth, yet many such plans remain unimplemented owing to lack of the funding needed to improve these roads.
12. By focusing on additional FMRs, VISTA can further boost economic activities by facilitating inclusive market integration and ensuring timely and efficient transport of agricultural products. This additional investment will not only address an urgent need, but will also enhance the long-term sustainability and resilience of rural economies, making it the most strategic choice for maximizing the impact of the additional funding.

¹ A small territorial and administrative district forming the most local level of government.

Special aspects relating to IFAD’s corporate mainstreaming priorities

13. In line with IFAD’s mainstreaming commitments, the project has been validated as:
- Including climate finance
 - Gender-transformational
 - Prioritizing Indigenous Peoples Including adaptive capacity

B. Description of geographical area and target groups

Geographical area

14. The proposed project area covers the upland areas in all provinces of two regions: Soccsksargen (Region XII) on the island of Mindanao and the Cordillera Administrative Region in Luzon.

Target groups

15. Consistent with the original design’s targeting strategy, the additional financing will target direct beneficiaries, focusing on the upland rural poor, including women, Indigenous Persons, and youth. The additional funding will increase overall project outreach by 10,000 additional households, or 50,000 people, increasing total project outreach to 80,000 households (rather than the original 70,000 households). Consistent with the original project targets, the additional beneficiaries will include 50 per cent women, 30 per cent Indigenous Peoples and 20 per cent young people.
16. As a gender-transformative project, strategies to encourage gender equality and women’s empowerment will be implemented in all aspects of VISTA, including by investing in gender-transformative approaches, supporting women’s leadership, identifying the specific needs of local women’s groups, Indigenous women and young women, particularly those living in poverty.

C. Components, outcomes and activities

17. The project components and subcomponents will remain the same. The additional financing activities will be implemented under subcomponent 2.3.
18. **Component 1 – Ecosystem planning, protection and enhancement.** This component aims to promote: (i) the development of natural resource planning; (ii) communities’ capacity to adapt to climate change and to conserve natural resources; and (iii) inclusive approaches and innovations to provide sustainable and green benefits across value chains.
19. **Subcomponent 1.1 – Identify and prioritize sustainable investments.** This subcomponent focuses on reviewing existing plans, datasets and investments affecting target areas. The technical provider will create geospatial maps based on the review, aligning results with value chain analyses in component 2 to identify feasible options for supporting enhanced production of natural resources.
20. **Subcomponent 1.2 – Enhance natural resources management for value chains and resilience.** One priority is to strengthen communities’ capacity to adapt to climate change, conserve water, improve soil health, reduce slope erosion and increase biodiversity. Investments will support improved water use in upland ecosystems for sustainable coffee and cacao value chain development. This subcomponent also includes climate information services for target value chains.
21. **Subcomponent 1.3 – Greening the value chain.** This subcomponent supports applied research, piloting and innovations for sustainable natural resource use, reducing environmental impacts in value chains and climate-proofing through resilience measures. While subcomponents 1.1 and 1.2 focus on public goods, by managing resources for overall benefit, subcomponent 1.3 emphasizes greening business operations, with direct economic implications for businesses.

22. **Subcomponent 1.4 – Response to emergency and disaster.** This subcomponent includes a disaster response contingency to prevent disruption in the project areas. Project financing prioritizes investments aiming to safeguard assets, restore agricultural land, water and irrigation systems, and enhance rural community organizations’ ability to respond to crises and their consequences. This subcomponent maintains a zero balance until activated by triggers identified in the design report. Upon activation, the budget will be updated for Fund approval.
23. **Component 2 – Sustainable value chain development.** This component aims to: (i) enhance smallholder farm productivity through farming system interventions, agricultural practices and improved access to post-harvest facilities and infrastructure; (ii) strengthen and expand the commercialization of selected value chains and adopt greening investments by building value chain organizations’ capacity in the project areas; and (iii) address climate-resilient infrastructure needs to support value chain development.
24. **Subcomponent 2.1 – Sustainable improvements to agricultural production and enhanced extension services.** This subcomponent focuses on enhancing agricultural production by investing in farming models, technologies and systems. It supports good agricultural practices and improved access to post-harvest facilities, including sustainable extension services designed for coffee and cacao. VISTA will set up a farm business school to test, adopt and replicate environmentally sustainable and climate-resilient agricultural practices and technologies in the target areas.
25. **Subcomponent 2.2 – Value chain commercialization and rural finance.** This subcomponent aims to commercialize and enhance the competitiveness of target value chains. It includes investments in farmers and value chain participating organizations to expand their businesses. The strategic investment plan will include targeted investments based on value chain analyses, potentially covering capacity-building for value chain participating organizations, farm-level interventions, post-production investments and facilitation of access to rural finance.
26. The project will provide grants to farmers for farm-level investments. Matching grants of up to 50 per cent will support post-production investments, complementing other government programmes and covering non-infrastructure post-production investments for access to high-quality and specialty markets. For expanded outreach and sustainability in a diverse financial environment, VISTA will develop a comprehensive rural finance strategy.
27. **Subcomponent 2.3 – Value chain-related infrastructural support.** To address critical infrastructure gaps that may undermine project benefits, VISTA will address constraints linked to access infrastructure, such as FMRs. The additional financing will be wholly used to rehabilitate and improve an additional 87 km of deteriorated FMRs. This subcomponent also includes post-harvest facilities, including solar-drying pavements, storage warehouses and processing centre buildings, as well as greenhouses with drip irrigation for vegetable production using solar-powered fertigation systems.
28. **Component 3 – Project management.** This component aims to ensure strong links among components, efficient and integrated planning, monitoring and evaluation processes, coordination mechanisms and partnerships with key stakeholders.
29. **Subcomponent 3.1 – Project operations management.** This subcomponent will focus on the enhanced implementation and coordination capability and capacity of the Department of Agrarian Reform and the Department of Agriculture and other implementing agencies and partners for effective and efficient provision of project services.

30. **Subcomponent 3.2 – Project monitoring and evaluation, and knowledge management.** This aims to capture and analyse robust data and information in a timely manner, and report to project management and stakeholders for evidence-based decision-making.

D. Costs, benefits and financing

Project costs

31. The original total project cost was estimated at EUR 104.35 million over a six-year implementation period.
32. The new total project cost, including the additional financing, amounts to EUR 135.36 million over a six-year implementation period. The additional financing from IFAD (EUR 18.38 million), the National Government (EUR 6.19 million) and local government (EUR 6.44 million) will be wholly utilized under component 2 (subcomponent 2.3) of VISTA.
33. Project components 1 (ecosystem planning, protection and enhancement) and 2 (sustainable value chain development) are partially counted as climate finance. As per the multilateral development banks' methodologies for tracking climate change adaptation and mitigation finance, the total amount of IFAD climate finance for this project, including the additional financing, is estimated at EUR 53.75 million (55.4 per cent of the total IFAD financing).
34. The total amount of IFAD climate finance for the additional financing component is estimated at EUR 9.19 million (50 per cent of IFAD loan).

Table 1

Original and additional financing summary

(Thousands of euros)

	<i>Original financing*</i>	<i>Additional financing</i>	<i>Total</i>
IFAD loan (PBAS)	23 120		23 120
IFAD loan (BRAM)	55 500	18 379	73 879
National Government	14 269	6 190	20 459
Local government	8 090	6 435	14 525
Beneficiaries	3 373		3 373
Total	104 352	31 004	135 356

* The original financing and cost tables may be found in the President's report on the Value Chain Innovation for Sustainable Transformation in Agrarian Reform Communities Project (VISTA) (document EB 2024/141/R.5/Rev.1).

Table 2

Additional financing: project costs by component and financier

(Thousands of euros)

<i>Component</i>	<i>Additional</i>									
	<i>Additional IFAD BRAM</i>		<i>National Government</i>		<i>Local government</i>		<i>Total</i>			
	<i>Amount</i>	<i>%</i>	<i>Amount in cash</i>	<i>%</i>	<i>Amount in kind</i>	<i>%</i>	<i>Amount in cash</i>	<i>%</i>	<i>Amount in kind</i>	<i>%</i>
1. Ecosystem planning, protection and enhancement	-	-	-	-	-	-	-	-	-	-
2. Sustainable value chain development	18 379	59.3	6 190	20	-	-	6 435	20.7	-	-
3. Project management	-	-	-	-	-	-	-	-	-	-
Total	18 379	59.3	6 190	20	-	-	6 435	20.7	-	-

Table 3

Additional financing: project costs by expenditure category and financier
(Thousands of euros)

Expenditure category	Additional										
	Additional IFAD BRAM		National Government				Local government				Total
	Amount	%	Amount in cash	%	Amount in kind	%	Amount in cash	%	Amount in kind	%	Amount
Investment costs											
1. Works	18 379	60	6 127	20	-	-	6 127	20	-	-	30 632
2. Good, services and inputs	-	-	63	17	-	-	309	83	-	-	372
Subtotal	18 379	59.2	6 190	20	-	-	6 435	20.8	-	-	31 004
Recurrent costs											
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Total	18 379	59.2	6 190	20	-	-	6 435	20.8	-	-	31 004

Table 4

Additional financing: project costs by component and project year (PY)
(Thousands of euros)

Component	PY1		PY2		PY3		PY4		PY5		PY6		Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount
1. Ecosystem planning, protection and enhancement	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Sustainable value chain development	-	-	2 450	7.9	7 035	22.7	10 624	34.3	10 895	35.1	-	-	31 004
3. Project management	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	2 450	7.9	7 035	22.7	10 624	34.3	10 895	35.1	-	-	31 004

Financing and cofinancing strategy and plan

35. IFAD will finance the project through contributions from the IFAD PBAS with a loan of EUR 23.12 million and from the IFAD BRAM with a loan of EUR 55.50 million (original financing) and a loan of EUR 18.38 million (additional financing), under ordinary terms. The IFAD funding will finance 71.7 per cent of the total project costs. IFAD's share of recurrent costs will amount to 5 per cent of total project financing and 7 per cent of IFAD financing. No operating costs are planned under the additional financing
36. Other contributions to the original and additional financing include EUR 14.53 million (10.7 per cent) from local government and EUR 20.46 million (15.1 per cent) from the National Government. Beneficiaries, including value chain producers' organizations, will contribute EUR 3.37 million (2.5 per cent) in cash and in kind.

Disbursement

37. The additional financing will be disbursed in accordance with the same disbursement procedures set out in the original project design.
38. VISTA will open a designated account to receive the BRAM funds for the original project financing and the additional financing. IFAD will transfer funds for the additional financing to the project designated account through a revolving fund mechanism, following the IFAD Project Financial Management and Financial Control Handbook and the Project Financial Management and Financial Control Arrangements Letter.
39. The Department of Agrarian Reform will prepare the quarterly consolidated interim financial report and withdrawal application and submit them to IFAD within 30 days after quarter end through the IFAD Client Portal for cash forecasts and disbursement requests from IFAD.
40. The Bureau of the Treasury, through the Department of Agrarian Reform, will maintain a designated account for the receipt of loan proceeds.

41. The Department of Finance will transfer funds from the designated accounts to the project accounts in the local currency.

Summary of benefits and economic analysis

42. The project level economic analysis indicates that the provision of the additional financing of US\$20 million in IFAD loan funds to VISTA is economically justified.
43. Analyses of both the original project and the additional financing indicate that the farm road upgrades funded by the additional financing facility of VISTA will bring additional benefits in terms of the economic internal rate of return, which shows the opportunity value to the economy and to the project. With the addition of new financing, the economic internal rate of return will increase from 37 to 38 per cent, and the net present value will increase from US\$355 million to US\$367 million. The analyses justify the provision of the additional financing to VISTA to improve transportation infrastructure, thereby boosting agricultural productivity, reducing transportation costs and enhancing market accessibility for farmers. The rehabilitation and improvement of these FMRs, ensuring accessibility during the rainy season and extending their life by mitigating risks of damage from weather and climate events, is crucial for reducing post-harvest losses, lowering vehicle operating costs and saving travel time and costs for road users, thereby significantly benefiting the rural economy and supporting the livelihoods of rural communities. The additional financing activities will also provide qualitative benefits, such as increased educational and health benefits, by improving population mobility. Furthermore, market competitiveness will be enhanced, which will eventually benefit the producers and also the consumers who are utilizing the FMRs.

Exit strategy and sustainability

44. The sustainability strategy for VISTA's additional finance focuses on ensuring the long-term maintenance and resilience of FMRs. To address common operational and maintenance issues, FMRs will be built in compliance with government policies, utilizing portland cement concrete pavement for road surfacing and incorporating climate-proofing measures. These measures will reduce maintenance burdens and extend the economic life of the infrastructure. The infrastructure will adhere to the latest national technical specifications, allowing for adjustments in road width to accommodate local conditions and provide passing bays where necessary, thereby creating a robust and adaptable infrastructure network capable of withstanding climate impacts.
45. An essential component of the exit and sustainability strategy is the development of a practical operation and maintenance manual, together with capacity-building through training-of-trainers programmes for MLGU and barangay officials. The manual will guide communities in routine maintenance activities and will include a monitoring and evaluation (M&E) system to ensure compliance with the subproject agreement. MLGUs, mandated under the Local Government Code of 1991 to maintain these facilities, will integrate the operation and maintenance of FMRs into their annual investment plans, allocating funding from their development fund. This strategy aims to stimulate community engagement and ensure the sustainability of the infrastructure by providing the necessary tools, training and budgetary support for ongoing maintenance.

III. Risk management

A. Risks and mitigation measures

46. For the additional financing of FMRs under VISTA, several risks are relevant. The country context risk is substantial, but is expected to be moderate after mitigation measures are implemented. The project faces substantial inherent risk owing to the complex nature of land tenure and reform in the Philippines, although residual risk for sector strategies and policies are moderate. To mitigate these risks, the project

will rely on institutional agreements and other measures described in the design report. Additionally, environmental risks and natural calamities are a concern, but compliance with the Social, Environmental and Climate Assessment Procedures (SECAP) will ensure that safeguarding requirements are met. All other risk categories are identified as moderate, and appropriate mitigation measures are in place. The financial management inherent risk is substantial. Residual risk has not been assessed but will be assessed during implementation.

47. The risk of delays in the allocation of the Department of Agrarian Reform and MLGU counterpart funds may impede subproject implementation on the ground. To address this risk, VISTA will ensure the availability of counterpart funds by conducting annual review and planning sessions with the Department of Agrarian Reform and participating MLGUs prior to the budgeting exercise for the subsequent implementation year. Additionally, there is a risk that some MLGUs might face fiscal difficulties in meeting the 20 per cent counterpart funding requirement and might therefore drop out of VISTA participation. In such situations, MLGUs could seek financial assistance from provincial governments and other development projects. The Department of Agrarian Reform will maintain a backup list of ARCs to replace any MLGUs that drop out, ensuring continuous project implementation.

B. Environment and social category

48. The additional financing will not affect the environmental and social risk category of the original VISTA, which is rated as moderate. An environmental, social and climate management framework has been prepared, in addition to a stakeholder engagement plan, a Free, Prior and Informed Consent implementation plan, an Indigenous Peoples framework, an abbreviated resettlement plan, a targeted adaptation assessment, an annotated outline of a pest management plan and guidance on cultural heritage.
49. The additional financing will focus on activities within the current VISTA areas and ARCs. It will adhere to the same SECAP standards as the original project, with no new requirements to be introduced. Since all SECAP standards were included in the original VISTA design, there will be no additional implications associated with this additional financing.

C. Climate risk classification

50. The project climate risk is classified as substantial. The project areas are impacted by extreme climatic events, such as flooding, tropical storms, typhoons and drought. SECAP measures will be combined with targeted climate adaptation strategies to mitigate risk. Additional details about climate risks and mitigation measures are provided in the SECAP review note and its annexes.
51. The main risk associated with the FMR upgrade activities to be financed with the additional funds is the potential for excessive rains due to climate change, which may delay the completion of these roads. To mitigate this risk, the VISTA project management office will meticulously review the technical documents for the proposed subprojects, ensuring that MLGU timelines for each subproject take into account historical weather patterns and forecasts. This proactive review will occur before no objection requests are submitted to ensure realistic scheduling and reduce weather-related delays.

Debt sustainability

52. The Philippines is at a low overall risk of sovereign stress and debt. Most indicators have started to normalize following recovery from the COVID-19 shock. Public debt is expected to gradually decline to about 57 per cent of GDP over the medium term, driven mainly by a favourable interest growth differential. Debt coverage at the national level is adequate, as local government units and social security institutions have surpluses. The realism tools suggest projections of key debt drivers are within norms. Medium-term solvency and liquidity risks are

manageable. Over the longer run, structural reforms to boost growth potential and tackle risks from climate change should continue.

IV. Implementation

A. Compliance with IFAD policies

53. VISTA is fully compliant with IFAD policies and aligned with the IFAD country strategic opportunities programme (COSOP) for the Philippines for 2023–2028. It has been endorsed as a gender-transformative initiative and accordingly will be guided by the strategic objectives of the IFAD Policy on Gender Equality and Women’s Empowerment. It will also include climate finance and support the strengthening of adaptive capacity, prioritizing Indigenous Peoples, and will be implemented in accordance with IFAD’s Inclusive Rural Finance Policy. Additionally, the project adheres to the most recent SECAP guidelines (2021). The project’s increased focus on youth aligns with the Rural Youth Action Plan 2019–2021, ensuring that it supports and engages young people effectively. VISTA is also aligned with all IFAD policies on financial management and procurement. The additional financing will not create any divergence from these policies.

B. Organizational framework

Management and coordination

54. The Department of Agrarian Reform will have overall responsibility for implementing the project and will use its existing structures at national, regional and provincial levels to implement the project activities. The Department of Agriculture will assist the Department of Agrarian Reform in implementing subcomponents 1.2 and 2.1. The central office of the Department of Agriculture will mobilize its attached bureaux and offices to play a key role in project implementation. The local government units in the target provinces and municipalities, in close coordination with regional and provincial offices, will be involved in the implementation of subprojects related to agroforestry and rural infrastructure. The project steering committee, chaired by the Department of Agrarian Reform and consisting of members of relevant national government agencies and other institutions, will serve as the governing body and provide policy direction and overall coordination for the project.
55. Consistent with the implementation arrangements of the original design, the additional financing to support the improvement of FMRs will be implemented by the Department of Agrarian Reform through MLGUs on the basis of a cost-sharing arrangement with VISTA, using private contractors for labour, materials and equipment and engaging members of the community as skilled or unskilled labour in compliance with government regulations (in particular, the Local Government Code of 1991).

Financial management, procurement and governance

56. The financial management arrangements for the project, including the additional financing, will follow the government public financial management systems, government accounting manual and other regulations and procedures on receipts and disbursements of proceeds from loans, insofar as these are consistent with IFAD’s standard disbursement procedures and financial management guidance. Disbursement of funds will be based on the quarterly interim financial reports submitted to IFAD within 30 days following each reporting quarter. The additional financing will be incorporated into the project annual external audit to be conducted by the Commission on Audit of the Philippines based on the consolidated financial statements. The audit report will be submitted to IFAD within six months after the end of the financial year.
57. Procurement, including with the additional financing, will be carried out in accordance with the national procurement law and its implementing rules and regulations, provided that these are consistent with IFAD’s Project Procurement

Guidelines. The project will follow the project procurement strategy as provided for in the design. Online project procurement plans will be prepared using IFAD's Online Project Procurement End-To-End System (OPEN). The IFAD contract monitoring tool will be used for managing and updating contracts. Applicable procurement methods and prior review requirements will be observed.

58. On governance, procuring entities will benefit from capacity-building at start-up, with an emphasis on post-qualification. BUILDPROC procurement training will be provided at all levels as required. The ombudsman of the Philippines is tasked with receiving administrative and criminal complaints for graft and corruption, including those relating to projects receiving foreign assistance.

C. Monitoring and evaluation, learning, knowledge management and strategic communication

59. The activities carried out with the additional financing will be integrated into the VISTA M&E system, which will provide reliable data to support results-based management and evidence-based decision-making. The project will perform: (i) process monitoring; (ii) performance monitoring; and (iii) outcome monitoring. M&E plans will be developed and the execution of the plans will be assessed annually. The project will use IFAD's core outcome indicators measurement guidelines for baseline, midline and endline surveys to measure changes.
60. VISTA's communication strategy will involve a diverse range of stakeholders, including local communities, government bodies, NGOs and farmers. The project will include the development of a comprehensive communication plan from the outset. This strategic blueprint will be developed collaboratively with the IFAD communication specialists, ensuring alignment with corporate practices and organizational objectives.

D. Proposed amendments to the financing agreement

61. The financing agreement will be amended to reflect the additional financing of EUR 18.38 million, maintaining the same terms and conditions as stipulated for an ordinary loan under category 2. This amendment will ensure that the new financing aligns fully with the existing agreement and adheres to the established framework and guidelines.

V. Legal instruments and authority

62. A financing agreement between the Republic of the Philippines and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient. The financing agreement signed on 10 July 2024 will be amended following approval of the additional financing.
63. The Republic of the Philippines is empowered under its laws to receive financing from IFAD.
64. I am satisfied that the proposed additional financing will comply with the Agreement Establishing IFAD and the Policies and Criteria for IFAD Financing.

VI. Recommendation

65. I recommend that the Executive Board approve the additional financing in terms of the following resolution:

RESOLVED: that the Fund shall provide a loan on ordinary terms to the Republic of the Philippines in an amount of eighteen million three hundred eighty thousand euros (EUR 18,380,000) (equivalent to US\$20,000,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Alvaro Lario
President

Updated logical framework incorporating the additional financing

Results Hierarchy	Indicators					Means of Verification			Assumptions
	Name	Baseline	Mid-Term*	Original Target	End Target	Source	Frequency	Responsibility	
Outreach	1 Persons receiving services promoted or supported by the project					Project MIS data	Annually	NPCO	The targeted rural areas are accessible and have the necessary infrastructure for effective outreach. The local communities are open to engagement and trust the intentions and benefits of the VISTA and participate actively. The existing government policies that support or do not hinder the project will remain stable throughout the project duration. The existing government policies that support or do not hinder the rural development project will remain stable throughout the project duration.
	Males - Males	0	14000	35000	40000				
	Females - Females	0	14000	35000	40000				
	Young - Young people	0	5600	14000	16000				
	Indigenous people - Indigenous people	0	8400	21000	24000				
	Total number of persons receiving services - Number of people	0	28000	70000	80000				
	Male - Percentage (%)	0	20	50	50				
	Female - Percentage (%)	0	20	50	50				
	Young - Percentage (%)	0	8	20	20				
	1.a Corresponding number of households reached					Project MIS data	Annually	NPCO	
	Women-headed households - Households	0	5600	14000	16000				
	Non-women-headed households - Households	0	22400	56000	64000				
	1.b Estimated corresponding total number of households members					Project MIS data	Annually	NPCO	
	Household members - Number of people	0	140000	350000	400000				
Project Goal Reduce rural poverty and increase food security while protecting and enhancing the natural ecosystems in vulnerable upland areas in CAR and Region XII	Increase in housing and farm asset indices from baseline data					Baseline, Mid term, and End-Line Studies	Start, Mid term, and EOP	Third Party Service Provider	
	Percentage Increase - Households - Percentage (%)	0	3	10	10				
	Increase in the ratio of food expenditure to total family expenditure from baseline data								
	Percentage increase - Households - Percentage (%)	0	5	15	15				
Development Objective Increase income and employment of target groups in fragile upland areas, including women, youth and IPs, through the strengthening	Increase in income of participating households from baseline					Baseline, Mid term, and End-Line Studies, PSA	Start, Mid term and EOP	Third Party Service Provider	
	Increase in household income - Percentage (%)	0	10	30	30				
	2.2.1 Persons with new jobs/employment opportunities					Project M&E/MIS	Annual		

of inclusive value chains with conservation and sustainable use of the natural resources and climate resilient practices	Total number of persons with new jobs/employment opportunities - Number of people	0	4000	10000	11300			Project M&E/MIS Unit	NCI. Project area is not affected by major natural disasters or calamities. No major changes to government incentive programs and/or policies related to domestic agriculture and trade of value chain products.	
	increase in crop yield among local communities in upland agriculture ecosystems.						Baseline, Mid term, and End-Line Studies, COI Survey	Start, Mid term, and EOP, Annually		Third Party Service Provider
	Crop Yield - Percentage (%)	0	10	20	20					
	IE.2.1 Individuals demonstrating an improvement in empowerment						Project M&E/MIS	Annual		Project M&E/MIS Unit
	Total persons - Number of people	0	20000	48000	56000					
	SF.2.1 Households satisfied with project-supported services						Baseline, Mid term, and End-Line Studies	Start, Mid term, and EOP		Third Party Service Provider
Outcome 1. Improved sustainable use of natural resources for sustainable production systems that can cope with negative impacts of climate change	1.2.1 Households reporting improved access to land, forests, water or water bodies for production purposes						Baseline, Mid term, and End-Line Studies, COI Survey	Start, Mid term, and EOP, Annually	Third Party Service Provider	Local institutions and communities are willing to engage and adequately capacitated by the Project on natural resource and environment protection. No major calamities and natural hazards affecting the project area.
	Total no. of households reporting improved access to land - Households	0	10000	30000	30000					
	3.2.2 Households reporting adoption of environmentally sustainable and climate-resilient technologies and practices						Baseline, Mid term, and End-Line Studies, COI Survey	Start, Mid term, and EOP, Annually	Third Party Service Provider	
	Total number of household members - Number of people	0	50000	150000	150000		Project M&E/MIS	Annually	Project M&E/MIS Unit	
	Increase in adoption of NRM plans by participating local government units									
Output 1.1. High quality, VC-focused NRM plans implemented	Sub-project proposals (SPs) and VISTA investment plans approved						Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	
	Investment Plans - Number	0	20	30	30					
Output 1.2. Households supported with activities to improve agroforests, enhance soil management, improve water resources, and conserve biodiversity	Area supported for agroforestry activities						Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	No major calamities and natural hazards affecting the project area. and the social and environmental safeguards are applied properly.
	Agroforestry activities - Area (ha)	0	5000	6000	6000					
Output 1.3. Innovative, inclusive and sustainable approaches on green value chains developed	Sub-project proposals on mechanisms for greening the VC (manual, guideline, and skills trainings) approved and implemented						Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	No major calamities and natural hazards affecting the project area.
	Proposals Approved - Number	0	20	50	50					
Output	Households supported by the disaster fund									

1.4. Response to Emergency and Disaster (RED)	Number of Household supported - Households										Will be activated based on Government request if one or several of the expected shocks have occurred. Targets will be set when the fund is activated.		
Outcome 2. Developed commercially viable and environmentally sustainable Value Chains of selected commodities	1.2.2 Households reporting adoption of new/improved inputs, technologies or practices					Baseline, Mid term, and End-Line Studies, COI Survey, Project M&E/MIS	Start, Mid term, and EOP, Annually	Third Party Service Provider		No major calamities and natural hazards affecting the project area. Strong planning and coordination efforts between DA , DAR , LGUs and other implementing partners is ensured. No major changes in the availability, and prices of agricultural inputs. Training partners and extension specialists are available in the market.			
	Total number of household members - Number of people	0	49000	115500	115500								
	1.2.4 Households reporting an increase in production												
	Total number of household members - Number of people	0	42000	98000	98000								
	1.2.5 Households reporting using rural financial services												
	Total number of household members - Number of people	0	30000	80000	80000								
	2.2.6 Households reporting improved physical access to markets, processing and storage facilities												
	Households reporting improved physical access to markets - Percentage (%)	0	40	50	54								
	2.2.3 Rural producers' organizations engaged in formal partnerships/agreements or contracts with public or private entities										Project M&E/MIS	Annually	Project M&E/MIS Unit
	Number of POs - Organizations	0	100	250	250								
2.2.5 Rural producers' organizations reporting an increase in sales					Project M&E/MIS	Annually	Project M&E/MIS Unit						
Number of Rural POs - Organizations	0	40	80	80									
Rural producers' organization reporting an increase in net profit					Project M&E/MIS	Annually	Project M&E/MIS Unit						
VPO given intensive training - Percentage (%)	0	40	80	80									
Output 2.1. Rural producers and their members provided with sustainable technologies, practices and agricultural inputs	1.1.3 Rural producers accessing production inputs and/or technological packages					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	Private sectors are active and willing to engage with rural producer organizations based on the Project terms.				
	Total rural producers - Number of people	0	4000	10000	10000								
	1.1.4 Persons trained in production practices and/or technologies					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit					

	Total number of persons trained by the project - Number of people	0	10000	20000	20000				Government, private sector, and all other main stakeholders work in coordination, particularly during the investment planning stage. Social and environmental safeguards are followed strictly.
	Number of farms receiving standard certifications (i.e. GAP)					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	
	Farmers - Number	0	2500	5000	5000				
Output 2.2. Rural producer organizations and their members supported with investments for viable and inclusive VC	2.1.3 Rural producers' organizations supported					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	Private sectors are active and willing to engage with rural producer organizations based on the Project terms.
	Rural POs supported - Organizations	0	200	500	500				
	2.1.4 Supported rural producers that are members of a rural producers' organization					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	Government, private sector, and all other main stakeholders work in coordination, particularly during the investment planning stage. Social and environmental safeguards are followed strictly.
	Total number of persons - Number of people	0	8000	20000	20000				
	1.1.5 Persons in rural areas accessing financial services					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	
	Total persons accessing financial services - savings - Number of people	0	4000	10000	10000				
	1.1.7 Persons in rural areas trained in financial literacy and/or use of financial products and services					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	
	Persons in rural areas trained in FL and/or use of FProd and Services (total) - Number of people	0	8000	20000	20000				
Rural Producers' organizations accessing investment matching grants					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit		
VC Participating Organizations	0	200	580	580					
Output 2.3. Rural producers supported with access to new or improved access and productive infrastructure and facilities	2.1.6 Market, processing or storage facilities constructed or rehabilitated					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	Private sectors are active and willing to engage with rural producer organizations based on the Project terms. Social and environmental safeguards are followed strictly.
	Total number of facilities - Facilities	0	40	100	100				
	2.1.5 Roads constructed, rehabilitated or upgraded					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	
Length of roads - Km	0	20	80	167					
Outcome 3. Strengthened national and local institutional frameworks	Existing/new laws, regulations, policies or strategies proposed to policy makers (national/local) approved and ratified					Project M&E/MIS	Annually	Project M&E/MIS Unit	A proper M&E/KM set up and plans at start up. Government
	Proposal - Number	0	2	5	5				

with policy initiatives on sustainable use of natural resources and environmentally responsible Value Chains	SF.2.2 Households reporting they can influence decision-making of local authorities and project-supported service providers					Project M&E/MIS	Annually	Project M&E/MIS Unit	interest and willingness to engage in policy development. Active engagement with stakeholders including effective implementation of GRM.
	Household members - Number of people	0	35000	122500	140000				
Output 3.1. Operational implementation arrangements established at all project management levels	Coordination mechanisms with complete representations established					Project M&E/MIS	Quarterly, Annually	Project M&E/MIS Unit	Competent staff/consultants are available at project start up
	EARCC mechanisms - Number	0	27	27	27				
Output 3.2. Functional M&E/MI systems supportive of generating knowledge products for learning and policy engagement	Knowledge products on natural resources and responsible VCs published								Competent staff/consultants are available at project start up
	Learning materials - Number	0	8	20	20				
	Policy briefs - Number	0	2	5	5				

** In compliance with the President's Memorandum template, the original VISTA Mid-term targets are provided, while the integrated single Log Frame in the ORMS system reflects the adjusted Mid-term targets incorporating the additional financing.*

Updated summary of the economic and financial analysis

Table A

Financial cash flow models

		Most Representative Crop Models and Enterprise Models: Incremental Net Benefits (Peso/ha - crops); (Peso/Unit - enterprises)													
F I N A N C I A L A N A L Y S I S		Reforestation: Non-Timber forest products	Agro forestry	Cocoa: Rehabilitation: ARBOs	Cocoa: New Planting: ARBOs	Rehab Robusta Coffee	New Robusta Coffee	New Arabica Coffee	Rehab Arabica Coffee	Cocoa process: Fermented, dried cocoa beans	Coffee process: Dried beans	Green Coffee Processing and Packaging (per unit)	Warehouse Model (1 unit)	Farm to Market Roads: AF Additions (Total - 87 km)	
	PY1	2,873	23,603	43,038	48,033	19,373	57,128	73,983	25,922	731,700	375,100	10,605,280	2,712,206	-	
	PY2	26,870	8,012	16,108	4,022	4,563	29,128	44,458	3,539	91,990	30,314	3,536,379	124,208	14,488,181	
	PY3	1,648	18,361	4,784	8,188	17,083	9,885	36,081	4,153	87,720	64,529	3,536,379	454,897	17,113,357	
	PY4	1,972	15,695	8,523	28,573	5,783	47,917	8,242	6,028	87,720	98,744	7,253,973	315,732	1,112,153	
	PY5	5,931	12,737	5,629	44,926	4,716	33,091	95,421	12,222	87,720	218,496	7,253,973	315,732	11,090,016	
	PY6	10,255	4,080	10,440	75,880	4,759	39,984	114,907	4,450	87,720	252,711	7,253,973	679,455	52,383,010	
	PY7	14,440	20,124	63,217	92,555	14,233	47,976	129,243	14,474	161,083	290,828	7,253,973	679,455	52,600,225	
	PY8	18,032	21,543	63,217	114,065	16,568	57,792	145,467	15,792	161,083	290,828	7,253,973	679,455	52,300,275	
	PY9	21,623	22,261	63,217	113,700	16,568	57,792	145,467	15,792	161,083	290,828	7,253,973	679,455	51,605,587	
	PY10	25,214	12,283	63,217	113,335	16,568	57,792	145,467	15,792	161,083	290,828	7,253,973	679,455	50,927,018	
NPV (Peso) (@ 7%; 20 Yrs)	310,532	743,793	692,440	692,440	255,518	752,118	861,468	72,397	594,303	1,807,466	2,386,033	4,678,380	313,708,177		
NPV (US\$)	5,626	13,475	12,544	12,544	4,629	13,625	15,606	1,312	10,766	32,744	43,225	84,753	5,683,119		
B/C Ratio	1.98	2.01	1.67	4.21	1.28	1.97	3.79	1.31	1.01	1.02	1.02	1.25	2.84		
FIRR	34%	40%	24%	24%	16%	34%	38%	21%	15%	35%	37%	20%	52%		

Table B

Project costs and logframe targets

PROJECT COSTS AND INDICATORS FOR LOGFRAME						
TOTAL PROJECT COSTS (in million USD)		146.56	Base costs	131	PMU	7.8
Beneficiaries	400,000 People	80,000 Households	800 groups			
Cost per beneficiary	366 USD x person	1,832 USD x HH	Adoption rates			68%
Components and Cost (USD million)		Outcomes and Indicators				
A. Ecosystem Planning, Protection and Enhancement	28.2	Households supported with activities to improve agroforests, enhance soil management, improve water resources, and conserve biodiversity	Area supported for agroforestry activities: 6000 ha; Areas supported for community-level forestry: 4000 ha; Length of Slope Protection Works provided to sloping farm lands: 3400 mt; Number of Small Farm Reservoirs provided: 40 units; Length of Streambank protected and stabilized: 850 mt; CIS Rehabilitated: 640 ha; CIP Constructed: 450 ha; Pipe Irrigation Scheme provided: 430 ha; Rainwater tank provided: 850			
B. Sustainable Value Chain Development	105.9	Develop commercially viable and environmentally sustainable Value Chains of selected commodities	Households reporting an increase in production: 19,600 hhs; Households reporting improved physical access to markets: 43,000 hhs;			
		Rural producers and their members provided with sustainable technologies, practices and agricultural inputs	Rural producers accessing production inputs and/or technological packages Total rural producers - Number of people: 10,000; Persons trained in production practices and/or technologies: 20,000			
		Rural producer organizations and their members supported with investments for viable and inclusive VC	Rural producers' organizations supported: 25,000; Rural producers' organizations accessed Project VC financing instruments: 500; Persons in rural areas accessing financial services: 10,000			
		Rural producers supported with access to new or improved access and productive infrastructure and facilities	Market, processing or storage facilities constructed or rehabilitated: Total number of facilities: 100 Facilities; Roads constructed, rehabilitated or upgraded: 167 km (80 original & 87 AF)			
C. Project Management	12.4	Strengthen national and local institutional frameworks with policy initiatives on sustainable use of natural resources and environmentally responsible Value Chain	Existing/new laws, regulations, policies or strategies proposed to policy makers (national/local) approved and ratified: 5 products; Households reporting they can influence decision-making of local authorities and project-supported service providers: 140,000 hhs members			

Table C

Main assumptions and shadow prices

MAIN ASSUMPTIONS & SHADOW PRICES ¹					
FINANCIAL	Output	Av. Incremental Yields (%)	Price (Peso/kg)	Input prices	Price (Peso)
	Cocoa	173%	99.0	Cocoa planting material (per plant)	16
	Coffee - Robusta	50%	138.6	Coffee planting material (Robusta)	25
	Coffee - Arabica	35%	189.4	Coffee planting material (Arabica)	20
	Fuelwood	7%	1.1	Urea fertilizer (per kg)	17
	Upland rice	14%	15.5	Neemicide (or similar) per Lit	474
	Green house vegetable	95%	20.3	Basal Fertilizer (kg)	26
	Banana	41%	6.0	Compost/mulching / Manure (mt)	1545
				Machine hire for land preparation (hr)	671
				Seed paddy (kg)	24.40
ECONOMIC	Official Exchange rate (OER)	55.2	Discount rate (oppo. cost of capital)		9%
	Shadow Exchange rate (SER)	58	Social Discount rate		5%
	Standard Conversion Factor	1.1	Output conversion factor (average)		1.1
	Shadow Wage Rate Factor (SWRF)	0.9	Input Conversion factor (average)		1.06

Table D
Beneficiary adoption rates and phasing

Table D		Beneficiary HHs, Adoption Rate, Phasing in							
Items	Target HH	Y 1	Y 2	Y 3	Y 4	Y 5	Y 6	Y 7	Total HHs
Coffee - New: Robusta	4,500	100	1500	1400	1500	0	0	0	4,500
Coffee - New: Robusta under coconut	4,500	100	1500	1400	1500	0	0	0	4,500
Coffee - RH: Robusta under coconut	4,500	100	1500	1400	1500	0	0	0	4,500
Coffee - RH: Robusta	9,000	200	3000	2800	3000	0	0	0	9,000
Coffee - New: Arabica	4,500	100	1500	1400	1500	0	0	0	4,500
Coffee - RH: Arabica	4,500	100	1500	1400	1500	0	0	0	4,500
Cocoa Rehabilitation	9,000	200	3000	2800	3000	0	0	0	9,000
Cocoa New planting	4,500	100	1500	1400	1500	0	0	0	4,500
Total	45,000	1000	15000	14000	15000	0	0	0	45,000
Adoption rate	68%	50%	60%	70%	90%				
Cocoa Processing: Solar Dryer	1,000	-	-	500	500	-			1,000
Coffee processing: Solar tuner dryer	1,000	-	-	500	500	-			1,000
Total Forest RH	16,045	-	3,538	9,091	3,416			-	16,045
Warehouse	4,000	-	-	4,000	-	-			4,000
Green Coffee Processing and Packaging - processing building	500	-	100	300	100				500
Rainwater Capture Tank (500 Liter/PE pipes)	850	200	500	-	150				850
Greenhouse Drip Irrigation (200 sqm)	200	-	160	40	-				200
CIS Rehabilitation	640	-	500	140	-				640
CIP Construction	450	-	350	100	-				450
Farm to market roads (Original design and Additional Financing): km	167	998	2,517	3,685	3,673				10,873
Total Households Benefited									80,558

Table E

Economic cash flow

Table presents the overall project aggregation, include the net incremental benefits of each financial model in economic terms, converted using shadow prices (table C) and multiplied by the number of beneficiaries (table D). Net incremental costs present all additional project costs. Last column, adjusted for double counting, indicates net cash flow to be used to calculate project profitability indicators such as NPV and economic IRR (EIRR).

E C O N O M I C A N A L Y S I S	Year	NET INCREMENTAL BENEFITS	NET INCREMENTAL COSTS			Cash Flow - after removing double count (USD '000)
		Total Incremental Benefits (USD'000)	Economic Investment Costs (USD'000)	Economic Recurrent Costs (USD'000)	Total Incremental Costs (USD 1000)	
		PY1	(9,989)	4,251	2,246	
PY2	(7,778)	20,184	2,685	22,869	(18,977)	
PY3	10,052	29,430	1,982	31,413	(190)	
PY4	12,328	30,940	1,437	32,377	6,092	
PY5	15,527	19,333	1,095	20,428	13,148	
PY6	19,160	1,579	1,438	3,017	16,143	
PY7	23,812		144	144	23,510	
PY8	42,499		144	144	42,197	
PY9	47,729		144	144	47,427	
PY10	44,349		144	144	44,047	
PY11	41,384		144	144	41,082	
PY12	51,215		144	144	50,914	
PY13	56,197		144	144	55,895	
PY14	52,158		144	144	51,856	
PY15	49,953		144	144	49,651	
PY16	55,896		144	144	55,594	
PY17	56,176		144	144	55,874	
PY18	55,909		144	144	55,607	
PY19	53,589		144	144	53,287	
PY20	61,995		144	144	61,694	
		NPV@5% (USD '000)	367,047			
		NPV @ 5 % (Peso '000)	20,260,982			
		EIRR	38.2%			

Table F

Sensitivity analysis

SENSITIVITY ANALYSIS (SA)					
		Δ%	Link with the risk matrix	IRR (%)	NPV (USD million)
Base scenario				38%	367
Project benefits	-10%		Vulnerability to environ. conditions	24%	212
Project benefits	-20%		Vulnerability of target populations and ecosystems to climate variability and hazards	10%	58
Project costs	10%			26%	249
Project costs	20%		Project Funds Flow/Disbursement Arrangements	15%	131
Project costs + Bnenfits	" +10%&-10%		Resource Efficiency and Pollution Prevention	13%	94
1 Year lag in benefits			Project budgeting delays	17%	233

ECONOMIC AND FINANCIAL ANALYSIS

Value Chain Innovation for Sustainable Transformation in Agrarian Reform Communities (VISTA) – Additional Financing

Introduction and methodology

1. The Value Chain Innovation for Sustainable Transformation in Agrarian Reform Communities (VISTA) Project was approved by the IFAD's Executive Board on 24/04/2024. The Project has entered into force on DD/MM/2024. The original project completion date is set 30/06/2030 and the financial closure date is DD/MM/2024. The Government of Philippines has requested on 21/11/2023 an additional financing of US\$20 million for VISTA and subsequently, IFAD has allocated US\$20 million to the VISTA Project. Since these additional funds were secured after the initial project submission to the Government, they were not included in the original design, financial plan and the economic and financial analysis (EFA). In order to include the enhanced cost in the EFA, this Annex revises the EFA of the original VISTA design including the additional \$20 million.
2. The design mission for the VISTA project carried out the EFA to assess the financial and economic viabilities of investments assisted by VISTA. The project has three components: Component 1 – Ecosystem Planning, Protection and Enhancement; Component 2 – Sustainable Value Chain Development; and Component 3 – Programme management. The original VISTA project will directly reach an estimated 70,000 households. With the AF facility, all of which will be used to build farm to market roads (FMR), the outreach of the project will increase to 80,000 households (10,000 will be the road users). The distribution of the beneficiaries, including the additional beneficiaries, by type of enterprises are presented in Table 1.
3. **Methodology, information sources and Approach of EFA:** The representative gross margin (GM) models were developed based on the relevant information received from various sources. The sources of data (EFA excel sheets presents specific references that were used to derive GM models) include the following. Project documents of the Convergence on Value Chains for Rural Growth and Empowerment in the Philippines; Rural Agro-Enterprise Partnership and Inclusive Development Project (RAPID) in the Philippines; Cordillera Coffee Industry Development Plan: 2016-2022 prepared by the Cordillera Administrative Region (CAR) administration; Department of Agriculture, Philippines 2022, National Agriculture and Fisheries Modernization and Industrialization Plan 2021-2030: Transforming the Philippine Food System Together, Philippines: DA; Department of Agriculture, Philippine Cocoa Industry Road Map: 2021-2025, High Value Crops Development Program; Department of Agriculture, Philippine Coffee Industry Road Map: 2021-2025, High Value Crops Development Program; Department of Agriculture, Philippine Vegetable Industry Road Map: 2021-2025, High Value Crops Development Program; Department of Agriculture, Philippine Banana Industry Road Map: 2019-2022, High Value Crops Development Program; Midsayap-Datu Piang National Highway Upgrading (Midsayap Section), Municipality of Midsayap, Province of Cotabato²; Warehouse and Distribution Management of National Food Authority (NFA), Rice in the Philippines: Best Practices³; and market data collection undertaken by the in-country design mission. Field data collection for building required gross margin models, mainly for coffee, cocoa, banana and vegetable was undertaken mainly in Region 12. A list of the prices of relevant inputs and outputs

² That is, 50% (US\$ 10 million) of the Additional Finance contribution (US\$ 20 million) is validated as climate finance (adaptation). In the original budget, 57% (US\$ 48.17 million) of IFAD budget (US\$ 84.99) was validated as climate finance (adaptation).

³ Allan F. Galvez (2019), Warehouse and Distribution Management of National Food Authority (NFA) Rice in the Philippines: Best Practices, IOER International Multidisciplinary Research Journal, Volume 1, Issue 2, June 2019, pp 10 -19.

was based on this information. Other sources of information include Philippine National Bank and World Bank Commodity Forecast.

4. The main types of data that were used for the FEA include (i) crop production data; (ii) market prices; (iii) capital and working capital expenditure of on-farm and off-farm enterprise; (iv) cost of farm tools and machineries; (v) international prices for computing parity prices of tradable commodities; (v) cost of fertiliser and other agro-chemicals; (vi) cost and income of fuelwood production; (vii) vehicle maintenance cost; (viii) farm to market road and other infrastructure maintenance cost; (ix) postharvest losses of coffee and cocoa by marketing them using delapidated roads without value chain linkages (to assess the new FMR benefits). The EFA follows the IFAD EFA Guidelines while NEDA guidelines also were considered. This revised version used IFAD and NEDA's methodology specifically for including debt financing in the EFA – i.e. loan amount for each crop/enterprise was added to the benefit flow, and repayment of loans were added to the cost flow. The benefit flows of all models are net of relevant taxes as detailed in EFA Excel sheets.
5. Table 1 summarises the number of beneficiaries, including the new FMR beneficiaries, and that gross margin models and enterprise models that VISTA would be supporting. Table 1 also summarises the type of project support and investment provided to each model and the benefits generated.
6. The VISTA project will generate multiple social, environmental, nutritional, financial, economic and institutional benefits. The beneficiaries of VISTA in the EFA represented coffee and cocoa as the anchor crops value chains. In addition, agroforestry beneficiaries and their income has been included where the products are coffee (representing anchor crops), banana (representing fruits), and fuelwood (representing non-timber forest products). The intercropping of coffee and cocoa with coconut is common specially in Region 12. Therefore, such intercropping under coconut was also considered as EFA models. The Communal Irrigation Systems and CIP systems that will be established would benefit heirloom/upland rice. As such paddy has been included in estimating the benefits of these irrigation systems. Table 2 summarises these benefits and detailed in Table 3.

Table 1: Enterprises, project level targets and number of beneficiaries benefited

Enterprises / Gross margin models	Units	Total targets	VISTA Support (attribution)	Benefits to the VISTA target group	Nb HH Benefited	
					/Unit	Nb HH Benefited
Cocoa Processing: Solar Dryer	Units	20	Establishment cost	Processed beans	50	1,000
Coffee processing: Solar tuner dryer	Units	20	Establishment cost	Processed beans	50	1,000
Forestry		-			-	-
Water source protection through SALT/Agroforestry/EP	ha	10,587	Establish & initial maintenance	Productivity improve of VC crops	-	-
Forest ecosystem and conserving biodiversity within the sub-catchments	ha	11,352	Establish & initial maintenance	Productivity improve of VC crops & environment	-	-
Reforestation with Assisted Natural	ha	1,000	Establish & initial maintenance	Fuelwood output & environment	-	-

Regeneration and Enrichment Planting			Establish & initial maintenance	Productivity improve of VC crops & environment		
Enrichment Planting with coffee, cacao and others	ha	1,000			-	-
Total Forest RH	ha	13,352			1.22	16,289
Nurseries	Nb	30	Partial initial cost	Planting material for VC crops	3	90
Warehouse	Units	40	Refurbishing cost	Better storage for increased prices	100	4,000
Trails (Foot, Animal, Sledge)	km	30 km	Improvement and initial maintenance cost	Time saving in farm output transport	-	-
Hanging Foot Bridge	km	850 lm	Same as above	Same as above	-	-
Standard FMR (PCCP)	km	80 km	Same as above	Time saving, reduced vehicle maint. Cost, travel cost saving	-	-
Tire Tracks / Motorcycle or Tricycle roads	km	30 km	Same as above	Same as above	-	-
Green Coffee Processing and Packaging - processing building	Units	10	Partial initial cost	Processed / value added coffee beans	50	500
Rainwater Capture Tank (500 Liter/PE pipes)	Units	850	Initial cost	Time saving in water collection	1	850
Greenhouse Drip Irrigation (200 sqm)	Units	10	Initial cost	Vegetable production with high tech	20	200
CIS Rehabilitation	ha	640	Refurbishing cost	Upland rice production	1	640
CIP Construction	ha	450	Same as above	Same as above	1	450
Total extent: Coffee	ha	15,750	Matching grants & extension	Increased production	1	31,500
Total extent: Cocoa (ha)	ha	5,400	Same as above	Same as above	1	13,500
Banana (avg extent 1 ha/HH)	ha	27,000	Extension	Same as above	-	-
Standard FMR (PCCP) – AF support	km	87 km		In addition to all others, reducing postharvest loses of coffee and cocoa		10,000
Total	HH					80,019

7. Table 2 summarises the beneficiary distribution. Since there is a strong project attribution, as described below, in generating benefits, the phasing of the project beneficiaries was designed in parallel to the yearly distribution of the project budget. The percentage distributions of HHs and the budget are close to each other as shown in the Table below and mostly middle-loaded.

Table 2: Enterprises, project level targets and target distribution over project period

Enterprises / Gross margin models	Units	Total targets	Project				
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Cocoa Processing: Solar Dryer	Units	20		0	10	10	
Coffee processing: Solar tuner dryer	Units	20		0	10	10	
Forestry							
Water source protection through SALT/Agroforestry/EP	ha	10,587	2,245	6,597	1,745		
Forest ecosystem and conserving biodiversity within the sub-catchments	ha	11,352	-	2,500	6,852	2,000	
Reforestation with Assisted Natural Regeneration and Enrichment Planting	ha	1,000	-	200	400	400	
Enrichment Planting with coffee, cacao and others	ha	1,000	-	200	200	400	200
Total Forest RH	ha	13,352	-	2,900	7,452	2,800	200
Nurseries	Nb	20		6	14		
Warehouse	Units	40			40		
Trails (Foot, Animal, Sledge)	km	30 km		20	10		
Hanging Foot Bridge	km	850 lm		700	150		
Standard FMR (PCCP)	km	80 km		60	20		
Tire Tracks / Motorcycle or Tricycle roads	km	30 km		20	10		
Green Coffee Processing and Packaging - processing building	Units	10		2	6	2	
Rainwater Capture Tank (500 Liter/PE pipes)	Units	850	200	500		150	
Greenhouse Drip Irrigation (200 sqm)	Units	10		8	2		
CIS Rehabilitation	ha	640		500	140		
CIP Construction	ha	450		350	100		
Total extent: Coffee	ha	15,750	350	5,250	4,900	5,250	
Total extent: Cocoa (ha)	ha	5,400	120	1,800	1,680	1,800	
Total VC Crops Extent	ha	21,150	470	7,050	6,580	7,050	
Banana (avg extent 1 ha/HH)	ha	27,000	10,800	16,200	-	-	
Standard FMR (PCCP) – AF support	km	87 km		784	2,300	3,465	3,450

8. In order to represent these sectors and crops and to capture the benefits of the VISTA, several gross margin modes were included in the EFA. These gross margin models were derived from the perspective of beneficiary producers and from the country perspective. Table 3 summarises the GM models that are farm-based models, and Agrarian Reform Beneficiary organization (ARBO) / Producers Organizations based models (processing enterprises), and small enterprise models. The assumptions used to build up the GM models were presented with details in the EFA excel sheets.

Table 3: Type of VISTA investments in Value Chain products and other enterprises

Crops / products	Typical VISTA investments	GM Models used for the EFA and remarks
<i>Private beneficiary and/or ARBO management models – conducted from the individual beneficiary perspective and included in both the financial and economic analyses:</i>		
Coffee and cocoa	Nurseries, performance-based grants, extension, demonstrations, training, pipe irrigation (water would be provided during dry spells), Small Farm Reservoir (SFR/interceptor canal which will provide water during dry spells), input and output marketing will be provided. Debt financing for capital expenditure and working capital were provided and include in the financial analysis.	Robusta coffee new planting; Robusta coffee rehabilitation; Robusta coffee new planting under coconut; Robusta coffee rehabilitation under coconut; Arabica coffee new planting; Arabica coffee rehabilitation. Cocoa new planting, and cocoa rehabilitation. (The incidence of cocoa intercropping is relatively low and as such intercropping was not considered for cocoa). Productivity improvement was the benefit in the model.
Coffee and cocoa processing	Under post-harvest infrastructure facilities, solar drying facilities, warehouses, processing building will be provided	Processed beans of coffee and cocoa would-be value-added products. Increased prices of the processed products were the benefits.
Greenhouse vegetable managed by ARBO	Greenhouse with drip irrigation, water management, post-harvest handling. The rain water harvesting tanks were assumed to be providing water for drip irrigation.	Drip irrigated vegetable (farms) model. Land use factor increased by 300% with the facility and the viability was estimated with that increase.
Warehouse managed by ARBO	Design and construction of the building with required facilities	Warehouses are used to store coffee, cocoa, and paddy during the processing. Through storage the quality of these commodities can be maintained and thus there is a slight increase in the prices in comparison to the un-stored commodities. Using the price increment as the benefits, financial and economic viabilities were estimated.
Agroforestry	Same intervention as in reforestation, Streambank Stabilization and additionally beneficiaries will have coffee, banana, and maize and cash and food crops. NRM benefits were assumed to have a positive impact on the yield of crops in agroforestry.	Agroforestry model with other crops – fuelwood production and production of other crops were the benefits.
<i>Natural resource management models – conducted from the country perspective and included in the economic analysis:</i>		
Reforestation	Nursery establishment and associated facilities, Plantation establishment/Out-planting, Maintenance & protection and TA/replacement planting & M&E, Streambank Stabilization. NRM benefits were assumed to have a	Fuelwood production model. Reforestation would bring about several environmental benefits such as reducing Green House Gas (CO ₂ sequestration) and cleaning the environment. Although these externalities could be estimated using valuation techniques, EFA analysis of VISTA recognizes these benefits and provides a qualitative description.

	positive impact on the yield of crops in fuelwood production	
<i>Infrastructure models – conducted from the country perspective and included in the economic analysis:</i>		
Paddy production under CIS and CIP irrigation	CIS and CIP irrigation facilities provided for upland paddy and paddy was used to estimate the economic viability of these irrigation systems.	Upland paddy production under irrigation. Paddy is not a crop that would receive investment assistance from VISTA. CIS and CIP have however been requested by the project beneficiaries in the targeted ARCs. The productivity of coffee and cocoa would be enhanced with such irrigation. The viability of these investments was however estimated using paddy as a benefited commodity as it is the most prevalent crop under CIS and CIP.
Standard Farm to Market Roads (FMR)	Survey and designing of the roads, road construction and maintenance	The economic viability of the investments in FMR was estimated using reduction of vehicle operating costs, passengers' time saving benefits, reduction of passengers' travel costs, and reduction in the transport costs of good. For the new FMR supported by the AF facility, benefits of reducing the postharvest losses of coffee and cocoa were considered. These benefits already built into the VISTA original EFA as there is VC connections, whereas additional beneficiaries (10,000 hhs) do not have all that VC connectivity facilities.
Tire Tracks / Motorcycle or Tricycle roads	Survey and designing of the tracks, construction and maintenance	Same benefit estimation method used for roads have been used for the tracks as well.
Trails and Foot Bridge	Survey and designing of the structures, construction and maintenance	Time saving benefits for households and time saving for hauling along the trails and bridges.

9.

10. Table 4 presents a few of the key references that were used to build the GM models. The data provided by the design team further validated and improved the WOP and the WP scenarios.

Table 4: Data sources used for the estimation of cost and benefits of the EFA

GM Model	Data sources to build WOP situation	Data sources to build WP situation
Coffee and cocoa	RAPID project data, coffee and cocoa Road Map data, mission field data	Expected productivity in the cocoa and coffee Road Map report
Coffee and cocoa processing	Same as above	Data collected from current processors during the mission
Greenhouse vegetable managed by ARBO	Discussion with DAR and DA staff during mission and the exit conference	Expected productivity in the vegetable Road Map report

Warehouse managed by ARBO	New	Convergence on Value Chains for Rural Growth and Empowerment project reports, Warehouse and Distribution Management of National Food Authority (NFA), Rice in the Philippines: Best Practices
Agroforestry	Forestry expert of the design Mission	Calora et.al. (1998), yield of fuel wood per hectare in Besao / Sagada, Regional wood energy development programme in Asia GCP/RAS/154/NET, Wood fuel in the Philippines - production and marketing - teacher's camp, Baguio city, Philippines ⁴ for forestry, same reference sources listed above for coffee
Reforestation	Forestry expert of the design Mission	Same reference sources listed above for fuelwood production and data from the mission.
Paddy production under CIS and CIP irrigation	Converg data sources	Converg data sources
Standard Farm to Market Roads (FMR)	Converg data sources	Converg data sources. The field visits and Focus Group Discussion of such visits collected information to assess the benefits of postharvest losses of new FMR.

Project Cost, beneficiaries and assumptions

11. **Costs.** The estimated cost of the VISTA, generated from COSTAB, was used as the project cost with the following adjustment. The VISTA would provide establishment and initial maintenance cost of all forestry related activities, all infrastructure and postharvest enterprises that are maintained by the producer organizations and ARBOs. For the value chain crops (coffee and cocoa) matching grants would be provided to finance planting material and other farm inputs such as fertiliser. These costs in the components 1 and component 2 of the cost tables were deducted from the project cost in the EFA since these would be a component of the production cost of the enterprise models including farm models. The production cost of all GM models was included in the computation of the gross margins. The VISTA project cost net of these costs mentioned above, thus formed the cost of the project for the EFA (see EFA excel sheets for details).
12. The original COSTAB was revised including USD 20 million as AF and the revised cost tables also used the same approach summarised above to derive the cost flow for the EFA.
13. **Beneficiaries.** Table 1 summarised the total direct beneficiary households of project activities by the enterprises and Table 2 by the project years. The EFA used these beneficiary households and their distribution for the estimation of project benefits.
14. **Gender.** The enterprises that VISTA is supporting have adequate gender focus. Enterprises such as banana, upland rice and vegetable production, etc are operated predominantly by women.
15. The EFA was based on the following **general assumptions**:

⁴ Regional wood energy development programme in Asia GCP/RAS/154/NET, Woodfuel in the Philippines - production and marketing - teacher's camp, Baguio city, Philippines

- (a) The VC crops, coffee and cocoa, fuelwood and banana included in the EFA are already in production and they would improve the productivity by establishing soil and water conservation methods, irrigation structures (for upland rice), better planting material (coffee and cocoa), and replanting or rehabilitation (cocoa and coffee). The ARBOs level enterprises and SMEs are mostly new activities and they would start the operation as new enterprises. Both sets (farms and enterprises) would be able to access loans and also matching grants.
 - (b) All benefits were estimated using 2023 constant prices. The incremental costs and benefits of the project supported enterprises will continue for a 20-year period which include the 6-year VISTA project implementation period. It is assumed that the general inflation will have a similar impact on cost and benefits flows at an equal rate and hence the price escalation on costs and benefits have not been adjusted.
 - (c) For all activities which used labour, a financial rural daily wage rate of Peso 365 person-day for unskilled labour and Peso 450-500 per person-day for skilled labour who work in technology demanded enterprises such as processing and warehouses etc were used. The wage rate was not differentiated by gender, and the same rate was paid to female labour. The same unskilled wage rate was used to value household family labour too because of the availability of wage labour opportunities in the project areas.
 - (d) Each household could have more than one farm enterprise or income generating activities, for example banana and coffee, fuel wood collection and upland rice. However, the aggregation of benefits to derive project level benefits was done on the basis of households by taking the average land size for each crop and type of cultivation such as coffee rehabilitation etc. The assumed average land sizes were 0.50 ha for all types of coffee cultivations (observation from the mission field work), 0.4 ha for cocoa, 1 ha for banana, 1 ha for upland rice under irrigation, 200 sq mt for intensive vegetable under greenhouses, 1.22 ha for agroforestry and 1 ha for fuelwood representing non-timber forest products. The EFA excel sheets presents the details of the farm models.
 - (e) The EFA estimated the projected cash flow of all the farm models and enterprise covering the entire project life for 20 years including the 1st year of the project.
16. The assumptions listed below were used to estimate the benefits arising from reducing postharvest loses accruing to new FMR:
- (a) The total number of households who will be using 87 km of roads is estimated at 10,000 and this increment will spread over four years starting from the 2nd year of the project. The original VISTA project has a target distribution of 80 km of FMR that were supported by the VISTA original budget. The same distribution was used to distribute the 87 km of additional roads over the 4 years.
 - (b) In the original design of VISTA, it was assumed that 19% and 6% of the total beneficiary households of 70,000 will have existing Robusta coffee and Arabica coffee respectively. Using the same percentage, it was assumed that out of 10,000 new households; 1,928 and 643 households have existing Robusta coffee and Arabica coffee respectively. The average extent of coffee was assumed at 0.5 ha per households in the original VISTA design. Using the same average, the extent of Robusta coffee and Arabica coffee that will be served by the additional FMR was assumed at 964 ha and 257 ha respectively.
 - (c) In the original design of VISTA, it was assumed that 13% of the total beneficiary households of 70,000 will have existing cocoa lands. Using the

same percentage, it was assumed that out of 10,000 new households; 1285 households have existing cocoa. The average extent of cocoa was assumed at 0.4 ha per households in the original VISTA design. Using the same average, the extent of cocoa that will be served by the additional FMR was assumed at 514 ha.

- (d) The average productivity of existing Robusta coffee and Arabica coffee was assumed at kg 480 and kg 858 per ha respectively. This is 60% of the productivity levels assumed at VISTA as VISTA beneficiaries will have various support services that will help improve the productivity. The field observations of the AF field visit mission verified this yield level.
 - (e) The average productivity of existing cocoa was assumed at kg 611 per ha respectively. This is 60% of the productivity levels assumed at VISTA as VISTA beneficiaries will have various support services, similar to that for coffee, which will help improve the productivity. The field observations of the AF field visit mission verified this yield level.
 - (f) The AF-EFA assumed that the estimated production of both coffee and cocoa will be transported to either traders or processors using new roads. The "without project" situation is represented by having poor roads for transporting coffee and cocoa. It was assumed that there is 20% and 30% avoidable postharvest loss⁵ in quality by weight of coffee and cocoa respectively due to the use of poor roads. This loss is avoided by using improved roads. The field observations of the AF field visit mission verified this level of losses in coffee and cocoa.
 - (g) As a result of drop in quality, it was assumed that the prices of Robusta coffee and Arabica coffee will decrease by 20%, and cocoa by 25%. This drop was also verified in the field.
 - (h) Avoided losses and consequent avoidance of drop in prices of coffee and cocoa are considered as benefits of the new FMR in addition to all other benefits that were listed above.
17. The values of losses estimated on the basis of these assumptions are presented in the EFA excel sheets. The analysis was based on economic prices exactly what was used in the original VISTA analyses.

Financial Analysis

A. Enterprise Budgets

18. The financial profitability parameters of all GM models are presented in **Error! Reference source not found.** (a). The following specific assumptions were used in estimating the indicators:
- (a) The land size under each crop was used for farm modeling which is summarised above. The average size of the crops in the farms were obtained during the design field visits;
 - (b) It is assumed that the size of the farms would remain unchanged, but the productivity improvements would be brought about by providing better management practices and better inputs such as planting material, and credit to cover capital expenditure and working capital;
 - (c) For all farm models, the cash flows were generated for 1 ha unit and thereafter the cash flows were scaled down to represent the cultivation sizes of the crops in the farm. The scaled down extents were used in the project level aggregated analysis;

⁵ The total postharvest loss could be slightly more than this level, and these levels represent the losses that could be avoided by improving transportation.

- (d) The discount rate of 7% was used for the computation of financial profitability indicators which is the current lending rate reported by Financial Market Operations Sub-Sector, Bangko Sentral ng Pilipinas, January 2023 and represent the weighted average cost of capital in the Philippines;
- (e) The beneficiaries will use a portion of the production of vegetables for domestic consumption. However, the total production has been valued and included in the analysis;
- (f) Without Project (WOP) GM parameters were obtained from the reference sources listed in
- (g) Table 4 above. The WP productivity levels were assumed to be of 30-40% higher than the WOP levels which is considered as feasible as per reference sources and the country team;
- (h) The technology adoption rate was assumed at 50% in year 1 (which means 50% of the beneficiaries will apply the full package of technology and obtained the expected increased production), 60% in year 2, 70% in year 3 and 90% in year 4 onwards. The rates, particularly in the first two years, are conservative. On the basis of the current technology situation in the project target group, a gradual increase in the rates are to be expected;
- (i) All the crop models would use family labour for all operations and some hired labour for post-harvest processing activities. Such labour differentiation has been maintained in the GM models. All SMEs, nurseries have both skilled and unskilled labour. Such labour was accounted for accordingly and valued at different wage rates that were presented above; and
- (j) For the new SME enterprises, the WOP scenarios were assumed as the value of a proportion of labour, both skilled and unskilled, that is used in the enterprise. The logic is that this proportion of labour was employed elsewhere before the project, and the enterprise has replaced that labour income by employing them.
- (k) Two types of farm budgets were prepared for cocoa cultivation to capture the two types of markets that the farmers are selling their cocoa beans. One is the ARBO's-run processing centers – 20 in number; and the other is the open market. There are private sector operators who purchase wet non-fermented or partly fermented beans and process to produce the dry cocoa beans. There is slight difference in the farm-gate price of cocoa beans in these two markets: ARBOs pay Peso 58.17/kg from their member-farmers and private sector pays Peso 55.4/kg of wet beans⁶. On average about 84% of the volume of cocoa wet bean production by the VISTA supported farmers will sell in the open market (estimation is in the sheet "CocoaFermented_Dry" – cell D127 of the EFA excel sheets). This is mainly because the ARBOs-run cocoa processing centers will be limited to 20 and with 85% capacity these facilities can process only a limited volume of cocoa beans. The financial profitability of the two type of models were estimated and presented in
- (l) Table 5 and both types are financially viable.
- (m) For coffee, such differentiation was not required as almost the total production of coffee by the VISTA supported farmers would be provided to Green Coffee Processing and Packaging centers, 10 numbers with large processing capacity (1700 mt/year processed coffee beans) and Dehulled and cleaned Coffee Beans production centers, 20 numbers with adequate capacity (EFA excel sheet for details – sheets: "CoffeeProcessing" and "Coffee_Process_Pack").

⁶ Reference for the operation of the private sector and the market prices: Philippine Cocoa Industry Road Map: 2021-2025

19. **Debt Financing.** VISTA would facilitate main stream banks such as Land Bank to provide loans with competitive rates for two main VC products, coffee and cocoa cultivation and related processing enterprises. These loans would be provided as capital expenditure and working capital loans. The terms of the loan products were assumed as one-year repayment period and a 6.5% annual interest rate. The EFA estimated the potential loan requirement and possible repayment schedule for each coffee and cocoa farm models and enterprise models. The financial analyses of the models were carried out with and without debt financing in order to demonstrate the impact of debt financing on the cash flow and the financial profitability indicators. The comparative results are presented in
20. Table **5** (b) below.

Table 5 (a): Financial profitability indicators of a Unit of all GM models that were used in the EFA (FMR, including AF supported FMR has economic values)

Gross margin Model	Net Income:wop (Peso/ha)	Net Income:wop (Peso/ha)[b]	Total cost (Peso/ha)[b]	Incremental NPV (Peso): 7% DR	IRR	B/C ratio	Incremental Return to Labour (Peso/md)	Switching value: Ben	Switching value: Cost
Reforestation: Non-Timber forest products (fuelwood)	884,997	916,005	13,084	156,690	34%	1.98	1,448	-50%	98%
Agro forestry			245,028	369,508	40%	2.01	877	-50%	101%
Cocoa: Rehabilitation: Open Market	29,519	49,587	43,774	415,813	27%	1.62	100	-38%	62%
Cocoa: Rehabilitation: ARBOs	29,519	56,212	48,632	415,813	24%	1.67	153	-76%	321%
Cocoa: New Planting[a]: ARBOs	10,349	101,493	45,833	669,684	41%	4.21	727	-76%	321%
Cocoa: New Planting[a]: Opne Mkt	10,349	93,984	45,833	615,022	37%	4.92	670	-80%	392%
Rehab Robusta Coffee under coconut	2,191	13,636	38,172	100,119	42%	1.62	1,518	-38%	62%
Rehab Robusta Coffee	32,933	14,967	14,308	56,157	16%	1.28	1,569	-22%	28%
New Robusta Coffee under coconut	[c]	31,114	28,350	194,608	27%	1.59	2,149	-37%	59%
New Robusta Coffee	10,349	52,566	62,915	370,344	34%	1.97	2,992	-49%	97%
New Arabica Coffee	10,349	129,015	25,817	861,468	38%	3.79	1,372	-74%	1,372
Rehab Arabica Coffee	70,261	84,804	44,940	72,397	21%	1.31	442	-24%	31%
Banana	-3,487	26,814	65,386	186,442	49%	1.27	236	-21%	27%
Paddy: CIS	62,448	83,943	62,183	59,037	13%	1.20	543	-17%	20%
Cocoa Nursery	3,150	59,698	2,953,836	-1,320,724	-19%	0.94	332	7%	-6%
Cocoa process: Fermented, dried cocoa beans [g]	17,459	141,366	4,670,817	594,303	15%	1.01	1,498	-1%	1%
Coffee process: Dried beans[g]	30,393	235,567	12,573,156	1,807,466	35%	1.02	1,278	-1%	2%
Green Coffee Processing and Packaging (per unit, '000)[g]	2,094	247,779	242,841	35,718	37%	1.02		-1%	2%
Vegetable with drip irrigation	197,227	429,291	35,855	2,835,798	34%	2.44	4,938	-59%	144%
Warehouse Model[e]		1,024,031	1,466,474	4,678,380	20%	1.25	723	-20%	25%
Foot Bridges[d]	2,211,041	1,105,520		3,303,743	50%	3.61		-73%	261%
Farm-to-Market Roads[f]				3,753,127	43%	2.68		-63%	168%
Farm-to-Market Roads Supported by AF facility				3,605,841	52%	2.84		-65%	184%
[a]: Replace maize									
[b] At full development									
[c] Coconut income removed as it is the same WOP and WP									
[d] Total cost saving and other indicators per tank. Construction cost in the EFA tables									
[e] Per warehouse									
[f] Per km. Viability is based on IRR etc									
[g] Labour opportunity cost									

Table 5 (b): Financial profitability indicators of GM models that would receive project supported loan financing

Gross margin Model	IRR		B/C ratio		NPV (7%, 20-years) in Peso	
	With Loan Financing	Without Loan Financing	With Loan Financing	Without Loan Financing	With Loan Financing	Without Loan Financing
Cocoa: Rehabilitation: Open Market	27%	23%	1.54	1.61	281,642	277,770
Cocoa: Rehabilitation: ARBOs	32%	25%	1.67	1.69	349,545	314,586
Cocoa: New Planting: ARBOs	50%	37%	3.41	4.87	738,977	744,438
Cocoa: New Planting: Opne Mkt	51%	35%	3.21	4.50	676,554	672,625
Rehab Robusta Coffee under coconut	104%	38%	1.48	1.54	109,649	106,626
Rehab Robusta Coffee	33%	24%	1.38	1.48	97,088	96,271
New Robusta Coffee under coconut	29%	26%	1.48	1.54	189,689	211,984
New Robusta Coffee	35%	28%	1.70	1.80	368,357	366,019
New Arabica Coffee	37%	31%	2.78	3.36	891,637	887,773
Rehab Arabica Coffee	21%	18%	1.21	1.25	70,861	70,547
Cocoa process: Fermented, dried cocoa beans	16%	14%	1.01	1.01	654,100	654,100
Coffee process: Dried beans	37%	100%	1.01	1.02	1,934	2,330
Green Coffee Processing and Packaging (per unit, '000)	53%	49%	1.02	1.02	56,667	56,803
Warehouse Model	16%	15%	1.13	1.14	24,280	23,110

22. The net benefits, estimated as the net present value (NPV: at 7% financial DR and for 20-year period) and financial internal rate of return of all the models have increased with the help of VISTA interventions (WP case). **Error! Reference source not found.** above summarises the results. The same parameters for enterprises are presented in the table. All models have positive indicator levels and the return to family labour which is higher than the current wage rate in the project area. The indicators of all models suggest the financial worthiness of investing beneficiaries' assets and public funds in these models.

B. Employment generation

23. The EFA excel sheet estimated the employment generation, by way of labour use, as a result of undertaking project supported farm activities and enterprises. The incremental total employment creation is 2,406,546 labour days per year. On the basis of the assumption that 220 days per year as labour-year, i.e. one-person work for 220 days in one year, the total labour days indicates that there is 10,939 additional employment generated owing to the project.

C. Sustainability analysis

24. As mentioned above, the project would facilitate obtaining loans from main-stream banks. The EFA estimated the capacity of the farm models and all other enterprise models to repay the loans that were estimated and also estimated the remaining cash flow to be used for livelihood. It is assumed that 50% of the capital cost would be financed by a loan and the balance by a matching grant. The details are in the EFA excel sheets. The estimation shows that almost all the models have a positive cash flow from 2nd year onwards to support the livelihood after repayment of capital and the interest of credit. The terms of the credit were assumed as 7% annual interest and 1-3 years repayment period. Other family income sources such as wage labour etc have not been used for this analysis.

D. Poverty impact

25. The total beneficiary households, estimated at 77,000 will be benefited by one or a combination of project supported activities. Table 1 summarised the distribution of households that would be benefit by the project supported activities. However, the information is insufficient to estimate the household who would benefit by different combinations of these activities (see Table 1). Therefore, in order to estimate the impact of project benefits on household income increase, which is directly relevant to poverty impact, the weighted average of income from income generating activities that the beneficiary households would be engaged in was estimated and presented in
26. Table 6 (EFA excel sheet has details).
27. Among the activities, banana as observed during the design field visits is cultivated in most of the lands as an intercrop. It is assumed about 27,000 HHs would have banana and would also have increased income. These households too were added to the total HHs in order to estimate the weighted average income (these 27,000 were not counted in the total outreach as it is a double counting). The weighted average annual income per household of five members at full development of the project was estimated at Peso 251,389. The current poverty line of CAR and Region 12 is Peso 141,520 and 132,215 respectively⁷ for a family of five members. This indicates that the project is capable of generating additional income (all income estimates are incremental income) that is over 78% and 90% higher than the poverty lines of CAR and Region 12 respectively.

⁷ Source: Philippine Statistics Authority 2022; https://rsoarmm.psa.gov.ph/sites/default/files/Preliminary%202021%20Full%20Year%20Poverty%20Statistics%20Publication_25Aug2022_1.pdf

Table 6: Number of HHs benefited by each income generating activity, activity income at full development and the weighted average Income

Enterprises / Gross margin models	Units	Nb HH Benefited	Net income at full development (Peso/Unit or farm)	Weighting factor for avg income (%)	Weighted avg income /HH (peso/Yr)
Cocoa Processing: Solar Dryer	Units	1,000	87,720	1.04%	912
Coffee processing: Solar tuner dryer	Units	1,000	218,496	1.04%	2,272
Total Forest RH including agro-forestry & fuelwood	ha	16,289	1,127,791	16.94%	191,028
Nurseries	Nb	90	430,575	0.09%	403
Warehouse	Units	4,000	818,620	4.16%	34,049
Green Coffee Processing and Packaging - processing building	Units	500	287,778	0.52%	1,496
Greenhouse Drip Irrigation (200 sqm)	Units	200	531,262	0.21%	1,105
CIS Rehabilitation	ha	640	96,358	0.67%	641
CIP Construction	ha	450	96,358	0.47%	451
Coffee - New: Robusta	ha	4500	19,992	4.68%	935
Coffee - New: Robusta under coconut	ha	4500	2,605	4.68%	122
Coffee - RH: Robusta under coconut	ha	4500	7,511	4.68%	351
Coffee - RH: Robusta	ha	9000	8,284	9.36%	775
Coffee - New: Arabica	ha	4500	57,454	4.68%	2,688
Coffee - RH: Arabica	ha	4500	47,969	4.68%	2,245
Cocoa Rehabilitation	ha	9000	22,209	9.36%	2,078
Cocoa New planting	ha	4500	45,626	4.68%	2,135
Banana (avg extent 1 ha/HH)	ha	27,000	27,429	28.08%	7,701
Total HHs including Banana (Banana is intercropped)		96,169		100.00%	
Weighted average HH income per year	Peso/HH				251,389
Weighted average HH income per month	Peso/HH				689
Weighted average HH income per day	US \$/day				12.52
Poverty Line: CAR (HH = family of five)	Peso/Yr/HH				141,520
Poverty Line: Region 12 (HH = family of five)	Peso/Yr/HH				132,215

E. Overall Financial Analysis

29. The cashflows of all the enterprise models populated with appropriate targets over the 6-year VISTA project period were aggregated to compute the total gross benefit flow of the VISTA project. The cashflows of the aggregated financial models included loan financing and loan repayments. The total cost is comprised of (i) the VISTA project cost, based on 2023 prices, net of all infrastructure cost and grants provided; (ii) the incremental cost of all farm models and enterprises; and (iii) total loan repayment. The incremental benefits of all farm and enterprise's models were provided the benefit flow, which also include the capital expenditure and working capital loan financing. The Financial Internal Rate of Return (FIRR) is 41% with Net Present Value (NPV) of USD 315 million (Peso 17,378 mn) at 7% financial DR⁸ and the financial benefit cost ratio is 1.27. As a sensitivity test, the NPV and the benefit cost ratio were estimated at 10% DR and the estimation are USD 203 million and 1.24 respectively. The net benefit flow was discounted at 7% to ascertain the break-even point of the project cash flows. At the 7th year (2031), the project will be able to breakeven the total project investment and the beneficiaries' investment during the project period and start generating a positive net benefit flow. Table 7 presents the results of sensitivity analyses and VISTA is financially viable to face all perceivable risk factors. The FMR benefits are included in the economic analysis.

Table 7: Results of the Financial Analysis and the Sensitivity analyses

Sensitivity Analyses	EIRR	B/C Ratio	NPV (Peso mn)	NPV (USD mn)
Base Case	41%	1.27	17,378	315
All cost increase by 10%	26%	1.15	10,936	198
All cost increase by 20%	14%	1.06	4,494	81

⁸ The central bank of the Philippines held its benchmark interest rate for the second straight meeting at 6.25% in June 2023, in line with market expectations, as inflation continued on an easing trend.

All benefits decrease by 10%	24%	1.14	9,198	167
All benefits decrease by 20%	9%	1.02	1,018	18
Cost +10% and benefits -10%	11%	1.04	2,756	50
1 year delay in getting benefits	16%	1.22	9,486	172

Economic analysis

30. The economic analysis was carried out by adjusting the cost and benefits flows that were used in the financial analysis of the VISTA project to reflect economic values. For FMR, the benefits were estimated in economic values and the costs were converted to economic values using the standard conversion factor. In addition to the assumptions made in the financial analysis, the following assumptions were used in the economic analysis.

- (a) The economic investment cost is based on the project cost net of financing for all infrastructure cost (already included in the models), forestry establishment (already in the model), debt financing and debt repayment (as they are transaction payment and no net impact on the national economy in economic terms), and matching grants (already in the models) during the 6-year implementation period generated by COSTAB programme. It deducts the amounts payable for taxes and provisions for price contingencies from the financial costs.
- (b) Benefits of reducing postharvest losses for 10,000 households were included in the economic analysis.
- (c) The following procedure was used to convert all prices of farm, and micro-enterprises to economic prices:
 - (i) using border prices, import parity prices were estimated to value tradable goods (all fertilisers), the computation is presented in the EFA excel sheets;
 - (ii) for all non-tradable goods, standard conversion factor (SCF) of 0.944 was used to adjust the prices – the market distortion includes some degree of protection and over-valuation of Peso in terms of the US dollar – the SCF was computed taking the ratio between Official Exchange Rate (OER)⁹ and Estimated Shadow Exchange Rate (SER)¹⁰ [SCF=ER/SER]; EFA excel sheets presents details; and
 - (iii) VAT rate of 12% was used to remove the tax portion of the prices of the locally traded and tradable goods.
- (d) Shadow wage rate factor is assumed at 0.944, which is the SCF, to account some out-migration, seasonal labour shortages, and semi-urban labour demand. Labour is idle during some periods of the year indicating full employment point has not been reached.
- (e) The economic discount rate (EDR) of 4.58%, which is Scheduled Banks Weighted Fixed Deposit Rate¹¹, was used to represent the Opportunity Cost of Capital.

31. After making the required adjustments to the cash flows of the financial analysis on the basis of the above assumptions, the economic analysis for the VISTA was

⁹ Official Exchange Rate (ER) Jan 2023] IMF rates

¹⁰ Computed: $SER = \frac{[b+(b*c)] + [a-(a*d)]}{[b+a]}$ *e: a = average export value; b = average import values; c = Import Tariff (the average Most Favored Nation tariff rate: MFN is the relevant rate); d = Export duties (export of all business items); and e = Official (or market) Exchange Rate.

¹¹ As of June 2023, the highest bank interest rates in Philippines are offered by SeaBank and GoTyme Bank, which is 5% per year.

carried out. Table 8 and Table 9 present the results of the EFA of the original design with no AF and including AF respectively. The Economic Internal Rate of Return (EIRR) is 38% and the economic benefit cost ratio is 1.31 with the economic discount rate of 5% for the project including AF. The project earns an Economic Net Present Value (ENPV) of USD 356 million and USD 367 million (Peso 19,649 and 20,261 million) respectively for the 20-year period with 5% discount rate. As a sensitivity test to the EDR, the analysis was carried out with 10% economic discount rate. The ENPV and the economic benefit cost ratio are USD 176 million and 1.25 respectively indicating the project is economically viable at a higher opportunity cost of capital.

32. In addition to the quantified economic benefits, VISTA project will generate economic multiplier effects across the rural economy. The enterprises that were expanded in scale or with enhanced productivity would demand for inputs which will create multiplier effects. In addition, some of these enterprises will be graduated to access credit from mainstream financial institutions with low interest rates but with collateral requirement which those enterprise will be able to provide. Such increase in the credit demand would further enhance the broad multiplier effects in the rural economy. Further, VISTA would generate climate benefits through reforestation, soil management, other conservation activities and carbon sequestration. Health benefits attributed better quality drinking water is non-quantified additional benefit. Also, through VISTA, there will be increased tax income to the government, better capacities of the government staff.
33. The additional FMR and the original FMR will also provide qualitative benefits such as increased educational and health benefits by improving the mobility. Also the market competitiveness will be enhanced which will eventually benefit the producers and also the consumers who are utilizing the roads.
34. **Sensitivity analyses** were carried out to assess whether the project is economically robust in light of potential risks that could increase cost of production of enterprise, decrease benefits or delay in realising benefits. The risk factors that have been identified in the project Integrated Risk Matrix were used as the basis to rationalise the sensitivity scenarios.
35. Table 8 presents the risk factors considered and the results of the sensitivity analyses. The project generates EIRRs that are higher than the opportunity cost of capital under all sensitivity scenarios. The analyses indicate therefore that the enterprise models and the overall VISTA project are both financially and economically justifiable even under most of the adverse risky environments. The two extreme conditions of 20% cost increase and benefit reduction with a slightly reduced EIRR, yet viable, alarm the project to monitor for cost escalations and keep adequate controls to maintain the cost as estimated, and undertake training and other capacity building activities for the producers to maintain the productivity level as expected.

Table 8: Results of the Economic Analysis and the Sensitivity analyses – Without Additional Financing

Sensitivity Analyses	EIRR	B/C Ratio (5% EDR, 20-years)	NPV (Peso mn)	NPV (USD mn)	Risk Factor
Base Case	37%	1.30	19,649	356	
All cost increase by 10%	25%	1.19	13,183	239	Project Funds Flow/Disbursement Arrangements
All cost increase by 20%	14%	1.09	6,716	122	
All benefits decrease by 10%	23%	1.17	11,218	203	Vulnerability to environ. conditions

All benefits decrease by 20%	10%	1.04	2,786	50	Vulnerability of target populations and ecosystems to climate variability and hazards
Cost increase by 10% and benefits decrease by 10%	12%	1.07	4,751	86	Resource Efficiency and Pollution Prevention
1 year delay in getting benefits	16%	1.24	12,305	223	Project Budgeting

Table 9: Results of the Economic Analysis and the Sensitivity analyses – With Additional Financing

Sensitivity Analyses	EIRR	B/C Ratio (5% EDR, 20-years)	NPV (Peso mn)	NPV (USD mn)	Risk Factor
Base Case	38%	1.31	20,261	367	
All cost increase by 10%	26%	1.19	13,745	249	Project Funds Flow/Disbursement Arrangements
All cost increase by 20%	15%	1.09	7,229	131	
All benefits decrease by 10%	24%	1.18	11,719	212	Vulnerability to environ. conditions
All benefits decrease by 20%	10%	1.05	3,177	58	Vulnerability of target populations and ecosystems to climate variability and hazards
Cost increase by 10% and benefits decrease by 10%	13%	1.07	5,203	94	Resource Efficiency and Pollution Prevention
1 year delay in getting benefits	17%	1.25	12,841	233	Project Budgeting

36. **Switching value analysis.** This is considered as the percentage change in a variable required to reduce the economic net present value (ENPV) to 'zero' at an economic discount rate of 4.58%. The chosen variables for the analysis are: total economic benefits flow and the total economic cost flow (EFA excel sheets have the analysis). The switching value of the total benefits is -24% (reduced) and total cost is +31% (increased), where the ENPV becomes zero. The results indicate that the project becomes unviable when the farmer producers and enterprises benefits drop by 24%, and total costs, of which 27% is the project cost, increase by 31%, which is marginally sensitive. Regular monitoring and quickly resolving implementation issues when they are flagged are therefore important to maintain the project viability.
37. **Conclusion.** The EFA analyses indicate that the project is adequately viable in financial and economic terms and also has the capacity to face many risk factors while being viable. The project therefore is suitable for receiving public funds for investments.
38. The EFA excel sheets, both for financial and economic values, provide the detail tables listed below.

Country	Philippines
Value Chain Innovation for Sustainable Transformation in Agrarian Reform Communities (VISTA)	
Design EFA	
PriceConversion_FinPack	PriceConversion_FinPack!A1
Prices	Prices!A1
Targets	Targets!A1
Model Results: Financial	
Fin+Economic analysis	Fin+EcoAnalysis!A1
Targets	Targets!A1
Reforestation	Reforest!A1
Agroforestry	AgroForestry!A1
Cocoa processing	CocoaFermented_Dry!A1
Cocoa Nursery	CacaoNursery!A1
Cocoa Rehabilitation: Market model	RHCocoa_Market!A1
Cocoa Rehabilitation: ARBOs model	RHCocoa_ARBO!A1
Cocoa New planting Market model	NewCocoa_Market!A1
Cocoa New planting ARBOs model	NewCocoa_ARBO!A1
Coffee processing	CoffeeProcessing!A1
Coffee packaging	Coffee_Process_Pack!A1
Rehabilitation of Robusta Coffee under coconut	RHRobCF_CN!A1
New Planting of Robusta Coffee under coconut	NewRobCF_CN!A1
Rehabilitation of Robusta Coffee	RHRobCF!A1
New Planting of Robusta Coffee	NewRobCF!A1
New Planting of Arabica Coffee	NewArbCF!A1
Rehabilitation of Arabica Coffee	RHArbCF!A1
Banana	Banana!A1
Maize	Maize!A1
Paddy under irrigation	Paddy_CIS!A1
Green House veg	Veg_GreenHouse!A1
Warehouse model	GodownModel!A1
FootBridge&Trail_Fin	FootBridge&Trail_Fin!A1
FootBridge&Trail_Economic	FootBridge&Trail_Eco!A1
Road_Fin	Road_Financial!A1
Road_Eco	Road_Economic!A1
ARC Selection	ARC selection!A1