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**President's memorandum**  
**Proposed additional financing**  
**Republic of Sierra Leone**  
**Rural Finance and Community Improvement**  
**Programme – Phase II**

Project ID: 1100001710

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**FOR: APPROVAL**

**Action:** The Executive Board is invited to approve the recommendation for the proposed additional financing contained in paragraph 61.

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## Appendices

- I. Updated logical framework incorporating the additional financing
- II. Updated summary of the economic and financial analysis

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### Programme delivery team

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## Financing summary

<b>Initiating institution:</b>	IFAD
<b>Borrower/recipient:</b>	Republic of Sierra Leone
<b>Executing agency:</b>	Ministry of Agriculture, Forestry and Food Security
<b>Total programme cost:</b>	US\$65.6 million
<b>Amount of original IFAD loan:</b>	Special drawing rights (SDR) 7.4 million (equivalent to approximately US\$11.2 million)
<b>Amount of original IFAD grant:</b>	SDR 7.4 million (equivalent to approximately US\$11.2 million)
<b>Terms of original IFAD financing:</b>	Highly concessional
<b>Amount of additional IFAD loan:</b>	US\$4.5 million
<b>Amount of additional IFAD grant:</b>	US\$4.5 million
<b>Terms of additional IFAD financing:</b>	Highly concessional
<b>Amount of second additional IFAD Debt Sustainability Framework (DSF) grant:</b>	US\$15 million
<b>Contribution of borrower/recipient:</b>	US\$8.3 million
<b>Contribution of beneficiaries:</b>	US\$6 million
<b>Financing gap:</b>	US\$5 million

## I. Background and programme description

### A. Background

1. The Rural Finance and Community Improvement Programme – Phase II (RFCIP2)<sup>1</sup> was approved by the IFAD Executive Board in April 2013 for a nine-year period. Its original financing consisted of: (i) an IFAD loan of SDR 7.4 million (equivalent to approximately US\$11.2 million); (ii) a Debt Sustainability Framework (DSF) grant of SDR 7.4 million (equivalent to approximately US\$11.2 million); (iii) counterpart funding from the Government of Sierra Leone of US\$4.5 million; (iv) beneficiary contributions of US\$3.5 million; and (v) cofinancing from the National Social Security and Insurance Trust (NaSSIT) of US\$6.9 million and the International Finance Corporation (IFC) of US\$1 million. However, the NaSSIT and IFC cofinancing never materialized, leaving a financing gap that has been covered with additional IFAD financing of US\$9 million, approved in March 2018, and additional government contributions of US\$249,000.
2. The Ministry of Agriculture, Forestry and Food Security (MAFFS) is the lead implementing agency. The financing agreement was signed on 7 May 2013 with a completion date of 30 June 2022 and closing date of 31 December 2022. A first “no-cost extension” was granted to extend these dates to 30 June 2023 and 31 December 2023, respectively. In June 2023, an additional four-year extension was granted, moving the programme completion date from 30 June 2023 to 31 May 2027. As of 31 December 2022, the RFCIP2 disbursement rate was 99.9 per cent and the first RFCIP2 additional financing was 98.9 per cent.
3. This second additional financing request of US\$15 million from the Government of Sierra Leone responds to the need to further improve the sustainability outlook for RFCIP2 outcomes. The requested additional financing will be invested over the four additional years.

### B. Original programme description

4. RFCIP2’s goal is to contribute sustainably to reducing rural poverty and household food insecurity. The development objective is to improve access to rural financial services to foster agriculture sector development.
5. The 285,000 households targeted represent 35 per cent of Sierra Leone’s rural population.<sup>2</sup>
6. RFCIP2 consists of two components:
  - (i) **Component 1.** Strengthening and expanding the rural finance system.
    - **Subcomponent 1.1.** Sustainable and autonomous rural financial institutions.
    - **Subcomponent 1.2.** Promotion of tailored agricultural financial products (through the agricultural finance facility (AFF) and the capitalization of rural finance institutions (RFIs), made up of community banks, and financial service associations (FSAs) operating under the regulatory supervision of their apex bank).
  - (ii) **Component 2.** Programme management and coordination, and knowledge generation.

<sup>1</sup> [EB 2013/LOT/P.2/Rev.1.](#)

<sup>2</sup> RFCIP2 project design report (PDR): The population was estimated at 5.8 million, two thirds of whom lived in rural areas, p.1.

## II. Rationale for additional financing

### A. Rationale

7. Rural finance and financial inclusion remain the key priorities for Sierra Leone's agricultural and rural development. RFCIP2's rural finance network has become the largest banking system in rural areas of the country. It has thus far been able to reach 21 per cent of rural households (almost 244,000 households) with financial services, and to increase the proportion of RFI agricultural loans from 18 per cent (2018) to nearly 30 per cent (2022). Over 88 per cent of households have acknowledged improvements in their overall economic situation after receiving loans<sup>3</sup> and investing them in viable rural/agricultural businesses.
8. Over a roughly 10-year implementation period, 76 RFIs were established and are currently operational, with no dependence on IFAD resources to cover administrative costs. Seventeen of them are community banks that provide basic financial services in rural areas where commercial banks are averse to operating due to high transaction costs, and 59 are financial services associations, which are community-owned and managed financial institutions that mobilize savings in the form of equity to members in rural areas and provide them with loans for grassroots businesses. A formally constituted technical assistance agency has been converted to an apex bank, with 50 per cent ownership by the community banks and financial services associations in the country, with the remaining 50 per cent held in trust for other potential institutional investors.
9. This commendable programme performance, evidenced through the report produced by the Independent Office of Evaluation of IFAD on the country programme and through cross-boarder learning visits from Liberia and Nigeria, has been recognized by IFAD with a performance bonus in 2021.<sup>4</sup> One of the lessons learned is that having a locally constituted board to oversee management of the various RFIs is a key sustainability factor. Moreover, making investment capital available in rural economies creates an environment for rural entrepreneurship to thrive.
10. Nonetheless, significant challenges remain to ensure the consolidation and sustainability of programme achievements and their expansion:
  - (i) **Beneficiary and poverty focus.** The AFF funding contributed to a more than 11 percentage point increase in agricultural loans between 2018 and 2022 across all RFIs, cumulatively reaching 2,314 rural people. Notwithstanding, unmet demand for funding from the AFF remains high.<sup>5</sup> The scaling up will aim at addressing this demand and expanding the range of appropriate products and services to lower-income, excluded and underserved rural communities.
  - (ii) **Strengthening and sustainability of intermediary financial supply institutions.** RFIs lack the capabilities to provide cost-effective last-mile competencies for the tailored products and services needed by rural clients, such as crop cycle-sensitive repayment loans and diverse climate-smart renewable energy loans. Through this scaling up, the investment in the online platform for intermediary financial institutions will increase their product range and appropriateness while boosting their asset base, thereby strengthening them financially to crowd in private sector capital. The transformation of reflows from agricultural onlending funds into a development fund further contributes to the sustainability of the RFIs.

<sup>3</sup> RFCIP2 (2020): Beneficiary perception survey.

<sup>4</sup> RFCIP2 (2022): Annual progress report.

<sup>5</sup> The unvetted collated list of unmet loan applications from all community banks and FSAs amounted to \$12.25 million as of February 2023. It is estimated that at least a third of this amount could meet the RFI credit approval threshold and be eligible for disbursement.

- (iii) **Close alignment with government policies and initiatives.** The activities covered by this second additional financing are particularly aligned with the objectives of the second National Strategy for Financial Inclusion (NSFI-2) (2022–2026), which has recently endorsed the Government’s strategy of relying on the apex bank and its network of RFIs for the implementation of financial inclusion activities to achieve inclusive growth.

### **Special aspects relating to IFAD's corporate mainstreaming priorities**

11. RFCIP2 was approved prior to the Eleventh Replenishment of IFAD’s Resources (IFAD11) and was therefore not screened for IFAD11 mainstreaming criteria. However, the programme embeds and effectively addresses these topics, particularly gender, youth and climate issues.
12. **Gender.** Women are the heads of about one third of households but are constrained by cultural customs and norms that perpetuate their vulnerabilities, including challenges in accessing land, skills and capital. The Government’s gender equality and women’s empowerment policies will be supported under the scaling up through the revitalization of gender-sensitive programmes such as the Gender Action Learning Systems (GALS) trainings to improve women’s skills, knowledge and leadership capacity. A social inclusion focal point will be also recruited to strengthen targeted women's access to agricultural and non-agricultural loans.
13. **Youth.** The youth of Sierra Leone are characterized by low technical and vocational skills, limited involvement in policy dialogue, few economic opportunities and high unemployment rates, especially in rural areas. The programme will put greater emphasis on youth inclusion in programme activities and pursue support for policy engagement to promote implementation of the National Youth Policy, which was revised in 2020 with specific priorities in access to livelihood opportunities (including agriculture).
14. **Nutrition.** As stipulated under the Medium-Term National Development Plan 2019–2023, nutrition remains a priority for the Government of Sierra Leone. The country has made progress toward meeting nutritional targets for maternal, infant and young child nutrition, stunting and wasting.<sup>6</sup> However, some 2.2 million people are considered undernourished.<sup>7</sup> Through the scaling up, RFCIP2 will increase funding to agricultural producers and enterprises involved in food production and processing. This will contribute to increased food availability in markets and eventually improve food quality, thereby benefiting rural communities.
15. **Climate and environment.** According to the World Risk Report 2021, Sierra Leone has a climate risk index of 9.40 (ranking 47<sup>th</sup> out of 181 countries) due to high vulnerability and lack of coping and adaptive capacities.<sup>8</sup> The major climate risks include changes in precipitation and temperature that result in lower yields, increased water stress and natural disasters. Annual deforestation is estimated at about 20,000 ha and is caused by agricultural expansion, including the traditional bush-fallow cultivation system, logging, wood removal for fuelwood and charcoal, and mining activities.
16. Through the scaling up, capacity-building activities and funds will be made available to support business adaptation and mitigation plans that include climate-smart inputs and access to renewable energy technologies (RETs).

## **B. Description of geographical area and target groups**

17. RFCIP2 is designed to be national in scope, although the establishment of RFIs has been guided by clearly defined criteria that include: (i) the potential for poverty

<sup>6</sup> Global Nutrition Report. 2022. <https://globalnutritionreport.org/resources/nutrition-profiles/africa/western-africa/sierra-leone/>.

<sup>7</sup> FAO.2018-2020. FAOSTAT-Sierra Leone. <https://www.fao.org/faostat/en/#country/197>.

<sup>8</sup> World Risk Report 2021. BündnisEntwicklungHilft, Ruhr University Bochum – Institute for International Law of Peace and Conflict 2021. [https://weltrisikobericht.de/wp-content/uploads/2021/09/WorldRiskReport\\_2021\\_Online.pdf](https://weltrisikobericht.de/wp-content/uploads/2021/09/WorldRiskReport_2021_Online.pdf).

reduction and employment creation; (ii) economic growth potential; and (iii) coverage by ongoing IFAD-supported operations. The geographical area of RFCIP2 will remain unchanged with the scaling up.

18. RFCIP2 targets two groups: (i) micro and small rural entrepreneurs; and (ii) small- and medium-scale farmers. Both groups are willing to boost agricultural production levels to shift from subsistence and low-yield farming to commercial agriculture.
19. The original target was to reach 285,000 households (or 35 per cent of the country's rural population) with financial services. Through the scaling up, the programme is expected to reach an additional 39,496 households, bringing the revised overall outreach to 324,496 households.
20. Within the scaling up, the programme will reinforce its targeting strategy through pro-poor and smallholder farmer-friendly financial products and ensure that beneficiaries include a minimum of 40 per cent women and 30 per cent youth by leveraging gender- and youth-sensitive products.

### **C. Components, outcomes and activities**

21. RFCIP2 is operationalized through two components that will both benefit from the scaling up. The activities planned are consistent with the logical framework and the theory of change.
22. **Component 1. Strengthening and expanding the rural finance system.** This component seeks to expand the target group's access to rural financial services in a sustainable manner. The two subcomponents address the institutional arrangements and resources to increase the availability of key products for clients.
23. **Subcomponent 1.1. Sustainable and autonomous rural financial institutions.** The programme has successfully created the largest rural finance network in Sierra Leone, and the network is on track to become sustainable with the potential to increase its outreach and range of services for the rural poor. Beneficiary surveys indicate an incremental level of trust and beneficiary satisfaction with the services provided by RFIs.<sup>9</sup>
24. The proposed scaling up will provide resources for: (i) RFIs to computerize and interconnect their operations to create a robust platform for the delivery of a wide range of services, which includes linking them to national payment systems (for check clearing, electronic transfers, remittances, etc.); (ii) reviewing the operating model for the apex bank to increase its sustainability; and (iii) providing capacity-building to actors on both the supply side (digitalized financial services, operating procedures to improve risk management and institutional performance, etc.) and the demand side (financial education and empowerment, digitalized finance education, etc.).
25. **Subcomponent 1.2. Promotion of tailored agricultural financial products.** This subcomponent includes a dedicated line of credit or an available AFF for both community banks and FSAs and a capitalization facility for community banks. Together, these two funds promote and make more accessible rural and agricultural finance products to foster agricultural production and commercialization. The scaling up will make it possible to address the unmet demand of RFI clients for loans to finance productive activities via increased loanable funding and appropriate products and services.
26. **Component 2. Programme management and coordination, and knowledge generation.** This component is aimed at facilitating effective and efficient programme management, monitoring and evaluation (M&E) and knowledge generation. The scaling up will be used to strengthen this function by recruiting several additional staff such as a rural finance officer (filling a vacancy), a

<sup>9</sup> IFAD Supervision Mission Report (June 2022).

procurement officer (to coordinate the extensive procurement of computerization activities) and a gender/youth specialist.

## D. Costs, benefits and financing

### Programme costs

27. The total cost of RFCIP2 following this scaling up would amount to US\$65.6 million, disaggregated as follows: (i) US\$31.3 million from IFAD's original investment; (ii) US\$15 million from the IFAD scaling up; (iii) US\$5.9 million from beneficiaries; and (iv) US\$5.2 million from the Government. The remaining US\$3 million is expected to be financed through government reflows. There is a financing gap of US\$5 million that may be covered through the NaSSIT and/or international partners such as the World Bank and African Development Bank (AfDB).
28. **Financing by component.** Component 1 will receive an additional US\$11.6 million (78 per cent of IFAD's additional financing). This funding is allocated as follows: subcomponent 1.1, sustainable and autonomous rural financial institutions, will receive US\$7.0 million to digitalize RFI operations, widen the range, and improve the quality of the products and services provided; and subcomponent 1.2, promotion of tailored agricultural financial products, will together provide up to US\$4.6 million to improve funding to farmers and micro and small entrepreneurs for productive investments. Component 2, project management and coordination, and knowledge generation, will account for an additional US\$3.3 million (22 per cent of this additional financing).

Table 1

### Original and additional financing summary

(Thousands of United States dollars)

	<i>Original financing</i>	<i>Additional financing</i>	<i>Total</i>
IFAD loan/grant	31 316	15 000	46 316
Financing gap	-	5 000	5 000
Government cofinancing from reflows	-	3 050	3 050
Government	4 714	581	5 295
Beneficiaries	3 477	2 500	5 977
<b>Total</b>	<b>39 507</b>	<b>26 130</b>	<b>65 637</b>



Table 2  
**Additional financing: programme costs by component (and subcomponent) and financier**  
 (Thousands of United States dollars)

<i>Component/subcomponent</i>	<i>IFAD additional financing</i>		<i>Financing gap</i>		<i>Government cofinancing from reflows</i>		<i>Government</i>		<i>Beneficiaries</i>		<i>Total</i>
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>In-kind</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>
<b>1. Strengthening and expanding the rural finance system</b>											
1.1 Sustainable and autonomous rural financial institutions	7 013	82	1 000	12	-	-	562	0.7			8 575
1.2 Promotion of tailored agricultural financial products	4 680	33	4 000	28	3 050	21	9	0.1	2 500	18	14 238
<b>2. Project management and coordination, and knowledge generation</b>	3 307	100	-	-	-	-	10	0.2			3 317
<b>Total</b>	<b>15 000</b>	<b>57</b>	<b>5 000</b>	<b>19</b>	<b>3 050</b>	<b>12</b>	<b>581</b>	<b>2</b>	<b>2 500</b>	<b>10</b>	<b>26 130</b>

Table 3  
**Additional financing: programme costs by expenditure category and financier**  
 (Thousands of United States dollars)

<i>Expenditure category</i>	<i>IFAD additional financing</i>		<i>Financing gap</i>		<i>Government cofinancing from reflows</i>		<i>Additional Government</i>			<i>Beneficiaries</i>		<i>Total</i>
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Government</i>			<i>Amount</i>	<i>%</i>	<i>Amount</i>
							<i>Cash</i>	<i>In-kind</i>	<i>%</i>			
<b>Investment costs</b>												
1. Equipment and materials	5 370	90	-	-	-	-	581	10				5 950
2. Consulting services and training	2 861	100	-	-	-	-	-	-				2 861
3. Investment capital	3 917	29	4 000	30	3 050	23	-	-	2 500	19		13 469
4. Civil works	-	-	1 000	100			-	-				1 000
<b>Total investment costs</b>	<b>12 780</b>	<b>52</b>	<b>5 000</b>	<b>22</b>	<b>3 050</b>	<b>13</b>	<b>581</b>	<b>3</b>	<b>2 500</b>	<b>11</b>		<b>23 278</b>
<b>Recurrent costs</b>												
1. Recurrent	2 852	100	-	-	-	-	-	-				2 852
<b>Total recurrent costs</b>	<b>2 852</b>	<b>100</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>				<b>2 852</b>
<b>Total</b>	<b>15 000</b>	<b>57</b>	<b>5 000</b>	<b>19</b>	<b>3 050</b>	<b>12</b>	<b>581</b>	<b>2</b>	<b>2 500</b>	<b>10</b>		<b>26 130</b>

Table 4  
**Programme costs by component and programme year (PY)**  
 (Thousands of United States dollars)

<i>Components/subcomponents</i>	<i>(RFCIP) up to 2022</i>	<i>PY1</i>	<i>PY2</i>	<i>PY3</i>	<i>PY4</i>	<i>Total</i>
	<i>Amount</i>	<i>Amount</i>	<i>Amount</i>	<i>Amount</i>	<i>Amount</i>	<i>Amount</i>
<b>1. Strengthening and expanding the rural finance system</b>						
1.1 Sustainable and autonomous rural financial institutions	29 006	6 803	989	395	389	37 581
1.2 Promotion of tailored agricultural financial products	5 000	5 628	3 782	2 733	2 095	19 238
<b>Subtotal</b>	<b>34 006</b>	<b>12 431</b>	<b>4 771</b>	<b>3 128</b>	<b>2 484</b>	<b>56 819</b>
<b>2. Project management and coordination, and knowledge generation</b>						
	5 501	1 048	723	723	823	8 818
<b>Total</b>	<b>39 507</b>	<b>13 479</b>	<b>5 494</b>	<b>3 851</b>	<b>3 307</b>	<b>65 637</b>

### **Financing and cofinancing strategy and plan**

29. Total IFAD financing would increase from US\$31.3 million to US\$46.3 million. Furthermore, US\$3 million is expected to be financed from government reflows. The scaling up comes with a financing gap of US\$5 million, which may be covered through NaSSIT and/or international partners such as the World Bank and AfDB. The Government contribution for scaling up has been estimated at US\$0.581 million in the form of tax exemptions, while the beneficiary contribution is estimated at US\$2.5 million.

### **Disbursement**

30. Disbursement arrangements will remain unchanged as per the RFCIP2 financing agreement. The disbursement of IFAD funds will flow through a designated account in United States dollars.
31. Withdrawal applications will be prepared by the National Programme Coordination Unit (NPCU) and submitted through interim financial reports under the report-based mechanism. Further details concerning disbursement will be provided in the programme financial management and financial control arrangements letter and the financing agreement.

### **Summary of benefits and economic analysis**

32. The overall programme benefits stream has been computed at the baseline of both the programme goal and objective. It is estimated that scaling up will yield an economic internal rate of return (EIRR) of 21 per cent and have a net present value of US\$27.6 million (at an average discount rate of 10 per cent). The scaling up will be highly profitable from an economic standpoint.
33. A sensitivity analysis shows that the EIRR drops to 17 per cent with a 20 per cent increase in programme costs. With a 10 per cent increase in programme costs, the EIRR drops to 18 per cent. Such cost increases could arise from the higher cost of running the digitalized infrastructure without a commensurate growth in income. A one- or two-year delay in aggregate programme benefits still yields an EIRR of 17 per cent and 14 per cent respectively. The sensitivity analysis shows that the programme remains a highly attractive investment.
34. Sources of incremental scaling-up benefits arise significantly from subcomponent 1.1. Sustainability and autonomy are enhanced through the confidence that clients would have in the supported RFI. Further assessment of this digitalization is presented in appendix II.

### **Exit strategy and sustainability**

35. Significant elements of the programme exit strategy are already embedded in the activities of RFCIP2:

- **Critical mass, economies of scale and sustainability.** The computerized interconnected RFI network provides a critical mass to benefit from the economies of scale, additional income streams from new products, quality service, efficiency, cost savings and hence, greater profitability and operational and financial self-sufficiency. The solar-powered (RETs) computerization of the network will enhance interoperability with other commercial financial institutions and the Central Bank of Sierra Leone.
- **Building empowered beneficiaries and clients.** Through financial education and empowerment, and availing of onlending funds to support farmers engaging in agriculture as a business, a network of stronger clients will be built, providing incentives in rural communities toward agricultural and rural micro, small and medium-sized enterprise development.
- **Stronger RFI model and capitalization.** The apex bank's current operating model will undergo detailed study to consolidate network operations. The modeling also includes planned conversion of the AFF to a revolving agricultural development fund that will be dedicated to financing short-, medium- and long-term investments in smallholder agriculture and to sustaining farming activities, while augmenting network resources and sustainability.

### III. Risk management

#### A. Risks and mitigation measures

36. The key implementation risks assessed at programme design remain, and mitigation measures have been properly implemented. However, a few risks will require serious attention in the implementation of the scaling up:
- **Country context.** An uncondusive government policy environment coupled with potential political interference in programme implementation was rated at medium at design. Operating financial inclusion policies and emerging agricultural policies are combining well to provide an unencumbered implementation framework. The open competitive process for hiring persons with private sector backgrounds for key positions will be retained.
  - **Institutional capacity for implementation and sustainability.** The risk that community banks and FSAs lack the capacity to maintain healthy portfolios and ensure linkage with agricultural clients has been mitigated with the technical guidance and oversight of the apex bank. The risk of the apex bank lacking management capacity is deemed less perilous than its financial sustainability. A comprehensive study is proposed to ensure that the RFI model achieves operational efficiency, profitability and sustainability.
  - **Programme procurement.** The risk that the borrower's regulatory and institutional capacity and practices are inadequate for carrying out procurement in a manner that optimizes value for money is deemed medium. A procurement officer will be recruited for the NPCU to support the scaling up, which has a significant procurement content. The officer will also provide capacity-building support to the apex bank staff that will be involved in the RFI digitalization effort.
  - **Fiduciary risks.** At the midterm review, the overall fiduciary risks were assessed as medium. Staffing positions were formalized through an open competitive process, and disbursement procedures streamlined to performance-based approaches regarding the funding of the apex bank. During the supervision mission in August 2022, finance unit staffing deficiencies were considered the major issue; however, the accountant that resigned has been replaced. Other issues found were delays in the submission and approval of the annual workplan and budget (AWPB) and

non-automation of the fixed asset register. Overall, financial risks are monitored during the quarterly meeting of programme fiduciary staff, the IFAD ICO and the finance officer.

## **B. Environment and social category**

37. The environmental and social risk is classified as medium. As a stand-alone rural finance operation, the programme is not complex and does not involve activities with high potential for harming people or the environment or impacting environmentally or socially sensitive areas. The potential direct and indirect adverse risks and impacts on human populations or the environment are unlikely to be significant and could eventually be easily mitigated in a predictable manner.
38. The social risk is medium, with threats to human security unrelated to the programme. The programme will in fact increase financial and social inclusion, reduce poverty, boost income and improve household assets. Capacity-building will be undertaken for the programme to mitigate social risks and impacts.

## **C. Climate risk classification**

39. The climate risk is currently assessed as medium. Sierra Leone's climate is subject to extreme events such as flooding and drought, with future changes in temperature, rainfall and extreme weather events affecting agricultural productivity. Sierra Leone also has high climate vulnerability due primarily to its low adaptive capacity. However, RFCIP2 does not support investments or install infrastructure in any climate-sensitive areas.
40. The impact study for RFCIP2 has shown that the resilience of poor rural beneficiaries has increased through access to finance. Income growth has also increased the number of beneficiaries now using solar energy.
41. RFCIP2 is investing in institutional development and capacity-building for rural institutions, which will become more resilient through the adoption of green technologies without extensive additional costs.

## **IV. Implementation**

### **A. Compliance with IFAD policies**

42. The programme is aligned with the country strategic opportunities programme (COSOP) for Sierra Leone 2020–2025 and contributes to the three strategic objectives of the IFAD Strategic Framework 2016–2025.
43. The programme is aligned with IFAD's Inclusive Rural Finance Policy (2021), as it seeks to strengthen the capacity of the RFI network to sustainably serve its target market in the rural economy. RFCIP2 scaling up will adopt IFAD's Poverty Targeting Policy to ensure greater programme adherence to IFAD mainstreaming themes.

### **B. Organizational framework**

#### **Management and coordination**

44. As per the programme design, an NPCU has been created in the MAFFS to implement the programme. Programme management and coordination arrangements have performed creditably so far. These arrangements will not change and will be spearheaded by the NPCU and supervised by both IFAD and the Government of Sierra Leone. Key staff will be augmented to improve results under the scaling up, particularly in procurement, rural finance, social inclusion and M&E.

#### **Financial management, procurement and governance**

45. **Financial management.** The financial management arrangements of the ongoing programme will be retained. The scaling up will be implemented through the Government's financial management systems and will comply with procedures and systems consistent with international accounting standards and government requirements. MAFFS will be responsible and accountable to the Government and

- IFAD for the proper use of funds pursuant to the financing agreement. The core programme financial management processes will be aligned with country systems and IFAD requirements.
46. The NPCU will consolidate the programme budget using a bottom-up approach based on a participatory exercise that includes all programme parties. Consolidated AWPBs will be submitted for approval 60 days before the start of the financial year.
  47. Initial advances for the scaling up will be provided to meet expenditures for the first six months of implementation. Further advances will be withdrawn using the revolving fund modality and report-based disbursement method. The programme will submit interim financial reports indicating progress against components and categories vis-à-vis the AWPB, disaggregated by financier and submitted on a quarterly basis to justify the funds used and withdraw further advances from the accounts.
  48. Existing internal controls will be strengthened to protect programme funds against any financial impropriety. The financial management team will conduct a monthly budget analysis, bank reconciliations and proper oversight of implementing partners' activities. The MAFFS' Internal Audit Unit will conduct quarterly reviews and report directly to the Ministries of Finance and Agriculture. The internal audit reviews will cover all programme activities and ensure compliance with the recommendations of the supervision missions, external audit, government directives, etc.
  49. **Retroactive financing.** The additional financing includes provision for retroactive financing. As an exception to the General Conditions for Agricultural Development Financing, the Government will be allowed to submit a claim for reimbursement of IFAD-eligible expenditures incurred under the programme during the period after 1 July 2023 up to the date the additional financing agreement enters into force. Since the original financing has almost entirely been disbursed (98.95 per cent), this provision should allow the programme to carry on without disruption (drawing on prefinancing by the Government) while waiting for the additional financing to enter into force.
  50. In any event, the programme activities and components that will be prefinanced by the Government and their proposed corresponding amount(s) shall together not exceed 10 per cent of the total additional financing. The financing for the retroactive financing amount will be drawn from the IFAD performance-based allocation system for Sierra Leone.
  51. The Government prefinances retroactive expenses at its own risk. If the additional financing is not approved by the IFAD Executive Board, the additional financing agreement does not enter into force, or the expenditures are not considered eligible according to the General Conditions for Agricultural Development Financing, the expenses will not be reimbursed. Reimbursement of retroactive financing will be included in the programme's first financial statements and audited, with appropriate separate disclosure of the amount in the notes to the accounts.
  52. **Procurement.** Procurement of works, goods and services under the scaling up will continue to be carried out under the provisions of the national procedures (Public Procurement Regulation and Manual of 2020), as prescribed by the Public Procurement Act of December 2016, insofar as they are compatible with the relevant IFAD guidelines and prior-review requirements up to the threshold set for goods, works and services. Each contract to be financed with IFAD financing will be included in the procurement plan prepared by the NPCU and agreed upon with IFAD.
  53. Direct contracting, single-source selection, fixed-budget selection, quality-based selection and least-cost selection methods will be selected on a case-by-case basis.

The scaling up of software arrangements will need to be sufficiently justified in Open Software.

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

54. **Planning, monitoring and evaluation.** The M&E function has been creditably implemented under RFCIP2, albeit with limited manpower, which will be rectified with at least one additional staff member. The programme will build on the existing M&E system used for results tracking and programme management. The programme will prepare AWPBs in a participatory manner, reflecting the input of beneficiaries and other stakeholders to allow for timely approval by the national steering committee.
55. **Learning, knowledge management and strategic communications.** Capturing and documenting lessons and innovations will remain an integral part of the RFCIP2 knowledge management and communication activities, while the focus on thematic reporting and studies will be intensified.
56. The scaling up will finance the documentation and sharing of lessons learned through professional publications and documentaries to be distributed during policy dialogues and knowledge capitalization workshops. The scaling up will also support the organization of RFCIP2 exit strategy implementation meetings with relevant stakeholders to ensure the sustainability of programme achievements.

### **D. Proposed amendments to the financing agreement**

57. The financing agreement will be amended to incorporate the additional financing of US\$15 million which, together with the original financing, will bring the total IFAD contribution to US\$46.3 million.

### **V. Legal instruments and authority**

58. An amendment to the financing agreement between the Republic of Sierra Leone and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient. The signed financing agreement will be amended following approval of the additional financing.
59. The Republic of Sierra Leone is empowered under its laws to receive financing from IFAD.
60. 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**

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

RESOLVED: that the Fund shall provide a Debt Sustainability Framework grant to the Government of the Republic of Sierra Leone in an amount of fifteen million United States dollars (US\$15,000,000) 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/notes
	Name	Baseline (December 2022)	Midterm	Original end target	New End target	Source	Frequency	Responsibility	
Outreach						Apex Bank progress reports, NPCU Impact studies	Quarterly	NPCU	Rural communities participate actively in the activities of the programme
	Number of persons receiving project services (men and women) (CI. 1)	70,000	174,268	285,000	324,496				
	<i>Women (At least 40%)</i>		69,707		129,798				
	<i>Youth (At least 30%)</i>		52,280		97,348				
	Corresponding number of households reached (CI. 1a)	42,000	174,268	285,000	324,496				
	Estimated corresponding total number of households members (CI. 1b)	252,000	1,045,608	1,710,000	2,109,224				
Project/programme goal	<b>Rural poverty and household food insecurity reduced on a sustainable basis through access to rural finance for 285,000 households</b>								
	Reduction in the prevalence of child malnutrition (stunting), by gender	34.10%	28.80%	31.30%	31%	VAM, UNICEF, AHTS, WFP, reports	Baseline, and completion		Income from economic activities will be used on household improvement
	Number of households with improvement in household assets ownership index, based on additional assets	0	100,000	285,000	300,000	Household and impact surveys	Baseline, Midterm and Completion	NPCU	
Development objective	<b>Access to rural financial services is improved, enabling development of the agricultural sector</b>								
	Number of households reporting using rural financial services (CI 1.2.5)	70,000	174,268	285,000	324,496	<ul style="list-style-type: none"> <li>Rapid assessment</li> <li>Household and impact surveys</li> </ul>	Baseline, Midterm and Completion	NPCU, Apex Bank	Rural communities participate actively in the activities of the programme
	CB/FSA shareholders/ depositors receiving agricultural loans	7,000	70,000	105,000	195,000	Apex annual reports	Annually	Apex Bank	
	Increase in farm incomes through agricultural financial products (US\$/ha)	N/A	350	350	350	Household and impact surveys	Baseline, Midterm and Completion	NPCU, Apex Bank	
Component 1: Consolidation of the rural finance system									

<b>Outcome 1</b> Establishment of a viable and sustainable rural financial system	Sub-component 1a: Sustainable and autonomous rural financial institutions (CBs, FSAs and the APEX)									
	1.2.7 Partner financial services providers with operational self-sufficiency above 100%					Apex annual and external audit reports	Bi-annually and annually	NPCU and Apex Bank	<ul style="list-style-type: none"> <li>Rural financial institutions operating sustainably</li> <li>Government monetary and fiscal policies and macro-economic environment conducive for rural financial institutions operations</li> </ul>	
	FSA	N/A	29	59	59					
	CB	N/A	12	17	17					
	Percentage of partner financial service providers expressing satisfaction with services of the Apex Bank	74%	85%	100%	100%	Outcome surveys	Mid-term and endline			
	Average in share capital of FSAs until completion (share value adjusted to reflect the current inflation)					Apex annual and external audit reports	Bi-annually and annually			
	FSA	\$24,338	\$30,000	\$70,000	\$40,000					
	CB	\$44,199	\$55,000	\$85,000	\$70,000					
	Percentage of partner financial institutions fully compliant with BoSL's regulation of minimum capital requirements					APEX annual reports and BoSL annual reports	Annually			
	FSA	3% - 2 out of the 59	10%	100%	20%					
	CB	35% - 6 out of 17)	50%	100%	60%					
	Percentage of partner financial service providers (RFIs) with PAR ≥30 days below 5% (CI 1.2.6)					APEX annual reports and BoSL annual reports	Annually			
	FSA	14%	30%	60%	100%					
	CB	12%	30%	60%	100%					
	<b>Output 1.1</b>	1.1.6 Financial service providers supported in delivering outreach strategies, financial products and services to rural areas	49	77	77	77	APEX and project reports			Quarterly
<b>Outcome 2</b> Agricultural finance facility (AFF) and CB capitalization fosters agricultural	Component 1: Consolidation of the rural finance system									
	Sub-component 1b: Promotion of agricultural financial products									
	Yields/ha or percentage increase in yields/ha (rice)	1.68 MT/Ha	2MT/Ha	4MT/ha	3MT	Outcome & HH surveys	Bi-annually/ Annually	NPCU and Govern ment	Beneficiary communities access and utilize agricultural loans	



production and commercialization	Percentage of rice production commercialised	35%	40%	30%	50%	Outcome and household surveys	Bi-annually/ Annually	NPCU	
	Percentage in gross agricultural loan portfolio					APEX annual reports and BoSL annual reports	Bi-annually/ Annually	NPCU	Rural financial institutions operating sustainably Government monetary and fiscal policies and macro-economic environment conducive for rural financial institutions operations
	<i>FSA</i> s	4.30	4.30	45	45				
	<i>CB</i> s	16	16	40	45				
<b>Output 2.1</b> Accessibility of developed agricultural financial products	Number of persons in rural areas accessing financial services (savings, credit, insurance, remittances) <b>(CI 1.1.5)</b>	245,920	279,789	285,000	324,496	APEX annual reports and project reports	Quarterly and annually	NPCU and Apex Bank	
	Number of persons in rural project areas trained in financial literacy and/or use of financial products and services <b>(CI 1.1.7)</b>	1,194	90,000	150,000	200,000	APEX reports and Program monitoring reports National Statistics	Quarterly and annually	NPCU and Apex Bank	<ul style="list-style-type: none"> <li>Rural communities willing to participate in the trainings</li> </ul>
	<i>Women (At least 40%)</i>		36,000		80,000				<ul style="list-style-type: none"> <li>RFIs are able to provide training to rural communities</li> </ul>
	<i>Youth (At least 30%)</i>		27,000		60,000				

## Updated summary of the economic and financial analysis

The updated economic and financial analysis is presented in two parts: [1] Brief on additional finance investments and their potential impact on project objectives; and [2] Updated summary of RFCIP II economic and financial analysis.

### [1] Brief on Additional Financing investments and impact on project objectives

A main outcome of RFCIP II is to develop financial services to foster agricultural production and commercialization in Sierra Leone, and up to a third of the rural poor would have access to rural finance services; in so doing, farmers will be able to improve their agricultural production potential as they have the financial resources to buy inputs that will lead to increased production output<sup>10</sup>.

**AF Investments and Implementation Strategy:** To achieve its objectives, the Programme developed a strategy of capacitating and resourcing intermediary rural financial institutions, that is, the CBs and FSAs under the auspices of an apex bank (as is best practice), to improve access to finance to target beneficiaries. This is operationalized by (i) providing *on-lending funds* to support farming and related activities and rural micro and small enterprise activities, and (b) by improving the operating efficiencies and the *technology-induced or digitalized value proposition of rural financial institutions* to be better placed to serve their rural clients sustainably.

Thus, the additional financing has allocated funds (of up to US\$4.59 million) to partially address unmet demand from the on-lending and agricultural financing facility (AFF)<sup>11</sup>.

The other major allocation of the additional financing is towards digitalizing the rural financial institutions network to better serve the needs of the RFCIP II target group.

**Rationale for Digitalization:** Emerging trends reinforce the catalytic effects of digitalizing the rural finance network in the country<sup>12</sup>. Indeed, various IFAD missions have observed that digitalizing the rural finance network will enable them to cost effectively deepen their rural outreach in the medium term, and significantly increase the competitiveness of the RFIs by expanding the range and quality of services to the rural beneficiaries thereby mitigating the risk of losing clientele and their relevance in rural areas.

In recognition of the need for a core banking application to anchor its digitalization drive, the CBs and FSAs acquired the Bank Manager software to enable the network to derive the significant benefits of digitalization<sup>13</sup>; whilst this modest investment started to contribute to the creditable performance of the RFIs, the limitations of the Banking Manager software including proprietary and performance issues, constrained implementation. Hence, the need to make the requisite level of investment in good quality and more complete digitization to achieve the required levels of performance with a wider range of good quality services for the rural customers.

**Scope of Digitalization:** The additional financing will fund a tested and reliable core banking application (user licences) to replace the defunct Bank Manager software, hardware (computers, laptops, printers), local area networks, wide area network to interconnect CBs, FSAs, Apex Bank and their respective branches to access primary and secondary data centres (a shared service with economies of scale benefits). In addition, the RFIs will be connected to the national switch at the central bank through the Apex Bank to enable the CBs and FSAs to participate in the national payment system. These investments will enable first class

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<sup>10</sup>RFCIP2 PDR.

<sup>11</sup> The unvetted collated list of unmet loan applications from all CBs and FSAs amounted to \$12.25 million as at February 2023. It is estimated that at least a third of this amount could meet the credit approval threshold of the RFIs and be eligible for disbursement.

<sup>12</sup> June 2022 Supervision mission report.

<sup>13</sup> June 2022 Supervision mission report.

payments, money transfers, cheque clearing, the deployment of more and appropriately tailored savings, credit and other products and services to the rural clients to support their agricultural and micro and small business activities. It will provide a robust platform for the delivery of digital financial services which leverage technology to deliver cost effective financial services to underserved and unbanked rural communities.

**Digitalization Costs and Benefits:** The digitalization strategy has four cost centres, to be funded from additional financing and/or by the RFIs themselves; (i) procurement of hardware and systems (additional financing), the core banking application and other software (additional financing), installation and deployment of hardware and software (additional financing), and (v) recurrent costs (additional financing during the project phase, and from CBs and FSAs thereafter). These are captured in the RFCIP II additional cost tables.

The benefits of the digitalization, whilst not immediately quantifiable, can be presented qualitatively as follows:

Stakeholder	Selected Potential Benefits
<p><b>Project Target Groups</b> (farmers, MSMEs, rural community members who are also shareholders of CBs and FSAs, other CB and FSA clients)</p>	<ul style="list-style-type: none"> <li>• Wider range of products and services (credit, savings, payments and remittances, insurance, etc) with efficiency enhancing and fraud-minimizing technology-enabled front and back-end features.</li> <li>• Technology-enabled tailor-made products which may be difficult to deploy and track manually such loans with intermittent multi-payment amortization/repayment plans.</li> <li>• Availability of digital financial services (DFS), emerging cost effecting channels for reaching under-served communities cost-effectively.</li> <li>• Access to the national switch and interoperable systems to participate in account to wallet and wallet to account, cross country remittances via multiple channels.</li> <li>• Last mile benefits to overcome the hitherto truncated funds transfer services whereby funds remitted to beneficiaries have to be cashed by CB and FSA managers from the nearest commercial bank to be physically/manually paid to target beneficiaries in rural communities.</li> <li>• Digitalized CBs and FSAs increase in value for shareholders (target group members) thereby attracting more investments from them and attracting new shareholders and depositors. This will increase the capitalization of the CBs and FSAs for sustainable and increase services to the communities.</li> </ul>
<p><b>RFIs (CBs, FSAs, Apex Bank)</b></p>	<ul style="list-style-type: none"> <li>• Technology-enabled efficiency gains and minimization of fraud due to the effective capture of transactions</li> <li>• Technology-based platforms such as available with interconnectivity other RFIs and participation in the national payment systems (national switch and interoperable systems) will facilitate several fee-based income activities to improve profitability, growth in network and greater likely of meeting central bank regulatory capitalization thresholds. Such growth in the capital base of the RFIs will enhance their sustainability.</li> </ul>

## [2] Summary of the Economic and Financial Analysis

**Financial Cashflow Models:** Six individual financial models were developed to represent the project intervention in the target area. These include three (3) agricultural models i.e; Nerica rice production, Paddy rice production & Cocoa production and three business enterprise models derived from investment to Community banks (CBs), Financial Service Associations (FSAs) and Apex bank network. The models have been adopted and updated

for RFCIP scaling up and have been found financially viable to be able to seek for additional funds. The table below summarizes the financial viability assessment for RFCIP.

**Table A**  
**Financial cash flow models**

A)		PRODUCTION					
FINANCIAL ANALYSIS		Farm models' net incremental benefits					
		Agricultural models (in SLL 000)			Financial institution models (USD)		
		(i) Rice production (Nerica)	(ii) Rice production (Paddy)	(iii) Cocoa production	Apex bank financial model	Community bank model	FSA's financial model
PY1	1,287	199	-1,875	(927,000)	-19,430	(18,311.6)	
PY2	1,287	199	-1,875	(569,000)	-8,095	(11,712.0)	
PY3	1,287	199	-1,875	(106,000)	2,518	(2,466.2)	
PY4	1,287	199	-1,275	88,000	20,154	11,950.8	
PY5	1,287	199	-1,113	96,800	48,600	25,481.2	
PY6	1,287	199	390	106,480	48,600	25,481.2	
PY7	1,287	199	390	117,128	48,600	25,481.2	
PY8	1,287	199	390	128,841	48,600	25,481.2	
PY9	1,287	199	390	128,841	48,600	25,481.2	
PY10+	1,287	199	390	128,841	48,600	25,481.2	
PY11	1,287	199	390	128,841	48,600	25,481.2	
PY12	1,287	199	390	128,841	48,600	25,481.2	
PY13	1,287	199	390	128,841	48,600	25,481.2	
PY14	1,287	199	390	128,841	48,600	25,481.2	
PY15	1,287	199	390	128,841	48,600	25,481.2	
PY16	1,287	199	390	128,841	48,600	25,481.2	
PY17	1,287	199	390	128,841	48,600	25,481.2	
PY18	1,287	199	390	128,841	48,600	25,481.2	
PY19	1,287	199	390	128,841	48,600	25,481.2	
PY20	1,287	199	390	128,841	48,600	25,481.2	
NPV (USD)	10,955	1,698	-4,384	-682,550	251,008	116,147	

**Project Costs and Log Frame Targets:** Table B provides overall project costs by components and beneficiaries. The total project costs have been estimated at US\$ 107.1 million over a ten-year project implementation period. The cost per beneficiary has been estimated at US\$ 246 and cost per household has been estimated at US\$ 1,450. It is estimated that up to 73,875 households will be impacted by the project implementation (equivalent to 435,862 beneficiaries). The following table summarizes the expected outcomes of the project interventions and indicators linked to Log-frame targets.

**Table B: Project costs and log-frame indicators**

PROJECT COSTS AND INDICATORS FOR LOGFRAME			
TOTAL PROJECT COSTS (in 000 USD)		60,008	Base costs
Beneficiaries	2,019,939 people	336,656 Households	
Cost per beneficiary	29,708 USD x person	178,247 USD x HH	
Components and Cost (USD 000)		Outcomes and Indicators	
Strengthening & Expanding the Rural	51,748		
Project Management &	8,260		

**Main Assumptions and Shadow Prices:** Table C provides the expected yield per hectare for the agricultural models used to estimate the project viability. As part of the AF analysis, these have been validated. It also summarizes some of the main input prices included in the models.

**Table C: Main assumptions and shadow prices**

MAIN ASSUMPTIONS & SHADOW PRICES <sup>1</sup>					
FINANCIAL	Output	Yields/ trading targets	Price (in SLL)	Input prices	Price (SLL)
	Rice	3,220	2,321	Rice seeds	3200
	cocoa	534	12,500	Fertilizer	3,600
	Maize	313	6,000	Unskilled labour	15000
ECONOMIC	Exchange rate (OER)	7,529	Discount rate (opportunity cost of capital)	10%	
	Proxy for WOP hh income		Social Discount rate	8%	
			Output conversion factor	1	

**Beneficiary Adoption Rates and Phasing:** Table D below summarises beneficiary phasing year after year cumulating up to 336,656 by the last year of the project.

**Table D: Beneficiary adoption rates and phasing**

Beneficiary Segmentation	2020	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Total
<b>Total Number of Households under Field Pilot Production</b>														
Number of FTH	-	2,000	2,000	2,000	1,000	10,000	10,000	10,000	20,704	-	2,000	4,210	2,000	62,622
Cumulative	-	2,000	4,000	6,000	7,000	17,000	27,000	37,000	57,704	59,704	61,704	65,914	67,914	67,914
<b>Total Number of Households under Series Pilot Production</b>														
Number of FTH	-	2,000	2,000	2,000	1,000	10,000	10,000	10,000	20,704	-	2,000	4,210	2,000	62,622
Cumulative	-	2,000	4,000	6,000	7,000	17,000	27,000	37,000	57,704	59,704	61,704	65,914	67,914	67,914
<b>Total Number of Households under Cluster Production</b>														
Number of FTH	-	2,000	2,000	2,000	1,000	10,000	10,000	10,000	20,704	-	2,000	4,210	2,000	62,622
Cumulative	-	2,000	4,000	6,000	7,000	17,000	27,000	37,000	57,704	59,704	61,704	65,914	67,914	67,914
<b>Total Number of Households under FAs</b>														
Number of FTH	-	2,000	2,000	2,700	3,000	10,000	10,000	10,000	16,000	-	2000	2000	2000	65,000
Cumulative	-	2,000	4,000	6,700	9,700	19,700	29,700	39,700	55,700	55,700	57,700	59,700	61,700	61,700
<b>Total Number of Households under CBs</b>														
Number of FTH	-	1,000	1,000	1,000	1,000	5,000	5,000	5,000	7,000	-	2000	2000	4000	28,000
Cumulative	-	1,000	2,000	3,000	4,000	9,000	14,000	19,000	27,000	27,000	29,000	31,000	35,000	35,000
<b>Total Number of Households under Apex Bank</b>														
Number of FTH	-	1,000	1,000	1,000	1,000	5,000	5,000	5,000	7,000	-	-	-	-	27,000
Cumulative	-	1,000	2,000	3,000	4,000	9,000	14,000	19,000	27,000	27,000	27,000	27,000	27,000	27,000
<b>Total number of FTH</b>		<b>10,000</b>	<b>10,000</b>	<b>10,000</b>	<b>8,000</b>	<b>60,000</b>	<b>60,000</b>	<b>60,000</b>	<b>122,000</b>	<b>-</b>	<b>10,000</b>	<b>18,000</b>	<b>18,000</b>	<b>336,656</b>
<b>Adopted household rate</b>		<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>

**Economic Cash Flow:** Table E below presents the net incremental benefit of the project, including all project costs. The scaling up analysis shows that the project has the capacity to generate a high Economic Rate of Return (ERR) of 21 per cent with a positive Net Present Value (NPV) of US\$27.6 million compared to the projection at design of 17% and US\$14.9 million respectively.

**Table E: Overall Economic Analysis**

D)		Net Incremental Benefits										NET INCREMENTAL COSTS			Cash Flow (USD)
E C O N O M I C  A N A L Y S I S	P	RFQP 1&2 Benefits					Scaling-Up Benefits					NET INCREMENTAL COSTS			
		(1) Rice production	(2) Rice production	(3) Cocoa production	Apex bank model	Community bank model	FGAs model	FAS	CBs	Total Net Benefits	Treatment Costs (USD)	Recurrent Costs	Total Costs		
	PY1	-	-	-	-	-104,600	-837,972	-	-	-516,422	-	-	1,603,126	(2,126,546)	
	PY2	64,024	157,529	-	-	-205,269	-535,963	-	-	-302,372	-	-	5,435,598	(5,737,961)	
	PY3	230,053	441,290	-	-	-993,321	-46,345	-	-	-347,942	-	-	5,589,735	(5,937,684)	
	PY4	415,258	818,536	-	-	-856,450	133,257	-	-	480,438	3,863,261	2,239,380	6,122,701	(5,646,323)	
	PY5	579,826	842,687	-	-	-831,792	443,143	-	-	1,149,267	1,200,228	1,725,720	6,802,228	(5,606,666)	
	PY6	950,948	2,109,501	439,515	-	-510,560	443,143	-	-	2,529,853	904,475	568,108	1,473,583	1,056,270	
	PY7	1,781,096	3,468,441	1,596,412	-	-298,826	443,143	-	-	4,481,198	503,650	386,708	890,358	2,596,890	
	PY8	2,611,244	4,296,288	2,624,080	-	-85,115	443,143	-	-	6,072,176	93,600	247,095	340,695	3,731,475	
	PY9	3,785,008	6,651,682	3,033,184	-	78,962	443,143	-	-	8,327,196	138,600	367,095	535,695	7,791,465	
	PY10	3,785,008	6,651,682	7,024,214	-	86,856	443,143	-	-	10,526,606	10,627,029	901,965	11,528,994	(1,008,394)	
	PY11	3,681,043	7,077,324	12,242,555	-	95,544	443,143	-	-	13,764,374	3,918,461	632,086	4,551,549	9,212,825	
	PY12	4,169,110	7,675,918	15,096,860	-	105,090	443,143	-	-	16,300,694	3,296,299	686,098	3,982,497	12,318,197	
	PY13	4,480,327	7,924,962	24,079,486	-	115,600	443,143	-	-	19,752	31,048	-	-	21,127,341	
	PY14	4,633,356	7,676,668	26,208,397	-	127,169	443,143	-	-	97,811	33,532	-	-	22,261,704	
	PY15	4,532,140	7,500,010	26,431,428	-	139,880	443,143	-	-	104,871	36,016	-	-	24,446,123	
	PY16	4,532,140	7,500,010	26,576,770	-	153,874	443,143	-	-	104,871	36,016	-	-	23,435,755	
	PY17	4,532,140	7,500,010	12,206,054	-	169,262	443,143	-	-	104,871	36,016	-	-	14,473,213	
	PY18	4,532,140	7,500,010	8,275,061	-	186,188	443,143	-	-	104,871	36,016	-	-	12,287,556	
	PY19	4,532,140	7,500,010	8,275,061	-	204,807	443,143	-	-	104,871	36,016	-	-	12,287,796	
	PY20	4,532,140	7,500,010	8,275,061	-	225,269	443,143	-	-	104,871	36,016	-	-	12,269,661	
		<b>NPV@ 10% (USD)</b>		<b>27,608,623</b>											
		<b>ERR</b>		<b>21%</b>											

**Sensitivity Analysis:** Table F below presents a sensitivity analysis that has been carried out to test the robustness of the above analysis. The outcomes are presented in table below. The sensitivity analysis investigates the effect of fluctuations in project costs, benefits and delays in implementation on the NPV and EIRR. It also shows the economic impacts that a decrease in project benefits of up to 30 per cent will have on the project's viability. A sensitivity analysis shows that the EIRR drops to 18 per cent with a 20 per cent increase in project costs. A 10 per cent increase in costs yields a high EIRR of value 19 per cent, and a delay of project aggregated benefits by one to two years still yields a high ERR of 18 per cent and 15 per cent respectively. The overall analysis shows that the

economic viability of the project remains attractive by preserving positive NPV and EIRR in each case.

**Table F: Sensitivity analysis**

Year	1	2	3	4	5	6	7	8	9	10 - Yr 20
<b>Incremental Benefits</b>	518,420	302,373	347,945	480,438	1,200,228	2,529,953	4,481,198	6,072,170	6,327,190	10,526,600
benefits +10%	570,261	332,610	382,340	526,481	1,320,250	2,782,048	4,929,316	6,679,387	6,959,009	11,579,260
benefits +20%	622,103	362,848	417,634	578,626	1,440,273	3,036,043	5,377,436	7,286,604	7,602,628	12,831,820
Mild scenario	518,420	272,136	347,945	384,360	1,200,228	2,529,953	4,033,076	6,072,170	6,661,762	10,626,600
Medium scenario	518,420	272,136	347,945	384,360	1,200,228	2,529,953	4,033,076	6,072,170	6,661,762	10,626,600
High scenario	518,420	241,898	313,161	384,360	1,200,228	2,529,953	3,684,959	5,464,963	5,330,876	10,626,600
<b>Project Costs</b>	1,603,126	5,435,588	5,589,735	6,122,761	6,802,228	1,473,583	890,308	340,695	535,695	-
costs +10%	1,763,439	5,979,147	6,148,709	6,736,037	7,482,450	1,620,941	979,339	374,765	589,265	-
costs +20%	1,923,751	6,522,706	6,707,682	7,347,313	8,162,673	1,768,300	1,068,370	408,834	642,834	-
costs +30%	2,084,064	7,066,264	7,266,656	7,959,589	8,842,896	1,915,658	1,157,400	442,904	696,404	-
<b>Net cash flow</b>										
base scenario	-2,121,646	-5,737,861	-5,837,890	-5,642,323	-5,602,000	-1,056,370	3,690,890	5,731,476	7,791,486	10,626,600
costs +10%	-2,281,858	-6,281,620	-6,408,654	-6,254,690	-6,282,223	-800,011	3,691,650	5,697,408	7,737,925	10,626,600
costs +20%	-2,442,171	-6,826,079	-7,056,627	-6,868,676	-6,882,445	-761,853	3,412,629	5,663,358	7,684,358	10,626,600
costs +30%	-2,602,483	-7,368,637	-7,614,801	-7,479,162	-7,642,888	-614,296	3,323,796	5,629,267	7,630,786	10,626,600
benefits +10%	-2,173,367	-5,788,198	-5,872,476	-5,694,280	-5,461,977	-1,309,366	4,039,010	6,338,692	8,624,214	11,579,260
benefits +20%	-2,225,229	-5,798,438	-5,887,389	-5,648,238	-5,361,854	-1,682,360	4,467,130	6,945,909	9,468,933	12,631,820
benefits -10%	-2,121,646	-5,707,724	-5,837,890	-5,738,411	-5,602,000	-1,056,370	3,142,770	5,731,476	6,126,067	10,626,600
benefits -20%	-2,121,646	-5,707,724	-5,837,890	-5,680,688	-5,602,000	-1,056,370	3,142,770	5,731,476	2,786,181	10,626,600
benefits -30%	-2,121,646	-5,677,488	-5,802,888	-5,680,688	-5,602,000	-1,056,370	2,894,851	5,124,258	2,786,181	10,626,600
benefits delayed 1 year	-1,603,126	-5,654,006	-5,892,106	-6,479,706	-6,321,790	-273,365	1,839,846	4,140,603	6,636,476	8,327,190
benefits delayed 2 years	-1,603,126	-5,435,688	-6,106,165	-6,425,134	-7,160,173	-893,145	309,820	2,189,258	3,945,603	6,072,170
a) Discount rate	10%									
<b>Sensitivity Analysis</b>	Base case	Costs increase			Increase of Benefits		Decrease of Benefits			Delay of I
IRR	21%	18%	19%	16%	22%	24%	20%	18%	17%	15%
NPV (USD) '000	27,691,552	26,726,044	21,862,236	18,977,528	33,236,626	36,871,388	24,230,186	19,516,887	17,487,382	29,621,007

Year	1	2	3	4	5	6	7	8	9	10 - Yr 20	
<b>Incremental Benefits</b>	-577,759	-255,648	-302,467	654,473	1,608,406	2,934,858	4,511,734	6,585,102	9,765,638	10,055,201	
benefits +10%	-635,534	-281,213	-332,714	719,921	1,769,247	3,228,343	4,962,908	7,243,613	10,742,202	11,060,721	
benefits +20%	-693,310	-306,778	-362,961	785,368	1,930,087	3,521,829	5,414,081	7,902,123	11,718,766	12,066,241	
Mild scenario	-577,759	-230,083	-302,467	523,579	1,608,406	2,934,858	4,060,561	6,585,102	7,812,510	10,055,201	
Medium scenario	-577,759	-230,083	-302,467	261,789	1,608,406	2,934,858	4,060,561	6,585,102	3,906,255	10,055,201	
High scenario	-577,759	-204,518	-272,220	261,789	1,608,406	2,934,858	3,609,387	5,926,592	3,906,255	10,055,201	
<b>Project Costs</b>	1,603,126	5,435,588	5,589,735	6,122,761	6,802,228	1,473,583	890,308	340,695	535,695	-	
costs +10%	1,763,439	5,979,147	6,148,709	6,736,037	7,482,450	1,620,941	979,339	374,765	589,265	-	
costs +20%	1,923,751	6,522,706	6,707,682	7,347,313	8,162,673	1,768,300	1,068,370	408,834	642,834	-	
costs +30%	2,084,064	7,066,264	7,266,656	7,959,589	8,842,896	1,915,658	1,157,400	442,904	696,404	-	
<b>Net cash flow</b>											
base scenario	-2,180,885	-5,691,236	-5,892,202	-5,468,288	-5,193,822	-1,461,275	3,621,426	6,244,407	9,229,943	10,055,201	
costs +10%	-2,341,197	-6,234,795	-6,451,176	-6,080,564	-5,874,044	-1,313,916	3,532,395	6,210,338	9,176,374	10,055,201	
costs +20%	-2,501,510	-6,778,354	-7,010,149	-6,692,840	-6,554,267	-1,166,558	3,443,365	6,176,268	9,122,804	10,055,201	
costs +30%	-2,661,822	-7,321,912	-7,569,123	-7,305,116	-7,234,490	-1,019,200	3,354,334	6,142,199	9,069,235	10,055,201	
benefits +10%	-2,238,660	-5,716,801	-5,922,449	-5,402,840	-5,032,981	-1,754,760	4,072,600	6,902,918	10,206,507	11,060,721	
benefits +20%	-2,296,436	-5,742,366	-5,952,696	-5,337,393	-4,872,140	-2,048,246	4,523,773	7,561,428	11,183,071	12,066,241	
benefits -10%	-2,180,885	-5,665,671	-5,892,202	-5,599,182	-5,193,822	-1,461,275	3,170,253	6,244,407	7,276,815	10,055,201	
benefits -20%	-2,180,885	-5,665,671	-5,892,202	-5,860,972	-5,193,822	-1,461,275	3,170,253	6,244,407	3,370,560	10,055,201	
benefits -30%	-2,180,885	-5,640,106	-5,861,955	-5,860,972	-5,193,822	-1,461,275	2,719,079	5,585,897	3,370,560	10,055,201	
benefits delayed 1 year	-1,603,126	-6,013,347	-5,845,383	-6,425,228	-6,147,754	-134,823	2,044,550	4,171,039	6,049,407	9,765,638	
benefits delayed 2 years	-1,603,126	-5,435,588	-6,167,494	-6,378,409	-7,104,695	-819,110	718,098	2,594,163	3,976,039	6,585,102	
a) Discount rate	10%										
<b>Sensitivity Analysis</b>	Base case	Costs Increase			Increase of Benefits		Decrease of Benefits			Delay of Benefits	
IRR	20%	18%	17%	16%	21%	23%	19%	17%	16%	14%	
NPV (USD) '000	23,362,097	20,674,665	17,987,233	15,299,801	28,385,739	33,409,381	20,241,478	15,744,093	13,941,815	16,969,689	11,160,106