

Executive Board

President's memorandum Proposed additional financing Republic of India Livelihoods and Access to Markets Project

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Action: The Executive Board is invited to approve the recommendation for the proposed additional financing contained in paragraph 55.

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| Project/programme delivery team | |
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Financing summary

| Initiating institution: | IFAD |
|-------------------------------------|--|
| Borrower/recipient: | Republic of India |
| Executing agency: | Meghalaya Basin Management Agency |
| Total project cost: | US\$205.76 million |
| Amount of original IFAD financing: | SDR 32.40 million (equivalent to approximately US\$50 million) |
| Terms of original IFAD financing: | Blend terms |
| Amount of additional loan: | US\$20.58 million |
| Terms of additional IFAD financing: | Ordinary terms |
| Contribution of borrower/recipient: | US\$7.37 million |
| Contribution of beneficiaries: | US\$0.77 million |
| Others: | Banks: US\$1.94 million |
| | Convergence: US\$5.2 million |
| Cooperating institution: | IFAD |

I. Background and project description

A. Background

- This memorandum seeks Executive Board approval for additional loan financing of US\$20.58 million on ordinary terms for the Livelihoods and Access to Markets Project (LAMP) in the Indian state of Meghalaya. LAMP was originally considered by the Executive Board in April 2014.¹ The Board approved SDR 32.4 million in financing on blend terms through the Tenth Replenishment of IFAD's Resources' performance-based allocation system cycle. The total project cost of US\$169.9 million was funded by an IFAD loan of SDR 32.4 million (US\$50 million), a Government of Meghalaya contribution of US\$49.7 million, bank credit of US\$29.3 million, convergence of US\$28.2 million and a beneficiary contribution of US\$12.7 million. This additional finance proposal entails a total project cost of US\$35.85 million.
- 2. After a relatively slow start, project performance substantially improved after restructuring during the midterm review in 2018. Despite the COVID-related restrictions, as well as the limitations on disbursements recommended by IFAD just when the project was witnessing a major turnaround, LAMP successfully fast-tracked implementation and is on course to achieve the outcome and output targets of the original financing and largely utilize the original allocation. The Government of Meghalaya proposes to further heighten the project's impact and scale up selected successful activities in climate-resilient natural resource management, market-focused production with market linkages and financial access through village cooperatives. LAMP has demonstrated its potential as a "lighthouse" for the north-east region, introducing innovative interventions. In this context, the Government of India requested that IFAD extend the project completion period by two years and provide additional financing in the amount of US\$20.58 million on ordinary terms to consolidate the results, increase outreach and scale up successful models.

B. Original project description

- 3. The goal of the project is to improve family incomes and the quality of life in rural Meghalaya. This will be accomplished through the development objective of expanded and sustainable livelihood opportunities tailored to the hill environment and the effects of climate change.
- 4. At design, the project had four components: (i) Natural resources and food security; (ii) Livelihoods support; (iii) Knowledge services; and (iv) Project management. During the midterm review, the components were fine-tuned and reorganized as follows: Component 1: Integrated natural resource management; Component 2: Rural finance; Component 3: Inclusive supply chains and enterprise development, with knowledge management as a cross-cutting theme.

II. Rationale for additional financing

A. Rationale

5. Motivated by the successful emerging models of integrated village cooperative societies (IVCSs), value chains and LAMP marketing interventions and their contribution to sustaining rural communities, especially during the COVID-19 pandemic, the Government of Meghalaya has identified the need and potential for scaling up the scope and size of the project. The key purpose for the additional financing is to intensify household coverage and broaden the scope of interventions in the existing project villages and to support expansion into new villages.² The

¹ EB 2014/111/R.8/Rev.1.

² As per design, the project is being implemented in selected villages and blocks in all districts in the state. The new villages will therefore be part of the overall geographical area of the project.

scaling-up plan aims to exploit the full potential of selected value chains that have shown promise³ and consolidate the gains of the financial intermediation efforts under IVCSs, in addition to facilitating longer-term sustainability. The additional financing will result in an enduring development impact across the state. The Government of Meghalaya also recognizes LAMP's potential to become a lighthouse project for the north-east region, having introduced innovative solutions for access to finance, enterprise promotion and markets suited to the regional context.⁴

- 6. Additional financing is required to: (i) increase area outreach, adding six blocks to the existing 18; (ii) increase outreach to households by 23,577 households; (iii) expand financial inclusion modalities to 225 additional villages through IVCSs; and (iv) expand the market-development and entrepreneurship interventions of the Promotion and Incubation of Market-driven Enterprises (PRIME) Hub⁵ from 18 blocks to all 46 in the project districts. The majority of new households will be from Scheduled Tribes, which make up more than 85 per cent of the state's population. The additional financing will thus bring the development results to sustainable scale and impact across the state.
- 7. Based on the lessons learned, especially during the COVID-19 pandemic when access to finance and markets were found to be critical elements for building farmers' resilience, the Government of Meghalaya is interested in scaling up the formation of producers' groups and IVCSs, setting up collective marketing centres⁶ and processing units for product clusters in six new blocks in the project districts that have significant development potential. The proposed expansion and augmentation of producers' capacity to access finance and markets will comprehensively and sustainably address the needs of the rural population in the project area and create market-based opportunities to improve livelihoods.

Special aspects relating to IFAD's corporate mainstreaming priorities

- 8. A recent report on the multidimensional poverty index put the head count ratio of poor people in Meghalaya at 32.7 per cent against the national ratio of 25 per cent.⁷ In terms of population, the state has the country's second highest decadal growth rate.
- 9. Meghalaya ranks 26th out of 36 states in India in the Human Development Index rankings (2020); in terms of the Sustainable Development Goal Index on Gender Equality (2021) the state fares better and is ranked 18th. Over 85 per cent of the state's population consists of Scheduled Tribes mostly Garo, Jaintia and Khasi many of whom follow matrilineal traditions. While the gender gap is small, the urban and rural poverty gap is wide. Approximately 80 per cent of the state's population lives in rural areas, relying heavily on agriculture and allied services and largely engaging in traditional practices. This also poses challenges for youth, who find limited employment opportunities and turn to migration as a recourse.
- 10. In line with IFAD's mainstreaming commitments, the project has been validated as: ⊠ Youth-sensitive.

³ Under LAMP, value chains – such as ginger, turmeric, medical and aromatic plants – have demonstrated the potential to increase farmers' income.

⁴ The IFAD-financed Fostering Climate Resilient Upland Farming Systems in the North East Project has already visited LAMP to learn from its experience in value chains.

⁵ PRIME was launched in 2020 and works to make entrepreneurship the preferred career choice for the people of Meghalaya, especially youth. Since the launch of the PRIME initiative, entrepreneurship has soared, becoming the third most popular career choice in Meghalaya.

⁶ Collective marketing centres act as one-stop shops for cluster-level aggregation, processing, marketing and input supply. Farmers report the ability to negotiate much better prices. In one collective marketing centre in Wapung Skur, ginger is being sold at almost double the price that middlemen offered to farmers.

⁷ NITI Aayog, 2021. National Multidimensional Poverty Index – Baseline report.

B. Description of geographical area and target groups

- 11. The project covers the entire state of Meghalaya. In order to have cogent components focusing on specific areas within the state, 1,350 villages in the 11 districts were targeted at design; with additional financing, the proposal is to cover 173 additional villages.⁸ Integrated natural resource management (INRM) coverage is 1,350 villages at design, and there is no proposal to expand this to new areas, as the Government of Meghalaya is implementing these activities through convergence. However, an innovative activity related to payment for ecosystem services will be piloted. For rural finance, an additional 225 villages will be covered, bringing the total coverage to 1,125 villages. In the case of value chain and enterprise development, 1,350 villages were to be covered as per design targets, and under the additional financing, 173 more villages will be covered.
- 12. The targeting strategy under the additional financing is consistent with the original project strategy, which has proven effective. As directed by the country programme evaluation, a "saturation approach" will be adopted within villages, whereby all households in a village will be included. All households will be eligible for membership in the IVCSs and/or village employment councils so that they can participate in the project. Special emphasis will be given to the creation of income and enterprise opportunities for youth through the PRIME Hubs and marketing initiatives.
- 13. The percentage of households reporting the use of improved inputs, households reporting higher crop and livestock sales, and households reporting at least a 15 per cent increase in sales prices remain at 70 per cent, 80 per cent and 50 per cent, respectively, despite the increase in outreach. The changes in outreach and outcomes envisaged with the proposed additional financing vis-à-vis the original design targets are as follows:

| Indicator | Design targets | Revised targets after additional financing |
|--|-------------------|--|
| Persons receiving project services | 243 530 | 267 107 |
| Villages with INRM plans | 1 350 | 1 350 |
| Number of IVCSs set up | 300 | 450 |
| Number of households linked to value chains and enterprise development | 50 000 | 90 000 |
| Number of members using financial services | 90 000 | 100 000 |

Table 1 Revised targets after additional financing

C. Components, outcomes and activities

- 14. The original components and outcomes are mentioned in section 1(B). Modifications during the midterm review focused on enhancing implementation performance, responding to lessons to ensure achievement of the project development objective, while no changes were made to the objectives and key indicators. The additional loan would make it possible to increase outreach, outcome and output targets within the original project area.
- 15. **Component 1: Integrated natural resource management.** This component met its outreach targets by March 2022. Over the next two years, it will focus on: sustaining the progress achieved, increasing domestic water availability to reduce women's drudgery, treating degraded land through bioremediation and piloting an intervention to measure improvements in soil carbon to incentivize the ecosystem services rendered by villages through INRM. New custom hire centres and agri-input centres will be established in suitable IVCSs.

⁸ The number of districts and blocks have increased in the period since design, rendering comparison at that level difficult. Therefore, comparison of village numbers will provide a better and comparable measure of change.

- 16. **Component 2: Rural finance.** This component will increase its member outreach from 90,000 persons to 100,000, and village outreach from 900 villages to 1,125. A total of 150 new IVCSs will be established, covering 225 additional villages with additional financing. Given the Government of Meghalaya's commitment to scaling up IVCS interventions across the state and to establishing a sustainable institutional system for their regulation and supervision, the additional financing will support digitization of the IVCS financial management system. It will also support the establishment of an IVCS apex organization for better supervision of IVCSs through a dedicated cell for the eventual handover of regulatory tasks to the Government of Meghalaya's Department of Cooperation.
- 17. Component 3: Inclusive supply chains and enterprise development. The project will scale up the cluster-based formations for value chain promotion by mobilizing an additional 3,500 producers' groups, supporting master trainers to enable them to provide technical services to these groups, and by developing marketing linkages. Meghalaya's comparative advantage in terms of the production of seed and planting material will be further harnessed and scaled up with continued support from the International Potato Centre (CIP) and other agencies. Crop-specific missions, such as the ginger and turmeric missions, will receive support. A goat-farming model will also be piloted. Producers' groups and enterprises (individual, group and business entities) will be supported through the ongoing Value Chain Support Fund modality. A total of 200 collective marketing centres, 10 PRIME Hubs and 50 markets will be supported. The primary aim of the additional financing is to strengthen market linkages with processing and value addition, wherever feasible, to boost farm income.
- 18. Knowledge management activities will continue with the existing project's focus on studies, documentation and dissemination.

| Component | Key outcomes/outputs as per existing logical framework | Key outcomes/outputs with additional financing | | | | |
|---|--|--|--|--|--|--|
| 1. Integrated natural resource management | 50,000 farmers report increased crop production of at least 10% (cereals, horticulture and vegetables) | 65,000 farmers report increased crop production | | | | |
| | 1,350 villages with water-related interventions | No change | | | | |
| | 20,000 households reporting time saved in collecting water/fuel | 22,000 households reporting time saved in collecting water/fuel | | | | |
| 2. Rural finance | 90,000 IVCS members are using financial services, either from IVCSs or facilitated from banks | 100,000 IVCS members are using financial services from different sources | | | | |
| | 300 IVCSs formed and strengthened | 450 IVCSs formed and strengthened | | | | |
| | Average combined share capital and savings per household with IVCS exceeds INR 10,000 | No change | | | | |
| 3. Inclusive supply chains and | 50,000 households in supply chain clusters through producers' groups | 90,000 households in supply chain clusters through producers' groups. | | | | |
| enterprise development | 80% households report increased crop and livestock sales | No change, with an additional 40,000 households covered | | | | |
| | Persons trained in income-generating activities and business management – 0 | Persons trained in income-generating activities and business management – 37,000 | | | | |

19. The key outcomes and outputs from the additional financing are provided below: Table 2

| managomon | nonioaltaro ana vogotabioo, | | |
|-----------|---|-----------|--|
| | | | |
| | 1.350 villages with water-related interventions | No change | |

Estimated incremental outcomes with additional financing

D. Costs, benefits and financing

Project costs

- 20. The additional loan of US\$20.58 million is proposed to provide LAMP with additional financing to intensify and scale up its activities, outcomes and results. These funds will come from the cancelled resources of the Andhra Pradesh Drought Mitigation Project. IFAD's original financing for LAMP was SDR 32.4 million, approximately 85 per cent of which is expected to be disbursed by the end of the original project completion date of 31 December 2022. The main reasons for underperformance include start-up delays and challenges related to market linkages and private sector participation, which were relatively new concepts for the state. Subsequently, after the midterm review when the project was restructured, the implementation pace gained significant momentum, but COVID-19 disruptions, as well as the limitations on disbursements recommended by IFAD, severely impacted acceleration.
- 21. The additional financing of US\$20.58 million will leverage corresponding additional counterpart funding of US\$7.37 million, convergence funding and bank finance of US\$7.16 million and beneficiary contributions of US\$0.77 million, increasing the initial project cost amounts by US\$35.85 million. Convergence refers to resources that the government is able to mobilize for investments and services relevant to project households. These additional resources are primarily mobilized from government programmes. Therefore, upon approval of the proposed additional loan, the overall project costs of LAMP will increase from US\$169.91 million to US\$205.76 million. The detailed financing plan by financier, component and expense category is provided in tables 3, 4 and 5, respectively. The project cost by component and project year is provided in table 6.

Table 3

Original and additional financing summary

(Thousands of United States dollars)

| | Original financing* | Additional financing | Total |
|--------------------|---------------------|----------------------|---------|
| IFAD loan | 50 063 | 20 575 | 70 638 |
| Other cofinanciers | 57 495 | 7 135 | 64 630 |
| Beneficiaries | 12 682 | 774 | 13 456 |
| Borrower/recipient | 49 665 | 7 370 | 57 035 |
| Total | 169 905 | 35 854 | 205 759 |

* See tables 2 and 3 in document 3543-IN for a detailed breakdown.

Table 4

Additional financing: project costs by component (and subcomponent) and financier (Thousands of United States dollars)

| | | Additic IFAD le | | Othe cofinan | | Beneficia | ries* | Borrower /recipient | | Total | |
|----|--|--------------------|------|-----------------|------|-----------|-------|------------------------|------|--------|-------|
| С | omponent/ subcomponent | Amount | % | Amount | % | Amount | % | Amount | % | Amount | % |
| 1. | Integrated natural resource | | | | | | | | | | |
| | management | 1 745 | 49.0 | 1054 | 29.6 | - | - | 760 | 21.4 | 3 559 | 9.9 |
| 2. | Rural finance | 3 683 | 55.9 | 1935 | 29.4 | - | - | 965 | 14.7 | 6 582 | 18.4 |
| 3. | Inclusive supply chains and enterpri | se develop | ment | | | | | | | | |
| | Inclusive supply chains and enterprise development | 7 579 | 74.2 | - | - | - | - | 2 640 | 25.8 | 10 219 | 28.5 |
| | 2. Access to markets | 6 384 | 47.7 | 4 146 | 31.0 | 774 | 5.8 | 2 086 | 15.6 | 13 390 | 37.3 |
| | Subtotal | 13 962 | 59.1 | 4 146 | 17.6 | 774 | 3.3 | 4 727 | 20.0 | 23 609 | 65.8 |
| 4. | Knowledge services | 375 | 85.1 | - | - | - | - | 66 | 14.9 | 440 | 1.2 |
| 5. | Project management | | | | | | | | | | |
| | 1. Project management unit, Shillong | 569 | 51.4 | - | - | - | - | 537 | 48.6 | 1 106 | 3.1 |
| | 2. District project management units | 242 | 43.4 | - | - | - | - | 315 | 56.6 | 557 | 1.6 |
| | Subtotal | 811 | 48.7 | - | - | - | - | 852 | 51.3 | 1 663 | 4.6 |
| | Total | 20 575 | 57.4 | 7 135 | 19.9 | 774 | 2.2 | 7 370 | 20.6 | 35 854 | 100.0 |

* Beneficiary contributions in cash and in kind are expected.

Table 5 Additional financing: Project costs by expenditure category and financier (Thousands of United States dollars)

| | Govern | ment | Additional IFA | D loan | Bank | ſS | Converg | ence | Beneficia | aries | Tot | al |
|-------------------------------|--------|------|----------------|--------|--------|------|---------|------|-----------|-------|--------|-------|
| Category | Amount | % | Amount | % | Amount | % | Amount | % | Amount | % | Amount | % |
| 1. Works | 2 022 | 18.0 | 5 067 | 45.1 | - | - | 4 146 | 36.9 | - | - | 11 235 | 31.3 |
| 2. Equipment and materials | - | - | - | - | - | - | - | - | - | - | - | - |
| 3. Training | 501 | 10.0 | 4 493 | 90.0 | - | - | - | - | - | - | 4 994 | 13.9 |
| 4. Goods, services and inputs | 773 | 18.0 | 3 397 | 79.1 | - | - | 126 | 2.9 | - | - | 4 296 | 12.0 |
| 5. Grant and subsidies | 3 172 | 23.2 | 6 880 | 50.3 | 1 935 | 14.1 | 928 | 6.8 | 774 | 5.7 | 13 689 | 38.2 |
| 6. Salaries and allowances | 645 | 56.3 | 501 | 43.7 | - | - | - | - | - | - | 1 147 | 3.2 |
| 7. Operating costs | 256 | 52.0 | 236 | 48.0 | - | - | - | - | - | - | 493 | 1.4 |
| Total | 7 370 | 20.6 | 20 575 | 57.4 | 1 935 | 5.4 | 5 200 | 14.5 | 774 | 2.2 | 35 854 | 100.0 |

Table 6

Project costs by component and project year (PY)

(Thousands of United States dollars)

| | | | PY1 | | | PY3 | | PY4 | | Total |
|------------------------|---|--------|-----|--------|------|--------|------|--------|------|--------|
| Component/subcomponent | | Amount | % | Amount | % | Amount | % | Amount | % | Amount |
| 1. Integ | rated natural resource management | 184 | 5.3 | 1 813 | 52.5 | 1 457 | 42.2 | - | - | 3 455 |
| 2. Rura | l finance | 146 | 2.3 | 3 930 | 62.6 | 2 201 | 35.1 | - | - | 6 278 |
| 3. Inclus | sive supply chains and enterprise development | 1 608 | 7.3 | 12 676 | 57.7 | 7 703 | 35.0 | - | - | 21 987 |
| 4. Know | vledge services | - | - | 117 | 30.3 | 256 | 66.4 | 13 | 3.3 | 386 |
| 5. Proje | ect management | 94 | 6.3 | 437 | 29.5 | 771 | 52.1 | 179 | 12.1 | 1 481 |
| Tota | 1 | 2 032 | 6.1 | 18 973 | 56.5 | 12 389 | 36.9 | 192 | 0.6 | 33 587 |
| Subto | otal price contingencies | 43 | 1.9 | 1 061 | 46.8 | 1 124 | 49.6 | 39 | 1.7 | 2 267 |
| Tota | I | 2 075 | 5.8 | 20 034 | 55.9 | 13 514 | 37.7 | 231 | 0.6 | 35 854 |

Financing and cofinancing strategy and plan

22. The original IFAD loan of US\$50 million corresponds to 24.3 per cent of the total project cost. The IFAD additional financing amounts to US\$20.58 million, equivalent to 10 per cent of the total project cost. These IFAD loans will leverage cofinancing of US\$135.12 million, equivalent to 65.7 per cent of the total project cost.

Disbursement

- 23. There is no change in disbursement procedures and other financial management systems and processes, except for the introduction of report-based disbursements. Therefore, IFAD financing will be disbursed against duly certified quarterly interim unaudited financial reports in accordance with IFAD disbursement procedures for: (i) direct payment for foreign currency payments; and (ii) reimbursement. Yearly disbursement ratios have been adjusted in line with programme expenditure patterns and government policies.
- 24. There will be no authorized allocation from the designated account for the additional financing, and eligible expenditures will be reimbursed under the reimbursement disbursement method.
- 25. The borrower will receive loan funds in the designated account denominated in United States dollars that was opened to receive external financing and will pass the financing on to the Government of Meghalaya pursuant to national procedures.
- 26. **Flow of funds**. There is no change in the systems and procedures for flow of funds. The Government of Meghalaya will prefinance the yearly project expenditure and transfer the amount, including the government counterpart funds for project expenses, except for the salaries of government staff, to the bank account of the Meghalaya Basin Management Agency (MBMA), a not-for-profit company under the Meghalaya Basin Development Authority (MBDA).

- 27. The Government of India will pass the IFAD loan financing on to the state through the procedure of additional central assistance to the state of Meghalaya, a special category state. Under this procedure, 90 per cent of the financing will be provided to the state of Meghalaya as a grant and 10 per cent as a loan.
- 28. **Government and beneficiary contributions** (cash and in kind) and convergence will be integrated into the annual workplan and budget (AWPB) and will be consolidated in the project's quarterly interim unaudited financial report.

Summary of benefits and economic analysis

- 29. The financial models prepared at design were revised to adjust them to the prevailing prices. The overall project economic internal rate of return (EIRR) is estimated at 36.2 per cent, which is higher than the EIRR estimated in the original project design. The estimated net present value (NPV) for a 7.5 per cent discount rate is INR 7,291 million. A positive NPV under the current 7.5 per cent opportunity cost of capital indicates that the project investments are robust.
- 30. Sensitivity analysis indicates that in the event of a three-year delay in project benefits (that is, if the project's production activities take longer to scale up), the EIRR falls to 19.3 per cent, with an NPV of INR 3,773 million. Even in the adverse scenario of a three-year delay in project activities, costs increase by 20 per cent and benefits decrease by 20 per cent and the project has an EIRR of 12.9 per cent, well above the discount rate of 7.5 per cent. The switching values indicate that the investments are worthwhile, even if costs increase over 219.8 per cent or the benefits decrease by 68.7 per cent.

Exit strategy and sustainability

- 31. While the project as a whole is designed to create sustainable institutions and practices, the sustainability aspects differ from component to component. At design, the project had a sound exit strategy and sustainability plan, which are being implemented systematically:
 - (i) Participatory INRM planning and implementation have become part of village employment committees' annual activity calendar. The bank accounts, fund management, engineering support and facilitation for convergence undertaken by the project have enabled communities to continue INRM activities beyond the project period using Government of Meghalaya funds, in line with the project's exit strategy.
 - (ii) IVCSs have been set up as free-standing cooperative societies affiliated with the Meghalaya Cooperative Apex Bank and regulated by the state Registrar of Cooperative Societies, allowing them to operate as business agents of banks. Digitization will strengthen reliable accounting and operational procedures. The proposed IVCS apex organization will provide technical and policy support. Community ownership, efficiency, service quality and linkages with external institutions and regulators will ensure the sustainability of IVCSs after project completion.
 - (iii) Value chain investments, including institution-building support to producers' groups, have resulted in higher productivity, competitiveness and incomes for producers' groups and their members. Producers' groups will continue to operate as planned beyond the project. The investment in collective marketing centres will provide a platform for aggregating and adding value produce for marketing. Some collective marketing centres, in collaboration with IVCSs, have already experienced two seasons of aggregation and marketing, reducing the number of intermediaries in marketing channels and improving farm gate produce prices. The investments in markets, including in PRIME Hubs, will enable producers' groups to connect with higher-level markets and processing facilities in the identified value chains. With the

involvement of market players (in both the public and private sector), these value chains will function on their own at exit.

III. Risk management

A. Risks and mitigation measures

- 32. Risks and their mitigation measures are included in the original project design report. The main risks associated with achieving the project objective are related to:
 - (i) **Financial management capacity.** Inherent financial management risks for projects in India in general are delays in the release of funds, delays in the settlement of advances and inadequate documentation, but for LAMP, the release of funds has been timely. To ensure adequate risk mitigation, LAMP has employed qualified and experienced key financial management staff at the state level, with substantial improvements in fund release and financial management.
 - (ii) Procurement. The risks are related to inadequate procurement planning and adherence to procurement procedures. To ensure adequate risk mitigation, LAMP has employed qualified and experienced key procurement staff at the state level, leading to a substantial improvement in procurement management.
 - (iii) Climate risks. The additional financing will continue in order to implement best practices and technologies to mitigate the risks related to climate change, with a focus on increased water availability and the treatment of polluted water from coal mines using open limestone channel technology and vegetative measures. The additional financing will introduce a pilot on payment for ecosystem services.

B. Environmental and social category

- 33. A review of experience under existing IFAD projects in Meghalaya with similar interventions indicated that the original project activities were not likely to have any adverse environmental impacts on the project area and, instead, would have beneficial impacts through the development of an environmentally sensitive approach that includes INRM plans to optimize sustainable use of natural resources. However, the project was classified as Category B, as it will operate in fragile areas, following the IFAD procedures in place at design. An environmental and social management plan (ESMP) was prepared in 2020, as the environmental and social review note prepared during design was generic and did not include site-specific mitigation and/or adaptation measures to address the potential environmental, social and climate risks and impacts. The ESMP covers all project components and will continue to be relevant with the additional financing.
- 34. With the proposed additional financing, the project's goals, development objectives and components will remain the same. The additional financing will not include any new major activities and will target new households and villages within the geographical areas identified in the original design. Thus, the project category remains unchanged.

C. Climate risk classification

35. The original project was not assigned a climate risk classification, and no climate risk assessment was undertaken, as it was designed before 2015 when the Social, Environmental and Climate Assessment Procedures (SECAP) came into effect.

IV. Implementation

A. Compliance with IFAD policies

36. The original design fully conformed to IFAD policies. The proposed additional financing is fully aligned with IFAD's Strategic Framework 2016-2025 and the India country strategic opportunities programme 2018-2024, aiming to increase poor rural people's productive capacities and benefits from market participation. The expanded and scaled-up LAMP follows IFAD policies and strategies on gender mainstreaming, environment and natural resource management, climate change, rural finance and scaling up, and social, environmental and climate assessment.

B. Organizational framework Management and coordination

- 37. There is no proposal for change in the original design.
- 38. **Executing agencies.** At the central level, the Department of Economic Affairs, the Ministry of Finance and the Government of India, and at the state level, the Government of Meghalaya Planning Department are the nodal agencies. MBMA will be the lead project agency, with district project management units (DPMUs) located in the project areas.
- 39. **Coordination structures.** Coordination at the state level will be provided by the MBDA board, which will review the progress of LAMP and ensure that its activities are coordinated with other development efforts in the state. The management and coordination structures have been functioning fairly satisfactorily, with improved management and coordination vigour over the past three years. The coordination structures built during implementation will continue to operate under the additional financing. Furthermore, a mechanism will be set up at the national level to work closely with the Department of Economic Affairs in performance monitoring, technical guidance/support and the facilitation of knowledge-sharing between projects in India and relevant line ministries.

Financial management, procurement and governance

- 40. The financial management assessment concluded that the current arrangements followed by the lead project agency are adequate. For the additional financing, MBMA will continue to use national financial management standards consistent with IFAD guidelines and procedures. There are no changes in annual budget planning procedures. Implementation will follow the project's finance manual and financial reporting, and the IFAD Handbook for Financial Reporting and Auditing of IFAD-financed Projects. Project accounts will be audited by independent auditors assigned by the Office of Comptroller and Auditor General, adhering to acceptable national auditing standards.
- 41. Subsidiary agreements between the Government of Meghalaya and MBMA on the receipt of project funds will be extended to cover additional financing.
- 42. The inherent risks for LAMP are substantial, despite the overall environment surrounding financial management, the government's focus on improving financial management, its achievements in that connection and the experience gained in LAMP implementation.

Procurement

43. The procurement of goods, works and services (including non-consulting services) for LAMP follows IFAD's Project Procurement Guidelines and the IFAD Procurement Handbook, 2021. The procurement plan aligned with the AWPB will be prepared by the lead project agency and approved by IFAD. The last updated procurement risk matrix for the original financing indicates that there were gaps and inconsistencies in the processes, procedures and systems applied. However, these had only a limited impact on project implementation and performance. Onboarding of the project to IFAD's new single-interface procurement systems will substantially

strengthen project procurement. The existing procurement unit for the original financing will be further buttressed for the additional financing.

Governance

44. The original design remains unchanged. A framework for good governance is part of the project implementation manual. This framework aims to ensure:
(i) transparency, with information in the public domain; (ii) accountability in the use of resources; and (iii) participation, with people having a voice in decisions that may affect them. The involvement of affected communities in all stages of project implementation can simultaneously improve development outcomes and reduce the scope for fraud and corruption.

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

- 45. There is no proposal for change in the original design. The two main instruments for planning and monitoring are the logical framework and the AWPB.
- 46. **Planning.** All DPMUs will prepare draft AWPBs, which the project management unit will compile at the state level. The AWPBs will be submitted to the project management committee and then to IFAD for no objection.
- 47. **Monitoring.** Key indicators are defined in the logical framework and will be reported upon in the semi-annual progress reports. The project's management information system will help direct project interventions effectively to target beneficiaries.
- 48. **Knowledge management.** The core learning areas of LAMP cover natural resource management, value chains and access to finance. The project has integrated knowledge management into project implementation by: (i) appointing nodal knowledge management officers at the field level; (ii) regular collection of information on challenges, lessons and best practices from the field and their dissemination to all project staff; and (iii) better coordination between components, with the knowledge management team facilitating reviews and interdepartmental discussions. This system will continue under the additional financing.
- 49. **Strategic communication.** LAMP's key message is that market-led production, coupled with an emphasis on natural resource management and access to finance, helps to achieve better productivity, price realization and nutrition practices, resulting in inclusive and sustainable development.
- 50. The key innovative features of LAMP include:
 - (i) Treating polluted water from coal mines through open limestone channel technology and vegetative treatment measures. This has been scaled up by the Government of Meghalaya.
 - (ii) The cost-effective and community-owned financial inclusion modality (i.e. IVCSs) is also being scaled up by the Government of Meghalaya in nonproject areas.
 - (iii) A shift from subsistence farming to a market-led production system.

D. Proposed amendments to the financing agreement

51. The current financing agreement will be amended upon agreement with the borrower/recipient.

V. Legal instruments and authority

52. An amendment to the financing agreement between the Republic of India and IFAD will constitute the legal instrument for extending the proposed additional financing to the borrower/recipient.

- 53. The Republic of India is empowered under its laws to receive financing from IFAD.
- 54. 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

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

RESOLVED: that the Fund shall provide a loan on ordinary terms to the Republic of India in an amount of twenty million five hundred and eighty thousand United States dollars (US\$20,580,000) 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

| Desults | | Original | Additional | | Means | of Verificat | ion | |
|--|--|----------------------|----------------------|-------------------------|-------------------------------|----------------------------------|---------------------|-------------|
| Results Hierarchy | Indicators | financing targets | financing targets | Total Project Target | Source | Freq- uency | Respon -sibility | Assumptions |
| 1 | 2 | 6 | 7 | 13 | 9 | 10 | 11 | 12 |
| | 1.a Estimated corresponding total nur members | nber of house | holds | | MIS | semi- annual | PMU | |
| | Household members - Number of people | 7,89,360 | 1,30,145 | 9,19,505 | | | | |
| | 1.b Corresponding number of househ | olds reached | | | | | | |
| | Women-headed households - Number | 50,050 | 8,252 | 58,302 | | | | |
| | Non-women-headed households - Number | 92,950 | 15,325 | 1,08,275 | | | | |
| | Households - Number | 1,43,000 | 23,577 | 1,66,577 | | | | |
| Outreach | 1.c Persons receiving services promo project | | | | | | | |
| | Females - Number | 1,21,765 | 11,789 | 1,33,554 | | | | |
| | Males - Number | 1,21,765 | 11,789 | 1,33,554 | | | | |
| | Young - Number | 73,059 | 7,073 | 80,132 | | | | |
| | Not Young - Number | 1,70,471 | 16,504 | 1,86,975 | | | | |
| | Indigenous people - Number | 2,34,519 | 22,705 | 2,57,224 | | | | |
| | Non-Indigenous people - Number | 9,011 | 872 | 9,883 | | | | |
| | Total number of persons receiving services - Number of people | 2,43,530 | 23,577 | 2,67,107 | | | | |
| Project Goal Higher family incomes & | 2.a. % households reporting increase i | n assets | | | Impact assessment Study | Midterm and Completi on | PMU | |
| better quality of | Households - Percentage (%) | 75 | (10) | 65 | | | | |
| life in rural Meghalaya | 2.b. % Households reporting increase | in income | | | | | | |
| mognalaya | Households - Percentage (%) | 75 | (10) | 65 | | | | |

| Results | | Original Additional T | | Total Drainat | Means | of Verificat | ion | |
|---|--|-----------------------|-------------------------|---------------|---|----------------------------------|----------------------------|---|
| Hierarchy | Indicators | financing targets | Total Project Target | Source | Freq- uency | Respon -sibility | Assumptions Assumptions | |
| | 2.c. Households reporting increase in | food security | | | | | Ť | |
| | Households - Percentage (%) | 75 | (10) | 65 | | | | |
| Development Objective Expanded and sustainable livelihood | 3.a Households linked to supply chain development interventions | and enterpris | se | | Thematic studies, Annual Outcome Survey and Project progress reports | Midterm and completio n | PMU | |
| opportunities | Households - Number | 50,000 | 40,000 | 90,000 | | | | |
| adapted to the hill environment | 3.b 210 IVCS are financially sustainabl rates of at least 95% | e and have lo | an recovery | | | | | |
| and to the effects of climate change | No. of IVCS financially sustainable - Number | 210 | 0 | 210 | | | | |
| climate change | 3.c Households reporting a significant spent for collecting water or fuelwood | | | | | | | |
| | Households - Number | 20,000 | 2,000 | 22,000 | | | | |
| Outcome Increased sustainable management by | 4.a Households reporting adoption of technologies or practices | new/improvec | l inputs, | | Thematic studies, Annual Outcome Survey and Project progress reports | Annual | PMU | patterns do not seriously affect farming. Prices do not fall to a level where local |
| communities of | Households - Percentage (%) | 70 | 0 | 70 | | | | |
| their soil, water and biodiversity | 4.b Households reporting an increase | in production | | | | | | |
| resources | Total number of household members - Number of people | 50,000 | 15,000 | 65,000 | | | | |
| | 4.c Households reporting increased ar | ea under irrig | ation | | | | | |
| | Households - Number | 10,000 | 0 | 10,000 | | | | |
| | 5.a Village/community plans formulated | | | | MIS | Annual | PMU | |

| Results | | Original | Additional | Total Drainat | Means | s of Verificat | tion | |
|--|---|----------------------|----------------------|-------------------------|------------------------------------|-----------------|---------------------|--|
| Hierarchy | Indicators | financing targets | financing targets | Total Project Target | Source | Freq- uency | Respon -sibility | Assumptions |
| Output Natural resource planning | Number village plans - Number | 1,350 | 0 | 1,350 | | | | |
| Output Land, water | 6.a No of villages with water-related in | terventions | _ | | MIS/project progress reports | Annual | PMU | Adequate funds are available for the implementation of activities from convergence |
| resource and food crop | No. of villages - Number | 1,000 | 0 | 1,000 | | | | |
| development | 6.b No of Villages with land and conservation related interventions | | | | MIS/project progress reports | Annual | PMU | |
| | No. of villages - Number | 1,000 | 0 | 1,000 | | | | |
| Outcome | 7.a Households reporting using rural f | inancial servi | ces | | MIS | Annual | PMU | Support from the Department of Cooperatives and quality handholding from MCAB |
| Increased use of financial | Males - Number | | | 50,000 | | | | |
| services by rural | Females - Number | | | 50,000 | | | | |
| households | Households - Number | 90,000 | 10,000 | 1,00,000 | | | | |
| | 7.b Average combined share capital a with IVCS (in Rupees) | nd savings pe | r household | | MIS | Annual | PMU | |
| | Value in INR - Number | 10,000 | 0 | 10,000 | | | | |
| Output | 8.a IVCS societies cover 1125 villages | with 1,00,000 | members | | ICVS MIS system | semi- annual | PMU | Support from the Department of Cooperatives and quality handholding from MCAB |
| Rural finance | No. of villages - Number | 900 | 225 | 1,125 | | | | |
| | No. of members - Number of people | 90,000 | 10,000 | 1,00,000 | | | | |
| | 8.b IVCS formed/strengthened | | | | ICVS MIS | Annual | PMU | |
| | No. of IVCSs formed - Number | 300 | 150 | 450 | system | Annual | PIVIU | |

| Results | | Original | Additional | Total Project | Mean | s of Verificat | ion | |
|--------------------------------------|--|----------------------|---------------------|---------------|------------------------------------|----------------|---------------------|--|
| Hierarchy | Indicators | financing targets | financing financing | Target | Source | Freq- uency | Respon -sibility | Assumptions |
| | 8.c IVCS formed/strengthened with wo leadership | men as a par | of | | ICVS MIS system | Annual | MPU | |
| | No. of IVCs - Number | 150 | 75 | 225 | | | | |
| Outcome | 9.a Households reporting increased cr | op and livest | ock sales | | AOS | Annual | PMU | Households have adequate labour for the expansion of enterprise and good returns in sub-sector |
| Increased real | Households - Percentage (%) | 80 | 0 | 80 | | | | |
| net income for individuals and | 9.b Households reporting increased sa | ale prices by 1 | 5% | | AOS | Annual | PMU | |
| households in | Households - Percentage (%) | 50 | 0 | 50 | | | | |
| competitive | 9.c Households linked to Market Players | | | | AOS | Annual | PMU | |
| inclusive supply chains and local | Households - Percentage (%) | 30 | 10 | 40 | | | | |
| micro- and small enterprises | 9.d Rural entrepreneurs expand the turn over of their business by at least 30% | | | | AOS | Annual | PMU | |
| | Number of entrepreneurs - Number | 5,000 | 0 | 5,000 | | | | |
| | 9.e Supported rural enterprises report | ing an increas | se in profit | | AOS | Annual | PMU | |
| | Number of enterprises - Number | 3,000 | 0 | 3,000 | | | | |
| | 10.a Supply chain clusters established | | | | MIS/project progress | Quarterly | PMU | Viable value chain development |
| | No. of clusters - Number | 485 | 75 | 560 | reports | | | opportunities exist |
| Output | 10.b 30,000 households participating i production | n cluster-base | ed | | MIS/project progress reports | Quarterly | PMU | |
| Inclusive Supply Cjhain | Households - Number | 20,000 | 10,000 | 30,000 | | | | |
| Gjinain | 10.c Persons trained in production pra technologies | ictices and/or | | | MIS/project progress reports | Quarterly | PMU | |
| | Men trained in crop - Number | 10,000 | 2,500 | 12,500 | | | | |
| | Women trained in crop - Number | 10,000 | 2,500 | 12,500 | | | | |

| D Ka | | Original | Additional | Total Project | Means | s of Verificati | ion | |
|----------------------------|--|----------------------------|------------|----------------|------------------------------------|-----------------|-----|---|
| Results Hierarchy | Indicators | Tinancing Tinancing Target | Source | Freq- uency | Respon -sibility | Assumptions | | |
| | Total persons trained in crop - Number of people | 20,000 | 5,000 | 25,000 | | | | |
| | 10.d Supported rural producers that ar producers organization | e members o | f a rural | | MIS/project progress reports | Quarterly | PMU | |
| | Rural POs/PGs and IVCS undertaking production and marketing supported - Number | 1,200 | 4,800 | 6,000 | | | | |
| | Women in leadership position - Number | 600 | 2,400 | 3,000 | | | | |
| | 10.e Supported rural producers that an producers' organization | e members of | f a rural | | MIS/project progress reports | Quarterly | PMU | |
| | Total number of persons - Number | 50,000 | 40,000 | 90,000 | | | | |
| | Males - Number | 25,000 | 20,000 | 45,000 | | | | |
| | Females - Number | 25,000 | 20,000 | 45,000 | | | | |
| | Indigenous people - Number | 48,150 | 36,850 | 85,000 | | | | |
| | Non-Indigenous people - Number | 1,850 | 3,150 | 5,000 | | | | |
| | Young - Number | 15,000 | 12,000 | 27,000 | | | | |
| | Not Young - Number | 35,000 | 28,000 | 63,000 | | | | |
| Output Livestock | 11.a Paravets trained & providing servi | ices | | | MIS/project progress reports | Quarterly | PMU | Sufficient number of CLP and VRLP can be recruited and trained |
| development | No. of paravets trained - Number | 300 | 100 | 400 | | | | |
| · | No. of Village Level Resource Person trained - Number | 360 | 440 | 800 | | | | |
| Output Market | 12.a Roads constructed, rehabilitated of | or upgraded | | | MIS/project progress reports | Quarterly | PMU | Traditional leadership allows market development |
| development | Length of roads - Length (km) | 250 | (22) | 228 | | | | |

| Results | | Original | Additional | Total Project | Means | of Verificati | on | |
|-------------|---|--|------------------------------------|---------------|------------------------------------|----------------|---------------------|-------------|
| Hierarchy | Indicators | financing financing targets targets | | Target | Source | Freq- uency | Respon -sibility | Assumptions |
| | 12.b Market, processing or storage fac rehabilitated | | MIS/project progress reports | Quarterly | PMU | | | |
| | Market facilities constructed/rehabilitated - Number | 55 | 20 | 75 | | | | |
| | 12.c Staff of service providers trained marketing commitees) | (refers to staf | f of the | | MIS/project progress reports | Quarterly | PMU | |
| | Males - Number | 275 | 0 | 275 | | | | |
| | Females - Number | 275 | 0 | 275 | | | | |
| | 13.a Persons trained in income-generating activities or business management | | | | MIS/project progress reports | Quarterly | PMU | |
| | Females - Number | 0 | 18,500 | 18,500 | | | | |
| | Males - Number | 0 | 18,500 | 18,500 | | | | |
| | Indigenous people - Number | 0 | 35,631 | 35,631 | | | | |
| Output | Non-Indigenous people - Number | 0 | 1,369 | 1,369 | | | | |
| Enterprise | Young - Number | 0 | 11,100 | 11,100 | | | | |
| Development | Not Young - Number | 0 | 25,900 | 25,900 | | | | |
| | Persons trained in IGAs or BM (total) - 0 37,000 | | | 37,000 | | | | |
| | 13.b Rural enterprises accessing business development services | | | | MIS/project progress reports | Quarterly | PMU | |
| | Rural enterprises - Number | 5,000 | 1,000 | 6,000 | | | | |

Updated summary of the economic and financial analysis

I. FINANCIAL ANALYSIS

A. Objectives and Scope

- 56. **Methodology:** The methodology used for financial analysis included (i) revising the crop and activity models that were developed during project design and are being promoted under the LAMP, (ii) aggregating the activity models at the project model after revising them for prices, inflation factors, etc.
- 57. Input and output prices of farm production, NTFP, and livestock were obtained from Department of Agriculture, Horticulture, MBMA and State Agricultural Marketing Board, Shillong. Commodity prices were obtained from the regulated markets operating in Meghalaya through its websites: megamb.nic.in and from the IPM Section under of MBDA.

B. Key assumptions of financial analysis

- 58. Key assumptions are:
 - With training, technology support and better input services, the farmers can undertake improved farming practices and thereby enhancing productions at farm level.
 - There are skills and practices for rainfed agriculture, cultivation of off-season vegetables, spices, and flowers, etc and livestock products such pig, poultry, goats which can be expanded with improved farm management practices.
 - Although, there are three district agro-climatic zones, namely Tropical Zone, Sub-tropical Zone_and Temperate Zone, crop and activity models that are common to these zones were prepared and used in the analysis.
 - Soil health is invariably poor and as a result overall production potential is far lower than other parts in India. Therefore, continued application of FYM, composts and other organic manure is necessary to improve the soil health and their fertility and sustaining productions.
 - Farm gate prices are nearly 15% lower than those of the nearby market prices. In case of off-season vegetables, the farm gate prices amount to no more than 60%⁹.
 - Average distance between farm-gate to any wholesale market is 10 km. There are several private jeeps and vans plying carrying both passengers and commodities. But these vehicular operations are not periodic but with random schedules. This largely affects input and output prices.
 - Under the project's NRM interventions such as soil and water conservation, smallscale irrigation, micro-watershed treatment, spring protection and development, access to clean drinking water, drudgery reduction interventions.
 - Productivity increases under NRM development and IPM interventions are assumed at conservative levels ranging between 15% and 35% over the existing levels and these increases are achieved due to in situ soil and moisture conservation practices and improved agronomic practices.
 - No significant changes or shifts in cropping patters are assumed but the key assumptions have been adoption of appropriate agronomic practices including intercropping, crop rotation, conservation farming etc and these reflect in cultivation of off-season vegetables, spices, plantation crops.

⁹ Market surveys during the Design mission

C. Farm / Household Models

- 59. The crop, activity and plantation models, that were prepared at design were revised to adjust them for prevailing prices. These models were designed to pattern the landholdings and livelihood options and resource availability of the target group in the project area. The models broadly illustrate the LAMP's expected impact on the incomes, and labour use of households adopting and/or adapting both on-farm and non-farm technology options. These models are indicative and assumed for assessing the Project Performance Indicators. These are briefly described below.
 - NRM household model: the model has been assumed an area of 0.7 ha per household primarily with rainfed paddy (0.4 ha), maize (0.07 ha), peas (0.05 ha), mustard (0.05 ha) sweet potato (0.1 ha), vegetables (0.1 ha) etc. No major shift in cropping patterns is envisaged in the short run.
 - Supply chains production model: It has been assumed that IPM households participating under the LAMP have three different models (i) NRM model as described above, (ii) IPM crop model and (iii) IPM activity model. IPM crop model has ginger (0.105 ha), turmeric (0.105 ha), pineapple (0.1 ha), pepper (0.12 ha), banana (0.12) vegetables (0.107 ha) and scented rice (0.07 ha). Most of the plantation crops are taken up in the upland whereas the vegetables are cultivated in the lowland. Under IPM activity model honey production and sericulture activities have been assumed.
 - IVCS households: In addition to cultivating a meagre landholding of 0.70 ha, some 30 to 32% of NRM households also tend livestock predominantly of 3 piglets and 8-10 goats. Each household pig unit include 3 piglets, one pigsty and facilities for vet services. Each goat unit include 8 does, one buck, goat-shed and other facilities. These households would be supported through IVCS rural financing. In addition, IVCS households also use the institution for cultivating food crops on some 0.2 ha of land.
 - EFC household models: The EFC households have small enterprises such as tailoring, petty shops, services enterprises such as photo-copying unit along with internet, scanning and printing and facilities for binding etc, grocery shops and other non-farm micro-enterprises.
 - Market Access benefits to households: The project could not conduct an ex-ante analysis of setting up market sheds but has derived estimates from similar IFI funded projects in the region. An analysis of the market sheds in the World Bank funded NERLP project showed that on an average 24 households benefit from market access such market sheds and the sales increase 224.5% due to the market sheds. The
- 60. Details of the financial analysis of models presented in Annex-3.1 to 3.6 are summarized in Table below:

| Model | Gross | Input | Labour | BCR | FIRR | NPV |
|-----------------------------------|---------|---------|-----------|------|------|---------------|
| Model | Income | Cost | Labour | DCK | | (incremental) |
| | (INR) | (INR) | (INR) | | (%) | (INR) |
| NRM household model (0.7 ha) | 66,306 | 43,833 | 30,730 | 0.64 | high | 16,696 |
| IVCS farm model (0.2 ha) | 32,801 | 13,833 | 7,497 | 1.37 | high | 78,436 |
| IVCS livestock household | 30,925 | 15,660 | 15,660 | 0.50 | 21% | 19,676 |
| Supply chains production (1.3 ha) | 119,389 | 30,929 | 17,483 | 1.75 | 54% | 166,598 |
| Supply chain enterprises | 171,152 | 136,781 | 12,651.86 | 0.25 | 98% | 100,574 |

NPV is on incremental net return

II. ECONOMIC ANALYSIS

A. Objectives and Methodology

61. The objective of the economic analysis is to evaluate the expected contribution of the LAMP including the benefits from the additional financing component to the economic development of the project area districts. The purpose of such analysis is to determine whether the economic benefits sufficiently justify the use of the resources that the project needs.

B. Assumptions

- 62. The following assumptions underlie this economic analysis of the project.
 - A twenty-year analysis period has been assumed, which included a 13 year project investment period and a 7 year capitation period.
 - Agricultural goods move freely within the project area in response to market signals.
 - All agricultural inputs and outputs that are traded are valued at their border prices as of June 2022. These have been adjusted to allow for transport and marketing costs between the state border and target districts, to give an economic export parity value at the farm gate.
 - Economic investment costs are net of taxes and price contingencies, production credit, office rent etc. All costs directly associated with the incremental production are included in full, including incremental farm inputs and family labour.
 - A standard conversion factor (SCF) of 0.85 is applied to both traded and nontraded items for adjusting financial prices but with the following variations: food crops at 85%, fruits and vegetables and spice crops at 75%, labour 75%, livestock products, seeds and seedling and all planting materials and enterprises at 100%.
 - The average financial rural wage rate is taken to be the best estimate of the economic value of labour. The financial price of unskilled labour (INR 225) reflects seasonal variation in employment opportunities in the State. The value is derived from the prevailing MGNREGA rates in the state. The financial wage rate is thus taken to reflect the value of the marginal product of agricultural male and female labour without the project;
 - The analysis includes only <u>on-farm benefits</u> and including attributable benefits from soil and water conservation under NRM;
 - All costs and benefits are relating to investments made on targeted project area households and the resultants benefits;
 - Time required for the full development has been assumed over 10 years including farming system development, dissemination of information and technology transfer, and establishment of improved farming practices including changes at grassroots levels, improved access to markets, road improvement etc;
 - The analysis employs an Opportunity Cost of Capital (OCC) at 7.5%.

C. Costs - Benefits Streams and Analysis

- 63. **Investment and Recurrent Costs**: The incremental cost streams include all incremental on-farm investment and operating costs including the economic value of all the necessary incremental labour; and the project investment costs (calculated using COSTAB) and excluding the cost of the input packages, taxes and duties, grant, risk fund, office rentals, price contingencies, etc.
- 64. The **project economic costs** were calculated from the financial project costs excluding price contingencies, subsidies for production inputs, development credit, taxes and duties. Recurrent costs for continued extension/training support, operations and maintenance and periodic replacement of vehicles have been

included. Economic prices for inputs and output models were estimated by applying the conversion factors on the financial prices.

65. **Project Performance Indicators**: Cost-benefit analysis method was used for the economic analysis of the project and using three indicators to assess the overall performance of the project. These are (i) <u>economic internal rate of return</u> (IRR), and (ii) <u>net present value</u> (NPV). These were estimated using a 20-year incremental cash flows of benefit and cost streams. The overall Project IRR is 36.2% which is higher than the EIRR estimated at project design. The estimated NPV for a 7.5% discount rate is INR 7,291 million. A positive NPV under the current Opportunity Cost of Capital (OCC) of 7.5% indicates that the project investments are robust.

| | Scenario | EIRR | ENPV (INR M) | |
|--------------------|-------------------------|------------------------|-----------------|---------|
| | Base Case | 36.3% | 7,291.2 | |
| Changes | | | | |
| Programme Costs | Incremental Benefits | Benefits delayed by | | |
| + 20% | | | 30.9% | 6,628.2 |
| + 40% | | | 26.6% | 5,965.3 |
| | - 10% | | 33.1% | 6,230.6 |
| | - 20% | | 29.7% | 5,170.0 |
| | - 30% | | 26.0% | 4,109.4 |
| | - 40% | | 22.0% | 3,048.9 |
| + 20% | - 20% | | 24.7% | 4,507.1 |
| | | 1 year | 28.6% | 6,032.8 |
| Base | Case | 2 years | 23.3% | 4,862.3 |
| | | 3 years | 19.3% | 3,773.4 |
| | | 1 year | 19.6% | 3,500.4 |
| + 20% | - 20% | 2 years | 15.9% | 2,564.0 |
| | | 3 years | 12.9% | 1,692.9 |
| Sw | itching Values | /a | | |
| Costs | + | | 219.8% | 0 |
| Benefits | - | | 68.7% | 0 |

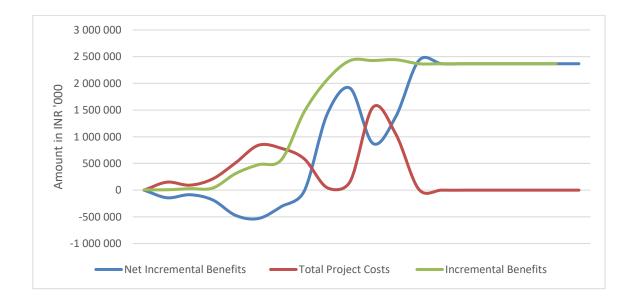
- 66. **Sensitivity analysis:** Sensitivity analysis of the project performance indicators has been carried out in order to test the robustness of project investments and benefits streams. If benefits are delayed by three <u>years</u> (in effect, if the project's production activities take longer to scale up), then the IRR declines to 19.3% with a NPV of INR 3,773 million. Even in the adverse condition that the project activities are delayed by three years, the costs increase by 20 per cent and the benefits decrease by 20 per cent the project has an EIRR of 12.9 per cent which is well above the discount rate of 7.5 percent.
- 67. **Switching value analysis:** Switching values¹⁰ indicate that the investments are worthy even if costs increased over 219.8% or the benefits declined by 68.7 %.
- 68. Comparison with design stage EFA indicators: In order to compare the EFA indicators of ex-ante and post MTR, (i) summary cash flow series of ex-ante EFA were adjusted to June 2022 price level using the State of Meghalaya's inflation rates and (ii) the

¹⁰ <u>Switching values</u> are yet another measure of sensitivity analysis They demonstrate by how much a variable would have to fall (if it is a benefit) or rise (if it is a cost) to make it not worth undertaking an option.

discount rate of 7.5% was used. Resulting comparisons are presented in the table below:

| Particulars | Ex-ante EFA Indicators | Ex-ante Additional Financing EFA indicators | | | | | | |
|---|---------------------------|---|--|--|--|--|--|--|
| IRR | 25% | 36.2% | | | | | | |
| NPV INR million, discounted at 7.5% | 15,417 | 7,291 | | | | | | |
| Benefits lagged by 2 years: | | | | | | | | |
| IRR | 18% | 23.3% | | | | | | |
| NPV INR million, discounted at 7.5% | 13,398 | 4,862 | | | | | | |
| There were nearly a nil outcome achievement during period prior to MTR and thus all benefits are accounted for during the post MTR implementation period; Number of out reached households also nearly halved as EFC could not register any growth and nor the livestock development. This scenario has adversely affected the post-MTR NPV values significantly. Although, there are no changes in IRR, NPV under post-MTR scenarios nearly halved. This was not the scenario of "benefits lagging" as no corresponding investments were made by the project. | | | | | | | | |

69. Graph showing Incremental benefits, Costs and Net Income is provided below:



Appendix III – Action plan with intermediate six-month targets

1. IFAD's Supervision and Monitoring Plan

To address the critical issues in a time-bound manner and guarantee the implementation and execution of the available resources, the project will continue receiving a close followup through:

- One full supervision mission Annually
- One implementation support mission Annually
- Virtual stocktake meetings Monthly (reducing the frequency to quarterly based on performance)

| Est. date | Туре | Focus | | | | | |
|-----------|---|--|--|--|--|--|--|
| Sept 2022 | Virtual Stocktake Meeting | Update and discussion on key agreed actions of last PSM & ISM Status of budget allocation for 2022 Update on the project progress Support to the project team in identifying and resolving any bottleneck or emerging issues AOB | | | | | |
| Oct 2022 | Supervision + Star up Workshop (for the proposed extension and AF) | Implementation status of AWPB 2022-23 Priorities for AWPB 2023-24 Financial Management and audit arrangements Disbursement status Revision of LogFrame Revision of Exit Strategy Review of PIM, if needed Update on all necessary compliances | | | | | |
| Nov 2022 | | Virtual Stocktake Meeting | | | | | |
| Dec 2022 | | Virtual Stocktake Meeting | | | | | |
| Jan 2023 | | Virtual Stocktake Meeting | | | | | |
| Feb 2023 | | Virtual Stocktake Meeting | | | | | |
| Mar 2023 | Implementation Support Mission | Assess status of agreed actions of last SM Review the project progress against its overall outputs and outcomes Provide guidance to the project team to improve performance rating which are problematic Update on the project progress | | | | | |
| Apr 2023 | | Virtual Stocktake Meeting | | | | | |
| May 2023 | | Virtual Stocktake Meeting | | | | | |
| Jun 2023 | | Virtual Stocktake Meeting | | | | | |
| Jul 2023 | | Virtual Stocktake Meeting | | | | | |
| Aug 2023 | | Virtual Stocktake Meeting | | | | | |
| Sep 2023 | Supervision Mission | Implementation status of AWPB 2023-24 Development of AWPB 2024-25 Review the project Logframe Financial Management and audit arrangements Disbursement status | | | | | |
| Oct 2023 | | Virtual Stocktake Meeting | | | | | |
| Nov 2023 | | Virtual Stocktake Meeting | | | | | |
| Dec 2023 | | Virtual Stocktake Meeting | | | | | |
| Mar 2024 | Implementation Support Mission | - RAVIAW THA HEADER HEADER ANALISE ANALISE ITS AVAIALLA UTALLES | | | | | |

| | | Provide guidance to the project team to improve performance rating which are problematic Update on the project progress Review the Exit Strategy and corresponding activities on ground |
|----------|---------------------------------|---|
| May 2024 | Virtual Stocktake Meeting | Review the project Logframe Update and discussion on key agreed actions of last SM & ISM Status of budget allocation for 2024 Progress on advancing to sustainability and exit activities (including status of handover and linkage with respective line departments) |
| Jul 2024 | Virtual Stocktake Meeting | Discussion on initiation of PCR activities Progress on advancing to sustainability and exit activities Closing Readiness |
| Sep 2024 | Supervision | Implementation of AWPB 2024-25 Revision of Disbursement Plan Financial Management and audit arrangements PCR requirement and documentation needed |
| Dec 2024 | Completion | PCR preparation Closing Readiness Implementation of Exit Strategy |

2. LAMP Action Plan

The following performance indicators will be closely monitored to evaluate the implementation status of the extension (Appendix A).

| Area | Indicator/goa l | Expected date | Responsibl e | Progres s as on 30-06- 2022 | Status |
|-------------------------------|---|--|-----------------|--------------------------------------|--|
| A. Disbursement plan | Disbursement plan followed – IFAD | Upto Dec 2022: 69% Balance Fund as on Dec 2022: USD 21 mil Additional Financing: USD 20 mil Total: USD 41 mil which will be disbursed as follows: >7% by 31- 3-2023 >60% by 31-3-2024 >99% by 31-12-2024 >1% by 31- 6-2025 | МВМА | 54.5% | Project is in line to achieve 70% disbursement by December 2022 specifically in grant support fund which has a pipeline of Rs.55Cr., Market led infrastructure in the project cluster, convergence which is already achieved but pending consolidation of data and Support fund to IVCS |
| B. Project implementation1 | Capacity Building and Training | >37% by 31-08-2022 >45% by 31-10-2022 >50% by 15-12-2022 >65% by 31-3-2023 >80% by 31-6-2023 100% by 31-9-2023 | MBMA | - | Capacity building of already shortlisted supply chain participants (PGs, SPs, IVCS) is in the pipeline of which 50% will be completed by December 2022 |
| 8 | Installation of water-lifting devices | Procuremen t by 25-9- 2022 Completion of Installation by 15-12- 2022 100% by 31-12-2022 | MBMA | 10% | 33 Electric pumps installed; project is already in the procress of procuring 27 solar pumps, 118 electrical pumps and 8 ram pumps; Technical Specifications |

Action plan for LAMP project. Targets and expected dates

| | | | | developed to |
|---------------------|-----------------------|------|-----|--------------------------|
| | | | | be uploaded |
| | | | | |
| | 5 FF0/ bu | | | for IFAD NOC |
| | >55% by 31-08-2022 | MBMA | | Onsite agri |
| | >59% by | | | extension |
| | 30-09-2022 | | | services to |
| | >62% by | | | continue |
| | 31-10-2022 | | | across all |
| | >65% by | | | project villages |
| | 30-11-2022 | | | until maturity |
| | >70% by 31-03-2023 | | | is reached; |
| | >80% by | | | Support such |
| Technical | 31-06-2023 | | | as provision of |
| extension | >90% by | | 51% | farm |
| support under | 31-12-2023 | | | implements, |
| INRM | >95% by | | | drudgery |
| | 31-03-2024 | | | reducing |
| | 100% by 31-06-2024 | | | implements, technical |
| | 51 00 2024 | | | |
| | | | | exposure will also be |
| | | | | provided on a |
| | | | | case to case |
| | | | | basis over the |
| | | | | next 2 years |
| | >80% by | МВМА | | TICKE 2 years |
| | 15-12-2022 | HBHA | | All 72 targeted |
| | >90% by | | | IVCS-CHCs |
| | 31-01-2023 | | | started |
| | 100% by 28-2-2023 | | | rendering |
| | 20-2-2023 | | | custom hiring |
| | | | | services; |
| | | | | Asset transfer |
| | | | | to IVCS-CHCs |
| Turulaurautatia | | | | under |
| Implementatio | | | | progress; |
| n of Village | | | 78% | procurement |
| Development Fund | | | | of 80% |
| Fulla | | | | planned |
| | | | | procurement |
| | | | | completed; |
| | | | | Technical |
| | | | | Persons |
| | | | | engaged to |
| | | | | render |
| | | | | technical |
| | | | | support to |
| | 00/ 1 | | | DPMUs. |
| | >8% by 30- | MBMA | | 1.4 cr of VDF |
| | 09-2022 >17% by | | | amount (not |
| Higher order | 30-11-2022 | | | disbursed to |
| intervention | >21% by | | 3% | 40 VDF |
| - | 15-12-2022 | | | tranches to |
| | >100% by | | | inactive VECs) |
| | 31-06-2023 | | | to be |

| | | | | reallocated as |
|---|--|------|-----|---|
| | | | | Challenge |
| | | | | Fund |
| | >70% by | MRMA | | |
| Convergence | >70% by 31-08-2022 >75% by 30-09-2022 >80% by 31-10-2022 >96% by 30-11-2022 100% by 31-1-2023 | MBMA | 64% | Out of the Target of 72 acre for reclamation of degraded land through plantation of Medicinal and Aromatic Plants, 57 acres completed. Out of the Total of 15 Sites for Implementatio n of OLCT, work has started in 13 Sites. Works under other INRM Higher Order Activities have been initiated through |
| Implementatio n of Supply chain grant support | >80% by 31-08-2022 >100% by 31-10-2022 | МВМА | 52% | S&WCD. Out of total target 12.67 crore, 1.28 crore achieved as on 5th August 2022. In addition to Convergence under MGNREGS, convergence process initiated under S&WCD. |
| Market led infrastructure, action research and tech demo | >50% by 31-08-2022 >70% by 30-09-2022 >85% by 31-10-2022 100% by 15-12-2022 | МВМА | 27% | Proposals for pilot innovations (Cold Storage, Blanket Vaccine carriers, pineapple fibre making units, banana fibre making units) already |

| | | | | received and |
|-------------------------------------|---|------|-----|---|
| | | | | ready for |
| | | | | disbursement |
| Seed Secure Meghalaya program | >65% by 31-09-2022 >85% by 31-10-2022 >100% by 15-11-2022 | МВМА | _ | New activity to start in next phase |
| Support Fund to IVCS | >72% by 31-08-2022 >75% by 30-09-2022 >76% by 31-10-2022 >80% by 30-11-2022 >100 by 28-02-2023 | МВМА | 47% | 289IVCSreceived01stinstalmentCorpusFundandanother256IVCSreceived02ndinstalment.AllIVCSexpected to getbothinstalmentofCorpusFundbyendofNovember |
| | | | | 2022. Risk Fund to IVCS will be supported on a case to case basis over the next 02 years. |
| Credit Linkage for IVCS | >15% by 31-08-2022 >16% by 30-09-2022 >17% by 31-10-2022 >18% by 30-11-2022 >19% by 31-12-2022 >28% by 31-12-2023 >35% by 31-12-2024 | MBMA | 14% | Credit linkage is slowing picking up as IVCS are beginning to mature. Further the project target of 183 Cr is on the higher side which needs to be revised to realistic figures |
| Expansion of IVCS | >9% by 31- 03-2023 >21% by 31-06-2023 >39% by 31-09-2023 >60% by 15-12-2023 >71% by 31-03-2024 | MBMA | - | New activity to start in next phase |

| | | >83% by | | |] |
|--------------------------|--|---|------|---|---------------------------|
| | | 31-03-2024 >91% by 31-06-2024 100% by 31-09-2024 | | | |
| | IVCS Computerizatio n | >2% by 31- 06-2023 >70% by 31-09-2023 >73% by 31-03-2024 100% by 31-06-2024 | MBMA | - | To start in next phase |
| | Development of Apex supervision and regulatory body for IVCS | >19% by 31-03-2023 >27% by 31-06-2023 >57% by 31-09-2023 >65% by 15-12-2023 >79% by 31-03-2024 >85% by 31-03-2024 100% by 31-06-2024 | МВМА | _ | To start in next phase |
| | Establishing Community Nurseries | >17% by 31-9-2022 >58% by 31-9-2023 >100% by 31-9-2024 | MBMA | - | to start in next phase |
| | Payment for Eco-system Services | >14% by 31-6-2023 >57% by 15-3-2024 >100% by 31-9-2024 | MBMA | - | to start in next phase |
| | Farm improvement and drudgery reduction | >6% by 31- 3-2023 >34% by 31-9-2023 >46% by 15-12-2023 >55% by 31-3-2024 >88% by 31-9-2024 >100 by 15-12-2024 | MBMA | - | to start in next phase |
| C. Project management | AWPB(asapprovedbyIFAD)isexecutedatleast 85% | By 31-3- 2023 By 31-3- 2024 By 31-12- 2024 | МВМА | - | |

| | Audit Report are presented on time | By 30-9- 2022 By 30-9- 2023 By 30-9- 2024 | MBMA | - | |
|-------------------|---|--|------|---|----------|
| | Preliminary AWPB and Procurement Plan are presented on time | By 28-2- 2023 By 28-2- 2024 | MBMA | - | |
| D. IFAD's support | 2 missions per year (1 supervision, 1 Implementatio n Support Mission) and monthly virtual stocktake meetings in 2023, Quarterly virtual stocktake meeting in 2024 | 4 by 31-12- 2022 12 by 31- 12-2023 5 by 31-12- 2024 | IFAD | - | On-going |