

Independent Office  
of Evaluation



Investing in rural people

Republic of Ghana

Root and Tuber Improvement and Marketing Programme

PROJECT PERFORMANCE EVALUATION







Independent Office  
of Evaluation



**Republic of Ghana**  
**Root and Tuber Improvement and Marketing Programme**  
**Project Performance Evaluation**

**July 2018**  
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Photos of activities supported by the Root and Tuber Improvement and Marketing Programme.

Front cover: Cassava peeling in Josma Good Practice Centre.

Back right: Improved stoves with chimneys for cassava processing to reduce the smoke.

Back left: Focus Group Discussion with farmers in Damongo.

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## **Preface**

*The Independent Office of Evaluation of IFAD (IOE) undertook a project performance evaluation of the Root and Tuber Improvement and Marketing Programme in the Republic of Ghana to provide an independent assessment of the overall results of the programme, generate lessons and recommendations for the design and implementation of ongoing and future operations in the country, and provide project-level evidence that will feed into the corporate-level evaluation on value chain development.*

*The programme was implemented between 2005 and 2015, with the aim to enhance the food security and incomes of poor rural households in Ghana, with a special emphasis on women and other vulnerable groups. Its specific objective was to build up competitive, market-based and inclusive commodity chains for roots and tubers, supported by relevant, effective and sustainable services that are accessible to the rural poor. By completion, it reached 217,258 direct beneficiaries (against the appraisal target of 290,000).*

*The programme design was relevant to the country context and Government priorities. The elements of an inclusive value chain development approach were in place, and the design and initial arrangements displayed a relatively solid intervention logic. However, there was a serious imbalance between production and marketing during implementation, which led to oversupply of produce and local market saturation. Progress was also made on the marketing side after the mid-term review, when supply chain facilitators were appointed and when the Ministry of Food and Agriculture strengthened the focus on agricultural commercialization. However, little time was left to implement the recommendations proposed by the supply chain facilitators, and the programme thus fell short of its objectives.*

*The project performance assessment highlights the need to invest early in specialized skills on market development and also to pay close attention to demand fluctuations for future market-oriented projects. The evaluation also points out that the design of rural financing instruments should be based on a rigorous assessment of the potential risks and constraints faced by both financial service providers and borrowers, with proper risk mitigation mechanisms in place.*

*The project performance assessment was conducted by Shijie Yang, Evaluation Analyst, IOE, in collaboration with senior consultant Dorothy Lucks (agribusiness development specialist). Peer reviewers – Fumiko Nakai, Senior Evaluation Officer, Mark Keating, Evaluation Officer, and Fabrizio Felloni, Deputy Director, IOE – provided comments on the draft report. Delphine Bureau and Laure Vidaud, Evaluation Assistants, provided administrative support.*

*IOE is grateful to the Ministry of Food and Agriculture of the Republic of Ghana and to IFAD's West and Central Africa Division for their cooperation and support and for the valuable comments provided during the evaluation process. I hope the results generated by this project performance assessment will be useful to inform and improve IFAD operations and activities in Ghana for enhanced development effectiveness.*



Oscar A. Garcia  
Director  
Independent Office of Evaluation of IFAD

**Gari processing in Akim South District.**

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## **Currency equivalent, weights and measures**

### **Currency equivalent**

Currency unit = Ghanaian cedi (GHS)

US\$ 1.0 = GHS 3.1

### **Weights and measures**

1 kilogram	=	1000 g
1 000 kg	=	2.204 lb
1 kilometre (km)	=	0.62 mile
1 metre	=	1.09 yards
1 square metre	=	10.76 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres

## Abbreviations and acronyms

BEC	business enterprise centre
COSOP	country strategic opportunities programme
DADU	district agricultural development unit
DSF	district stakeholder forum
FBO	farmer-based organization
FFF	farmer field forum
GASIP	Ghana Agriculture Sector Investment Programme
GEF	Global Environment Facility
GHS	Ghanaian cedi
GPC	good practice centre
GRATIS	Ghana Regional Appropriate Technology and Industrial Services
HQCF	high-quality cassava flour
IEC	information, education and communication
IOE	Independent Office of Evaluation of IFAD
MEF	micro-enterprise fund
MoF	Ministry of Finance
MoFA	Ministry of Food and Agriculture
M&E	monitoring and evaluation
MTR	mid-term review
NPSC	National Programme Steering Committee
NRGP	Northern Rural Growth Programme
OFID	OPEC Fund for International Development
PCO	programme coordinating office
PCR	project completion report
PFI	participating financial institution
PMD	Programme Management Department
PIALA	participatory impact assessment and learning approach
PPE	project performance evaluation
PROVACCA	Promoting a Value Chain Approach to Climate Change Adaptation in Agriculture in Ghana
REP	Rural Enterprise Programme
RIMS	Results and Impact Management System
RTIP	Root and Tuber Improvement Programme
RTIMP	Root and Tuber Improvement and Marketing Programme
R&T	roots and tubers
SCF	supply chain facilitator
SDR	Special Drawing Rights
ToC	theory of change
USD	United States Dollar
WAAPP	West Africa Agricultural Productivity Project
WCA	West and Central Africa Division of IFAD

# Map of the project area

## Republic of Ghana

### Root and Tuber Improvement and Marketing Programme

#### Project Performance Evaluation



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.  
Map compiled by IFAD | 25-05-2018



## Executive summary

1. **Background.** The Independent Office of Evaluation of IFAD undertook a project performance evaluation (PPE) of the Root and Tuber Improvement and Marketing Programme (RTIMP) in the Republic of Ghana. The objectives of the evaluation were to: (i) assess the results of the programme; (ii) generate findings and recommendations for the design and implementation of ongoing and future operations in Ghana; and (iii) provide project-level evidence that will feed into the corporate-level evaluation on value chain development. This PPE is based on a review of various project-related documents and a mission to Ghana in September 2017, which visited the project areas and held interviews and discussions with various key stakeholders, including beneficiaries.
2. **Programme context.** RTIMP was designed as a follow-up to the Root and Tuber Improvement Programme, which focused primarily on cassava research and development, was implemented from 1997 to 2005 at a total cost of US\$10.1 million and reached 750,000 household beneficiaries. RTIMP was approved in September 2005 and completed in December 2014. By completion, it had reached 217,258 direct beneficiaries (against the appraisal target of 290,000).
3. The programme's development goal was to enhance the food security and incomes of poor rural households in Ghana, with a special emphasis on women and other vulnerable groups. Its specific objective was to build up competitive, market-based and inclusive commodity chains for roots and tubers (R&T), supported by relevant, effective and sustainable services that are accessible to the rural poor.
4. The five programme components were: (i) support to increased commodity chain linkages; (ii) support to R&T production; (iii) upgrading of R&T processing, business and marketing skills; (iv) promoting a value chain approach to climate change adaptation in agriculture in Ghana (PROVACCA), a three-year pilot project that was added in July 2012 as a component of RTIMP with a Global Environment Facility (GEF) grant); and (v) programme coordination, monitoring and evaluation.
5. Against the estimated project cost of US\$27.7 million, the actual project cost was US\$23.6 million, which included an IFAD loan of about US\$19.0 million (80 per cent of the total cost), Government counterpart funding of US\$2.32 million, beneficiary farmers' and processors' contribution of US\$1.29 million, and contribution from the participating financial institutions of US\$0.4 million (against US\$4.0 million expected). At project completion, only 30 per cent of the available funds of the GEF grant had been utilized and the balance was "transferred" to co-finance another IFAD-financed programme, the Ghana Agriculture Sector Investment Programme.
6. **Relevance.** The objective of the programme was relevant to the country context and Government priorities. The elements of an inclusive value chain development approach were in place, and the design and initial arrangements displayed a relatively solid intervention logic with sufficient attention paid to collaboration with the private sector. The three main components in relation to production, processing and marketing were designed to be integrated to support value chain development across the areas of focus, and they were also appropriately resourced. Recognizing the Ministry of Food and Agriculture's (MoFA) lack of experience in R&T processing and commodity chain integration, the design envisaged partnership with the private sector (e.g. technical service provider in the original design, and supply chain facilitators after mid-term review) in leading the studies on value chain mapping and diagnostics, as well as proposing recommendations to address specific needs in each chain.
7. Given the long programme duration, it was designed to be flexible and responsive to emerging needs during implementation through the use of the two specific funds – the Initiative Fund and the Micro Enterprise Fund (MEF) – under the marketing

and production components. Unfortunately, although the two funds were in high demand, they lacked technical and operational details in design. The MEF in particular was based on unrealistic assumptions and overlooked liquidity constraints of the rural banks, resulting in low uptake. Even though there were some technical weaknesses in the original design, the programme implementation responded to lessons learned at mid-term review and worked to re-direct the design into some focused areas. Overall, this indicated a relatively well-designed programme, but with some weaknesses in sub-component design details.

8. **Effectiveness.** The main achievement of the programme has been in the change of farming practices at the farmer level. The use of the farmer field fora (FFF) was cited as a benefit for farmers across all levels of the programme. Through FFF and multiplication stations, the programme increased the availability and accessibility of healthy and high yielding R&T planting materials.
9. However, the objectives related to R&T value chain development, and processing and marketing skills upgrading, were underachieved. This is particularly related to slow implementation of the marketing and processing components before the mid-term. The mid-term review tried to re-focus the programme back to the original design with the participation of the supply chain facilitators (SCFs) who would assist producers and processors in identifying critical bottlenecks in the specific supply chain. The Initiative Fund was then expected to address those particular needs. Positive results were achieved, but little time was left to implement the recommendations proposed by SCFs. The PPE team also found that the farmer-based organizations were largely inactive and did not serve as an effective mechanism for helping farmers negotiate better prices and access markets, as expected in design. The effectiveness of district stakeholder forums (DSFs) in establishing market linkages among the R&T commodity chain actors was limited. But it is noted that good district leadership was essential for the forum to achieve its intended objective.
10. The good practice centres (GPCs) as processing centres are fully functioning in most of the cases, but they fall short of the objective as demonstration sites. The programme upgraded 26 GPCs. However, GPC as a main commercialization strategy did not provide a sufficient market mechanism to absorb the increased production, partly due to their limited geographical coverage. The focus of project attention on the GPCs as a main market avenue took attention away from other potential mechanisms. As mentioned earlier, though SCFs started to work on alternative mechanisms late in the project, little time was left to implement the proposed recommendations.
11. **Efficiency.** RTIMP experienced a number of issues with respect to programme efficiency: resources were not disbursed in a timely fashion; activities were not sequenced properly; high management costs were compounded by significant deficiencies in the programme's financial management; and cost per beneficiary was relatively high. Additionally, the MEF was underutilized and failed to mobilize resources from participating financial institutions due to design weakness and capacity constraints. Most notably, the project completion report indicated very high programme management costs: US\$11.5 million on coordination and the monitoring and evaluation component. After the PPE team's recalibration and correction of some errors, the management costs are estimated to be about US\$5.8 million, which still almost doubles the allocated amount of US\$2.9 million and represents 30 per cent of the IFAD loan. The increased management costs were mainly driven by the increase in vehicles and office equipment, and salaries and allowances, according to the expenditure category data. Staff turnover was high, which negatively affected the implementation efficiency and programme management.

12. **Rural Poverty Impact.** RTIMP significantly increased yields through improved varieties and better farming management skills. By changing land preparation from mounds to ridging, and by using improved varieties and better pest and soil management, farmers reported to have achieved an approximate doubling in yield for different R&T products (cassava, yam and cocoyam). Additionally, the improved planting materials produced some varieties with longer shelf-lives, which allowed farmers to store and sell them at a better price after the harvest season.
13. Due to increased productivity, many programme participants did achieve overall improvement in household income at the beginning. However, while productivity increased, marketing was still a problem; oversupply and local market saturation were widely observed, resulting in lower prices and unsustainable income increases. The programme included various initiatives to improve food safety and nutrition, including improved production quality control processes and the production of protein and vitamin A-fortified gari, particularly in the GPCs.
14. Overall, the programme contributed modestly to household incomes, primarily through improvements in agricultural production. There were significant increases in crop productivity and a resultant contribution to household food security. The increase in gari production also improved the accessibility and affordability of processed foods in the local communities. However, the magnitude of the programme's contribution is difficult to estimate due to the general upward trend of rural development, poverty reduction, and food security improvement in Ghana. Little was achieved at the institutional and policy levels, which also negatively affected the sustainability of benefits.

### **Conclusions**

15. In spite of a well-balanced design in which priority was given to building commodity chain linkages, the implementation focus was largely biased towards production with insufficient attention to the marketing aspects, which led to unfulfilled potential. This imbalance between production and marketing was mainly due to the reliance on the known approaches for production multiplication and lack of experience in the national agencies and their lack of focus on commercializing staple crops at programme commencement. The Programme Coordinating Office (PCO) was not adequately set up and equipped to coordinate the implementation of a programme of this nature. Progress was made after the mid-term review when supply chain facilitators were appointed and when the MoFA's focus towards agricultural commercialization intensified.
16. While the matching-grant mechanism has been used across IFAD's portfolio in Ghana with some successful experience, in the case of RTIMP the MEF was less effective in mobilizing resources from participating financial institutions. Although the MEF can be an appropriate mechanism to leverage resources, it needed to be built upon realistic assumptions about both supply (rural bank liquidity, low risk aversion to agricultural loans) and demand sides (strong farmers' groups, financial capacity).
17. The value chain approach for the R&T sector in Ghana is a good example of how subsistence farming can be commercialized with appropriate support, but a commercialization approach should be commenced early in implementation. The PPE found that there was both market demand and supply potential for R&T. If more knowledgeable and experienced staff had been secured for implementation at commencement, and the MoFA had had sufficient marketing and value chain development capacity, the programme would have had time to mature and generate greater results with correct commercial orientation.



## Recommendations

### **Recommendation 1. Future market-oriented projects should invest early in specialized skills on market development and pay close attention to demand fluctuations.**

The experience of RTIMP shows that when market analysis and commercial planning were carried out, and where DSFs were successful, positive progress was achieved. For future interventions, investments in capacity building of concerned agencies and in orienting the MoFA toward a commercial approach and mindset are required early on to allow time for implementation. Additionally, future projects also need to better identify market constraints: type of markets (export, regional, domestic), end use of the commodity, characteristics of the commodity, quality attributes, and current and emerging market trends. Lastly, while working directly with key enterprises, other marketing approaches such as direct linkage, contract farming, direct sub-contract, or agency facilitation could be considered and supported to increase diversification and address market interests.

18. **Recommendation 2. Matching grant funds may be appropriate but alternative rural financing mechanisms should also be explored.** RTIMP reliance on the MEF for financing constrained implementation, and more intensive support was required to overcome the challenges faced by both financial institutions and the target group. Where there is demand for rural finance, a matching grant fund can be a good mechanism to mobilize resources and increase financial access by resource-poor farmers. However, its design should be based on careful assessment of the potential risks and constraints in both supply (financial service providers) and demand (borrowers) sides for such a mechanism to be effective in reaching the intended target group. At the same time, alternative approaches aimed at improving access to finance, for example through linkages with the IFAD-financed Rural Enterprises Programme, a line of credit or asset-based financing (leasing) may also be explored.
19. **Recommendation 3. Project management issues need to be addressed early and decisively to avoid dilution of the strategic intent and efficiency of the project.** RTIMP implementation was affected by financial and staff management concerns. These were identified at an early stage, but action was not taken until late in the project period. Specifically, for the future projects, IFAD and the Government should identify risks related to project management and risk mitigation measures in advance so that actions, where and when required, can be taken in a timely manner. Future projects should ensure an appropriate structure of the implementation unit (e.g. PCO) to enhance the MoFA's leverage on project supervision. There is also a need to keep a certain degree of human resource and institutional memory within the Government after project closure.

## IFAD Management's response<sup>1</sup>

1. West and Central Africa Division (WCA) welcomes the overall findings of the Root and Tuber Improvement and Marketing Programme (RTIMP) project performance evaluation (PPE) conducted by the Independent Office of Evaluation (IOE).
2. WCA agrees with the IOE's evaluation of the Programme's performance and appreciates the fact that the PPE acknowledged the contribution of the RTIMP in significantly increasing various roots and tuber (cassava, yam and cocoyam) yields through improved varieties and better farming management skills.
3. Despite the relevance of the objective of the programme to the country context and Government priorities, WCA agrees with the PPE that the programme focus was largely biased towards production with insufficient attention to marketing aspects, as anticipated at design. Management also agrees that the Programme Coordination and Management Unit (PCMU) lacked requisite knowledge and experienced staff to manage a project of such nature. This underscores the importance of recruiting competent and committed staff in the PCMU and providing capacity building support. WCA further agrees that the failure to timely address financial and staff-related management concerns, further contributed to the poor financial management of the programme and the high staff turnover that ensued.
4. Finally, Management acknowledges the fact that the matching grant mechanism used, the Micro-Enterprise Fund (MEF), was less effective in mobilizing resources from participating financial institutions. The mechanism could have been built upon realistic assumptions on both supply (rural bank liquidity and low risk aversion to agricultural loans) and demand sides (strong farmers groups, financial capacity).
5. Management appreciates the PPE recommendations, and will ensure that the lessons learnt and recommendations made will be taken into consideration and in the on-going GASIP Programme and subsequent projects. Management's view on the specific recommendations are presented below:
  - (a) **Recommendation: Future market-oriented projects should invest early in specialised skills for market development and pay close attention to demand fluctuations**  
Agreed. On the recommendation to invest early in specialised skills on market development and pay attention to demand fluctuations, IFAD has adopted the cluster approach to increase the efficiency of FBO's business development in GASIP. This is done through a market analysis of the specific value chains to establish the viability of enterprises and investment potentials within that specific value chains. To enhance FBOs capacity to participate in markets, the Public-Private-Producer Partnership (PPPPs) approach is also used to develop effective partnerships and linkages among the respective actors.
  - (b) **Recommendation 2: Matching grant funds may be appropriate but alternative rural financing mechanisms should also be explored:**  
Agreed. With reference to the recommendation on Matching grant funds and exploring alternative rural financing mechanisms, IFAD is piloting other financing models as micro-leasing. The intent is use alternative financing mechanisms to address the inability to meet credit worthiness criteria, structurally high interest rates, collateral security requirements under conventional lending arrangements for the MSEs and lack of liquidity especially for term lending for many rural and community banks as participating financial institutions under the Rural Enterprises Programme (REP). Similarly, a Rural Enterprise Development Fund (REDF) designed as a refinancing facility for the financial institutions is being implemented under

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<sup>1</sup> The Programme Management Department sent Management's final response to IOE on 27 April 2018.

the same REP Programme. Venture capital for start-up of businesses and Challenge funds for investments in innovations are also being explored under REP and GASIP.

(c) **Recommendation 3: Project Management issues need to be addressed early and decisively to avoid dilution of the strategic intent and efficiency of the project:**

Agreed. In recognition of the challenges experienced in Project management in RTIMP and other projects in Ghana, the IFAD country office is working closely with the Government to improve on the recruitment processes, and will set up a rigorous staff performance evaluation system. The Government is also restructuring to establish/strengthen its Programmes Management Units in the Ministries of Food and Agriculture , and Trade and Industry. In so doing, the Government envisages better oversight of projects and monitoring for effective implementation, accountability and enhanced performance.

6. WCA appreciates the fruitful process undertaken and will work with the Government to ensure that lessons learned from this exercise are internalized to further improve the performance of IFAD-funded projects in Ghana.

# Republic of Ghana

## Root and Tuber Improvement and Marketing Programme

### Project Performance Evaluation

#### I. Evaluation objectives, methodology and process

1. **Background.** The Independent Office of Evaluation of IFAD (IOE) undertakes project performance evaluations (PPEs) for a number of selected completed projects.<sup>1</sup> The Root and Tuber Improvement and Marketing Programme (RTIMP) in the Republic of Ghana was selected for a PPE based on a number of considerations, in particular to provide inputs to the planned 2018 corporate-level evaluation on IFAD's contribution to agriculture-related value chain development.
2. **Objectives and focus.** The main objectives of the PPE are to: (i) assess the results of the project; (ii) generate findings and recommendations for the design and implementation of ongoing and future operations in the country; and (iii) provide project-level evidence that will feed into the corporate-level evaluation on value chain development. This PPE focused on selected key issues that emerged from a desk review: (a) enhanced production as a means of supply chain commercialization; (b) balances between marketing and production at project design; (c) microenterprise fund and access to finance; (d) sustainability of service provided by the programme; (e) synergies between grants provided and the programme objectives; and (f) programme efficiency.
3. **Methodology.** The PPE follows IFAD's Evaluation Policy,<sup>2</sup> the IFAD/IOE Evaluation Manual (second edition)<sup>3</sup> and the Guidelines for Project Completion Validation and Project Performance Evaluation.<sup>4</sup> It adopts a set of internationally recognized evaluation criteria (see annex II) and a six-point rating system (annex III, footnote a). The evaluation was based on a desk review of available data and documents<sup>5</sup> and a country mission for two weeks including field visits.
4. Data collection methods included desk-based research and review, interviews with various stakeholders and key informants (e.g. former programme staff, programme implementation agencies, service providers, staff from regional agricultural departments and district agricultural development units (DADUs), and IFAD staff in the country office). Focus group discussions were held with all types of actors along the roots and tubers (R&T) value chain (farmers, processors, buyers, chain facilitator, transporters and participating financial institutions). Direct observations were applied to check bookkeeping records, farming activities on adoption of programme-promoted farming techniques, and R&T processing units.
5. Primary data were collected in the field to validate documented findings and conclusions of the project completion report (PCR) and allow for an independent assessment of project performance. A qualitative approach was adopted for data collection due to time constraints, using semi-structured questionnaires (annex XI). Data collection methods comprised individual interviews and focus group discussions using open-ended interview guides (see annex XI). Given the time and resources available, no large-scale survey was undertaken.

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<sup>1</sup> The selection criteria for PPEs include: (i) synergies with forthcoming or ongoing IOE evaluations; (ii) novel approaches; (iii) major information gaps in PCRs; and (iv) geographic balance.

<sup>2</sup> <http://www.ifad.org/pub/policy/oe.pdf>.

<sup>3</sup> [http://www.ifad.org/evaluation/process\\_methodology/doc/manual.pdf](http://www.ifad.org/evaluation/process_methodology/doc/manual.pdf).

<sup>4</sup> [http://www.ifad.org/evaluation/process\\_methodology/doc/pr\\_completion.pdf](http://www.ifad.org/evaluation/process_methodology/doc/pr_completion.pdf). See annex IV for an extract from the guidelines, "Methodological note on project performance assessments".

<sup>5</sup> Including project appraisal report, supervision mission reports, mid-term review report, project completion report, baseline survey, midline survey, Participatory Impact Assessment and Learning Approach, and other documents. See also annex XII for bibliography.

6. *Visit sites selection.* Due to the national coverage of the programme and time constraints, to obtain a national representative sample of programme sites, the PPE team randomly selected the districts using the programme operation area dataset based on a series of parameters (e.g. year of implementation, commodity types, and geographical areas). The database on the Good Practice Centres (GPCs), which included some indicators on size, type of ownership, and districts, was used as a reference to select different sites.
7. **Data availability and limitations.** The programme kept a fair record of some programme activities and outputs. However, based on a thorough review of the programme archive in the Project Coordination Office (PCO) office in Kumasi, the PPE team identified major gaps; for instance, data collection sheets and templates used by district-level officers and zonal staff for data collection were sent in hard copy to the project office, but these hard-copy sheets were not found at the PCO. Overall, the monitoring and evaluation (M&E) system appeared to be weak.<sup>6</sup> This imposed significant challenges on assessing the programme effectiveness and impact for various aspects.
8. **Impact studies.** Nonetheless, the PPE benefited greatly from data available through the Participatory Programme Impact Assessment and Learning Approach (PIALA) carried out in 2015. This study was conducted by Participatory Development Associates,<sup>7</sup> jointly commissioned by the Ministry of Food and Agriculture (MoFA) and IFAD country office, and aimed to assess the attribution of the project to rural poverty impact. The PIALA methodology uses a theory of change (ToC) and a participatory sense-making approach and seeks to answer the following questions: "What has changed (or not), for whom, and why?"; "How sustainable are these changes likely to be?"; "What are the impacts and what has caused these changes?"; "What has been the programme's contributions to these changes, among other causes?"; and "What are the implications for future programme strategies?".
9. As part of the PIALA, a household survey was conducted by collecting data from 837 beneficiary households to assess changes in household food and income. Additionally, the study carried out a large sample of focus group discussions (in total 1180 beneficiaries) to assess the reconstructed ToC: the causes of the observed changes in the R&T value chain that affected household food and income, and how the area of production, processing, and market linkages contributed to the changes. Lastly, 100 key informant interviews were carried out with 75 district-level and 25 regional and national programme stakeholders. The national stakeholders interviewed included RTIMP and IFAD officials, managers from the participating financial institutions (PFIs), the farmer field fora (FFF) research leaders, and several important off-takers (called "supply chain leaders"). At district level, the stakeholders were district officials, leaders of Good Practice Centres (GPCs) and other small and medium enterprises, and the managers of the local branches of the PFIs. The detailed analysis and data from the PIALA has been used throughout the evaluation.
10. **Process.** The PPE mission was undertaken from 4 to 15 September 2017. At the onset of the mission, meetings were held in Accra with MoFA and staff working with current and previous IFAD-financed projects,<sup>8</sup> service providers<sup>9</sup> and development

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<sup>6</sup> The PCR attributed the weak M&E to lack of leadership and demand by the management, lack of staff skills, etc.

<sup>7</sup> Anticipating the completion of RTIMP and the start-up of the new Ghana Agricultural Sector Investment Programme (GASIP), MoFA and the IFAD country office jointly commissioned a full-scale and -scope impact evaluation for a total of about US\$233,000, covering the entire programme nationwide. The evaluation was conducted by Participatory Development Associates using a PIALA developed with support from IFAD and the Bill & Melinda Gates Foundation.

<sup>8</sup> GASIP and Northern Rural Growth Programme (NRGP).

<sup>9</sup> Ecobank Head Office, GRATIS, and Freshmacs as yam supply chain facilitator.



partners.<sup>10</sup> From 6 to 13 September, the team travelled to the project areas in five regions (see table 1 for details). In the field, the PPE team conducted key informant interviews with rural bank staff and end-customers, former programme staff, regional/district directors, staff from regional/district agricultural department units, and staff from the Council of Scientific and Industrial Research. Ten focus group discussions were conducted with various R&T value chain stakeholders (farmers, processors, buyers, chain facilitators, transporters and managers of the local branches of PFIs). After returning from the field to Accra, the PPE team held additional meetings, including with the Ministry of Finance (MOF), IFAD country director, Apex Bank and other PFI headquarters. The wrap-up meeting was held at MoFA in Accra on 15 September to present the preliminary findings. A list of key people met is provided in annex V.

11. Following the mission, further analysis of the data and findings was conducted. The resulting draft report was then peer-reviewed within IOE. It was thereafter shared with IFAD's West and Central Africa Division (WCA) and the Government of Ghana, and their comments have been taken into account in the final report.
12. Data and information from different sources were reviewed, analysed and triangulated, combined by the in-country work, to provide an informed assessment of the project performance.

Table 1

**List of zones, districts and communities visited by the PPE mission**

<i>Region</i>	<i>Selected district</i>	<i>Visited communities</i>	<i>Supply chains</i>
Northern	West Gonja	Damongo	Cassava (Gari)
Upper East	Navrongo	Paga	Sweet potato
	Techiman	Asuenyi, Techiman	Cassava, cocoyam, gari
Brong Ahafo	Asunafo North	Aduroye,	Cassava and yam
Eastern	Birim Central	Otaipro	Cassava and gari
Ashanti	Asante Akim South	Akim South	Cassava and yam
	Sekyere West	Krobo	Gari
	Mampong	Mampong	Gari, plywood cassava flour (PCF), high quality cassava flour (not functioning)
	Offinso North	Offinso	Cassava and gari

<sup>10</sup> Assistant representative of the Food and Agriculture Organization in Ghana country office; Senior Economist from World Bank.

## II. The project

### A. Project context

13. Ghana experienced significant economic growth in the early 2000s as a result of increasing political stability and market reforms that the long-term growth trend in GDP accelerated, hitting the peak of 9.2 per cent in 2008. The years 2006–08, at the beginning of programme implementation, saw severe macroeconomic imbalances when the country suffered from several exogenous shocks — an energy crisis in 2006, droughts and floods in late 2006, and rising world oil and food prices in 2008. Despite these challenges, the only dips in the rising post-2000 growth record took place in 2009 due to the global financial crisis, and in 2012, when growth reverted to its long-term trend after the start of commercial oil production in 2011 (World Bank, 2013). Remarkably, in July 2011, Ghana achieved the World Bank's per-capita income threshold for classification as a lower middle-income country, with a GDP growth rate topped at 14 per cent.
14. During the RTIMP programme life time, the Ghanaian cedi (GHS) lost ground against the United States Dollar (USD), depreciating from 0.93 GHS to 3.9 GHS per USD from 2006 to December 2014. The depreciation of the cedi underlines the economic difficulties that the country faces amid falling commodity prices and strapped Government finances.<sup>11</sup>
15. *Poverty.* The poverty landscape of Ghana changed considerably since the start of the programme, with national income per capita growing rapidly and rising from US\$470 in 2005 to US\$1470 in 2015 in nominal terms. It is noted that this change was largely due to the revision of Ghana's national accounts series from 1993 to 2006 by Ghana Statistical Service, leading the country's total GDP to be 60 per cent higher and also its consequent reclassification as a Lower Middle Income Country by the World Bank.<sup>12</sup> Although the poverty headcount fell from 43.9 per cent in 1998/1999 to 31.9 per cent in 2005, and further to 24.2 per cent in 2015, food-crop farmers still showed a high poverty rate at 45.5 per cent in 2005. Poverty was more pervasive in the north (52–70 per cent poverty rate) for the year 2005 and remained at a high level of 56 per cent by 2015. The poverty rate in the northern part of the country has also declined much less than in the rest of the country, largely reflecting the region's much higher percentage of subsistence farming and much lower level of urbanization.
16. *Agriculture sector.* Agriculture is an important economic sector for Ghana. Though its contribution to GDP declined from 41 per cent in 2005 to 21 per cent in 2015, it still employs about 53.6 per cent of the labour force (2013).<sup>13</sup> Agriculture remains largely rain-fed and subsistence-based, with rudimentary technology used to produce 80 per cent of total agricultural output (FAO, 2015). Within the sector, cocoa accounts for 14 per cent of agricultural GDP, cereal and root crops for 63 per cent, and forestry, livestock and fisheries for the remaining 23 per cent. The following crops are grown for food and cash throughout Ghana: cassava and cocoyam in the rainforests; cassava, yam and sweet potato in the transition and savannah zones; and *fracra* potato (an indigenous crop) in parts of the Upper-East region. The production of these R&T crops is mainly based on traditional practices and smallholder cultivation. The image of cassava tends to be negative as it is closely identified with the rural poor, yet processed cassava products (*gari*, *fufu*)

<sup>11</sup> There were high twin deficits (i.e. current account and fiscal deficits) and slowed-down economic growth, which exposed the economy to risks. Source: IMF Survey: High Twin Deficits Pose Risks to Ghana's Growth Outlook (2014) <https://www.imf.org/en/News/Articles/2015/09/28/04/53/socar050714a>.

<sup>12</sup> Ghana Statistical Service (2010), Rebasing of Ghana's National Accounts to Reference Year 2006, downloaded from [https://www.mofep.gov.gh/sites/default/files/reports/economic/RebasingNationalAccountsGhana\\_1.pdf](https://www.mofep.gov.gh/sites/default/files/reports/economic/RebasingNationalAccountsGhana_1.pdf). World Bank (2011) World Development Indicators, downloaded from [http://siteresources.worldbank.org/DATASTATISTICS/Resources/wdi\\_ebook.pdf](http://siteresources.worldbank.org/DATASTATISTICS/Resources/wdi_ebook.pdf).

<sup>13</sup> FAO (2015), Socio-economic context and role of agriculture, downloaded from <http://www.fao.org/3/a-i4490e.pdf>.

have strong markets in the rapidly expanding urban areas throughout West and Central Africa and with increasing commercialization, the economic potential and profile of the cassava crop and products are being recognized.

17. RTIMP was designed as a follow-up to the Root and Tuber Improvement Programme (RTIP), which focused primarily on cassava research and development and was implemented from 1997 to 2005 at a total cost of US\$10.1 million, reaching 750,000 household beneficiaries.<sup>14</sup>
18. **Project area.** The programme was national in scope. Its design aimed to cover at least 60 districts, rising to 85 at mid-term. In the end, it was expanded to 106 districts in Ghana across all ten regions.<sup>15</sup> The programme area covered all three agro-ecological zones: the Northern Zone (Zone 1-Tamale) comprising the Northern, Upper East and Upper West regions; the Middle Zone (Zone 2-Techiman), comprising Ashanti, Brong Ahafo and Western regions; and the Southern Zone (Zone 3-Koforidua), comprising Eastern, Volta, Greater Accra and Central regions.
19. **Target group and targeting approach.** The original 60 districts were selected based on the following criteria: significant production and marketing potential; vulnerability to food insecurity and low incomes; presence/absence of other interventions and related prospects for mutually beneficial collaboration; interest in crops other than cassava; and potential for collaboration with the Rural Enterprises Programme (REP) – Phase II.<sup>16</sup>
20. Regarding the targeting approach, programme activities were self-targeted since the R&T subsector was dominated by the rural poor and most forms of support were too modest to attract the non-poor. Supported by a strong information, educational and communication campaign, the local agricultural extension agents identified and approached farmers known to be food-insecure and encouraged them to participate in the programme. They also screened interested farmers, processors and traders to ensure appropriate poverty status. The PCR reported that MoFA and the programme's other implementation partners adopted a fully transparent and participatory approach for targeting. Self-targeting was also evident as farmers with higher income tend to invest in rice, tree crops or other commercial production. Similar mechanisms were used to approach processors who were still using traditional equipment, and to wage workers interested and able to become entrepreneurs themselves,<sup>17</sup> particularly women, who are more involved in cassava production and traditionally do most of the work.<sup>18</sup>
21. **Project goal and objectives.** The programme's development goal was to enhance the food security and incomes of poor rural households in Ghana, with special emphasis on women and other vulnerable groups. Its specific objective was to build up competitive, market-based and inclusive commodity chains for R&T, supported by relevant, effective and sustainable services that are accessible to the rural poor.
22. **Project components.** According to the RTIMP design, the programme originally comprised four components (A, B, C, E); a fifth component was added commencing from July 2012.

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<sup>14</sup> The interim evaluation of RTIP (2004) concludes that "RTIP successfully created a nationwide system for the multiplication and dissemination of planting material. However, two major areas of RTIP work were found to be in need of improvement. Firstly, attention to the poverty reduction goal of RTIP was inadequate. It was recommended that if a second phase of RTIP was to benefit from IFAD-financing, it should focus more systematically on how it can contribute to reducing rural poverty. Secondly, RTIP should address with vigor the wide range of issues that relate to the post-harvest phase of root and tuber crop production."

<sup>15</sup> Ghana is divided into ten administrative regions currently comprising 170 districts, increased from 138 in 2005.

<sup>16</sup> President's Report, p.5.

<sup>17</sup> Revised Programme Implementation Manual, 2013.

<sup>18</sup> PCR, para. 78.

- i. **Component A: Support to increased commodity chain linkages.** The expected outcome of this component was the establishment of market-based R&T commodity chains. The five subcomponents were: (i) information, education and communication campaign; (ii) linking small producers to larger markets; (iii) developing new uses for R&Ts; (iv) strengthening formal/informal organizations of growers, processors and traders; and (v) support to R&T commodity chain partners and policy dialogue. An Initiative Fund was available to finance pilot activities designed to forge/strengthen linkages within the R&T commodity chains. The fund covered the development of improved processing equipment and Supply Chain Facilitators (SCFs) to map five commodity chains, develop the supply chains, and link them to larger markets.
- ii. **Component B: Support to root and tuber production.** The expected outcome of this component was increased yields of R&T-based cropping systems. The component was expected to consolidate the achievements of RTIP. The five subcomponents were: (i) agricultural research; (ii) multiplication/distribution of planting material; (iii) improved cultivation practices; (iv) soil fertility management; and (v) integrated pest management. The existing range of new and indigenous varieties was to be expanded and private sector operators would be encouraged to take over service delivery. The main instrument for technology dissemination was FFF to facilitate planting material distribution, technology transfer and demonstration.
- iii. **Component C: Upgrading of root and tuber processing, business and marketing skills.** Under this component, R&T processing and marketing was to be upgraded through access to improved equipment, training and backstopping on business management and marketing skills by R&T smallholder farmers and processors. The component also included support for the establishment of GPCs, provision of relevant appropriate processing technologies, and the operation of a matching grant facility through a Micro-Enterprise Fund (MEF). The MEF was designed to mobilize private financial resources from PFIs to support farmers and processors in addressing financing gaps. It also aimed to improve knowledge and capacity of the Department of Agriculture staff to support commercial agriculture for the R&T sector, as well as creating a stronger link between rural banks and the R&T sector processors.
- iv. **Component D: "Promoting a value chain approach to climate change adaptation in agriculture in Ghana (PROVACCA)".** This is a three-year pilot project that was added in July 2012 as a component of RTIMP with a Global Environment Facility (GEF) grant. The programme was designed to address climate change adaptation needs of cassava value chain actors to enable them to cope with the negative effects (e.g. more extreme temperature, droughts and floods caused by extreme weather) and build their resilience to climate change phenomena.
- v. **Component E (previously D): Programme coordination, monitoring and evaluation.** Provision was made for the establishment of a PCO at Kumasi and three zonal offices. The implementation of field activities was to be outsourced to implementation partners willing to co-finance the work and/or to technical services providers under service provision contracts.

## B. Project implementation

23. **Timeframe.** The original loan of Special Drawing Rights (SDR) 13.05 million (equivalent to US\$19.0 million) was approved on 8 September 2005. The loan agreement was signed on 20 January 2006, and the loan became effective on 8 November 2006. An additional GEF grant for US\$2.5 million was approved in November 2012. The programme was completed on 31 December 2014, and the loan closing was on 30 June 2015 as per the original schedule.
24. **Implementation arrangements.** RTIMP activities were managed by a PCO headed by a national programme coordinator and supported by technical officers in charge of the components and zonal offices. A National Programme Steering Committee (NPSC) was established and was comprised of representatives of key stakeholders. Its role was to provide strategic orientation and facilitate collaboration and cooperation with Government institutions, research institutions and the private sector. The oversight and policy direction provided by the NPSC and the Directorate of Crops Services was expected to enable the effective implementation of the programme.<sup>19</sup>
25. The programme was implemented nationwide, covering all three agro-ecological zones of the country.<sup>20</sup> Each zone had project teams for ease of programme management and effective implementation. The management of the programme at PCO and zonal levels was designed to provide an effective structure and the required processes for efficiency in programme implementation, as well as link well with the MoFA structure. The PCO and the Zonal Offices worked in collaboration with district agricultural development units, regional agricultural development units, business advisory centres and other implementing partners. RTIMP established district stakeholder forums (DSFs) to address the supply and demand issues and assist in linking supply chain actors to the market.
26. **Project costs and financing.** The project cost was initially estimated at US\$27.7 million, including a foreign exchange component of US\$2.9 million (10 per cent). The rest included an IFAD loan of about US\$19.0 million (68 per cent of total cost), Government counterpart funding of US\$3.9 million,<sup>21</sup> beneficiary farmers' and processors' contribution of US\$832,200, and a contribution from the PFIs and a private equipment leasing company of US\$4.0 million (see table 2).
27. In addition to initial core financing, component D - PROVACCA - was financed by a grant of US\$2.5 million from (the IFAD-based) GEF under its Special Climate Change Fund, with complementary financial support from the Government. A grant of US\$523,800 funded by the OPEC Fund for International Development was cancelled<sup>22</sup> due to unjustified balance and unjustified advance.<sup>23</sup>
28. According to the PCR, the actual total project cost was US\$23.6 million (table 2). At project completion, only 30 per cent of the available funds of the GEF grant had been utilized and the balance was "transferred" to co-finance another IFAD-financed project, the Ghana Agriculture Sector Investment Programme (GASIP).
29. **Supervision arrangements.** Initial supervision of RTIMP was delegated to the World Bank, with occasional participation by IFAD staff and consultants. IFAD took

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<sup>19</sup> PCR, p.5.

<sup>20</sup> The country was demarcated into three zones: the Northern Zone (Zone 1-Tamale) comprising the Northern, Upper East, and Upper West regions); the Middle Zone (Zone 2-Techiman), comprising Brong Ahafo and Western regions; and the Southern Zone (Zone 3-Koforidua), comprising Eastern, Volta, Greater Accra and Central regions.

<sup>21</sup> It is from both the regular budget and from foregone taxes and duties.

<sup>22</sup> The OFID grant was planned to be utilized to procure and install a gasification plant, five mechanized gari roasters and one borehole with accessories for water distribution at Akro in the Techiman North District.

<sup>23</sup> According to the Supervision Report dated November 2014, no expenditure had been realized against the OFID funds at the completion date of the grant. The programme received an initial deposit of US\$250,000. Arrangements were under way to repatriate the funds back to IFAD. However, funds had a deficit of US\$22,319 equivalent as a result of exchange losses realized from the funds being transferred into the operation account.



control of direct supervision after the mid-term review (MTR), following the adoption of the IFAD policy on supervision and implementation support. The direct supervision arrangements started from 18 December 2009.

30. **Amendments to the financing agreement.** The financing agreement was amended four times: (i) reflecting the change to direct supervision (December 2009); (ii) reallocation of the loan funds to be in line with the recommendations of the MTR (October 2010); (iii) revision of the statement of expenditure thresholds applicable to reflect IFAD's updated disbursement procedures; and (iv) requirement of prior review by IFAD for payment of allowances (for details, refer to annex VI).
31. **Adjustments during implementation.** Main adjustments made during the MTR included the following:
  - a. Component A: The Initiative Fund was scaled down from US\$2.6 million to US\$946,000.
  - b. Component C: The MEF was scaled down (from US\$1.79 million to US\$0.61 million) to a pilot initiative and to use commercial banks, e.g. Agricultural Development Bank.<sup>24</sup>
  - c. Change of criteria for upgrading the processing centres into GPCs: more stringent financial analysis, including profitability and sensitivity analysis, was required before such upgrades could be financed.
  - d. Programme coverage: the number of districts covered by the programme increased from 60 to 85 in the post-MTR period, then expanded to 106 districts by completion.
  - e. The logframe was revised several times, mainly at MTR and in 2012. The 2012 supervision mission supported the project team to define and revise further the logframe of the programme and develop a draft M&E operational plan, redefining the programme indicators along with the Results and Impact Management System (RIMS) indicators. The revised logframe was planned to be used by 2013 for the last two-year implementation period, yet further revisions were made to identify key performance indicators in June 2013.
32. **The underlying theory of change.** The reconstructed underlying ToC narrative for the programme posited that through technology transfer and improved varieties, productivity of the R&T products would be enhanced; the value-added of the R&T would be increased through improved processing equipment as well as training in artisanal processing; access to markets would be improved via promotion of market linkages (i.e. DSFs, SCFs and business training). Therefore, the enhanced production was expected to be transformed into higher income with rising price margins, together with reduced risks, as farmers' resilience to climate change and droughts/floods would be improved as well. Food security would be improved via more abundant food provision, intake of more nutritious food, and higher household income (annex VIII).

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<sup>24</sup> After the MTR, commercial banks were invited to join the rural banks designated as PFI because only 10 out of the accredited 26 rural banks gave loan funds to programme participants.

Table 2  
Planned and actual programme costs and financing by component (US\$ '000)

Components	IFAD loan		GEF		OFID		Government of Ghana		PFI		Beneficiaries		Total			
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	%	Actual	%
A. Support to increased commodity chain Linkages	5,840	1,977					287	7					6,127	20.0%	1,984	8.4%
B. Support to root and tuber crop production	6,194	2,815					1,456	223			692	1148	8,342	27.2%	4,186	17.7%
C. Upgrading of small-scale root and tuber processing, business and marketing skills	4,028	2,529					368	9	3,998	398	140	141	8,534	27.8%	3,078	13.0%
D. Promoting a value chain approach to climate change adaptation in agriculture in Ghana			2,500	758	500								3,000	9.8%	758	3.2%
E. Programme coordination, monitoring and evaluation	2,903	11,508					1,783	2,084					4,686	15.3%	13,592	57.6%
Total	18,965	18,829	2,500	758,44	500	-	3,894	2,322	3,998	398	832	1289	30,689	100.0%	23,598	100.0%
%		99.28		30.34				59.63		9.97		154.88				

Source: Project completion report.

33. **Delivery of outputs.** Overall, most of the targets under component A were not attained. Targets in component B were mostly achieved, with the exception of the target related to secondary multiplication fields. Component C underperformed on almost all the key targets. Annex VII presents a breakdown of outputs by component and a total physical progress table.
34. **Component A: Support to increased commodity chain linkages.** The structure of this component was slightly inconsistent between different project documents. It progressed very slowly before the MTR due to insufficient attention to the defined activities (e.g. Initiative Fund, process to develop linkages and key value chain building blocks, knowledge centre and R&T apex structure) early in the programme.
35. *Subcomponent A.1: Information, education and communication (IEC).* The programme exceeded various targets on information dissemination set at MTR to sensitize potential beneficiaries on RTIMP (for details, see annex VII). It is reported that a total of 10,149 people accessed the RTIMP website.<sup>26</sup>
36. *Subcomponent A.2: Linking smallholder producers to larger markets.* This sub-component was designed to finance innovation through a demand-driven Initiative Fund, which did not deliver up to its expectations. The expected methodology was to appoint the SCFs early in the programme process to assist producers and processors in identifying critical bottlenecks in the specific supply chain, which the Fund would then address. However, the establishment of R&T value chains was slow in the early stage, with the SCFs not appointed until after mid-term. Early expenditure supported work on improving R&T processing equipment, instead of focusing on market facilitation. Only after the MTR was the support from SCFs yielding results and clear activities being identified for each supply chain. By December 2014, RTIMP had established and strengthened 24 gari, five fresh yam, six plywood and five HQCF value chains. However, the gari chain development fell short of its target set in the logframe (for details, see annex VII). As a result, against the allocation of US\$2.6 million at appraisal, only US\$643,416 was disbursed (i.e. 24.7 per cent of original target).<sup>27</sup>
37. Regarding another output indicator –quantity of R&T commodities traded annually (tonnes) – RTIMP supported 40,076 tons traded by value chain actors, which fell short of the MTR target by 29 per cent (for details, see annex VII). The PCR suggests that this was a result of the limited time left (two years) after MTR for SCF to implement and deliver<sup>28</sup>; however, this did not account for the effect of the delays in commencement of these activities, particularly the delays in procurement of SCFs.
38. Through Esoko Market Information System, which was introduced after 2010 under the Initiative Fund, 1,807 R&T actors accessed market information.
39. *Subcomponent A.3: Strengthening formal/informal organizations of growers, processors and traders.* This sub-component was intended to address the capacity requirements of asset-poor households to create formal and informal organizations that would eventually lead to an R&T apex body engaging in policy dialogue. After MTR, it was decided to transfer some training activities in upgrading some FFFs into the farmer-based organizations (FBOs) to component C. This also explained why, in the revised logframe, relevant indicators and targets under this subcomponent were dropped.
40. After the 2009 supervision mission, DSFs emerged as a key instrument for integration between producers, processors and market actors, as well as support

<sup>26</sup> The PPE team visited the website and found that there were few users and little information available, with a wrong link connecting to a website in Japanese.

<sup>27</sup> The allocation target was revised during MTR to be SDR 650,000 (equivalent to US\$712,000). PCR, para.35.

<sup>28</sup> PCR, para.37.

organizations. However, the DSFs were found to have achieved varying levels of success and were largely discontinued, apart from in a few districts.

41. *Subcomponent A.4: Support to R&T commodity chain partners and policy dialogue.* This activity aimed to support the development of fully integrated and viable partnerships between all stakeholders in the R&T commodity chains. However, during the MTR, the absence of active and functional FBOs made the programme realize that the development of an apex body for R&T crops would be difficult to achieve.<sup>29</sup> Given the initial delays in building the capacity of the FBOs and the mixed performance of the DSFs, the establishment of an apex body within the lifespan of RTIMP was not realistic.<sup>30</sup>
42. **Component B: Support to root and tuber production.** The structure of this component was inconsistent between different project documents. For example, the appraisal report combined "improved R&T cultivation practices" with "agricultural research" as one sub-component, while adding FFFs as a separate sub-component.<sup>31</sup> In the MTR report, the soil fertility management subcomponent was dropped.<sup>32</sup> Overall, this component progressed well over the entire period of the programme.
43. *Subcomponent B.1: Multiplication/distribution of planting material.* RTIMP ensured the availability of improved planting materials through the development of primary and secondary multiplication fields. As a result, a total of 187,275 farmers (127,476 males and 59,799 females) were supplied with improved healthy planting materials at the tertiary level between 2008 and 2014, achieving the MTR target. RTIMP also worked together with the West Africa Agricultural Productivity Project (WAAPP), financed by the World Bank, to produce planting material for farmers.<sup>33</sup> To ensure the continuous supply of healthy planting material, the RTIMP piloted the commercial multipliers initiative after MTR. Between 2012 and 2014, a total of 490 hectares of commercial fields were established. During the PPE, some commercial fields were still operational, although some had ceased mainly due to climatic factors, as reported by the DADUs and farmers.
44. *Subcomponent B.2: Farmer field fora.* The programme made great efforts to train farmers in improved technology using the FFF approach. Within the 451 FFFs established, the programme also made considerable efforts to target women. Out of the total of 15,154 participants trained during the FFFs, 7,810 (52 per cent) were women and 7,344 (48 per cent) were men. The programme also trained 723 FFF facilitators, considerably exceeding the target of 365.
45. *Subcomponent B.3: Integrated pest and disease management.* With the support of RTIMP, MoFA and its research institutes<sup>34</sup> produced 2,220,511 actives of Cassava Green Mite predators (*Typhlodromalus manihoti*), 89 per cent of the target.<sup>35</sup>
46. *Subcomponent B.4: Improved adoptable technologies developed.* RTIMP implemented adaptive on-farm research projects and carried out trials on different technologies. As of the end of 2014, a total of 780 farmers had participated in the on-farm research projects (7 per cent less the target recommended by the MTR). However, there are no data to verify the effectiveness or the uptake of these new technologies.

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<sup>29</sup> MTR, p.112.

<sup>30</sup> MTR, para. 19.

<sup>31</sup> Appraisal report, p.28.

<sup>32</sup> In the 2012 Supervision report, this component comprises: multiplication and distribution of planting material (B1); reinforcement of FFFs (B2); Integrated Pest Management (B3); and research to further improve cultivation practices (B4).

<sup>33</sup> Supervision report, November 2014.

<sup>34</sup> MOFA Plant Protection and Regulatory Services Directorate and Council for Scientific and Industrial Research-Savannah Agricultural Research Institute.

<sup>35</sup> It also released 1,504,555 actives of LGB predators (*Tereetrius nigresens*) at 631 locations, exceeding its target by 15 per cent. PCR, para.79.

47. **Component C: Upgrading of root and tuber processing, business and marketing skills.**
48. *Good practice centres.* By completion, RTIMP had upgraded 26 existing processing enterprises to GPCs with improved technologies to enhance productivity, hygiene, and safety during processing. This exceeded its appraisal target of 15 but fell short of the revised target of 40 set by the MTR. The target was not met because: (a) potential GPC hosts were unable to comply with the requirements of a viable business plan prior to financing; and (b) the establishment of GPCs was initially supported with 100 per cent subsidy on processing equipment, which was replaced by a matching grant initiative as full subsidy was not a market-driven method and not financially sustainable.
49. *Good practice centres used for demonstrations.* GPCs were also established as a network for demonstration centres where small-scale R&T entrepreneurs can learn about and invest in improved equipment and practices. The MTR recommended the expansion of the GPCs following a two-tiered process, a full GPC and a GPC-light version,<sup>36</sup> to increase dissemination and address over-supply marketing issues. However, this did not seem to occur as planned<sup>37</sup> and no M&E data recorded the successful rate of similar processing centres/practices being established using beneficiaries' own financial resources. Through 201 exposure visits, a total of 3,777 processors (1,000 males and 2,777 females) were exposed to good technologies at the GPCs, reaching 69 per cent of the programme target of 5,450.<sup>38</sup>
50. *Transfer of relevant processing technologies.* The programme trained 3,959 RTIMP-supported Business Advisory Centre clients (1,657 males and 2,302 females) in business development and marketing skills, recordkeeping and basic financial management skills, reaching 66 per cent of the target. Little information was available to track the trainees' ability in using the business and marketing skills.<sup>39</sup>
51. *Micro Enterprise Fund.* The MTR scaled down MEF allocation to US\$523,000 due to the slow progress made, as it only disbursed 27 per cent of the original allocation due to the total demand from processors being low. Disbursement improved in the last two years of the programme, and in total 1,235 clients (490 males and 745 females) had accessed the MEF through 10 PFIs and Ecobank by December 2014.<sup>40</sup>
52. **Component D: Promoting a value chain approach to climate change adaptation in agriculture in Ghana.** The subcomponents on raising awareness among farmers on potential impacts of climate change reached 5,511 people (3,318 men and 2,193 women). Under subcomponent D.2 "Support adaptation to climate change of cassava production", 49 FFFs were established in seven districts for hosting trial demonstrations, including activities on soil fertility management and soil water management. Regarding subcomponent D.3 "Promote innovative adaptation solutions along the agriculture value chain", the programme encountered procurement problems which delayed implementation. The programme also under-estimated the capital costs of key equipment, which resulted in inadequate funding, reallocation of resources, and consequent discontinuation of some programme design components. After the closing of RTIMP, implementation of PROVACCA was transferred to GASIP to install the planned Gasification Pilot Plant, and the grant was closed in June 2017.

<sup>36</sup> The full GPC follows the original concept of serving as a central processing unit as well as a demonstration site for technical processes as well as business and marketing training and linkage to financial institutions. The light GPC means that the facility only operates as a processing centre. RTIMP MTR (2010), para. 65.

<sup>37</sup> The PCR reports that there were 26 GPCs; however, the viability assessment data record 19 GPCs in 2010, increasing to 21 in 2012, but declining to 19 again in 2014 due to the closure of two GPCs.

<sup>38</sup> RTIMP PCR (2016), para. 8.

<sup>39</sup> Some anecdotal evidence showed that several small processors and service providers were making use of the Enterprise Records Books, but there was no systematic recording of data showing levels of use or benefits thereof.

<sup>40</sup> PCR, para. 66.



Table 3  
**Summary of RTIMP key output indicators**

No.	Supporting Evidence for Second-Level Indicators	Revised MTR Target (2012)	Cumulative Dec 2014	% Achieved
I	No. of DSF organized	417	380	91.13
II	No. of people participating in DSF		8 640	
III	No. of FFF organized	500*	451	90
IV	No. of clients reached through FFF	17 639	15 154	85.91
V	No. of R&T farmers receiving healthy planting material	174 400	187 275	107.38
VI	Yield of R&T-based cropping (cassava, yam, cocoyam, sweet potato) increased by 25% (POA)		22.0	
VII	R&T actors accessing market information through the Market Information System	10 500	1807	17.21
VIII	Tons of R&T commodity traded	56 400	47 114.1	83.54
IX	No. of clients trained in business development and marketing skills	6 000	3 959	65.98
X	No. of clients adopting business and marketing skills	3 000	2286	76.20
XI	No. of clients accessing financial services facilitated by the programme (MEF)	1 800	1 235	68.61
XII	Increase in number of metric tons of cassava processed at GPCs		37 070.6	
XIII	No. of clients acquiring improved processing equipment <sup>41</sup>	2 000	1 235	61.75
XVIII	No. of employees at GPCs		1 309	

Notes: \* RIMS L.1

Source: PPE team summarized the data based on MTR, PCR and logframe indicators.

<sup>41</sup> According to the MEF design and manual, the MEF would be created to provide matching grants covering up to 40 per cent of the cost of equipment purchases.

### **Key points**

- RTIMP was a US\$23.6 million national programme that was approved in September 2005 and completed in December 2014. By completion, it had reached 217,258 direct beneficiaries (against the appraisal target of 290,000).
- It was designed as a follow-up to the RTIP, which focused primarily on cassava research and development and was implemented from 1997 to 2005.
- The programme was implemented nationwide, covering all three agro-ecological zones of the country in 106 districts by programme completion.
- The programme had five components: (a) support to increased commodity chain linkages; (b) support to root and tuber production; (c) upgrading of root and tuber processing, business and marketing skills; (d) promoting a value chain approach to climate change adaptation in agriculture in Ghana (PROVACCA); and (e) programme coordination, monitoring and evaluation.
- PROVACCA is a three-year pilot project and was added from July 2012 as a component of RTIMP with a Global Environment Facility (GEF) grant. It was designed to address climate change adaptation needs of cassava value chain actors to enable them to cope with the negative effects and build their resilience to the climate change phenomenon.
- By programme completion, 451 FFF were established, reaching 15,154 clients (85.9 per cent of target) 380 DSF were organized with 8,640 participants; and 26 GPCs were upgraded.
- The MEF was scaled down to US\$523,000 due to the slow progress made before MTR, comprising only 27 per cent of the original allocation. Similarly, the Initiative Fund only disbursed 24.7 per cent of allocated funds against the appraisal target.

### III. Main evaluation findings

#### A. Project performance and rural poverty impact

##### Relevance

53. The assessment of relevance examines the extent to which the objectives of the project are consistent with beneficiaries' requirements, country needs, institutional priorities, and partner and donor policies. The analysis considers the validity of the project's conceptual and logical framework; assesses the validity of the key programme design assumptions (both implicit and explicit), and to what extent they have held up through the project life cycle; and assesses the extent to which IFAD and the project were able to react and adapt to changing contexts.
54. **Relevance of objectives. Overall, the project objectives were relevant to the Government policies and priorities, and the country context.** The continuing focus of IFAD's support to the R&T sector was valid given its importance as a staple food supply for the majority of poor farmers in Ghana. At the same time, research showed that there was a potential market for processed products from R&T that would increase the added-value to primary production and generate a higher income for poor farmers, rather than relying on marketing raw product. Similarly, the opportunity to improve technology and efficiency of production and processing offered considerable scope for health and income benefits. At the same time, women were identified as having an active role in R&T production and processing; therefore, the programme, as designed, was likely to have substantial potential to benefit women.
55. **RTIMP was also found relevant to the Government's Poverty Reduction Strategy Paper (2006-2009) with a focus on private sector-led economic growth;** and targeting vulnerable and excluded groups in rural areas. The PPE team also agrees with the PCR's finding that RTIMP was aligned with the Accelerated Agricultural Growth and Development Strategy, launched in 2000, as it contributed to the achievement of: (i) increased access to improved agricultural commodities; (ii) promotion of the production and marketing of selected agricultural commodities; (iii) increased access to rural finance; and (iv) improved access to domestic, regional and international markets. It was also fully in line with the Food and Agricultural Sector Development Policy adopted by MoFA in 2002, because of its focus on: (i) improving financial services delivery; (ii) development, dissemination and adoption of appropriate technology; and (iii) promoting selected commodities and improving access to markets.<sup>42</sup> As such, the programme responded positively to Government policies and beneficiary needs, with its focus on strengthening commodity chains for local R&T crops. The programme design was found to be in line with the 2006 Results-based country strategic opportunities programme (COSOP), which gave emphasis to developing a market-driven agriculture sector and vibrant private sector.
56. **Relevance of design. The basic design was sound, with key elements in place, but technical details regarding specific components were relatively weak.** RTIMP was a follow-up to RTIP. Building upon lessons learned from RTIP, it added a post-production focus in programme design that had been lacking in the former project. Thus, most of the assumptions under the ToC were well considered during the programme design, making the overall design sound. The three broad areas of project support, i.e. production, processing and marketing, were appropriate to the identified objectives and had distinct and appropriate subcomponents. The programme components were designed to be linked and integrated to support with key elements of a value chain development approach and to achieve balanced resource allocation across the three main areas of focus. The relevance of design was also reflected in the implementation process, during which no massive changes occurred. However, the design of some activities under

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<sup>42</sup> PCR, p.7.

marketing and processing components (e.g. the MEF) was flawed, with unrealistic assumptions (see para. 62). The independent project structure that was designed to create efficiency in project operations, although still supporting institutional capacity development, did integrate well with the existing national and regional structures.

57. **The programme design stressed the importance of the private sector in strengthening the chain linkages from production to marketing.** Recognizing the MoFA's lack of experience in R&T processing and commodity chain integration, the design envisaged the partnership with the private sector (e.g. technical service provider in the original design and SCFs after MTR) in leading the studies on value chain mapping and diagnostics, as well as proposing recommendations to address specific needs in each chain. Additionally, building upon the findings from IOE's RTIP Interim Evaluation (2004) and the Agreement at Completion Point, RTIMP design gave attention to the involvement of the private sector in multiplication of planting material.
58. **The key elements of component A demonstrated the focus of RTIMP on improving market linkages** to enable poor farmers to integrate more firmly into the R&T commercial markets . The five subcomponents were balanced to build awareness and knowledge of markets, build new market linkages, diversify markets, and strengthen the power base of small farmers in commercial markets through organizational development and policy dialogue. A supporting Initiative Fund was proposed for innovative ventures to forge/strengthen commodity chain linkages and the establishment of an R&T Apex Body.
59. **Component B was designed to be cost-effective and achievable for poor farmers in supporting improved farming techniques.** The mechanism of using FFF was appropriate within the cultural context, where farmers learn by doing and where there was not a need for substantial investment beyond the means of the poor farmers.
60. **Component C's design on upgrading processing and marketing techniques also demonstrated potential for success.** There was a focus on the need to increase processing efficiency and hygiene, but it was also recognized that there was potential to achieve progress even with existing equipment. The mechanisms and partners selected by the programme in order to improve processing were valid, given the available partners with the skills to work on improved processing. The design was explicit in the need to develop business skills as well as the "all-important marketing skills".
61. **Component D-PROVACCA was added during implementation and well integrated into the programme to improve farmers' resilience.** This component was supported through a GEF grant. The purpose of the grant was to promote a value chain approach to climate change adaptation. The design was to expand the RTIMP approach, using FFF to build awareness of climate-smart agriculture and find mechanisms for wider dissemination of climate-smart agricultural practices across the country. The additional component fitted well with the basic RTIMP design, particularly components A and B. The new component introduced and supported climate change risk analysis through the mechanism of the FFF, and promoted solutions in the context of market demand and opportunities.
62. **The Initiative Fund was designed to be responsive to emerging needs, but it lacked technical details of the funding mechanism.** The Initiative Fund was an appropriate mechanism given the intention to first carry out sub-sector market studies that would require financing to implement the recommendations, as well as other pilot activities that would be identified during implementation. However, the programme implementation manual failed to specify the detailed guidance for application (e.g. recipients, application criteria, funding mechanism, and fund management) until 2013, and staff had insufficient capacity for fund management and partnership facilitation.

63. **The design of the MEF was based on unrealistic assumptions, and the marketing aspects of component C were problematic.** The causal links in the programme's ToC depended on certain assumptions, which proved false during programme implementation for the marketing component (see annex VIII). There was an expectation that the MEF credit could reach poor farmers without credit history, and PFIs and a private leasing company would be willing to contribute funds to support the enterprises of poor farmers. In implementation this proved to be unrealistic due to liquidity issues among the rural banks and a risk aversion in relation to approving unsecured loans,<sup>43</sup> as well as barriers to access from potential borrowers because of cumbersome application procedures and reluctance to become indebted. The MEF could leverage resources for poor farmers from the existing financial institutions in the programme area, while providing a risk management mechanism for PFIs. Yet there was insufficient support built into the programme design to operationalize the theory. It was recognized that MoFA does not have the in-house expertise in rural banking, and the inclusion of one additional staff member at the PCO level was insufficient for the MEF to function. Similarly, part of the MEF functioning was predicated on the establishment of small farmer groups, but there was no clear mechanism for group formation and insufficient training for field staff to carry out group formation and strengthening in accordance with the requirements for group processing and MEF access.
64. **Relevance of targeting.** The self-targeting approach of the programme for participation at the farmer level was relevant in that R&T tended to be the main product for the poorest farmers, given their relative ease of farming, the availability of local markets, and their use for household consumption. GPC's targeting was based on the private sector orientation, technical capacity, and location of the centre in relation to main R&T production areas. In addition, the proactive field-based targeting through the existing district agricultural networks proved to be appropriate to the known implementation mechanisms for the DADU and the farmers.
65. **Summary.** Overall, the programme design objective was relevant to the country context and Government priorities. The self-targeting approach was cost-effective and relevant for supporting food security crops. The key elements of an inclusive value chain development approach were in place, and the design and initial arrangements displayed a relatively solid intervention logic with sufficient attention to collaborating with the private sector. There were some design weaknesses under the marketing and processing components. However, the programme was designed to be flexible and responsive during implementation through the use of the two specific Funds for components A and C. The programme implementation worked to narrow down and re-direct the design into some focused areas through the changes at MTR, but no substantial changes were proposed, indicating a relatively well-designed programme. The gaps and weaknesses in design application largely resulted from ineffective implementation rather than substantial design weaknesses (see Effectiveness part). Thus, the PPE team rates RTIMP as *satisfactory* (5) for the relevance criterion, the same as the self-rating by the Programme Management Department (PMD).

### **Effectiveness**

66. This section assesses the extent to which the programme's initial overall objectives were achieved and also recognizes direct achievements of the programme that were not initially foreseen at design. In addition, it aims to highlight the key factors within the programme design and implementation that contributed to the achievement, or non-achievement, of the programme goal and objectives.

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<sup>43</sup> Rural banks' savings deposits are typically of a short-term nature, while credit for micro-enterprise equipment is often medium or long term. This creates a financial mismatch between the maturity of assets and liabilities (CPE, 2012, p. 51).



67. Overall, component B was effective, but outcomes for components A and C were well below the expected achievements. The evaluation found that technical aspects of production and multiplication under component B achieved expected results, but the low achievement of marketing outcomes C1, C3 and C4 were highlighted as a major and continuing concern. The PROVACCA component was a valuable addition to the programme that leveraged the FFF approach well and contributed to increased awareness and knowledge of climate change effects, mitigation and adaptation practices. The project logical framework identified the project goal and objectives as well as key outcomes per component as per the table in annex IX. Table 4 provides a summary of the project outreach for key activities.

Table 4  
Summary of programme outreach

Activities	MTR target	Actual outreach number	% of MTR target achieved
Access to planting materials	174,400	187,275 farmers 32% female	104.7
Commercial planting material production		480 cassava farmers & 172 seed yam	
FFF facilitators <sup>44</sup>	365	723	200
FFF outreach		15,154 farmers	85.9
GPC exposure visits	N/A	3,777 (F:2,777; M:1000)	
Business training	6,000	3,959 processors	66
MEF grants	N/A	1,235 processors	
Artisan training		217	107
Market access		8,289	
Electronic information platform (Esoko)		1,807	
Seed inspector training		32	
Total		219,343	

Source: PCR (2016).

Notes: The number displayed here may include beneficiaries who received more than one intervention.

**Outcome A: Selected market-based R&T commodity chains established.**

68. **Commodity chain linkages did not occur as per design at early implementation stage.** As previously mentioned, the Initiative Fund was scaled down after MTR and underutilized (90.4 per cent against the MTR reallocation, 24.7 per cent against the appraisal target). The funds that were disbursed prior to MTR were largely to one implementing partner, the GRATIS Foundation<sup>45</sup> to support farming and processing equipment such as furrow ridgers, peelers and mechanical cassava harvesters. The development of equipment, although funded under component A, corresponded more closely to expected outcomes under components B and C. This demonstrates the low level of attention paid to the expected outcomes under component A.
69. **The MTR tried to re-focus the programme back to the original design with the participants of SCFs; positive results were achieved, but too late.** The MTR recommended that the focus of the Initiative Fund revert to the original intent on the development of at least three prototype R&T-based value chains and to secure the services of the SCFs as proposed in the design. Thereafter, four SCFs were appointed to cover different value chains<sup>46</sup> for value chain diagnostics and

<sup>44</sup> Facilitators trained included MoFA staff at national, regional and district levels, farmers, some staff of non-governmental organizations and researchers.

<sup>45</sup> Ghana Regional Appropriate Technology and Industrial Services.

<sup>46</sup> Gari, fresh yam, HQCF and cassava for the plywood industry.

recommendations.<sup>47</sup> The PPE team reviewed the SCF reports and found them have clearly identified market parameters and made sound recommendations, but limited progress was made in implementing the recommendations due to time and resource constraints.<sup>48</sup> During the PPE mission, visits to GPCs and feedback from field staff and SCFs highlighted that, while markets for several GPCs have diversified and been sustained, most GPCs have been unable to sustain the volumes and quality of production required, or have been unable to secure the prospective markets identified in the SCF reports. The Fund also implemented the "Esoko" market information system, including voice SMS in local dialects after feedback was provided by the programme, but the full potential was not realized during the programme period.

70. **FBOs were largely inactive and did not serve as an effective mechanism for helping farmers negotiate better prices and access markets, as expected in design.** As shown in the reconstructed ToC, it was expected that FFF activities would lead to the formation of FBOs that could become active in collective marketing and joint production activities, and serve as an efficient avenue for service delivery. The PPE notes that there was little focus on FBO strengthening during the early years of the programme, which contributed to the lack of progress in institutional strengthening and the inability to achieve the expected apex structure. The PIALA found that, by 2014, less than 30 per cent of the groups formed were active. This finding was confirmed by the PPE mission, given that the majority of groups met were inactive. In areas where they were active, this tended to be as a result of support for the Northern Rural Growth Programme (NRGP) where the programme areas overlapped.
71. **DSFs' effect in establishing market linkages among the R&T commodity chain actors was limited, and good district leadership was essential.** DSFs aimed to serve as platform for relevant stakeholders along the value chain<sup>49</sup> to hold dialogue to address issues of sustainable raw material supply, timely delivery schedules, and pricing mechanisms for R&T products. However, the PIALA found that the assumption that DSFs would help develop sustainable and inclusive R&T commodity chains largely did not hold true. In 84 per cent of the sampled districts, DSFs failed to help link farmers and processors to markets, and in 43 per cent of these they also failed to help establish sustainable and inclusive supply chains. There were also cases of unfair competition creating distrust and disadvantaged resource-poor farmers being exploited by middlemen and buyers as the products were sold on credit. The performance of DSFs highly depended on the leadership and management of the DADU offices. For example, the PPE team noticed that in districts where the DADU offices made efforts to formalize the connections through signing memoranda between producers and buyers, more effective and sustainable linkages were established.
72. **IEC materials had little effect on raising the awareness of existing and potential business opportunities within R&T commodity chains.** This occurred because the materials were mainly focused on R&T production, instead of marketing and processing. Thus, it is unclear whether this information provided strong evidence of the financial and market viability of R&T production and processing.<sup>50</sup>

**Outcome B: Productivity of R&T-based cropping systems increased.**

73. **There was evidence from the field of increases in production, mainly due to improved farm practices and introduction of new varieties and improved**

<sup>47</sup> Their contracts spanned two years, with the first year after MTR being mainly in market analysis and the second year in working with commodity chain actors on the recommendations of the specific analyses.

<sup>48</sup> In the last year of the project, each SCF noted progress in terms of increased sales and capacity of the participating producers; however, the progress reports highlighted the lack of resources and time available to implement the recommendations.

<sup>49</sup> DSFs consisted of bankers, researchers, farmers, processors, traders, fabricators, transporters, MoFA staff and non-governmental organizations.

<sup>50</sup> PCR, para. 34.

**planting materials.** The programme targeted an 85 per cent adoption of improved technologies by FFF farmers (improved integrated pest management practices, improved varieties, crop husbandry practices, soil fertility management practices). The report on Assessment of the Impact of the Distribution and Commercialization of Improved Planting Materials under RTIMP recorded a 65 per cent adoption rate for beneficiaries, whereas the adoption rate for non-beneficiaries was 19.25 per cent.<sup>51</sup> The high adoption rates and substantial increase in crop yields were confirmed by PPE field visits,<sup>52</sup> substantiating the PCR data (para. 53). There is some evidence that technology learned through RTIMP is applied to other crops (e.g. maize); also, the dissemination of knowledge and improved practices within and between communities is occurring.

74. **Through FFF and multiplication stations, the programme increased the availability and accessibility of healthy and high-yielding R&T planting materials.** RTIMP contributed to the preparation of four new R&T varieties and promoted other new specialized varieties. The programme also worked on the classification of local varieties.<sup>53</sup> This is of importance to widen the choice of planting materials to fit certain soil and climatic conditions and hence optimize yields. However, yield is only one factor in the cassava market. Other important factors are "poundability"<sup>54</sup> and colour. Feedback from farmers was that the quality of cassava varieties that were introduced by RTIMP was not as poundable as the traditional varieties and led to a lower quality of gari. However, there were some markets for the introduced varieties. Most farmers were more aware of different varieties and their different market and consumption potential. A few farmers combined old and new technologies to balance the different markets and uses. The commercialization of improved planting material was also documented to be very profitable.<sup>55</sup>
75. **Land and farm management practices have improved, and new varieties are more disease and pest-resistant.** This is confirmed by evidence from progress and supervision reports, as well as PPE field visits.<sup>56</sup> The research institutes, particularly the Crops Research Institute and the Council for Scientific and Industrial Research, were strongly engaged in the programme and carried out applied farm research through the FFF approach. Progress reports demonstrate that targets for the use of bioagents for pest and disease management produced/released were met and there was a reduction in the incidence of diseases and pests on R&T crops.

#### **Outcome C: Upgrading of R&T processing, business and marketing.**

76. **Marketing remains a major and continuing concern across the programme areas visited during the PPE.** RTIMP did support business training for 3,959 processors (about 66 per cent of target). Additional business support in some locations was delivered in partnership with the IFAD and African Development Bank-supported Rural Enterprise Programme's (REP) Business Enterprise Centres (BECs). The BECs provided training and mentoring in business skills such as book-keeping, feasibility assessment and marketing. BEC support, where it is available, has helped to improve the capacity of some RTIMP farmers, assisting them to develop their processing enterprises and supporting them with the REP matching

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<sup>51</sup> Assessment of the Impact of the Distribution and Commercialization of Improved Planting Materials under RTIMP (2014), p. vi. These data are based on a field survey across 38 selected districts, including 429 farmers (220 treated and 240 as a control group).

<sup>52</sup> Yields for R&T are highly variable depending on soil and climatic factors as well as farming practices.

<sup>53</sup> Local varieties were difficult to distinguish as one variety may be called by several different names across different locations.

<sup>54</sup> Poundability, such that the cassava can easily be peeled, grated and pounded into flour. This facilitates the production of high-quality gari.

<sup>55</sup> "With a total cost of GHS 7,478 from a hectare of improved cassava planting materials farm-cultivated, farmers are making a net profit of GHS 3,991 on average". Source: Assessment of the Impact of the Distribution and Commercialization of Improved Planting Materials under RTIMP (2014), p. vi.

<sup>56</sup> Assessment of the Impact of the Distribution and Commercialization of Improved Planting Materials under RTIMP (2014); PCR (2016), Appendix 8.

grant programme. Similarly, the technical support from GRATIS in training local artisans to fabricate and repair processing equipment has led in some areas to a positive connection in the commodity chain. However, in most communities met during the PPE, business and marketing skills were still at very low levels and demand for more support related to enterprise development and marketing was high.

77. **The GPCs as processing centres are fully functioning in most of the cases, but they fall short of the objective as demonstration sites.** GPCs failed to function as demonstration centres for knowledge. On average, based on record books for the GPC (where available), through detailed project progress reports and in focus group discussions at GPCs, only two visits per year with an average group size of ten persons per group were held for the exposure visits. This is a relatively low level of exposure given the level of programme attention and resources applied to the GPCs. One of the implicit assumptions of the ToC is that resource-poor processors would have the resources and means to replicate the GPC model, which was proved wrong. The PCR also concluded that the GPC mechanism did not function as expected because the full GPC facility was far beyond the capacity of small farmers to replicate. Nonetheless, during the PPE, there was evidence showing that home-based processors learned how to improve the quality of their gari from GPCs and in some cases achieve a higher price than previously. Also, the service that some GPCs provide to local producers where they use the GPC as a place to process their own production into gari is important for both their own consumption of quality gari and for them to market locally. Nonetheless, as a means to drive commodity chains and for substantially upgrading the R&T sector, the GPCs have not achieved the expected results.
78. **MEF was under-utilized for resource mobilization due to design weakness and capacity constraints.** The MEF was a key subcomponent that was designed to contribute to the upgrading of R&T commodity chain business. However, the MEF was under-utilized and did not create the mobilization of credit funds for R&T processing activities that was envisaged. MEF disbursements achieved only 30 per cent of original allocation (US\$579,617 disbursed<sup>57</sup> out of approximately US\$1.932 million allocation<sup>58</sup>). Loans secured mostly ranged between GHS728 to GHS 60,000, and most were for the purchase of cassava post-harvest or processing equipment. There was a mix between individual and group loans.<sup>59</sup> There was high demand for credit to cover for agricultural inputs, but these were considered by PFIs to be too risky, even with the available matching grant. Although no formal data on loan portfolio performance are available as they were not captured at the national level and were only retained with the district partners, feedback from financial institutional partners met during the evaluation indicated that repayment rates were largely acceptable, with only a few examples of non- or delayed repayments.
79. **The low disbursement of the MEF demonstrated major challenges with the mechanism. Three key reasons for the low MEF performance** were that (i) the MEF was not accessible because there were no PFIs within the district<sup>60</sup>; (ii) some PFIs were insufficiently liquid to lend the PFI contribution funds for term loan (i.e. longer than one year), which was required for the larger equipment loans; (iii) many farmers and processors had difficulty in addressing bank

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<sup>57</sup> The PCR also reported inconsistent data on the amount of disbursement for the MEF. The US\$579,617 is from the Appendix 8: Actual Physical Progress of the Programme, while the Schedule of Expenditure: By Expense Category reported the disbursement amount of US\$474,019.

<sup>58</sup> The loan allocation for the MEF was SDR1.38 million (President Report), equivalent to US\$1.932 million. Progress Report by Apex Bank (June 2011).

<sup>59</sup> The PPE explored whether there was any difference in performance between individual and group loans but responses from PFIs indicated that there was no significant difference; the main factors were the character and ability of the individual or group leader, or whether there were any climatic factors that affected the loan performance.

<sup>60</sup> In the PIALA (2015), of the 25 sample locations more than half had no access to the MEF.

criteria<sup>61</sup>; and (iv) the interest rate of between 38 and 40 per cent per annum placed a financial burden on small businesses with a relatively low profit margin. For GPCs with a larger turnover, some stable market outlets and other technical support in place, the risk was acceptable; but for small processors, the level of loan and interest payments for the benefits achieved reduced profitability to a level that was too risky for household livelihood security.<sup>62</sup>

80. **There is little evidence of the commercialization of R&T commodity chains.** Due to the above-mentioned flaws, commercialization of agriculture has remained limited and unsustainable. The PIALA concluded that market saturation occurred in more than 88 per cent of the researched districts as a result of weak and ineffective market-linking combined with overproduction. Poor roads and poor market infrastructure further limited resource-poor farmers' and processors' market opportunities and, in the absence of appropriate competition regulations, rendered them more vulnerable to unfair competition/trade, including monopolistic behaviour of GPCs.<sup>63</sup> In this respect, RTIMP did not achieve the expected evolution from the production base of RTIP.

### **Promoting a value chain approach to climate change adaptation in agriculture in Ghana**

81. In general, feedback from the activities from supervision reports, the PCR and the PPE field visits were positive. PROVACCA supported construction of a borehole and water distribution systems at Asueyi as well as plans for the supply and installation of the gasification plant and mechanized roasters. The borehole and distribution system was completed under RTIMP; based on feedback obtained during the PPE mission, it is operating successfully and is greatly benefiting local processors. The gasification plant and roasters were not procured under RTIMP due to procurement delays, but these subprojects are now being advanced by GASIP.<sup>64</sup>
82. **Summary.** The PPE found that, while the RTIMP design implied a priority focus on building commodity chain linkages and value addition through processing and marketing support, during implementation the production and marketing activities were not sufficiently balanced, leading to serious gaps in marketing support and commodity chain financing needs. In reality, RTIMP was implemented as a production-oriented programme. While the objectives related to production were largely achieved, the objectives related to R&T value chain development and processing were underachieved. This was partly due to the fact that the PCO was staffed with some people from RTIP, who at the onset of the programme lacked a fair understanding of marketing; and there were insufficient new programme staff with marketing knowledge and experience to take the programme in its new direction. When the attitudes towards R&T crops commercialization changed from the Government side, limited time was left for completing implementation, reflecting the follow-ups of the SCF recommendations and the expansion of GPCs. Other problems related to the MEF affected the whole implementation process, which resulted in the programme falling short of its objectives. The objectives of PROVACCA were underachieved based on original programme results framework due to the delays in the initial stage, but were advanced by GASIP. Thus, the programme's effectiveness is rated as *moderately unsatisfactory (3)*, the same as PMD's self-rating.

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<sup>61</sup> During the PPE, groups met that had accessed MEF funds had intensive support from the project to prepare the documentary requirements. A PPE review of a loan file for one client counted 13 separate requirements for documentary evidence including: letter of endorsement from the project and two guarantors, plus two other persons in good standing; personal details form; capital purchase form with supporting evidence from supplier; calculation of feasibility; statement of repayment capability; etc. For project clients with limited literacy, these requirements were considered to be too difficult. Also confirmed in PIALA sample respondents (2015), FN21.

<sup>62</sup> PIALA (2015), para. 279.

<sup>63</sup> PIALA (2015), para. 288.

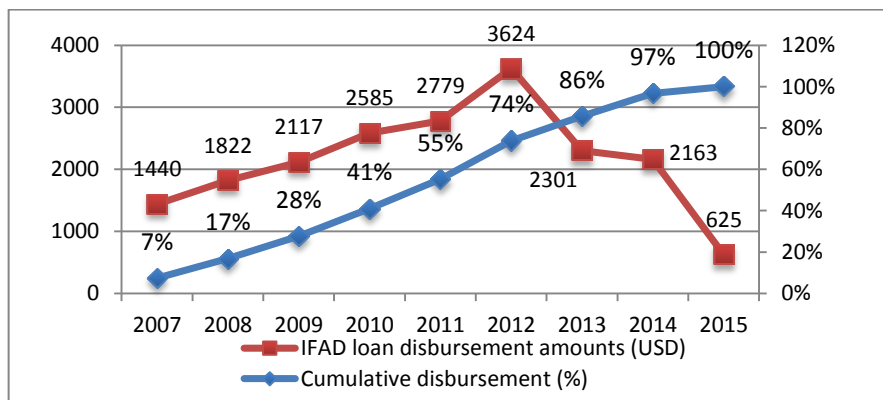
<sup>64</sup> GASIP supported additional design features for the subprojects to improve efficiency and safe waste water disposal. The site was viewed during the PPE, and potential for the project is high.

## Efficiency

83. Efficiency is a measure of how economically resources and inputs (e.g. funds, expertise, time) are converted into results. Here, this criterion is examined in relation to the following aspects: (i) timeliness; (ii) disbursement performance; (iii) project management efficiency; (iv) number of direct beneficiaries vis-à-vis the programme cost; and (v) economic and financial analysis.
84. **Timeliness.** The process from loan approval to effectiveness was 14 months, slightly longer than the country average (11.2 months). Considering RTIMP was a continuation of RTIP, with a PCO already set up and some programme staff on board, the quality at entry was not as efficient as it could have been. However, first disbursement occurred three months after loan effectiveness, faster than the country average (5.6 months).<sup>65</sup> The programme was completed as originally scheduled on 31 December 2014, while the GEF grant was extended one year and completed on 31 December 2016.
85. **Disbursement performance.** The overall disbursement rate was very slow before the MTR (nearly 31 per cent after 3.4 years of implementation), especially for component A on marketing (with disbursement rates of 12 per cent).<sup>66</sup> It caught up after the MTR, when IFAD took over direct supervision, as also reflected in the programme status reports prepared by IFAD, which rated the disbursement performance as *moderately satisfactory* from 2010 to 2014. At loan closing, the disbursement rate on the IFAD loan was 99.28 per cent.

Figure 1.

RTIMP IFAD loan disbursement record



Source: IFAD database (Oracle Business Intelligence).

86. **Management efficiency.** According to the PCR, RTIMP spent 290 per cent of allocated funds at appraisal on coordination and the M&E component, amounting to US\$11.5 million of the IFAD loan. A breakdown of these management costs by year and a cross-check with the expense category revealed some data discrepancies and errors, leading to overestimation of the management costs. After the PPE team's recalibration, the management costs are estimated to be about US\$5.8 million,<sup>67</sup> which still almost doubles the allocated amount of US\$2.9 million and represents 30 per cent of the IFAD loan.
87. The increased management costs were mainly driven by the increase in vehicles and office equipment, and salaries and allowances, according to the expenditure category data. There was high staff turnover, with the change of four MIS

<sup>65</sup> The calculation is for projects in Ghana approved between 2005 and 2011 (i.e. RTIMP, REP II, NRG, and the Rural and Agricultural Finance Programme).

<sup>66</sup> MTR, p.14.

<sup>67</sup> The PPE team estimated the management costs using two methods. First, the Supervision Report (March 2014) was used as a basis for further recalibration, due to the mistakes made in the last supervision report written in November 2014: there is a significant amount of management costs (US\$9.897 million), but it is not in line with the total amount of withdrawal applications processed during that time period. The amount starting from March 2014 was reconstructed by analysing the withdrawal applications until project closure. Second, the actual disbursement under the expense category was also used to give a rough estimation of the management costs.

specialists, three financial controllers, and two accounting officers engaged during the life of the programme.<sup>68</sup> This negatively affected the development and regular updating of the M&E database, as well as creating other management quality and continuity issues. Additionally, the administrator and the secretary were each replaced twice before the end of the programme.<sup>69</sup> High staff turnover drove up the management costs as new contracts and rates were negotiated above those expected at design, but also led to supervision mission recommendations not being followed up due to incomplete work hand-over.<sup>70</sup>

88. Significant deficiencies in the programme's financial management were also reported consistently in both the supervision reports and the PCR, including inaccurate and unreliable audited financial statements, ineligible expenditures (e.g. statement of expenses), and procurement issues.<sup>71</sup> According to the audit reports, there were a number of issues, including overpayment of salaries, advances to zonal offices and implementing agencies that were not returned by programme closure, and no documentation on auctioned vehicles.<sup>72</sup> Issues of management efficiency also adversely affected programme performance. For example, previous staff from zonal offices reported long delays in procurement that affected the ability to progress on even simple work processes, particularly in relation to components A and C.
89. **Cost per beneficiary.** In total, the programme reached 217,258 direct beneficiaries<sup>73</sup> (against an appraisal target of 290,000), of whom 40 per cent were women. The PCR also indicated that 859,765 indirect beneficiaries were reached, mainly through the transfer of knowledge between farmers after the FFF. However, there is no available M&E record to substantiate this outreach number.<sup>74</sup> The cost per beneficiary was US\$108, almost equivalent to the unit cost estimated in the appraisal report. In addition, using a simple average to calculate costs per beneficiary could potentially mask cost disbursement problems. For instance, the salaries and allowances were overspent by 347 per cent compared with the original loan allocation, while the investment components were underspent. Therefore, overall benefits to the households could have been higher if the programme had spent more on investment activities (e.g. marketing, processing, production) rather than on staff salaries.
90. **Economic and financial analysis.** The PCR did not estimate the overall economic rate of return. Instead, it calculated the benefit-cost ratios of different key commodities that the programme supported: 3.0 benefit-cost ratios for cassava (market); 2.0 for cassava (in ground); 7.0 for sweet potato (sold immediately); 9.4 for stored sweet potato; and 62.0 for yam. However, there is no information available on what input costs and farm-gate prices are based on, and whether labour costs were included. This estimation is also not an incremental margin of the

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<sup>68</sup> The M&E Specialist was replaced after the death of the first officer. The other specialists were replaced due to resignations by Commodity Chain, Linkages Specialist, and the Production Specialist.

<sup>69</sup> However, key staff such as the Programme Coordinator, the Programme Specialists and the Zonal Coordinators remained until the completion of the programme.

<sup>70</sup> RTIMP supervision mission reports (2010-2014, PCR).

<sup>71</sup> There were also difficulties in using the SCALA accounting system, and the budget monitoring and assets management systems were not fully operational. For example, the MTR reported: delays in recording transactions in the SCALA accounting system and the absence of a monthly accounts closing procedure; errors in the recording of 2007-2009 transactions into the SCALA system; inadequate high-level reviews and controls (fund availability, budget monitoring, analysis of disbursement rates and costs ratios, monitoring of procurement); and problems in cash management (absence of cash forecasting, limited number of bank signatories, inadequacies in the petty cash system) (Nov-Dec 2011).

<sup>72</sup> RTIMP Supervision reports 2010-2014; Letter to Government of Ghana Ministry of Financing and Economic Planning: Request for repayment of ineligible expenditure of US\$105,011.83 (March 2016); RTIMP Audit Report Management Letter on October 2015.

<sup>73</sup> The RIMS data under Appendix 9 report a different number of people – 236,866 – who received project services.

<sup>74</sup> According to the FFF impact assessment: "The significant increases in yields have resulted in non-beneficiary farmers within the beneficiary communities requesting beneficiary farmers to teach them the new ways of farming. However, communities further away from beneficiary communities have rarely heard about the FFF programme and therefore were unable to adopt any of these technologies. We therefore documented a low yield per hectare for farmers far away from these beneficiary communities." (p. 5).



RTIMP group compared with a non-RTIMP scenario. Lastly, the benefit-cost ratios also failed to consider the surging management costs and reduced number of beneficiaries, which all lead to economic and financial inefficiency.

91. **Summary.** Despite efforts made after the MTR to meet the programme's original timeline and disbursement, there were a number of issues which negatively affected how economically resources and inputs were converted into benefits. Firstly, the resources were not disbursed in a timely fashion and key activities were not sequenced properly, which left limited time to carry out the recommendations for the marketing component. Secondly, the programme did not sufficiently invest in the expected activities. Instead, resources were allocated to staff salaries and allowances, as well as vehicles and other operational costs, estimated by the evaluation to have reached 32 per cent of the IFAD loan.<sup>75</sup> Thirdly, the programme incurred a high amount of ineligible expenditure and audit reports were heavily qualified with a large number of negative findings on the quality of financial management. Persistent financial management weaknesses consistently affected the programme's performance, raised the real unit cost per beneficiary, and lowered the economic and financial efficiency. Consequently, the PPE rates the efficiency criterion *unsatisfactory* (2), lower than the PMD self-rating of *moderately unsatisfactory*.

### **Rural poverty impact**

92. Impact is defined as the changes that have occurred or are expected to occur in the lives of poor rural people (whether positive or negative, direct or indirect, intended or unintended) as a result of development interventions. The impact domains considered in the PPE are: (i) household income and net assets; (ii) human and social capital and empowerment; (iii) food security and agricultural productivity; and (iv) institutions and policies.
93. **Overall contribution to rural poverty reduction is positive.** In relation to rural poverty impact, there is evidence that RTIMP made a substantial contribution to food security and initial gains in income generation, as well as generating knowledge and skills development for 217,258 programme participants, of whom 40 per cent were women. This represents 75 per cent of the target.

### **Household income and net assets**

94. **There were initial income gains observed from the field but a lack of credible data to confirm the magnitude of positive impact on household income and assets.** Families met during the PPE reported that they are able to have sufficient production for consumption and for sale, leading to initial income gains before market saturation. The PIALA found that "15 per cent of the households raised their income above US\$2 per day between 2009 and 2015 compared to the target of 20 per cent". The PIALA attributes this impact largely to improvements in R&T sales. However, the data need to be interpreted with caution based on the following: (i) the baseline from which the 15 per cent rise is calculated is based on participant recall, only using a categorical income range<sup>76</sup>; (ii) the calculation of annual household income of US\$2 per day was converted from GHC 1000, but based on the exchange rate this is close to an equivalent of US\$1/day/household (i.e. USD/GHC about 3.0 in 2014-2015) according to the original household survey report; (iii) the real income increase is much lower (even negative) due to the high inflation rates during the programme lifetime (i.e. an average of 12.4 per cent of inflation rate); (iv) there is no valid counterfactual group and therefore it is difficult to exclude other external factors that may have also driven up household income, especially considering Ghana's rapidly growing

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<sup>75</sup> If we use the self-reported programme costs, the amount RTIMP spent on Programme Coordination, Monitoring & Evaluation is 61 per cent of the IFAD loan and 57.6 per cent of the total costs.

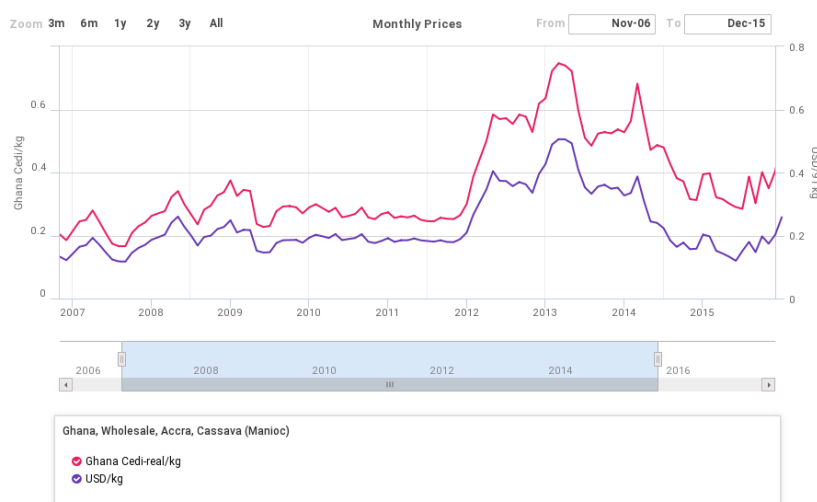
<sup>76</sup> In what range did the total income of your household fall (0-500, 501-1000, 1001-2000, 2001-5000, or 5001 or more GHS/year)?

economy and decline in average poverty rate of 1.1 per cent per year since 2006;<sup>77</sup> and (v) PIALA estimation gives an extremely high poverty rate if one uses an average household size of four in rural Ghana and a poverty line of GHC 792 per person per year in 2013.<sup>78</sup> With these criteria, it results that about more than 60 per cent of the surveyed households are under extreme poverty in the PIALA survey.

95. **As more households moved into R&T farming and local volumes increased, prices also declined**, particularly in peak seasons, due to oversupply in the market. Country average price data over the programme lifetime confirmed the trend that the prices fell back to 2007 levels after surging from 2012 to 2015 (see figure 2). A caveat here is that the price fluctuation shown in the figure might also be explained by sub-regional trends during the same period, not by the RTIMP intervention alone. The declining or low price has remained a key concern beyond the programme period, as mentioned during PPE consultations. This issue was also raised as a risk during the design of RTIMP, based on the similar experience during RTIP.<sup>79</sup>

Figure 2

**Cassava commodity price by month in Ghana (November 2006 to December 2015)**



Source: FAO-GIEWS FPMA Tool.<sup>80</sup>

96. **Qualitative evidence shows that change in household income can be positive or negative.** The results on whether there was net income gain from the programme activities are mixed. The SenseMaker data show that there are many different experiences among the programme participants. Thus attribution needs to be considered within the context of the specific commodity price variation, market and location and cannot be assumed across the whole target population (see the quote below). A caveat here is that the degree to which the qualitative evidence could be extended to the entire population of beneficiaries is not clear from the methodology documented.

*“In nearly half of the 240 stories or experiences of positive livelihood change collected from R&T farmers and processors, causes were not specified. In the other half, ‘higher yields’ and ‘better prices’ due to ‘new technologies and planting materials’ came out clearly as the main*

<sup>77</sup> According to the analysis using Ghana Living Standard Survey (2005/2006) and (2012/2013), between 2006 and 2013 the rate of poverty reduction slowed to an average of just 1.1 per cent per year, reflected in the poverty incidence change from 31.92 per cent to 24.23 per cent. This 1.1 per cent annual decrease is observed across different poverty measurements: extreme poverty line and poverty incidence using both new and old methods.

<sup>78</sup> The upper poverty line is set at 1,314 GHS per adult per year for 2013, and households below it are simply referred to throughout this paper as living in poverty. The lower poverty line is set at 792 GHS per adult per year, and households below it are referred to throughout as living in extreme poverty (source: 6<sup>th</sup> Ghana Living Standard Survey).

<sup>79</sup> Interim Evaluation, 2004.

<sup>80</sup> <http://www.fao.org/giews/food-prices/tool/public/#/dataset/domestic?country=GHA>.

cause. In 70 per cent of the 132 stories of negative livelihood change, 'inadequate buyers' was mentioned as the main cause. In nine cases it was 'limited market' and in seven cases a 'fall in the price of gari.'<sup>81</sup>

97. **The difficulties in marketing means that while household incomes have risen, the increment has been small.** The analysis of income levels in the PIALA sample showed that of the surveyed households, only 1 per cent achieved an income level above US\$4/day.<sup>82</sup> This suggests that, overall, the household incomes in the programme area, even with programme support, remain low. The low extent of income increase means that there was little opportunity for households to expand their asset base and longer-term prosperity. This was confirmed during the PPE interviews, during which community members reported spending income on household items and re-investing in their farm. At the same time, lack of capital for farm inputs and assets continued to be a major constraint to income growth, and few community members indicated that they were able to use their own savings for such investments.
98. **For households selling either raw materials or processed products, the increases were marginal; only households benefitting from GPCs and MEF gained a higher margin.** Since raw tubers only last a few days once harvested, income gained is small and wastage is high. For the programme households that were processing gari, the product lasts longer, giving more opportunity for income gains. However, the returns to labour for gari production are relatively low. Processors met during the PPE reported that gari processing was not a continuous operation for most but was used for supplementing household income when cash income was required. For project participants linked to a GPC, the operations were more commercial and the price advantage higher due to the product's higher quality and wider market. Where the MEF was operational, there was evidence of increases in productive assets, which contributed to the higher value of processed product within the market and resultant improved income for processors. However, there is also a reversed causality problem that it is likely that better-off communities were able to utilize the GPCs and MEF funds. Therefore, overall income and asset gains, while positive, were small.
99. **There is some correlation between better performance of DSFs and GPCs, and greater improvements in livelihood.** According to the PIALA, where the performance of DSFs and GPCs was better, supply chain development and commercialization were more successful, resulting in greater livelihood improvements. Where the performance of these mechanisms was weak, investments in smallholder businesses remained limited and profits stayed in the hands of a few,<sup>83</sup> thus undermining the hypothesis of smallholder commercialization as the driving force for sustainable livelihood improvement and poverty reduction.

### **Human and social capital and empowerment**

100. **RTIMP contributed to building participants' capacities through various training, knowledge dissemination, and other capacity-building activities.** Promotional materials, radio broadcasts and a market information system provided means of information uptake that appears to have resulted in a change in farming practice. All farmers met during the PEE displayed evidence of increased knowledge and skills in R&T farming. They were able to explain the knowledge that they had acquired and how that had resulted in improved yields. The Esoko platform is still in place and there was feedback during the PPE that some farmers are accessing and benefiting from price information.

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<sup>81</sup> PIALA, para. 138.

<sup>82</sup> PIALA, para. 286.

<sup>83</sup> PIALA, para. 42.

101. **Processing standards have improved leading to a more hygienic environment.** Stainless steel materials have been widely used in different processing equipment (e.g. graters, roasting pans). Farmers also stopped using their feet to wash cassava, which was a normal practice before the programme.
102. **The FFF was reported consistently as an important means of empowerment,** where farmers would drive their own learning as a result of identifying farming issues and then liaising with MoFA, DADU and agriculture research staff on identifying and applying solutions. The farmers' groups met during the PPE demonstrated appreciation for this approach and explained how it had engaged them actively in improving their own farms, commercial approaches to agriculture and in farm-based decision-making. Supervision reports also reported "farmers taking very active leadership stand as opinion leaders and not the usual 'giving' by researchers and the usual 'taking' by farmers. Farmers have the confidence in addressing their own determined / identified constraints and opportunities."<sup>84</sup> There was also evidence that the FFF and other RTIMP activities did have a positive effect in empowering women (see section on Gender equality and women's empowerment).
103. **The potential for empowerment through the formation of farmers' groups was not achieved as expected.** The FBOs largely formed only to conduct the FFF. Few of those met during the PPE demonstrated an ongoing level of support to members, or of any activities that would advocate for stronger and ongoing benefits to members. The PIALA estimated that less than 30 per cent of FBOs are still operational. A few FBOs, mainly those that have been supported by other projects such as the NRGF, do have joint activities such as shared land plots, or rotational assistance to group members during planting and harvesting. These groups often had joint bank accounts and were working towards generating joint financial assets to be used for in-group lending or purchase of post-harvest equipment. Overall, FBOs have not proven sufficient to enable farmers to gain better access to finance and markets, and increase profits and investments, as envisaged at design.<sup>85</sup>

### **Food security and agricultural productivity**

104. **RTIMP significantly increased yields through improved varieties and better farming management skills.** In the course of the mission, reports from farmers indicated that by changing their land preparation from mounds to ridging, and by using improved varieties and better pest and soil management, they had achieved an approximate doubling in yield. This yield increase was consistently reported across different villages and farm sizes, and was stated by both men and women. Overall, there was strong evidence that yields of cassava, yam and cocoyam generally doubled, or even more.<sup>86</sup> However, due to the local market saturation with improved production, farmers in some areas reported during the PPE that they are now reducing the level of cassava production and returning to traditional varieties, as they have higher demand on the market.<sup>87</sup>
105. **Various food security data demonstrate positive trends in food security across the country, so it is difficult to measure the impact by RTIMP alone.** RTIMP baseline figures in 2008 showed that 85 per cent of surveyed households living from the production, trading and processing of R&T could feed themselves

<sup>84</sup> Supervision report, May 2012.

<sup>85</sup> RTIMP Appraisal Report, para. 45.

<sup>86</sup> According to the Assessment of the Impact of the Distribution and Commercialization of Improved Planting Materials, the yield of cassava by the beneficiary was on average 23 Mt/ha, compared with control farmers on the average of 11.01 Mt/ha based on a household survey of 429 farmers (220 treated and 240 control group).

<sup>87</sup> The hectare of cultivating R&T products has been reduced and in some areas farmers are turning to other crops such as cocoyam, rice and maize due to a perception that there is better market. Other farmers continue to focus on cassava but reported decreasing profits due to the low prices and high wastage, despite continuing to achieve greater yields than in previous years. The greatest benefits are seen where farmers are both producing and processing cassava.

throughout the year.<sup>88</sup> Soon afterwards, Ghana became "food-secure" starting from 2009, according to World Food Programme studies.<sup>89</sup> The PIALA household survey also shows an improvement in food security from 2013 to 2014.<sup>90</sup> To better understand whether the improvement in food security was driven by a national trend or by RTIMP's intervention, the PPE team examined the PIALA, which showed that 91 per cent of the beneficiary households were able to feed their family, compared to 80 per cent of non-RTIMP households.<sup>91</sup> However, there are no baseline data available to examine the food security level between the RTIMP and non-RTIMP groups, which weakened the robustness of the results. Evidence from PPE field work suggested an improvement in food security and reduction in malnutrition due to increased production of improved nutritional products, including potato yoghurt (potagurt), protein-fortified soy-gari, vitamin A-fortified gari and sweet potato drink that were introduced by the programme and in some cases continued after programme completion. These products were mainly consumed by a certain group of people (i.e. students). However, no information on the adoption rates across the whole programme is available. There was also evidence showing that due to lack of intervention in stimulating demand for high- nutrition-added products (e.g. HQCF, fortified soy-gari), consumption remained limited and the programme missed the opportunity to largely change the malnutrition situation in the rural areas. Furthermore, where income increases were seen, farmers reported purchasing better-quality food for their families, resulting in better nutrition and overall food and nutrition security.

### **Institutions and policies**

106. **Even though RTIMP supported institution-building at the national level, little institutional benefit was observed due to the structure of the PCO.** RTIMP aimed to strengthen MoFA and the DADUs through improved knowledge and capacity to support commercial agriculture for the R&T sector, as well as creating a stronger link between rural banks and the R&T sector processors. The implementation arrangements for RTIMP comprised a distinct PCO and three zonal offices outside of MoFA. This was intended to allow the programme to be responsive and operate efficiently but would also aim to transfer knowledge to the Ministry for sustainable outcomes in terms of institutional support. However, there were limitations with the design in that it largely sidelined the main structure of MoFA. While coordination did occur at national and regional levels, the main point of connection was at the DADU level; therefore, little institutional benefit has been recorded.
107. **There was little impact on institutional development at the district level.** Overall, RTIMP built on the knowledge processes of RTIP in relation to production technologies and practices and did result in localized changes in approach e.g. some DADUs now incorporate FFF-type approaches for other programmes. However, little was achieved in orientating the DADUs towards commercial approaches. The DSFs were a successful institutional mechanism in some areas for sharing of information among producers, processors and buyers, as well as support organizations at district level, and the PPE found in a few cases that DSF-type activities are being continued by the DADU. Yet, the PIALA records weak DSF performance in 84 per cent of the research cases. DSFs contributed to some extent to strengthening the supply chains (57 per cent); conversely, they largely failed to link the supply chains to sufficient markets (43 per cent). It indicates that overall,

<sup>88</sup> PIALA, para. 116.

<sup>89</sup> The World Food Programme's Comprehensive Food Security & Vulnerability Analysis in 2009 found that 95 per cent of Ghana's entire population had access to sufficient and nutritious food to lead an active and healthy life and thus was defined as "food-secure".

<sup>90</sup> PIALA studies show that more households have gained access to sufficient food throughout 2014 than in 2013 across all socio-economic household categories, with 80 per cent of poor households that did not experience any food shortage in 2014 compared to 57 per cent in 2013 (PIALA, 2015, para. 117). However, the PPE team recognized that these data are not congruent with the data presented earlier, and it would be unrealistic for such a significant change within only a one-year gap.

<sup>91</sup> PIALA p. 15.

the DSFs initially generated benefits but that these benefits were not lasting. This is confirmed by the PIALA data on DSF meetings, which indicate a declining level of interest in the DSCs during programme implementation.<sup>92</sup> Furthermore, during the PPE some farmers indicated that the DSC led to them being exploited by buyers who purchased their produce but did not pay.<sup>93</sup> Consequently, not only was there virtually no impact regarding institutional development, but some negative impact was also noted.

108. **The programme lacked a strategic approach to engage financial institutions and support their development.** In spite of the acknowledged risks in the agriculture sector, the matching grant fund was seen as being a good way to manage the risks until a producer builds maturity in the market. Also, a matching grant enables extension of loans to potential clients with a lower effective interest rate than is charged commercially.<sup>94</sup> Liquidity was a concern at the beginning of the programme but, with the increasing opportunities for rural banks to access funds for on-lending, liquidity improved. However, the barriers to access loans were still high for the majority of RTIMP farmers and overall the MEF did not achieve its objective. RTIMP worked with rural banks through the Apex Bank and then the ECO Bank. It is notable that NRGP and REP work with a wider scope of financial sources, depending on the need and availability. The RTIMP SCFs also reported limitations with the MEF and started to pursue potential links with micro-finance institutions.<sup>95</sup> There was no provision within the programme to take a strategic approach to institutional development due to IFAD supporting the rural finance sector through other programmes such as the Rural and Agricultural Finance Programme.
109. **Summary.** RTIMP made modest contributions to household incomes, primarily through improvements in agricultural production and human capital increase, as well as significant increase in agricultural productivity and food security. However, the magnitude of the programme's contribution is difficult to estimate due to the general upward trend of rural development, poverty reduction, and food security improvement in Ghana. Little was achieved at the institutional and policy aspect, which also negatively affected the sustainability of benefits (discussed in the next section). Consequently, the PPE rates the rural poverty impact criterion as *moderately satisfactory* (4), the same as PMD's self-rating.

### **Sustainability of benefits**

110. This evaluation criterion relates to the likelihood of continuation of benefits generated by a development intervention.
111. **No exit strategy was put in place for consolidating the benefits achieved by RTIMP and for engaging the private sector.** Feedback from previous RTIMP staff and key stakeholders was that the programme did not plan for phasing out. It had no exit plan in place and, moreover, the flow of resources ended abruptly and staff contracts were terminated before the expected programme completion date, leaving a range of activities in the field uncompleted. There was no formal hand-over of programme activities to DADU or agency staff. The programme office was closed and documents were not properly archived. Some programme activities were transferred to GASIP, particularly the remaining PROVACCA infrastructure, but there was a hiatus in actions being followed through. Additionally, the programme failed to develop an effective strategy to transfer some of the Government's activities and management to the private sector, with appropriate

<sup>92</sup> For example, in the research areas, DSC meetings were held five to seven times in 2010 with 50 to 100 participants; in subsequent years it declined to one or two a year with only one third of the original number of participants (PIALA, p. 156).

<sup>93</sup> The exploitation of farmers through the DSC where buyers were brought into the locality from outside the area occurred in five groups that the PPE visited.

<sup>94</sup> On-lending funds carry a Central Bank base rate of 22-25 per cent, providing an on-lending margin of approximately 12 per cent for the bank, as well as the rural bank carrying the credit risk.

<sup>95</sup> Yam Supply Chain Facilitator Report (2012).

incentive mechanisms. This was partly due to few existing GPCs being able to continue to expand without assistance and partially to insufficient time remaining within the programme to implement the SCF recommendations. Furthermore, although the subsequent GASIP was considered to be an opportunity to continue priority activities from RTIMP, in reality few stakeholders met during the evaluation were aware of GASIP or its demand-driven approach and thus had not engaged with the follow-on programme activities.

112. **The high adoption rates for component B drives the main benefits: these benefits are sustained in terms of productivity.** The sustainability of impact of the various initiatives varies by component. The benefits gained from component B (focusing on production) are most likely to be sustained due to the high adoption rates and the promotion of commercial reproduction of improved planting materials. There is evidence gathered by the PPE mission that improved technology remains available to farmers two years after programme conclusion.
113. **The low profitability of many processors and low financial viability of some GPCs, coupled with relatively weak value chain linkages, make the various enterprises vulnerable to fairly small external shocks.**<sup>96</sup> According to the PIALA, 25 per cent of the GPCs were not functional by 2015.<sup>97</sup> Only one out of four of the GPCs that the PPE mission visited showed high financial viability. In the later stages, the programme put more effort into increasing profitability and reducing the cost-revenue ratio for rural enterprises. The average total cost-revenue ratio dropped from 99.2 per cent in 2011 to 70.5 per cent in 2012, rising up to 76 per cent in 2014,<sup>98</sup> indicating a low profit level. Thus, the actions taken have improved the level of sustainability, but only to a limited number of GPCs.
114. **FBOs were mainly production-focused; few in the sites visited have been sustained.** The FBOs sustained two years after the programme closure are predominantly the ones that have also been supported by other programmes such as the NRGP, or the ones that have been mobilized around GPCs or with strong leadership.
115. **There were only few cases where a DSF was continued by MoFA.** In particular, the DSF has been found to be unsustainable, as RTIMP financed all for a linkages, paying sitting fees to farmers who attended the trainings and other meetings.<sup>99</sup> Coupled with the ineffectiveness in linking traders and buyers, this adversely affected DSF's sustainability as people participated based upon programme-driven incentives.
116. **Another risk working against sustainable growth for the R&T sector is the continued reluctance of banks to provide seasonal and medium-term finance** for value chain entities due to liquidity constraints, persisting risk aversion, and asset-liability structure of PFIs (see paragraphs 61 and 108). If this situation continues, it will stifle the growth of processing and farm productivity alike.<sup>100</sup> In spite of efforts made to address relevant issues discussed in the Relevance and Effectiveness sections by applying successful procedures used by other IFAD-financed programmes (e.g. NRGP),<sup>101</sup> the MEF financing remained at piloting stage and there are limited cases where repeat lending took place.
117. **Summary.** Programme benefits are being sustained for production and basic processing but are not as expected for marketing, especially considering the absence of private sector involvement in value chain development. Thus,

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<sup>96</sup> According to the Supervision Report, an additional factor is that "some value chains are not using appropriate price-setting procedures, increasing the risks of contract defaults when prices change due to market forces".

<sup>97</sup> PIALA, p. 106.

<sup>98</sup> According to the GPC financial analysis database.

<sup>99</sup> PCR, para. 126.

<sup>100</sup> RTIMP Aide-memoire, November-December, 2013.

<sup>101</sup> RTIMP collaborated with REP-II and NRGP to provide credit lines to PFIs at concessionary interest rates (prime rate) for on-lending; the BACs under REP II were used to support business development activities of the GPC under RTIMP and apply for the grant (MTR, 2010 and Supervision mission reports, 2013).



sustainability is rated as *moderately unsatisfactory* (3), lower than PMD's self-rating.

## **B. Other performance criteria**

### **Innovation**

118. RTIMP is innovative in commercializing improved planting materials and developing some processing technologies. However, overall the innovation was not at the systemic level, as planned in the programme design.
119. **The key innovation under RTIMP that achieved success is the FFF**, an upgraded version of the Farmer Field School concept applied in the predecessor programme, RTIP. In the FFF, "horizontal" information and learning exchanges take place among producers, processors, researchers and extension workers in a colloquial, collegial setting.<sup>102</sup> This allowed an interface between different stakeholders to discuss about scientific improvements in relation to the development of new varieties, planting material multiplication and in applied farming practice. The FFF was reported by the research institutions, DADU staff and the farmers to be a considerable improvement on the previous Farmer Field School approach, which was curriculum-based rather than focussing on farmer-identified field problems.
120. **The innovations in value chain development were not as successful as expected.** Entry into new markets such as HQCF was constrained by the lack of attention to existing and potential marketing challenges. The processing technologies and practices were largely inaccessible to processors other than those intensely supported by the programme, and the marketing issues constrained private investors. The MEF did not generate the sustained access to finance as envisaged. Consequently, overall the programme did not achieve the extent of innovation as expected.
121. The criterion on innovations is rated as *moderately unsatisfactory* (3), compared with PCR's *moderately satisfactory*.

### **Scaling up**

122. This evaluation criterion concerns the extent to which the programme interventions have been (or are likely to be) scaled up by Government authorities, donor organizations, the private sector and other agencies.
123. In terms of programme activities, there is evidence from the field that the FFF approach is being continued and scaled up by MoFA and other development partners such as World Bank through WAAPP, within programme-supported communities and more widely across other communities that were not supported through the programme.
124. The GPC approach is considered as a good practice to mobilize farmers, reduce post-harvest loss, and increase the value added for R&T products. However, successful scaling up of GPCs is conditioned by a very careful selection of groups with an established chain of actors and serving many beneficiaries (strategic locations).<sup>103</sup> The underachievement of the MTR target of upgrading 40 GPCs also showed the challenges in mobilizing sufficient financial resources through the MEF.
125. Additionally, without proper solutions to tackle the marketing challenges, there are also risks in scaling up, e.g. market saturation, increased competition and inability to fulfil market volumes required on a consistent basis.
126. Given the above-mentioned challenges in scaling up the programme activities, this criteria is rated as *moderately unsatisfactory* (3), lower than PMD's self-assessment. PMD's rating was based upon optimistic expectation that some activities on marketing and processing (e.g. SCF, promotion of new R&T

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<sup>102</sup> CPE, 2012, para. 154.

<sup>103</sup> PCR, 2016, para. 81.

equipment) can be scaled up by NRGF and GASIP, however, PPE's field visits could not confirm that this was occurring. Furthermore, there are risks of oversupply if there is scaling up of the production activities, without addressing the marketing issues more effectively.

### **Gender equality and women's empowerment**

127. This evaluation criterion concerns the extent to which IFAD-supported interventions have contributed to better gender equality and women's empowerment – for example, regarding women's access to and ownership of assets, resources and services; participation in decision-making; work load balance; and impact on women's incomes, nutrition and livelihoods.
128. Ghana's COSOP 2006 specifically noted that gender issues should be integrated into all aspects of programme implementation – that all implementation partners must ensure that their activities account for the specific requirements of women. Together with guidance from the Gender Action Plan for IFAD (2003), the performance indicators were expected to be disaggregated by gender, and a gender analysis of programme outputs was to be undertaken.
129. **RTIMP applied a gender approach in its programme targeting to mainstream gender equity.** RTIMP design called for one professional staff member to be responsible specifically for promoting gender mainstreaming and requested RTIMP to prepare a Gender Action Plan and organize gender training for its own staff and also for service providers. However, these activities were not realized during implementation, in spite of recommendations made in supervision reports.<sup>104</sup>
130. **The programme outreach to the female beneficiaries for the production and processing components was effective.** The FFF was reported to be an effective mechanism for mainstreaming women's participation by organizing gender-specific groups. Some GPCs were also set up only for women's groups already involved in processing (e.g. Abingakuraa in Damongo). RTIMP also worked on strengthening women's organizations: some women-specific FBOs were created for organizing production and processing. Overall, RTIMP reached 217,258 direct beneficiaries, of whom 40 per cent were women.<sup>105</sup> However, there were also some weaknesses observed. While RTIMP provided gender-disaggregated data collection for monitoring, and used the data as a base to inform action, the follow-up actions were weak. Out of the five production outcome indicators, women accounted for between 34 per cent and 55 per cent of the overall outreach rates; on four outcome indicators for processing, women accounted for between 2 per cent and 73.5 per cent of the overall success rate.
131. **There is mixed evidence showing that the mechanization of processing reduced women's work load.** The main actors involved in processing are women. Therefore investments in upgrading the processing machines are of critical value to ease their workload. Interviews with most of the female beneficiaries during the PPE mission also confirmed the finding that machines developed under RTIMP (e.g. grating, roasting, pumping machines) facilitated gari processing. The processing training also improved good hygiene practices to improve women's health. Additionally, the MTR reported that GPCs were mainly used by women processors. However, there is also evidence that, due to the high processing capacity of the machines, women had to work harder to peel cassava to feed the machine, even though more income and employment were generated. Furthermore, it was reported that some of the processing machines were not easily

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<sup>104</sup> RTIMP Supervision Reports, 2010.

<sup>105</sup> PCR, para. 22.

used by women and further work needs to be carried out to make them more convenient for women to operate.<sup>106</sup>

132. **Female beneficiaries gained more access to rural finance under the MEF.** Sixty per cent of the MEF was given to female individuals or groups. Rural banks also reported their preference for lending to women due to low default rates and better loan performance, which also improved women's economic empowerment. However, this outcome was not driven explicitly by the programme, since female clients are generally associated with lower *portfolio-at-risk*: women are more risk-averse and with lower moral hazard risks, more responsive to coercive enforcement (e.g. social pressure, verbal aggression), and also choose more conservative investments.<sup>107</sup> Evidence is lacking for women's role in household decision-making and ownership of assets.<sup>108</sup>
133. Despite the achievements discussed above, there was little evidence that the programme has contributed to transformative change that would lead to a social change process concerning gender equality and women's empowerment. Gender and women's empowerment is rated as *moderately satisfactory* (4), the same as the self-rating.

### **Environment and natural resources management**

134. This criterion focuses on the extent to which IFAD-supported interventions have contributed to resilient livelihoods and ecosystems in relation to the use and management of the natural environment with the goods and services they provide.
135. **The FFFs were successful in orientating farmers on environmental concerns,** particularly in relation to water-saving and improved land management. The PPE interviews indicated that there was an increase in farmers using bio-organic fertilizers rather than chemical fertilizers, and the change from mounds to ridges in planting patterns not only improved soil and water retention but also reduced the need for weeding and using weedicides.
136. **New technology and skills acquired through RTIMP have enabled GPCs to practice better sanitation and waste management.** For example, the provision of chimneys and improved stoves in the construction of the processing units at GPCs controlled smoke and heat from the roasting units. The GPCs used less fuelwood compared to the traditional methods of processing.<sup>109</sup>
137. **However, there are some practices that cause environmental concerns.** For example, increased gari processing has created challenges to the environment with respect to management of waste, effluents and increased felling of wood for fuel, especially for processors not directly targeted by the programme. It was found that the heaps of cassava peels in some areas were being used to feed domestic animals; in most areas, however, the peels pose serious threats to the environment because of disposal challenges.<sup>110</sup> (For details, see annex X.). This is confirmed from the PPE team meetings with beneficiaries, and field observations of GPCs and land management skills across six regions.
138. **Summary.** While largely positive, activities related to gari processing and cassava waste disposal also created environmental concerns. Thus, the evaluation criterion on environment and natural resources management is rated as *moderately satisfactory* (4), the same as PMD's self-rating.

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<sup>106</sup> The hopper into which cassava is fed is too high off the ground. Similarly, the model of a robust single-screw press with the operating bar on top is difficult for women to operate (MTR, p.117).

<sup>107</sup> World Bank (2001) World Development Report: Engendering Development: Through Gender Equality in Rights, Resources and Voice. New York: World Bank and Oxford University Press. World Bank (2007) Finance for All? Policies and Pitfalls in Expanding Access. A World Bank Policy Research Report, The World Bank: Washington. D'Espallier, Bert, Isabelle Guérin, and Roy Mersland. "Women and repayment in microfinance." (2009).

<sup>108</sup> Taking into consideration that most Ghanaian societies are patrilineal, where women do not inherit and own or control land, their roles in decision-making for production activities are limited.

<sup>109</sup> PCR (2016), Appendix 11 on Environment Assessment.

<sup>110</sup> PCR, para. 77.

## **Adaptation to climate change**

139. This criterion assesses the contribution that IFAD-supported interventions have made to reducing the negative impacts of climate change through dedicated adaptation or risk reduction measures.
140. **Farmers have noted changes in climate, but it's not certain whether the awareness was raised by RTIMP activities.** Farmers met during the mission admitted to being affected by climate change in that they had to delay planting and were unable to cultivate part of their fields. Solutions that they are pursuing include using early-planting or early-maturing varieties (based on advice from RTIMP) and conducting soil management practices. However, it was not clear whether the awareness of climate change effects was solely driven by PROVACCA. During the PPE field visits, some farmers reported that they had been aware of the changes in climate prior to PROVACCA and had already been adapting their farming practices.
141. It is also not clear whether the subcomponent on awareness-raising was of substantial benefit, compared to direct benefits of innovative climate-resilient technologies and practices transfer, e.g. introducing more drought-resistant varieties and water-savings techniques.<sup>111</sup> Field visits also indicated that there was a high demand for the interventions on knowledge transfer. The programme could have used more financial and human resources on technology transfer to directly benefit the farmers; but only 20 per cent of the PROVACCA grant was spent on this subcomponent (4.2).
142. **The PROVACCA component expanded the reach of the FFF activities substantially.** There is some evidence of knowledge and practice replication in relation to climate-smart agriculture among non-programme farmers.<sup>112</sup> However, three major initiatives for PROVACCA were not completed within the programme period; these have been transferred to GASIP and are now close to completion.<sup>113</sup> Overall, RTIMP has been a good vehicle for introducing and applying climate change adaptation practices, but delays in full implementation have meant that the full benefits were not achieved during the programme period. These can only be realized due to the availability of GASIP, which has allowed transfer and completion of the planned sub-projects.
143. **Summary.** The PPE team examined the achievement of the PROVACCA two years after the loan closure. It should be recalled that the rating provided by the PCR was based upon unfinished activities of PROVACCA, and therefore less satisfactory. Overall, RTIMP has been a good vehicle for introducing and applying climate change adaptation practices, but there were delays experienced in implementation. As a result, the PPE rates the adaptation to climate change criterion as *moderately satisfactory* (4), higher than the PMD's self-rating (3).

## **C. Overall project achievement**

144. The main achievement of the programme has been in the change of farming practices at the farmer level. The use of FFF was cited as a benefit for farmers across all levels of the programme. The evidence is clear in the high level of production increases for the majority of farmers and in the reports from the DADU offices and the farmers that the improved practices are being replicated by other non-project-supported farmers and with project-supported farmers for other crops.

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<sup>111</sup> There is no information on PROVACCA or climate change responses in the PIALA; thus there is no other supporting evidence for the impact of PROVACCA activities.

<sup>112</sup> As identified during PPE interviews.

<sup>113</sup> Interviews with GASIP and field visit observations showed that there were limitations in the design of PROVACCA in relation to the biogas units, which have now been upgraded as part of GASIP.

145. The technical support for DADU offices has led to an improvement in capacity, although the extent to which the lessons are being applied varies depending on the current district leadership and resources available to each DADU.
146. The improvements for specific GPCs have been beneficial for the GPC management and for processors who have access to the facilities, or who supply the facilities. The GPCs provide a local market for some producers, and the generation of high-quality gari is a contribution to the local economy and for local nutrition. There is also benefit in some GPCs for short-term employment for some individuals who peel cassava on a commission-for-work basis.
147. The main aim of the programme to link rural producers with new and more diverse markets was less successful. The expected technical service providers were only appointed after mid-term and the main activities were unable to be sufficiently pursued to generate a major difference in the sector. This meant that there was an over-production in the programme areas and insufficient absorptive capacity in the markets.
148. Although progress with commercialization was limited, the areas where a more successful approach was observed also had support from the IFAD-financed REP. The collaboration between RTIMP and REP was envisaged as part of the programme design, and although it did not occur in all areas and was largely dependent on the willingness of both the REP and the GPC leaders to cooperate, where REP support was provided there was evidence of stronger business planning and management and more access to credit, either through the MEF or the REP Matching Grant Fund.
149. Overall, many programme participants did achieve an initial gain in household income; however, the extent of benefit was not as significant as expected due to market saturation and sustainability issues. The expected strengthening of the sector in institutional terms did not occur at all, and the innovations and value-added of the RTIMP investments compared to the ones of RTIP were not realized. This has led to mixed results in terms of overall programme benefits and sustainability. Consequently, RTIMP essentially replicated and extended the RTIP activities and largely missed the opportunity for strategic and transformational change for the R&T sector and did not achieve the potential synergies envisaged. Therefore, a rating of *moderately unsatisfactory* (3) is given based on the overall assessment of the programme performance.

## **D. Performance of partners**

### **IFAD**

150. **IFAD regularly fielded supervision and implementation support missions and provided the requisite backstopping and support.** In addition to bi-annual supervision missions (14 in total between 2009 and 2014), several implementation support missions were conducted (e.g. financial management support). With the country programme managers and country office's presence in Accra since 2012, IFAD had given regular support to addressing implementation weaknesses. However, several issues still perpetuated throughout the programme: implementation structure, M&E and financial management.
151. **IFAD actively took measures to address the implementation concerns of the PCO but failed to address key structural issues.** Since programme start-up, the structure and activities of the PCO were problematic (e.g. M&E, accounts, coordination, knowledge management). The design specified that there should be "operational autonomy" for the PCO, within the limits of the delegation of authority issued by MoFA.<sup>114</sup> The main responsibility for programme implementation oversight is encapsulated within the Programme Implementation Manual and

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<sup>114</sup> RTIMP Appraisal Report, para. 180.

associated documents<sup>115</sup> approved by IFAD; therefore a core responsibility for programme management rests with IFAD as well as with the Government. The initial supervision through the World Bank already started to identify issues with implementation in relation to the commercialization objectives of the programme: "there remains a lack of emphasis on the use of financial tools, [...] the exploitation of specific market potentials [...] should be the factors linking the programme components. The need for this emphasis is crucial if the programme activities are to succeed".<sup>116</sup> The shift to direct supervision by the Fund brought the concerns closer to IFAD Management. IFAD responded to the concerns by providing more intensive technical support. This eventually led to some improvement in programme management, particularly after mid-term, albeit too late to address the overall implementation concerns.

152. **The financial issues of the programme persisted and IFAD fielded additional missions to address them.** Towards the end of the programme, IFAD had to consider suspending funding for other operations in Ghana in an effort to recover the ineligible expenditures<sup>117</sup> for RTIMP. Therefore, while IFAD did exert efforts to address the weaknesses in the programme, the lack of decisive action earlier in the programme contributed to the overall gaps in performance. M&E issues will be discussed in the section below concerning Government performance.
153. Additionally, even though IFAD fielded staff and consultants from various professional backgrounds, there was no institutional expert fielded to find better solutions for strengthening the FBOs, which were a critical vehicle for organizing both the marketing and processing activities.
154. Based on the above, the performance of IFAD is rated as *moderately satisfactory* (4), the same as PMD's self-rating.

### **Government**

155. Overall, RTIMP was designed to be a value chain programme with marketing as the driving force for development. In reality it was implemented as a production-oriented programme. PCO was largely staffed with the same people from RTIP, who lacked understanding of marketing for staple crops. The Government gave less priority to value chain development during implementation. With the change of attitude from the Government's management side on the marketing and financial viability of RTIMP activities, there was more buy-in towards the end of the programme. Nevertheless, it was too late to implement some of the key marketing activities, leaving the local market saturated and farmers and processors affected by the oversupply of R&T products.
156. **In terms of technical support, the MoFA dissemination network was a key strength of the programme** and there was good collaboration with the research and scientific networks to achieve sound results in improved productivity. Yet the capacity of MoFA to support the more commercial activities of components A and C was not as apparent. While the programme design envisaged the appointment of technical service providers to support the process, the PCO did not work proactively to procure the SCFs and the support did not occur as planned.
157. **Issues with financial management of the programme were not dealt with decisively.** There were major and pervasive fiduciary and procurement issues that resulted in the need for the Government to refund monies to IFAD and also the loss of the OPEC Fund for International Development (OFID) grant. The financial issues were consistently raised by IFAD and through the country audit processes but were not decisively addressed either by programme management or by the Government

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<sup>115</sup> "The Programme operations and financial manuals and procedures of the Programme Implementation Manual referred to in Section B, Section 1.1(c) of Schedule 3 shall have been approved in draft by the Fund."

<sup>116</sup> World Bank RTIMP Supervision Report, September 2008.

<sup>117</sup> Letter from IFAD Director and Controller, Financial Operations Department to Minister of Finance and Economic Planning, 4 March 2016.

of Ghana. The monitoring of financial returns from zonal offices was also weak.<sup>118</sup> The required action eventually proceeded with the removal of the financial manager, but this occurred late in the programme and was not sufficient to redress the financial performance gaps of prior years. At the end, the programme spent about 30 per cent of the funds on programme coordination and M&E, yet little was done to establish a well-functioning M&E system (see next paragraph). There were some delays in the receipt of counterpart funding<sup>119</sup> from the Government, but overall counterpart funding support was satisfactory.

158. **The M&E system for the programme appeared to be incomplete and not well maintained.**<sup>120</sup> An M&E system was established but the tracking mechanism was not clear; PCO staffing assigned to M&E was ineffective and records were not properly handed over at programme completion. Most of the data were generated through the reports of DADU staff, but records were not available at the DADU offices to verify the extent to which the data collected were accurate. There were difficulties in attracting capable staff to manage the M&E activities, and rigorous data collection did not appear to be a priority, as evinced from the PPE review of hard-copy records. The isolation of the programme office from MoFA and the reporting process exacerbated the data gaps. The logframe was revised several times and not finalized until June 2013, leaving the indicators badly tracked. Baseline and midline data were also weak from both methodology and data analysis aspects, which made it difficult to measure outcomes and impacts appropriately. As the PCR commented, M&E remained very weak due to lack of leadership and demand by programme management, lack of skilled staff, etc. All of these aspects adversely affected overall performance of the programme and efficiency in achieving outcomes.
159. Therefore, given the above-mentioned weaknesses, the performance of the Government is rated as *moderately unsatisfactory* (3), lower than the PCR's rating of 4.

## **E. Assessment of the quality of the programme completion report**

160. **Scope.** The scope of the report is largely comprehensive and follows to a certain extent the PCR guidelines by IFAD. Project relevance was assessed against the external context, internal logic, and changes in design, which is considered as a good practice. The important section that was largely missed out is the Assessment of Impact section, even though relevant information is found in different parts of the PCR using findings from the PIALA. There is also no overall economic and financial analysis. Given this weakness, the scope is rated as *moderately satisfactory* (4).
161. **Quality.** The PCR presents a good analytical account of project performance with critical examination. The main weaknesses are related to the programme costs and lack of in-depth analysis of the Impact section.<sup>121</sup> The programme finance data largely over-estimated the programme management costs based on incorrect data. There are also some errors in physical outputs, inconsistencies in outreach data, and project internal rate of return. While the robustness of the data captured and reported is questionable in some cases, this was largely due to data discrepancies at the programme level as a result of the weak M&E system, rather than inadequacy on the part of the PCR. In fact, the PCR integrated different sources of

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<sup>118</sup> For details, see supervision reports (2009-2014), MTR and PCR.

<sup>119</sup> It was reported by the PCR that the delayed counterpart funding adversely affected the achievement of some deliverables, particularly the rolling-out of GPCs. As a result of the delays, staff salaries had to be sourced entirely from IFAD funds (after the MTR) instead of the original arrangement of 45 per cent from the Government and 55 per cent from IFAD (PCR, para.105).

<sup>120</sup> As noted in the methodology, the PPE was unable to review detailed project records, but available records were not consistent with progress reports and sources of information and data presented were not clear.

<sup>121</sup> See PCR, appendix 7.



information to fill in the data gap with fair assessment. In light of the above, the quality is rated as *moderately satisfactory* (4).

162. **Lessons.** The lessons learned from both the technical and operational perspectives in the PCR are relevant and provide important inputs for future programme design and implementation, and the PPE concurs with many of them. The rating is *satisfactory* (5).
163. **Candour.** The PCR is balanced and fair in presenting the programme's main achievements and shortcomings, reflecting on issues with the design and implementation. Due to some data inconsistency and absence of a comparison group, there are some caveats on selected PCR impact assertions. The rating is, nonetheless, *satisfactory* (5).

#### **Key points**

- The objective of the programme was relevant to the country context and Government priorities. The elements of an inclusive value chain development approach were in place at its commencement. The programme implementation worked to narrow down and re-direct the design into some focused areas through the changes at MTR, without substantial changes.
- The main achievement of the programme has been in the change of farming practices at the farmer level. The use of the FFF was cited as a benefit for farmers across all levels of the programme. However, the objectives related to R&T value chain development, and processing and marketing skills upgrading, were underachieved.
- RTIMP experienced a number of issues with programme efficiency: untimely disbursement of resources and improper sequencing of activities; high management costs, coupled with significant deficiencies in the programme's financial management; and relatively high cost per beneficiary.
- Many programme participants did achieve overall improvement in household income at the beginning. However, as productivity increased while marketing was still a problem, oversupply and local market saturation were widely observed, resulting in declined price and unsustainable income increase.
- IFAD and the Government bear joint responsibility for the implementation deficiencies and the programme's under-achieved investment, especially for the marketing activities. From programme start-up, the structure and activities of the PCO were problematic, leading to persistent financial management issues. Efforts were made consistently after MTR, but failed to address them in a systematic manner.

## IV. Conclusions and recommendations

### A. Conclusions

165. Based on the stated objectives of the PPE, conclusions relate to three levels of findings: (i) the direct results of the programme; (ii) findings to feed into country programming; and (iii) findings to generate learning for the proposed thematic value chain evaluation. The conclusions also relate to consideration of the ToC (see annex VIII).
166. **A serious imbalance between production and commercialization during implementation led to unfulfilled potential.** In relation to the direct results of the programme, the main conclusion was that, in spite of a well-balanced design in which priority was given to building commodity chain linkages, the implementation resulted in a serious imbalance between production and marketing. The production activities dominated, leading to delays and under-performance. The main reasons for the imbalance were related to MoFA's inexperience and lack of focus on commercializing staple crops at programme commencement, and the PCO was not sufficiently set up or supported for commercial programming and implementation. There were financial and staffing concerns that led to inefficient operations. It is notable that progress was made after MTR when SCFs were appointed and when MoFA focus towards agricultural commercialization intensified. This means that there was potential to achieve programme objectives, yet as the programme was already fully advanced, the commercial potential was not realized.
167. **The matching grant mechanism needed more intensive support.** The matching grant mechanism through the MEF is repeated in other projects across the IFAD portfolio in Ghana. While successful in other projects, it was less so in RTIMP. Despite the high level of demand and needs across the programme's target group, the uptake rate was low and MEF funds were eventually reallocated. Matching grants can be an appropriate mechanism to leverage resources when built upon realistic assumptions about both supply (rural bank liquidity and low risk aversion to agricultural loans) and demand sides (strong farmers' groups, financial capacity). However, when there is insufficient programme support (inexperienced and insufficient staff, lack of national advocacy) these are unlikely to succeed. In this regard, had the programme made more intensive efforts to link with other IFAD projects and learn from their experience, stronger results may have been achieved.
168. **The GPCs were beneficial, but benefits were not sufficiently harnessed.** A further conclusion is that the GPC as a main commercialization strategy was incomplete. The GPCs did not provide the necessary market absorption for the increase in production achieved, partially due to their limited geographical coverage. The focus of programme attention on the GPCs as a main market avenue took attention away from other potential mechanisms. The SCFs started to work on alternative mechanisms, but it was too late for the recommendations to be activated and supported. The GPCs as demonstration sites were beneficial but not to the extent that was envisaged at design. Not all GPCs achieved financial viability. There was an opportunity to more strongly capitalize on the programme investments in the GPCs.
169. **The value chain approach for the R&T sector in Ghana is a good example of how subsistence farming can be commercialized with appropriate support, but a commercialization approach should be commenced early in implementation.** PPE conclusions are that the programme design was relevant and that pursuing an approach that would shift subsistence farming into commercial agribusiness opportunities was valid at the time of design, and is still valid two years after completion. The PPE found that there was both market demand and supply potential for R&T. The market gaps are surmountable and the approach in design was appropriate to address the gaps. However, the commercialization approach did not commence early in implementation. If the PCO had secured appropriately knowledgeable and experienced staff and been more

effective in taking a commercial approach at commencement, as well as working with MoFA to build marketing and value chain development capacity, the correct commercial orientation would have been established earlier. Programme activities in commercialization would have had time to mature and generate greater results. Thus, RTIMP showed that without relevant programme scheduling, management and technical skills, the potential of design can be lost.

## **B. Recommendations**

170. Based on the conclusions, the PPE has the following three recommendations that relate to important issues for future operations in Ghana and for IFAD in value chain development interventions.
171. **Recommendation 1. Future market-oriented projects should invest early in specialized skills on market development and pay close attention to demand fluctuations.** The experience of RTIMP shows that when market analysis and commercial planning were carried out, and where DSFs were successful, positive progress was achieved. For future interventions, investments in capacity building of concerned agencies and in orienting the MoFA toward a commercial approach and mindset are required early on to allow time for implementation. Additionally, future projects also need to better identify market constraints: type of markets (export, regional, domestic), end use of the commodity, characteristics of the commodity, quality attributes, and current and emerging market trends. Lastly, while working directly with key enterprises, other marketing approaches such as direct linkage, contract farming, direct sub-contract, or agency facilitation could be considered and supported to increase diversification and address market interests.
172. **Recommendation 2. Matching grant funds may be appropriate but alternative rural financing mechanisms should also be explored.** RTIMP reliance on the MEF for financing constrained implementation, and more intensive support was required to overcome the challenges faced by both financial institutions and the target group. Where there is demand for rural finance, a matching grant fund can be a good mechanism to mobilize resources and increase financial access by resource-poor farmers. However, its design should be based on careful assessment of the potential risks and constraints in both supply (financial service providers) and demand (borrowers) sides for such a mechanism to be effective in reaching the intended target group. At the same time, alternative approaches aimed at improving access to finance, for example through linkages with the IFAD-financed Rural Enterprises Programme, a line of credit or asset-based financing (leasing) may also be explored.
173. **Recommendation 3. Project management issues need to be addressed early and decisively to avoid dilution of the strategic intent and efficiency of the programme.** RTIMP implementation was affected by financial and staff management concerns. These were identified at an early stage, but action was not taken until late in the programme period. Specifically, for the future projects, IFAD and the Government should identify risks related to project management and risk mitigation measures in advance so that actions, where and when required, can be taken in a timely manner. Future projects should ensure an appropriate structure of the implementation unit (e.g. PCO) to enhance the Ministry's leverage on project supervision. There is also a need to keep a certain degree of human resource and institutional memory within the Government after project closure.

## Basic project data

			Approval (US\$ m)		Actual (US\$ m)	
Region	West and Central Africa Region	Total project costs	27.7		23.598	
Country	Republic of Ghana	IFAD loan and percentage of total	18.965	68.5%	18.829	79.8%
Loan number	670-GH	Borrower	3.894	14.1%	2.322	9.8%
Type of project (subsector)	AGRIC	OFID (2012)	0.5		0	0.0%
Financing type		GEF (2012)	2.5		0.758	3.2%
Lending terms*	Highly concessional	PFI	3.988	3%	0.398	1.7%
Date of approval	08/09/2005	Beneficiaries	0.832	14.4%	1.289	5.5%
Date of loan signature	20/01/2006					
Date of effectiveness	08/11/2006	Other sources:				
Loan amendments	Four times (09/2009, 18/10/2010, 13/06/2012, 10/02/2015)	Number of beneficiaries: (if appropriate, specify if direct or indirect)			Direct: 217,258 HHs; Indirect: 859,765 HHs	
Loan closure extensions	N/A					
Country programme managers	Mohamed Manssouri Ulac Demirag Esther Kasalu-Coffin	Loan closing date	30/06/2015		30/06/2015	
Regional director(s)	Mohamed Béavogui; Idesbald De Willebois	Mid-term review			07/05/2010	
Lead evaluator for project performance evaluation	Shijie Yang	IFAD loan disbursement at project completion (%)			99%	
Project performance evaluation quality control panel	Fumiko Nakai Mark Keating Fabrizio Felloni	Date of project completion report			08/07/2016	

Source: President's report, appraisal report, PCR, and loan agreement.

\* There are four types of lending terms: (i) special loans on highly concessional terms, free of interest but bearing a service charge of three fourths of one per cent (0.75%) per annum and having a maturity period of 40 years, including a grace period of 10 years; (ii) loans on hardened terms, bearing a service charge of three fourths of one per cent (0.75%) per annum and having a maturity period of 20 years, including a grace period of 10 years; (iii) loans on intermediate terms, with a rate of interest per annum equivalent to 50 per cent of the variable reference interest rate and a maturity period of 20 years, including a grace period of five years; (iv) loans on ordinary terms, with a rate of interest per annum equivalent to one hundred per cent (100%) of the variable reference interest rate, and a maturity period of 15-18 years, including a grace period of three years.

## Definition and rating of the evaluation criteria used by IOE

Criteria	Definition *	Mandatory	To be rated
<b>Rural poverty impact</b>	Impact is defined as the changes that have occurred or are expected to occur in the lives of the rural poor (whether positive or negative, direct or indirect, intended or unintended) as a result of development interventions.	X	Yes
	<i>Four impact domains</i>		
	<ul style="list-style-type: none"> <li>Household income and net assets: Household income provides a means of assessing the flow of economic benefits accruing to an individual or group, whereas assets relate to a stock of accumulated items of economic value. The analysis must include an assessment of trends in equality over time.</li> </ul>		No
	<ul style="list-style-type: none"> <li>Human and social capital and empowerment: Human and social capital and empowerment include an assessment of the changes that have occurred in the empowerment of individuals, the quality of grass-roots organizations and institutions, the poor's individual and collective capacity, and in particular, the extent to which specific groups such as youth are included or excluded from the development process.</li> </ul>		No
	<ul style="list-style-type: none"> <li>Food security and agricultural productivity: Changes in food security relate to availability, stability, affordability and access to food and stability of access, whereas changes in agricultural productivity are measured in terms of yields; nutrition relates to the nutritional value of food and child malnutrition.</li> </ul>		No
	<ul style="list-style-type: none"> <li>Institutions and policies: The criterion relating to institutions and policies is designed to assess changes in the quality and performance of institutions, policies and the regulatory framework that influence the lives of the poor.</li> </ul>		No
<b>Project performance</b>	Project performance is an average of the ratings for relevance, effectiveness, efficiency and sustainability of benefits.	X	Yes
Relevance	The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, institutional priorities and partner and donor policies. It also entails an assessment of project design and coherence in achieving its objectives. An assessment should also be made of whether objectives and design address inequality, for example, by assessing the relevance of targeting strategies adopted.	X	Yes
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.	X	Yes
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted into results.	X	Yes
Sustainability of benefits	The likely continuation of net benefits from a development intervention beyond the phase of external funding support. It also includes an assessment of the likelihood that actual and anticipated results will be resilient to risks beyond the programme's life.	X	Yes
<b>Other performance criteria</b>			
Gender equality and women's empowerment	The extent to which IFAD interventions have contributed to better gender equality and women's empowerment, for example, in terms of women's access to and ownership of assets, resources and services; participation in decision making; work load balance and impact on women's incomes, nutrition and livelihoods.	X	Yes
Innovation	The extent to which IFAD development interventions have introduced innovative approaches to rural poverty reduction.	X	Yes
Scaling up	The extent to which IFAD development interventions have been (or are likely to be) scaled up by Government authorities, donor organizations, the private sector and others agencies.	X	Yes
Environment and natural resources management	The extent to which IFAD development interventions contribute to resilient livelihoods and ecosystems. The focus is on the use and management of the natural environment, including natural resources defined as raw materials used for socio-economic and cultural purposes, and ecosystems and biodiversity - with the goods and services they provide.	X	Yes
Adaptation to climate change	The contribution of the programme to reducing the negative impacts of climate change through dedicated adaptation or risk reduction measures.	X	Yes

<i>Criteria</i>	<i>Definition</i> *	<i>Mandatory</i>	<i>To be rated</i>
<b>Overall project achievement</b>	This provides an overarching assessment of the intervention, drawing upon the analysis and ratings for rural poverty impact, relevance, effectiveness, efficiency, sustainability of benefits, gender equality and women's empowerment, innovation, scaling up, as well as environment and natural resources management, and adaptation to climate change.	X	Yes
<b>Performance of partners</b>			
• IFAD	This criterion assesses the contribution of partners to project design, execution, monitoring and reporting, supervision and implementation support, and evaluation. The performance of each partner will be assessed on an individual basis with a view to the partner's expected role and responsibility in the programme life cycle.	X	Yes
• Government		X	Yes

\* These definitions build on the Organisation for Economic Co-operation and Development/Development Assistance Committee (OECD/DAC) Glossary of Key Terms in Evaluation and Results-Based Management; the Methodological Framework for Project Evaluation agreed with the Evaluation Committee in September 2003; the first edition of the Evaluation Manual discussed with the Evaluation Committee in December 2008; and further discussions with the Evaluation Committee in November 2010 on IOE's evaluation criteria and key questions.

## Rating comparison<sup>a</sup>

<i>Criteria</i>	<i>Programme Management Department (PMD) rating</i>	<i>Project Performance Evaluation rating</i>	<i>Rating disconnect</i>
<b>Rural poverty impact</b>	4	4	0
<b>Project performance</b>			
Relevance	5	5	0
Effectiveness	3	3	0
Efficiency	3	2	-1
Sustainability of benefits	4	3	-1
<b>Project performance<sup>b</sup></b>			
<b>Other performance criteria</b>			
Gender equality and women's empowerment	4	4	0
Innovation	4	3	-1
Scaling up	4	3	-1
Environment and natural resources management	4	4	0
Adaptation to climate change	3	4	+1
<b>Overall project achievement<sup>c</sup></b>	<b>4</b>	<b>3</b>	<b>-1</b>
<b>Performance of partners<sup>d</sup></b>			
IFAD	4	4	0
Government	4	3	-1
<b>Average net disconnect</b>			<b>-0.33</b>

<sup>a</sup> Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory; n.p. = not provided; n.a. = not applicable.

<sup>b</sup> Arithmetic average of ratings for relevance, effectiveness, efficiency and sustainability of benefits.

<sup>c</sup> This is not an average of ratings of individual evaluation criteria but an overarching assessment of the programme, drawing upon the rating for relevance, effectiveness, efficiency, sustainability of benefits, rural poverty impact, gender, innovation, scaling up, environment and natural resources management, and adaptation to climate change.

<sup>d</sup> The rating for partners' performance is not a component of the overall project achievement rating.

### Ratings of the programme completion report quality

	<i>PMD rating</i>	<i>IOE rating</i>	<i>Net disconnect</i>
Scope	NA	4	NA
Quality (methods, data, participatory process)	NA	4	NA
Lessons	NA	5	NA
Candour	NA	5	NA

### Overall rating of the programme Completion Report

Rating scale: 1 = highly unsatisfactory; 2 = unsatisfactory; 3 = moderately unsatisfactory; 4 = moderately satisfactory; 5 = satisfactory; 6 = highly satisfactory; n.a. = not applicable.



## Approach paper

**Republic of Ghana**  
**Root and Tuber Improvement and Marketing Programme (RTIMP)**  
(Project number 1312, Loan no. 670)

**Project Performance Evaluation**  
**Approach Paper**

### A. Background

1. The Independent Office of Evaluation (IOE) undertakes: (i) validation of project completion reports (PCRs) for all completed projects, based on a desk review of PCRs and other documents; and (ii) project performance evaluations (PPEs) involving country visits for selected projects (about 10 in a year).<sup>122</sup>
2. The Root and Tuber Improvement and Marketing Programme (RTIMP) (implemented between 2005 and 2015) in the Republic of Ghana has been selected for a PPE, among others, to feed into the planned corporate level evaluation on IFAD's contribution to agriculture-related value chain development for poverty reduction. The RTIMP PPE mission is scheduled for September 2017.
3. This document presents a brief description of RTIMP, the PPE objectives, scope and methodology, and evaluation questions which would guide this PPE.

### B. Project overview<sup>123</sup>

#### Project context

4. *Economy.* Ghana is well endowed with natural resources such as arable land, forests and minerals, however, the economy and public revenue are highly vulnerable to world prices for exports and imports. In the 1990s, falling gold and cocoa prices and rising oil prices set off trade shocks that slashed macroeconomic performance, raised budget deficits, lowered exchange rates and stimulated rapid growth of money supply and inflation. In the early 2000s, increasing political stability, accompanied by market reforms<sup>124</sup>, resulted in a gradually improved growth performance, with the long-term growth trend in gross domestic product (GDP) accelerating, hitting the peak of 9.15 per cent in 2008. The years 2006–08, at the beginning of programme implementation, saw severe macroeconomic imbalances when the country suffered several exogenous shocks — an energy crisis in 2006, droughts and floods in late 2006, and rising world oil and food prices in 2008. Despite these challenges, the only dips in the rising post-2000 growth record took place in 2009 due to the global financial crisis, and in 2012, when growth reverted to its long-term trend after the start of commercial oil production in 2011 (World Bank, 2013). Remarkably, in July 2011, Ghana achieved the World Bank's per-capita income threshold for classification as a Lower Middle Income Country with a GDP growth rate topped at 14 per cent.
5. *Poverty.* Ghana is one of 16 nations comprising West Africa, with an estimated population of about 28.21 million (2016). Despite high rural exodus, 45 per cent of

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<sup>122</sup> The selection criteria for PPE include: (i) information gaps in PCRs; (ii) projects of strategic relevance that offer enhanced opportunities for learning; (iii) a need to build evidence for forthcoming corporate level evaluations, country strategy and programme evaluations or evaluation synthesis reports; and (iv) a regional balance of IOE's evaluation programme.

<sup>123</sup> Information in this section is mostly derived from the 2005 RTIMP president report, appraisal report, financing agreement, project completion report, 2012 IOE country programme evaluation, and data from World Development Indicators.

<sup>124</sup> After the gross domestic product (GDP) growing at an average rate of 4.3 per cent in the 1990s, falling gold and cocoa prices and rising oil prices set off trade shocks that slashed macroeconomic performance, raised budget deficits, lowered exchange rates and stimulated rapid growth of money supply and inflation.

the population was still rural and over 80 per cent of the labour force worked either in low-return smallholder agriculture or the informal sector (Ghana Living Standards Surveys, 2014). The poverty landscape of Ghana changed considerably since the start of the programme with the per capita gross national income in Ghana rose from US\$470 in 2005 to US\$1470 in 2015. Although the poverty headcount fell from 43.9 per cent in 1998/1999 to 31.9 per cent in 2005, and further to 24.2 per cent in 2015, food-crop farmers still showed high poverty rate at 45.5 per cent in 2005.<sup>125</sup> Poverty was more pervasive in the north (52-70 per cent) for the year 2005 and remained at a high level of 56% by 2015.<sup>126</sup> The poverty rate in the northern part of the country has also declined much less than in the rest of the country, largely reflecting the region's much higher rate of subsistence farming and much lower level of urbanization.

6. **Agricultural sector.** Agriculture is an important economic sector for Ghana. Though its contribution to GDP reduced from 41 per cent in 2005 to 21 per cent in 2015, it still employs about 53.6 per cent of the labour force (2013)<sup>127</sup>. Agriculture has grown significantly since 2007, benefiting from high international prices, particularly for its main exports such as cocoa. Despite this growth, agriculture remains largely rain-fed and subsistence-based, with rudimentary technology used to produce 80 per cent of total output. Within the sector, cocoa accounts for 14 per cent of agricultural GDP, cereal and root crops for 63 per cent, and forestry, livestock, and fisheries for the remaining 23 per cent. The following crops are grown for food and cash throughout Ghana: cassava and cocoyam in the rainforests; cassava, yam and sweet potato in the transition and savannah zones; and *frafra* potato (an indigenous crop) in parts of the Upper-East Region. The production of these root and tuber crops is mainly based on traditional practices and smallholder cultivation. The image of cassava is negative as it is closely identified with the rural poor, yet processed cassava products (*gari*, *fufu*) have strong markets in the rapidly expanding urban areas throughout West and Central Africa.
7. The Ministry of Food and Agriculture (MoFA) was committed to developing the root and tuber (R&T) subsector. While strong in technical fields (e.g. selection/multiplication of planting material), the ministry lacked expertise in policy, economic, and marketing issues, paid limited attention to post-harvest stages (processing and marketing), and lacked experience in working with the private sector. RTIMP was designed as a follow-up to the Root and Tuber Improvement Programme (RTIP), which focused primarily on cassava research and development and was implemented from 1997 to 2005.<sup>128</sup>

### **Project information**

8. **Project area.** The programme was national in scope. The programme design aimed to cover at least 60 districts, rising to 85 at mid-term. In the end, it was expanded to 106 districts in Ghana across all ten regions.<sup>129</sup> The programme area covered all four major agro-ecological zones: Northern savannah, Transition, Forest and the Coastal Savannah zones.
9. **Target group and targeting approach.** The original 60 districts were selected based on the following criteria: significant production and marketing potential; vulnerability to food insecurity and low incomes; presence/absence of other interventions and related prospects for mutually beneficial collaboration; interest in

<sup>125</sup> Ghana Statistics Service (2007): Pattern and trends of poverty in Ghana (1991-2006) [https://s3.amazonaws.com/ndpc-static/CACHES/NEWS/2015/07/22//GGLSS5+Pattern\\_Trends+Poverty+in+GH.pdf](https://s3.amazonaws.com/ndpc-static/CACHES/NEWS/2015/07/22//GGLSS5+Pattern_Trends+Poverty+in+GH.pdf).

<sup>126</sup> OECD <http://www.oecd.org/agriculture/agricultural-policies/46341169.pdf>.

<sup>127</sup> FAO (2015), Socio-economic context and role of agriculture. downloaded from <http://www.fao.org/3/a-i4490e.pdf>

<sup>128</sup> RTIP focused mainly on cassava research and development and was implemented from 1997 to 2005 at a total cost of US\$10.1 million with 750,000 household beneficiaries.

<sup>129</sup> Ghana is divided into ten administrative regions currently comprising 170 districts, increased from 138 in 2005.

crops other than cassava; and potential for collaboration with Rural Enterprises Project – Phase II (President's Report, p.5).

10. Regarding targeting approach, programme activities were self-targeted since the R&T subsector was dominated by the rural poor and most forms of support were too modest to attract the non-poor. Supported by a strong information, education and communication campaign, the PCR reported that MoFA and the programme's other implementation partners adopted a fully transparent and participatory approach to targeting. Teams of locally posted agricultural extension agents and NGOs screened interested farmers, processors, and traders. Proactive targeting mechanisms were put in place to guarantee access by the poorest, particularly women who were more involved in cassava production and traditionally do most of the work.
11. **Project goal and objectives.** The programme's development goal was to enhance the food security and incomes of poor rural households in Ghana, with special emphasis on women and other vulnerable groups. Its specific objective was to build up competitive, market-based and inclusive commodity chains for R&T, supported by relevant, effective and sustainable services that are accessible to the rural poor.
12. **Project components.** According to the RTIMP design, the programme originally comprised four components (A, B, C, E), and a fifth component was added commencing from July 2012.
  - i. **Component A: Support to increased commodity chain linkages:** The expected outcome of this component was the establishment of market-based R&T commodity chains. The five subcomponents were: (i) information, education and communication campaign; (ii) linking small producers to larger markets; (iii) developing new uses for R&Ts; (iv) strengthening formal/informal organizations of growers, processors and traders; and (v) support to R&T commodity chain partners and policy dialogue. An initiatives fund was to finance pilot activities designed to forge/strengthen linkages within the R&T commodity chains.
  - ii. **Component B: Support to root and tuber production:** The expected outcome of this component was increased yields of R&T-based cropping systems. The component was expected to consolidate the achievements of RTIP. The five subcomponents were: (i) agricultural research; (ii) multiplication/distribution of planting material; (iii) improved cultivation practices; (iv) soil fertility management; and (v) integrated pest management. The existing range of new and indigenous varieties was to be expanded and private sector operators will be encouraged to take over service delivery. The main instrument for technology dissemination was FFF.
  - iii. **Component C: Upgrading of root and tuber processing, business and marketing skills:** Under this component, R&T processing and marketing was to be upgraded through access to improved equipment, training and backstopping on business management and marketing skills by R&T smallholder farmers and processors. The component also included support for the establishment of Good Practices Centres (GPCs), provision of relevant appropriate processing technologies, and the operation of a matching grant facility through the Micro-Enterprise Fund (MEF).
  - iv. **Component D: "Promoting a value chain approach to climate change adaptation in agriculture in Ghana (PROVACCA)"** is a three- year pilot project and was added from July 2012 as a component of RTIMP with a Global Environment Facility (GEF) grant. The programme was designed to address climate change adaptation needs of cassava value chain actors to enable them to cope with the negative effects and build their resilience to climate change phenomenon.

- v. **Component E (previously D): Programme coordination, monitoring and evaluation:** Provision was made for the establishment of a programme coordination office (PCO) at Kumasi and three zonal offices. The implementation of field activities was to be outsourced to implementation partners willing to co-finance the work and/or to technical services providers under service provision contracts.
13. **Implementation arrangements.** The RTIMP Programme activities were managed by a Programme Coordinating Office (PCO) headed by a National Programme Coordinator, supported by Technical Officers in charge of the components and zonal offices. A National Programme Steering Committee (NPSC) was established and comprised of representatives of key stakeholders with a role to provide strategic orientations and facilitate collaboration and cooperation with Government institutions, research institutions, and the private sector. The oversight and policy direction provided by the NPSC and the Directorate of Crops Services was expected to enable the effective implementation of the programme (PCR, p.5).
14. The programme was implemented nationwide, covering all three agro-ecological zones of the country<sup>130</sup>. Each zone had project teams for ease of programme management and effective implementation. The management of the programme at PCO and zonal levels, in collaboration with District Agricultural Development Units, Regional Agricultural Development Unit, Business Advisory Centres and other Implementing Partners, was designed to provide an effective structure and the required processes for efficiency in programme implementation.
15. **Project costs and financing.** The programme cost was initially estimated as US\$27.7 million, including a foreign exchange component of US\$2.9 million (10 per cent). The rest included an IFAD loan of about US\$19.0 million (68 per cent of total cost), Government counterpart funding of US\$3.9 million<sup>131</sup>, beneficiary farmers and processes' contribution of US\$832 200, and contribution from the partner financial institutions (PFIs) and a private equipment leasing company of US\$4.0 million (see table 1).
16. In addition to initial core financing, component D, PROVACCA, was financed by a grant of US\$2.5 million from (the IFAD-based) GEF under its Special Climate Change Fund, with complementary financial support from the Government. The grant of US\$523.800 OPEC Fund for International Development (OFID) funding was cancelled due to mis-procurement and weak financial management.
17. According to the PCR, the actual total project cost was US\$23.6 million (table 1). At project completion, the GEF grant had expended only 30 per cent of the available funds and the balance was "transferred" to co-finance another IFAD-financed project.
18. **Grants related to RTIMP.** In addition to the loan, IFAD has financed two regional and two country-specific grants which were expected to be linked to RTIMP. The Regional Cassava Processing and Marketing Initiative (a grant of US\$1.3 million) was to support market information systems, a manufacturers' equipment survey, and a feasibility study to assess a unit producing pre-cooked, vacuum-packed sterilized cassava chips to be marketed and distributed through a cold chain application. According to the Country Programme Evaluation (CPE) conducted by IOE in 2012, as of March 2011, the market information systems were still not functional, the study had not been implemented, and there were no signs that RTIMP was benefiting from the grant.

<sup>130</sup> The country was demarcated into three zones: the Northern Zone (Zone 1-Tamale) comprising the Northern, Upper East, and Upper West regions); the middle Zone (Zone 2-Techiman), comprising Brong Ahafo and Western regions; and the Southern zone (Zone 3-Koforidua), comprising Eastern, Volta, Greater Accra and Central regions.

<sup>131</sup> It is from both the regular budget and from foregone taxes and duties.

19. A country-specific grant, Sustainable Up-scaling of Seed Yam and Cassava Production Systems for Small-Scale Growers in Ghana (COFIN EC-20-GH) (funded by the EU Food Facility for EUR 1.087 million), was to support RTIMP to meet the escalating costs of food in 2008's food crisis. It was closed on 31 January 2012 with 87.47 per cent disbursed.
20. Another country-specific grant (US\$200,000) was the Fast Track Initiative on Partnership for Grains and Oilseed Development in Ghana provided to ACIDI-VOCA, an international NGO, providing expertise in value chain development and analysis, agribusiness, and enterprise development.
21. The last, regional grant is the Potential Use of Cassava Wastes to Produce Energy (with grant funding provided by the Italian Development Cooperation) for US\$0.2 million.<sup>132</sup>
22. **Timeframe.** The original loan of SDR 13.05 million (equivalent to US\$19.0 million) was approved on 8 September 2005. The loan agreement was signed on 20 January 2006, and the loan became effective on 8 November 2006. Additional GEF grant US\$2.5 million was approved in November 2012. The programme was completed on 31 December 2014, and the loan closing was on 30 June 2015 as per original schedule.
23. **Supervision arrangements.** Initial supervision of RTIMP was delegated to the World Bank, with occasional participation by IFAD staff and consultants. However, IFAD took control of fielding supervision and implementation support missions after the MTR following IFAD policy on supervision and implementation support. The direct supervision started from 18 December 2009.
24. **Amendments to the financing agreement.** The financing agreement was amended four times: (i) reflecting the change to direct supervision (December 2009); (ii) reallocation of the loan funds to be in line with the recommendations of the mid-term reviews (October 2010); (iii) revision of the SOE thresholds applicable to reflect IFAD's update disbursement procedures; and (iv) requirement of prior-review by IFAD for payment of allowances.
25. **Adjustments during implementation.** The PCR reports two main adjustments made during the MTR, including the following:
  - i. Component C (Upgrading of R&T Processing and Marketing): The programme scaled down the MEF to a pilot initiative to be implemented in partnership with other IFAD projects, and to use commercial banks, e.g. Agricultural Development Bank.
  - ii. Programme coverage: The number of districts increased from 60 to 85 in the post-MTR period, then expanded to 106 districts by completion.

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<sup>132</sup> The information regarding these last two grants was so far found only in the CPE. The PPE team will try to identify relevant grant documents by consulting the PCO and field visits to update their status.

Table 1.  
Planned and actual programme costs and financing by component (US\$ '000)

Components	IFAD Loan		GEF		OFID		GOG		PFI		Beneficiaries		Total			
	Allocat ion	Actual	Allocat ion	Actual	Allocat ion	Actual	Allocat ion	Actual	Allocat ion	Actual	Allocati on	Actual	Allocati on	%	Actual	%
<b>A. Support to Increased Commodity Chain Linkages</b>	5,840	1,977					287	7					6,127	20.0%	1,984	8.4%
<b>B. Support to Root and Tuber Crop Production</b>	6,194	2,815					1,456	223			692	1148	8,342	27.2%	4,186	17.7%
<b>C. Upgrading of Small-Scale Root and Tuber Processing, Business and Marketing Skills</b>	4,028	2,529					368	9	3,998	398	140	141	8,534	27.8%	3,078	13.0%
<b>D. Promoting a value chain Approach to climate change adaptation in Agriculture in Ghana</b>			2,500	758	500								3,000	9.8%	758	3.2%
<b>E. Programme Coordination, Monitoring &amp; Evaluation</b>	2,903	11,508					1,783	2,084					4,686	15.3%	13,592	57.6%
<b>Total</b>	<b>18,965</b>	<b>18,829</b>	<b>2,500</b>	<b>758.44</b>	<b>500</b>	<b>-</b>	<b>3,894</b>	<b>2,322</b>	<b>3,998</b>	<b>398</b>	<b>832</b>	<b>1289</b>	<b>30,689</b>	<b>100.0%</b>	<b>23,598</b>	<b>100.0%</b>
<b>%</b>	<b>99.28</b>		<b>30.34</b>		<b>-</b>		<b>59.63</b>		<b>9.97</b>		<b>154.88</b>					

Source: Project completion report (2015)

26. **Project implementation results - snapshot.** According to the PCR, in total, the programme reached 217,258 direct beneficiaries (against an appraisal target of 290,000) of which 40 per cent were women.
- i. Through the farmer field fora (FFF), which were used as the platform for improved technology transfer, a total of 15,154 farmers (52 per cent females) and other stakeholders, including MoFA personnel, participated in four hundred and fifty-one (451) FFF.
  - ii. RTIMP also implemented an adaptive research programme and carried out trials on different technologies. As at the end of 2014, 16 (70 per cent of target) on-farm action research had been conducted to address the challenges identified through the FFFs. A total of 780 farmers participated in the on-farm research projects (93 per cent of the MTR target).
  - iii. To reduce post-harvest losses and promote good processing, quality management, and business development practices, the programme upgraded 26 existing processing enterprises to Good Practice Centres (GPCs) (against MTR target of 40). Output per week increased from an average of 5.2 tons before the upgrade to 15 tons of fresh cassava roots at the GPCs. Through 201 exposure visits, 3,777 (74 per cent females) R&T chain actors were introduced to improved processing technologies at the GPCs (69 per cent of target).
  - iv. Regarding R&T marketing, the Programme trained 3,959 clients (66 per cent of appraisal target) in business development and marketing skills (58 per cent females) focusing on records keeping and basic financial management, banking culture, business plan preparation, and implementation.
  - v. With respect to R&T chains development, with the support from Supply Chain Facilitators, four specific commodity chains, namely gari, fresh yam, plywood cassava flour and high quality cassava flour were established. A total of 3,146 actors, made up of 2,731 farmers, 359 processors and 56 transporters, were involved in the development of the four commodity chains.
  - vi. Regarding market linkages, 350 district stakeholder fora were organized across the country with a total of 12,983 participants (46 per cent females) reached.
  - vii. The operation of a matching grant facility was through the Micro-Enterprise Fund. However, only about half of the districts had access to the Fund.
27. According to the self-rating on the programme performance at completion, the overall project achievement was considered as *moderately satisfactory* (4), with the ratings for relevance and rural poverty impact as *moderately satisfactory* (4), while effectiveness and efficiency as *moderately unsatisfactory* (3).

### C. PPE objectives and scope

28. The PPE will be undertaken in accordance with the IFAD's Evaluation Policy<sup>133</sup> and the IFAD Evaluation Manual (second edition, 2015), building on a desk review of PCR and other available data. The main objectives of the PPE are to: (i) assess the results of the programme; (ii) generate findings and recommendations for the design and implementation of ongoing and future operations in the country; and (iii) provide project-level evidence that will feed into the corporate level evaluation on the value chain.
29. **Scope.** A PPE provides assessment and independent ratings on the programme performance according to the standard evaluation criteria defined in the IOE

<sup>133</sup> <https://webapps.ifad.org/members/eb/102/docs/EB-2011-102-R-7-Rev-3.pdf>

Evaluation Manual (see paragraph 39). At the same time, given the time and resources available, the PPE is not expected to examine the full spectrum of project activities, achievements, and drawbacks. Rather, it will focus on selected key issues of focus with consideration to the following: (i) contextual, project design and/or implementation issues that had a critical bearing on project achievements or challenge and unsatisfactory performance; and (ii) issues of importance that cut across the thematic issue of commodity chain development. The PPE will take account of the preliminary findings from a desk review of PCR and other key project documents and interviews at the IFAD headquarters. During the PPE mission, additional evidence and data will be collected to verify available information and each an independent assessment of performance and results. A theory of change for the programme, which has been reconstructed by the PPE team in the absence of its clear presentation in the programme design, will be used to guide the identification of key issues (presented later in the section) and the evaluation approach.

30. **RTIMP theory of change.** A summary theory of change (TOC) was developed for RTIMP by PIALA team<sup>134</sup>. The PPE team adjusted it based upon the desk review and consultation conducted (see ToC p.61). The overall TOC narrative is that livelihoods and poverty status could be improved by commercializing the root and tuber production and processing businesses of smallholders. The District Stakeholder Forums (DSF), Farmer Field Forums (FFF), Good Practice Centers (GPC) and Micro-Enterprise Fund (MEF) were designed as the main mechanisms for developing competitive market-driven and inclusive supply chains, and linking these to bigger markets. The TOC was built around three main impact pathways as follows.
- *Enhanced market linkage* – DSFs would help develop the roots and tubers supply chains and link these to markets. Farmers and processors participating in the supply chains would gain better access to training and finance for investment and innovation, commercialize and develop viable businesses.
  - *Enhanced roots and tubers production* – FFFs would enable resource-poor farmers and seed producers to enhance their production and become commercial growers by adopting improved planting materials and technologies and organising into Farmer-Based Organizations.
  - *Enhanced roots and tubers processing* – Upgrading of small roots and tubers enterprises into GPCs serving as demonstration and market hubs, would attract and expose small processors to high-quality processing operations using improved technologies and standardized equipment. This would help them to enhance the quantity and quality of their production, obtain loans through the MEF to invest in these new technologies and standardized equipment, and develop profitable businesses.
31. **Key issues for evaluation in PPE.** Based on a desk review of the PCR and preliminary discussions held with the current and former Country Programme Managers, key issues for this PPE (to be covered under different evaluation criteria) have been identified as below. These may be fine-tuned based on further considerations or information availability, consultation with Western and Central Africa Division (WCA) and the Government.
32. *Enhanced production as a means of supply chain commercialization.* The programme continued extensive research on roots and tubers production technology that commenced under the preceding RTIP project. There was an expectation that a technology-driven approach to the supply chain would lead to increased supply and, with other component support, greater market activation,

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<sup>134</sup> Heinemann, E, Van Hemelrijck, A, Guijt, I, Insights from piloting a Participatory Impact Assessment and Learning Approach (PIALA) with IFAD, (undated).



resulting in improved benefits for farmers. The programme results demonstrate that increases in production did occur and more farmers were attracted to plant roots and tubers due to the increase in productivity. However, the PCR states that markets failed to absorb the increased production volumes, which caused prices to drop, hence negatively affecting farmers' and processors' livelihoods from 2013 onward. The PCR suggests that this was due to lack of coordination between the production and processes aspects of the programme and that the programme did not pay sufficient attention to the learning from the RTIP evaluation in this regard<sup>135</sup>. The PPE will consider the extent to which the positive advances in production led to supply chain development and investigate how the programme activities in different components were linked to create optimum benefits for farmers.

33. *Balances between marketing and production at programme design.* In general, the programme performed well for the component related to R&T production (i.e. component B), while the performance was weak for activities related to marketing and value chain development (i.e. component A and C). This is partially because the programme was largely implemented by MoFA staff who has technical knowledge but lacks business and marketing skills. In order to fill the expertise gap on marketing, the programme was to engage Technical Service Providers under performance-based contracts, but the design did not adequately consider the availability of Technical Service Providers in the market, did not identify available agencies that could provide those services, and did not specify whether competent training providers and value-chain facilitators would be available if needed (CPE, p.31). The PPE team will further explore the design documents using the theory of change and identify factors that prevented effective implementation of value chain development in the country by consultation with relevant stakeholders.
34. *Microenterprise fund and access to finance.* The use of matching grants through the MEF was designed to stimulate the supply chain by improving access to finance for consolidators and processors. The MEF was intended to improve access to finance by private sector actors and also to attract their engagement in the supply chain in project areas. The Initiative Fund and the MEF were considered to be under-performing at MTR, which adjusted the relevant targets and reallocated the funds to other better-performing activities. By project completion, 1,235 processors received matching grants associated with a loan or a leasing arrangement, to upgrade their level of technology, resulting in higher productivity, improved product quality, and higher incomes. This represented 68 per cent of the target of 1,800. The PFIs provided up to 50 per cent of required capital, the programme provided 40 per cent as a matching grant and the borrower was required to contribute 10 per cent. The PCR indicates that there were improvements in performance in the latter stages of programme implementation but that access to finance was still uneven across project areas. The PPE will explore the contributory factors to the challenges and successes achieved in the MEF and assess how the lessons learned through the MEF have been considered in subsequent operations of IFAD and PFIs. Regarding matching grants, the PPE team will also assess how sound the design was, why they were scaled down during implementation, how effective it was to engage entrepreneurial poor, , and assess performances of different types of PFIs (e.g. rural leasing and commercial bank branches in rural areas).
35. *Sustainability of service provided by the programme.* The programme Development Objective emphasised the need to build competitive and market-based R&T commodity chains supported by relevant, effective and sustainable services that are easily accessible by the rural poor. The RTIMP activities have been extensive and have built on the previous RTIP activities. RTIMP PCR rated the programme 4

<sup>135</sup> IFAD, RTIMP Project Completion Report, 2014, para 75.

(*moderately satisfactory*) for sustainability, despite a rating of 3 (*moderately unsatisfactory*) for both effectiveness and efficiency. The PPE will follow up on a sample of the sub-projects such as GPCs, technological improvements initiated by the programme and other initiatives that were assessed as "successful", as well as examples where project activities are no longer operational to gain a deeper understanding of key factors influencing the likelihood of success and sustainability.

36. *Synergies between grants provided and the programme objectives.* As mentioned earlier, there were reportedly four grants that were or were expected to be linked to the programme. The PPE will examine the level of synergies realized and the performance of the grant activities, particularly the GEF grant for Promoting a Value Chain Approach to Climate Change Adaptation in Agriculture in Ghana. Currently, the GEF grant implementation was extended one year after transferred to the ongoing IFAD project GASIP<sup>136</sup> following the closure of RTIMP. The PCR rated the programme with respect to adaptation to climate change as moderately unsatisfactory (3). The PPE will follow up on progress achieved in relation to project activities and likelihood of enhancing sustainability and resilience through climate change adaptation.
37. *Programme efficiency:*
- (i) According to the programme cost and finance table in PCR, 57.6 per cent of the IFAD loan was spent on programme coordination and M&E, which was 290 per cent of the amount allocated at appraisal (see table 1)<sup>137</sup>. The PPE team will verify the costs, identify the costs breakdown, and seek justification of increased costs especially at the last implementation year: how these activities are relevant to project objectives and commodity chain development.
  - (ii) Significant deficiencies in programme financial management were reported consistently in both supervision reports and PCR, including inaccurate and unreliable audited financial statements, ineligible expenditures (e.g. SOEs expenses), and procurement issues. The team will examine these issues and the reasons behind low financial performance (e.g. slow installation of national standard accounting system).
38. **Evaluation criteria.** In line with the IOE's Evaluation Manual (2015), the key evaluation criteria applied in PPEs in principle include the following:
- (i) **Rural poverty impact**, which is defined as the changes that have occurred or are expected to occur in the lives of the rural poor (whether positive or negative, direct or indirect, intended or unintended) as a result of development interventions. Four impact domains are employed to generate a composite indication of rural poverty impact: (i) household income and assets; (ii) human and social capital and empowerment; (iii) food security and agricultural productivity; and (iv) institutions and policies. A composite rating will be provided for the criterion of "rural poverty impact" but not for each of the impact domains.
  - (ii) **Relevance**,<sup>138</sup> which is assessed both in terms of alignment of project objectives with country and IFAD policies for agriculture and rural development and the needs of the rural poor, as well as project design features geared to the achievement of project objectives.

<sup>136</sup> Ghana Agricultural Sector Investment Programme is an ongoing IFAD programme for a total finance package of US\$113.0 million (2014-2020).

<sup>137</sup> The last supervision report (Nov 2014) saw a surge of programme coordination costs from US\$3 million (Mar 2014) to US\$6.35 million for IFAD finance part. The total finance package also saw a significant increase from US\$3.65 million to US\$9.89 million from March 2014 to November 2014.

<sup>138</sup> An average of the ratings for relevance, effectiveness, efficiency and sustainability of benefits will be the project performance rating.

- (iii) **Effectiveness**, which measures the extent to which the programme's immediate objectives were achieved, or are expected to be achieved, taking into account their relative importance.
  - (iv) **Efficiency**, which indicates how economically resources/inputs (e.g. funds, expertise, time, etc.) are converted into results.
  - (v) **Sustainability of benefits**, indicating the likely continuation of net benefits from a development intervention beyond the phase of external funding support. It also includes an assessment of the likelihood that actual and anticipated results will be resilient to risks beyond the programme's life.
  - (vi) **Gender equality and women's empowerment**, indicating the extent to which IFAD's interventions have contributed to better gender equality and women's empowerment, for example, in terms of women's access to and ownership of assets, resources and services; participation in decision making work loan balance and impact on women's incomes, nutrition and livelihoods.
  - (vii) **Innovation and scaling up**, assessing the extent to which IFAD development interventions: (a) have introduced innovative approaches to rural poverty reduction; and (b) have been (or are likely to be) scaled up by Government authorities, donor organizations, the private sector and other agencies. Separate ratings will be provided for innovation and scaling up.
  - (viii) **Environment and natural resource management**, assessing the extent to which a project contributes to changes in the protection, rehabilitation or depletion of natural resource and the environment.
  - (ix) **Adaptation to climate change**, assessing the contribution of the programme to increase climate resilience and increase beneficiaries' capacity to manage short- and long-term climate risks.
  - (x) **Overall project achievement** provides an overarching assessment of the intervention, drawing upon the analysis and ratings of all above-mentioned criteria.
  - (xi) **Performance of partners**, including the performance of IFAD and the Government, will be assessed on an individual basis, with a view to the partners' expected role and responsibility in the programme life cycle.
39. An evaluation framework will be developed with guiding evaluation questions according to the evaluation criteria described above. The evaluation questions contained in the framework reflect the guidance in the IOE Evaluation Manual as well as key issues identified (in the next section).
40. **Rating system.** In line with the practice adopted in many other international financial institutions and UN organizations, IOE uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 being the lowest score (highly unsatisfactory).

#### **D. Evaluation methodology**

41. The PPE will build on a desk review of PCR and other key project documents and available data (including participatory impact assessments carried out at project completion) while taking into account the contexts and information from interviews at the IFAD headquarters. During the main PPE mission, additional evidence and data will be collected to verify available evidence and to reach an independent assessment of performance and results. The PPE will use a theory of change for an examination of assumed causal linkages and whether there is sufficient evidence to support these linkages, while also examining to what extent key assumptions were realistic.
42. **Data collection.** Careful review, analysis, and triangulation of reported project achievements will be key. Validation of project results will be done through bringing

in and cross-checking information and evidence from multiple sources and stakeholder perspectives.

43. *Prior to the PPE mission.* In the preparatory stage, relevant documents and data are gathered and reviewed to guide the evaluation design and planning and conduct of the PPE mission. Main project-related documents and data for a desk review include the following: (i) project design documents; (ii) project implementation manual; (iii) financing agreements, amendments and background documents; (iv) supervision and implementation support mission reports; (v) mid-term review report; (vi) PCR; (vii) IFAD periodical project status reports with self-assessment ratings; (viii) IFAD financial and disbursement data; (ix) baseline and end-line household survey reports in line with the IFAD's results and impact management system (RIMS) if available; and (x) participatory impact assessment learning approach (PIALA) carried out by the IFAD Policy and Technical Advisory Division<sup>139</sup>.
44. Additional data, information, and documents will be collected as much as possible before the mission - through email correspondence with the programme stakeholders. These may include project monitoring and evaluation data and reports or some technical reports produced by the programme.
45. Interviews will be conducted with IFAD staff, in-country stakeholders through audio or video conferences (with a limited number of people who were involved in the programme management), and possibly also main consultants who were involved in supervision and implementation support. Interactions with stakeholders would help the PPE team identify additional relevant data and reports and key issues for attention before mission
46. Given that the PIALA was conducted with household survey, the PPE team will also seek to access data files to better understand the methodology, analysis, and findings presented. The available data and evidence are reviewed to examine the extent of consistencies or inconsistencies while reflecting the plausible causal links and assumptions in the theory of change and to identify gaps to refine the tools and questions to guide the field work.
47. *Data collection during the mission.* The PPE mission will be conducted for about two weeks, including visits to the programme sites over 6-7 days. During the in-country work, additional primary and secondary data will be collected. Data collection methods will mostly include qualitative techniques. The methods deployed will consist of individual and group interviews, focus group discussions with project stakeholders, beneficiaries and other key informants and resource persons, and direct observations.
48. *Field visit site selection.* The PPE mission will conduct field visits in three different agro-ecological zones. Site selection for field visits will be guided by the following consideration as may be relevant: (i) coverage of areas with different characteristics (e.g. agro-ecological conditions and farming systems, poverty status, road connection, and access to markets and services); (ii) districts with varied performance under different programme activities (e.g. capacity of district staff); and (v) locations of the GPCs, DSFs, FFFs and PFIs. Balancing the consideration to these criteria with the distance and the time constraint of the PPE would be important.
49. *Key stakeholders* to be met in Accra and in the zonal offices (Kumasi and Tamale) include the following: (i) MoFA and former programme staff to the extent traceable; (ii) Ministry of Finance and Economic Planning; (iii) Ministry of Trade and Industry; (iv) regional and district-level agriculture staff (i.e. Regional Agricultural

<sup>139</sup> The PIALA evaluation of RTIMP includes an assessment of three programme components and multiple mechanisms in 30 districts across the entire country, as well as a statistical survey in 900 households and a participatory inquiry with over 1300 participants

Development Unit, District Agricultural Development Unit and District Stakeholder For a); (v) representatives from the business advisory centre, District Stakeholder Fora and FFF; (vi) representatives from Agricultural Development Bank and Participating Financing Institutions<sup>140</sup>; (vii) management and members of farmer-based organizations; (viii) farmers who grow roots and tuber; (ix) main in-country partners and service providers involved in the programme<sup>141</sup>; and (x) other key informants.

50. **Stakeholders' participation.** In compliance with the IOE Evaluation Policy, the main project stakeholders will be involved throughout the PPE. This will ensure that the key concerns of the stakeholders are taken into account, that the evaluators fully understand the context in which the programme was implemented, and that opportunities and constraints faced by the implementing institutions are identified. Regular interaction and communication will be established with the Western and Central Africa of IFAD and with the Government. Formal and informal opportunities will be explored during the process for the purpose of discussing findings, lessons, and recommendations.

### E. Evaluation process

51. The PPE will involve following key steps:
- **Preparatory phase.** The preparatory phase will include the following activities: (i) desk review of PCR and main programme design and implementation documents (e.g. supervision mission reports, mid-term review report, design document); (ii) collection and review of data and information (e.g. participatory impact assessment, project monitoring data on locations and types of project investments, IFAD loan disbursement records); (iii) preparation of the PPE approach paper.
  - **In-country work.** The PPE mission is scheduled for 4-15 September 2017. It will interact with representatives from the Government and other institutions, beneficiaries and key informants, in Accra in the field. At the end of the mission, a wrap-up meeting will be held in Accra to summarize the preliminary findings and discuss emerging issues. The IFAD country programme manager, country programme officer, junior programme officer for Ghana are expected to participate in the wrap-up meeting, which is tentatively scheduled for 15 September 2017.
  - **Report drafting and peer review.** After the field visit, a draft PPE report will be prepared and submitted to IOE internal peer review for quality assurance.
  - **Comments by WCA and the Government.** The draft PPE report will be shared simultaneously with WCA and the Government for review and comment. IOE will finalize the report following receipt of comments by WCA and the Government and prepare the audit trail.
  - **Management response by WCA.** A written management response on the final PPE report will be prepared by the Programme Management Department. This will be included in the PPE report when published.
  - **Communication and dissemination.** The final report will be disseminated to key stakeholders and the evaluation report published by IOE, both online and in print.

<sup>140</sup> There are different types of PFIs or rural financial institutions involved, ten in total, including rural and community banks, rural branches of commercial banks, and leasing companies. M&E data regarding PFIs are under request. PPE team plan to select a sub-set of PFIs according to their performance level and type of business, taking into consideration of their availability and connection.

<sup>141</sup> Namely, World Bank, Ghana Regional Appropriate Technology Industrial Service, and Food and Agriculture Organization. The other partners will be identified in the preparation stage.

52. **Tentative timetable** for the PPE process is as follows:

<i>Date</i>	<i>Activities</i>
July – August 2017	Preparation and desk review
4– 15 September 2017	Mission to Ghana
September–October 2017	Preparation of draft report
Late October 2017	IOE internal peer review
Mid-November 2017	Draft PPE report sent to Western and Central Africa region and Government for comments
December 2017	Finalisation of the report
January 2018	Publication and dissemination

### **F. Evaluation team**

53. Ms Shijie Yang, IOE Evaluation Analyst, has been designated as lead evaluator for this PPE and will be responsible for delivering the final report under the supervision of Ms Fumiko Nakai. She will be assisted by Ms Dorothy Lucks (rural development and micro-enterprises specialist, IOE consultant). Ms Delphine Bureau, IOE Evaluation Assistant, will provide research and administrative support.

### **G. Background documents**

54. The key background documents for the exercise will include the following:

#### **RTIMP project specific documents**

- Appraisal report (2006)
- IFAD President's Report (2005)
- Mid-term review report (2010)
- Financing Agreement (2006) and amendments
- Supervision mission aide memoire and reports (2008-2014)
- Project status reports (2008-2014)
- Project completion report (2015)
- GEF grants document (2011-2016)
- Results and Impact Management System: end-line survey (2015), together with the PIALA (data files to be requested)

#### **General and others**

- Country Programme Evaluation by Independent Office of Evaluation (2012)
- IFAD (2015). Evaluation Manual – Second Edition
- IOE (2012). Guidelines for the Project Completion Report Validation (PCR) and Project Performance Assessment
- IFAD (2011). IFAD Evaluation Policy
- Various IFAD policies and strategies, in particular, Strategic Framework (2007-2012), Targeting, Gender Equality and Women's Empowerment, Rural Finance

## **List of key people met**

### **Government**

#### **Ministry of Food and Agriculture (MoFA)**

Mr Benjamin Kofi Gyasi, Ag. Chief Director  
Mr Seth Osei-Akoto, Director of Crop Services, MoFA  
Ms Angela Dannson, Director, Projects' Coordination Unit (PCU)-MoFA  
Mr George Prah, Deputy Director, MoFA-Crop Service  
Mr Roy Ayariga, NPC, GASIP-MoFA  
Mr Joseph Tommie, Senior Agricultural Economist, PCU-MoFA

#### **Ministry of Finance, Accra**

Mr Michael Ayesu, Director, External Resource Mobilization, Multilateral Division  
Mr Edmund K. Nkansah, Head, BADEA/IFAD/OFID Unit  
Mr Inusah Musah, Desk Officer  
Ms Elizabeth Ayor, Assistant Economic Officer

#### **RTIMP team**

Mr Joseph Yeboah, PROVACCA component coordinator  
Mr Vincent Cyril AKOTO, Technology Promotion Officer of Rural Enterprises Programme (REP) and former RTIMP officer  
Mr Lambert Dandeebo, former RTIMP Zonal Coordinator in Tamale zone

#### **GASIP team in Accra**

Mr K.B. Owusu Sekyere, Senior Policy and M&E manager  
Mr Chelteau Barajei, National Infrastructure Manager  
Mr Adwin F., M&E officer  
Mr Samuel Adu-Boahen, Senior Accounting Officer  
Mr Dominic Tano, National Procurement Manager

#### **GASIP team in Kumasi**

Mr Sabastian Salia, Infrastructure Officer  
Mr Joseph Y., PROVACCA coordinator  
Mr Eddy Addo-Dankwa, VCO  
Dr. Eric Twum, CCAM  
Mr Patrick Ofori, M&E officer

#### **West Africa Agricultural Productivity Programme (WAAPP)**

Ms Azara Ali Mamshie, National WAAPP Coordinator  
Mr Augustin Oppong Danquah, M&E officer of WAAPP

### **International and donor institutions**

#### **FAO**

Mr Benjamin M. Adjei, Assistant FAO Representative

#### **World Bank**

Mr Kadir Osman Gyasi, Senior Economist

### **Non-governmental organizations and associations**

#### **Association of Church-based Development NGOs**

Mr Malex Alebikiya, Executive Director, ACDEP

## **Private sector**

Mr Charles Kumi-Amoah, Freshmacs, Yam supply chain facilitator

## **Participating Financial Institution**

### **Apex Bank**

Mr Roderick Okoampah Ayeh, Manager, Projects & Credit

Mr Enoch R. Arkaifie, Deputy Head, Projects & Credit

Mr William Kwane Kwapong, Credit & Microfinance Officer, Projects and credit Department

### **Ecobank**

Mr Hayfor, Credit Analyst, Ecobank Head Office in Accra

Mr Steven Amoako, Manager, Tamale office

## **Research and training institutions**

Ghana Regional Appropriate Technology Industrial Service

Dr. Joe Manu Aduening, Research Leader, Centre for Scientific and Industrial Research (CSIR) –CRI, Fumesua, Kumasi

## **Beneficiaries**

### **DADU officers and beneficiaries**

#### *Ashanti Region*

Paul Amoh Korang, Regional Crops Officer, MoFA

#### *Sekyere Central District*

Mr Emmanuel Beah, Assistant Agriculture Officer

Mr Francis Achaea, Desk Officer-RTIMP, MoFA

Mr Thomas Fofie, Head of Business advisory Centre, Sekyere Central District

29 farmers and processors from the Josma Good Practice Center

#### *Akim South District*

Dr. David Anamsout, Director of Agricultural Department

Mr Stephen Adzogle, Business advisory center, DADU

Mr Albert Bour, Agricultural Extension Officer

21 farmers and processors

#### *Mampong/ Ejura-Sekyedumase*

Mr Sandra Asar, DADU director,

Mr Mills O. Michael, Agricultural Extension Officer, DADU

35 farmers, processors, and transporters

#### *Offinso North*

Mr Francis Arkorful-Quay, DADU director,

31 farmers and processors (4 FBOs) around the GPC Hansua (Hansua Women Gari Society)

#### *Techiman*

DADU director

39 farmers, processors, and transporters

#### *Tain District*

DADU director, agricultural extension officers

41 farmers, processors, and transporters



*West Gonja (Damongo)*

DADU director, agricultural extension officers  
37 farmers, processors, and transporters

*Paga*

DADU director and agricultural extension officers  
28 members of sweet potato processing group in Paga

*West Akim*

Eastern Region regional director  
Eastern Region IFAD desk officer  
DADU director, agricultural extension officers  
38 farmers, processors, buyers, and transporters

**IFAD**

Mr Andrew Macpherson, Consultant-Supervision mission leader  
Ms Esther Kasalu-Coffin, Country Programme Manager  
Mr Ulac Demirag, former Country Programmer Manager  
Mr Theophilus Otchere Larbi, Country Programmer Officer

**Participants at Wrap-up Meeting in Accra 15 September 2017**

Mr Kwasi Attah-Antwi, National director of Rural Enterprises Programme, MOTI  
Mr Vincent Cyril Akoto, Technology Promotion Officer of Rural Enterprises Programme (REP) and former RTIMP officer  
Mr David Modzaka, Deputy Director, MoFA  
Mr Richard Annobil, Deputy Director, HRDMD-MoFA  
Mr Samuel Archer Assist. Agricultural Officer, PCU-MoFA  
Mr Emmnuael Garti, M&E specialist, NRGp-MoFA  
Mr Roy Ayariga, NPC, GASIP-MoFA  
Ms Theresa Fynn, Assistant Chief Technical Officer, PCU-MoFA  
Mr Seth Osei-Akoto, Director of Crop Services, MoFA  
Mr Paulina Addy, Agricultural Director, WIAD-MoFA  
Ms Angela Dannson, Director, PCU-MoFA  
Mr Inusah Musah, Senior Economic Officer, MOF  
Ms Esther Kasalu-Coffin, Country Director, IFAD  
Mr Fellix N. Darimaani, National Programme Coordinator, NRGp-MoFA  
Mr Kenneth Gbeddy, Director-VSD, MoFA  
Mr Selassie Setorwofia, Assistant Agric. Officer, MoFA  
Mr Joseph, Tommie, Senior Agricultural Economist, PCU-MoFA  
Mr Phyllics Mends, Deputy Director, SRID-MoFA

## Summary of amendments to the loan agreement

<b>1. Amendment to the Programme Loan Agreement following the EB's approval in September 2008 of the IFAD policy on supervision and implementation support (IPSIS), whereby the appointed cooperating institution would be replaced by direct IFAD supervision – 18 December 2009</b>				
<b>2. Amendment to schedule 2 of the Loan Agreement following request for reallocation by the Borrower – 18 October 2010</b>				
Categories	Loan Amount Allocated Initially (expressed in SDR)	% of Eligible expenditures to be financed Initially	Loan Amount Reallocated (expressed in SDR)	% of Eligible expenditures to be financed after
I. Vehicles and Office Equipment	970,000	100%	2,160,000	100%
II. Materials and Supplies	630,000	100%	1,350,000	100%
III. Specialist Service and Studies				
A- Technical Assistance, Professional services and Studies	1,150,000	100%	1,250,000	100 %
B- Subject –Matter Specialists	180,000	45%	410,000	100 %
IV. Training, Workshops & Farmers and Entrepreneurs	4,740,000	100%	3,940,000	100%
V. Fund				
A- Initiative Fund	1,790,000	100%	650,000	100%
B- Micro-Enterprise Fund	1,380,000	30%	420,000	30%
VI. Salaries and Allowances	640,000	45%	1,470,000	100 %
VII. Operating Costs	570,000	40%	570,000	40%
VIII. Unallocated	1,000,000		830,000	
<b>TOTAL</b>	<b>13,050,000</b>		<b>13,050,000</b>	
<b>3. Amendment to the Letter to the Borrower (LTB) concerning the revision of the SOE thresholds applicable to reflect IFAD's updated disbursement procedures and the roll out of risk-based disbursements – 13 June 2012</b>				
<b>4. Amendment to the LTB to address fiduciary risk requesting that justification for any payment of allowances, including fuel, per diem and any other allowances must be submitted to IFAD for prior review and No-Objection on the expenditure to be incurred – 10 February 2015</b>				

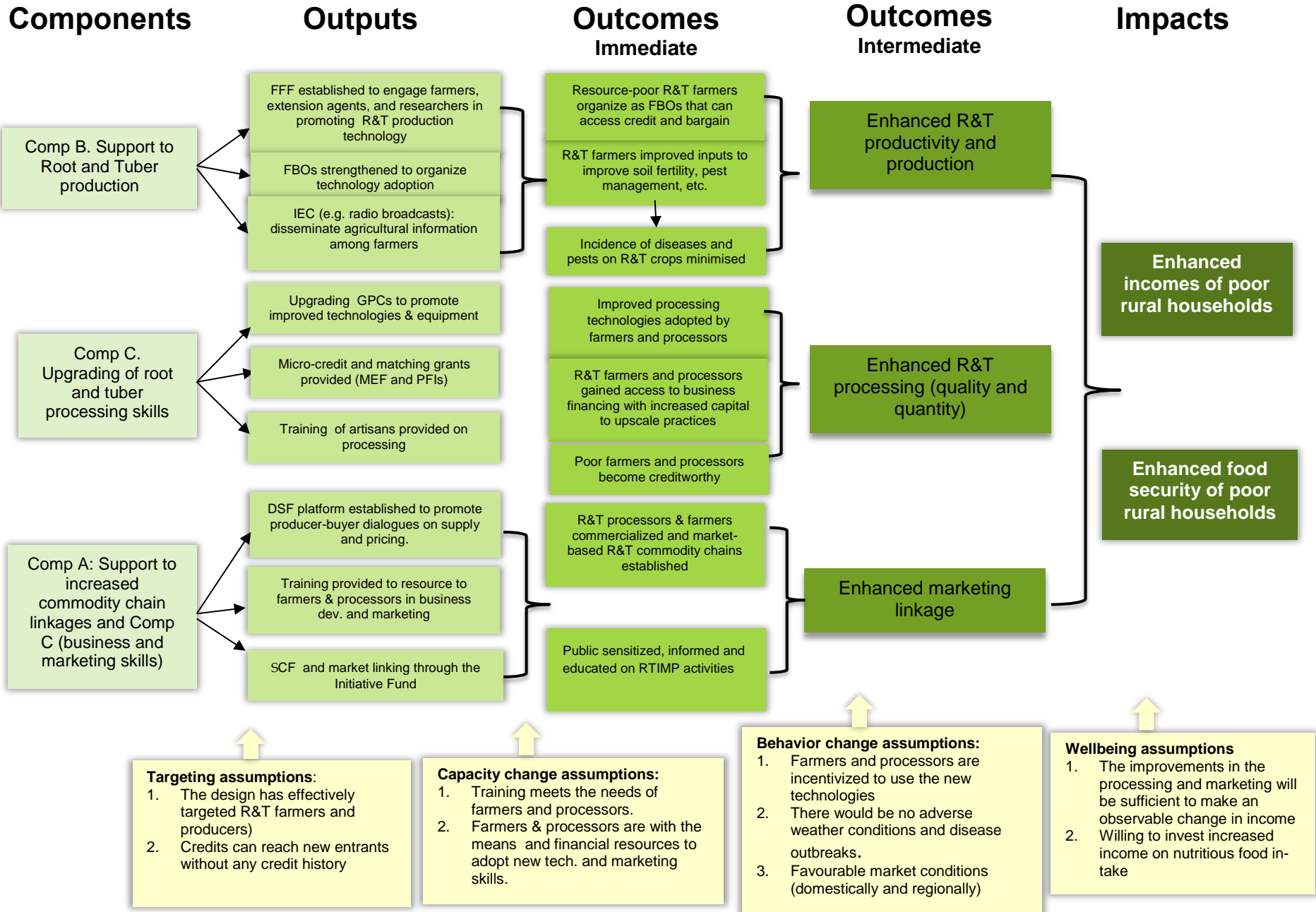
## Physical targets and output delivery

<i>Indicators</i>	<i>Target</i>	<i>Achieved</i>	<i>% Achieved</i>
<b>Component A</b>			
<b>Sub-Component A1: Information, education and communication campaign</b>			
Promotion materials developed and distributed	74,755	80,073	107.11
Development and broadcast of TV documentaries	10	14	40
Development of radio discussions	129	160	24.03
<b>Subcomponent A.2-Linking small producers to larger markets</b>			
R&T Chains established			
Gari chains established	75	24	32
Plywood chains established	6	6	100
HQCF supply chains established	6	5	83.3
Fresh yam supply chain established	1	5	400
Quantity of R&T commodities traded annually			
Tons of R&T commodities traded by 2014	56,400	40,076	71.6
Tons of PCF traded by 2014	13,200	4,932	37.4
Tons of HQCF traded by 2014	12,800	2,387	18.6
Tons of Yam (chain only) traded by 2014	2,400	10,092	420.5
Tons of Gari traded by 2014	28,000	22,665	80.9
Number of clients engaged in the four chains by 2014	10,500	N/A	
<b>Component B</b>			
<b>Subcomponent B.1- Multiplication/distribution of planting material:</b>			
Primary multiplication fields of R&T established (ha)	608	633.12	104.13
Secondary multiplication fields of R&T established (ha)	2,514	1970.82	78.4
R&T farmers receive healthy planting material by 2014	174,400	187,275	107.3
Subcomponent B.1- Farmer Field fora			
No. of Farmer Field Fora organized	500*	451	90
No. of clients reached through FFF	17639	15154	85.91
No. FFF facilitators trained	365	723	98.0
Adoption rate	85%	65%	76.4
<b>Subcomponent B.3-Integrated pest and Disease Management</b>			
No. of actives of CGM predators (Typhlodromalus manihoti) produced and released	2,500,000	2,220,511	89
No. of LGB predators (Teretrius nigresens) produced and released	1,312,000	1,504,555	115
<b>Subcomponent B.4-Improved adoptable technologies developed</b>			
No. of on-farm research projects on R&T crops conducted	23	16	70
No. of farmers participated in the research project	840	780	93
<b>Component C</b>			
<b>Subcomponent C.1-Processing technologies identified and transferred</b>			

Number of prototypes and technologies tested	30	28	93.33
Number of artisans trained in manufacturing of equipment and construction of processing units	214	200	107
Number of beneficiaries of exposure visits	5449	3777	69.3
<b>Subcomponent C.2-GPC's established and used for demonstration</b>			
Number of GPCs established	40	26	65
<b>Subcomponent C3 Clients equipped with technical business and marketing skills</b>			
No. of clients trained in business development and marketing skills	6 000	3 959	65.98
No. of clients adopting business and marketing skills	3 000	2286	76.20
No. of clients accessing financial services facilitated by the programme (MEF)	1 800	1 235	68.61
Increase in number of metric tons of cassava processed at GPCs		37 070.6	
No. of clients acquiring improved processing equipment <sup>142</sup>	2 000	1 235	61.75

<sup>142</sup> According to the MEF design and manual, the MEF would be created to provide matching grants covering up to 40 per cent of the cost of equipment purchases.

# Theory of change



## Summary of expected objectives and outcomes by component

Component	Outcomes	Summary Results
RTIMP goal: To enhance incomes and food security to improve the livelihoods of the rural poor of Ghana		Food insecurity dropped from 20% to 16% in project area. Incomes increased by 15%. <sup>143</sup>
RTIMP Objective: To build competitive and market-based R&T commodity chains supported by relevant, effective and sustainable services that are easily accessible by the rural poor		Commercialization and sustainable services evident in only 12% of project areas <sup>144</sup> .
Support to increase Commodity Chain Linkages	Objective A: Selected market-based R&T commodity chains established	Four chains established; 71% of targeted production traded with project support but few viable new markets secured as most markets were not sustained beyond the programme period <sup>145</sup> .
	OUTCOME A1: Selected market-based R&T commodity chains established	
	OUTCOME A2: Public sensitized, informed and educated on RTIMP activities	Evidence of shift towards market-oriented farming but barriers to market access (finance, linkages, technology) remain pervasive in all project locations visited <sup>146</sup>
Support to root and tuber production	Objective B: Productivity of R&T-based cropping systems increased	Target for planting material distribution achieved (187,275 farmers/174,400 targeted i.e. 107%)
	OUTCOME B: Yields of R&T-based cropping systems increased	Planting material distribution mechanism still existing in some districts; others affected by drought and lack of MoFA resources. Technology adoption indicates high level of performance i.e. 386,402 ha under new technologies (96.7% of target).
	OUTCOME B1: Availability and access to planting material for R&T crops improved	
	Outcome B2: Improved technologies adopted by FFF farmers (improved integrated pest management practices, improved varieties, crop husbandry practices, soil fertility management practices)	Evidence of substantial yield increases; Cassava yields increased from 12 tons/ha to between 22–30 tons/ha; Sweet potato from 6.3 ton/ha to 16 tons/ha; Cocoyam from 5-6 tons/ha to 12-15 tons/ha; Yam from 8-10 tons/ha to 18-20 tons/ha and Frafra potato, a yield of 19.1 tons/ha <sup>147</sup> .  19 of the 25 districts (76 %) demonstrated improved farm management practices <sup>148</sup> .
	OUTCOME B3: Incidence of diseases and pests on R&T crops minimised	
OUTCOME B4: Improved adoptable technologies released for farmers use		
Upgrading of root and tuber processing, business and marketing skills	OBJECTIVE C: To transfer relevant processing technologies.	19 out of 24 project-supported Good Practice Centres (GPC) operating but only ten demonstrating good viability at project closure <sup>149</sup> . Replication of GPCs amongst other farmers constrained by lack of access to capital. Yet, improvements in hygiene and quality positive.
	OUTCOME C1: R&T processing and marketing upgraded	Micro-enterprise fund (MEF) largely unavailable to poor farmers. MEF disbursed USD579,617 through 10 PFI and Ecobank, approx 63 per cent of approved fund.
	OUTCOME C2: Improved processing technologies adopted by Processors	
	OUTCOME C3: Access of R&T chain actors to financial services and recovery of credit improved	1,235 clients (476 males & 713 females) accessed the MEF by December, 2014
OUTCOME C4: Adoption of business and marketing skills by R&T actors improved.		
Programme Coordination, M&E	OUTCOME D: Programme effectively managed, monitored and evaluated.	Project management rated as moderately satisfactory for most of the programme period but both financial management and M&E rated as moderately unsatisfactory during implementation <sup>150</sup> .

<sup>143</sup> Data source: RTIMP Project Completion Report (2016) however, data is not substantiated, project end line survey unavailable. PPE field work (2017) confirms reduction in food insecurity but income increases cannot be verified.

<sup>144</sup> RTIMP Project Impact Assessment and Learning Approach (PIALA), 2015 para 288.

<sup>145</sup> SCF progress reports 2001; 2012; interviews with SCF; interviews with GPCs.

<sup>146</sup> PPE visits to farmers and GPCs, 2017.

<sup>147</sup> RTIMP Project Completion Report (2016), magnitude validated through. PPE field work (2017).

<sup>148</sup> RTIMP Project Impact Assessment and Learning Approach (PIALA), 2015, para 200.

<sup>149</sup> RTIMP Project records, GPC viability assessment, 2011-2014.

<sup>150</sup> Project Supervision reports 2010-2014.

Annex IX

<p>GEF GRANT: Promoting a value chain approach to climate change adaptation in agriculture in Ghana (PROVACCA)</p>	<p>Additional component financed by GEF grant. Commenced in 2012, July.</p> <p>Outcome 1 Awareness raising on climate change and capacity to address its impacts</p> <p>Outcome 2 Support adaptation to climate change of cassava production</p> <p>Outcome 3 Promote innovative adaptation solutions along agriculture value chain</p>	<p>Wide range of awareness raising activities through FFFs radio, media, schools, etc. Reaching 5,500 people.</p> <p>49 FFFs established in 7 project districts for climate change adaptation</p> <p>Biogas and deep well improvements to cassava value chain not completed within project period. Transferred to GASIP project for completion<sup>151</sup>.</p>
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Source: RTIMP PPE (2017) combined data sources: see respective footnotes.

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<sup>151</sup> Ghana Agriculture Sector Improvement Project (GASIP) team meeting with PPE team; PPE visit to bio-gassification plant site.

## Environment assessment

### Positive and negative impact of programme activities on the environment

<i>Positive impact</i>	<i>Negative impact</i>
The increased premium on cassava under RTIMP has made farmers conscious of protecting their farms and the environment from bush fires through the use of fire belts.	Non-targeted or indirect beneficiary use of slash and burn cultivation methods may lead to air emissions of particulates and smoke to contribute to environmental warming
Mainstreaming ploughing, harrowing and ridging before planting on ridges did increase yields and rural incomes significantly under the programme.	Opening up large tracts of land may lead to loss of biodiversity and habitats.
The biological control of pests using bio-agents reduced the use of Agro-chemicals in beneficiary communities. The use of classical biological control is a cost-effective and sustainable option to lower economic and environmental losses due to pests	Increase use of agro pesticides by indirect beneficiaries contribute to environmental pollution
Washing of peeled cassava before processing and drainage of effluents through soak away leads to top grade products and improved waste management	The increase in Gari processors outside the target beneficiaries has also created challenges to the environment with respect to management of waste, effluents and increased felling of wood for fuel. However, this can also be seen as opportunity for the development of woodlots.
The provision of chimneys and improved stoves in the construction of the processing units at GPCs controls smoke and heat from the roasting units. The GPCs use less fuel wood compared to the traditional methods of processing.	The heaps of cassava peels in some locations are used to feed domestic animals but in some areas, it is a threat to the environment because of disposal challenges
Increased use of herbicides improved labour productivity and profitability at enterprise level	Herbicide drift inadvertently may lead to air and underground water pollution



## Evaluation framework

Core Evaluation Criteria	Evaluation Questions	Data sources/collection instruments
Relevance	<p>Were project objectives and design appropriate to the context?</p> <p>How appropriate were the programme adjustments made during implementation (particularly scaling down relating to matching grants)?</p> <p>Is the PCR rating of highly relevant (5) validated by the evaluation?</p> <p>How well does the programme design align with the draft theory of change in Approach Paper?</p> <p>Is the programme design well taken into account the lessons learned from the RTIP project implementation?</p> <p>Was the programme implementation approach appropriate for achieving the programme's objectives? This refers, inter alia, to the following dimensions: (i) targeting approach (whether the self-targeting approach was sufficient to include the asset-poor and food-insecure farmers, as well as small R&amp;T processors and traders); (ii) whether the target group have the financial means/inputs to adopt improved technologies; (iii) working through farmer-based organizations or community-based organizations; and (iv) implementation arrangements – at national level, regional and district levels.</p> <p>Regarding matching grants,</p> <ul style="list-style-type: none"> <li>- Whether the terms and conditions of matching grants could ensure the activities reach the poorest categories of rural society (high minimum savings balances, restrictions on withdrawals, mortgage as a primary form of collateral, etc.</li> <li>- Analyse the key constraints facing financial institutions, such as (a) insufficient knowledge about target groups and investments; (b) perceived risks and restrictive policies on client selection, collateral requirements and interest rates; (c) inadequate operational capacity; and (d) high cost of and lack of access to long-term funds (given asset-liability matching regulations).</li> <li>- Based on the constraints facing financial institutions, whether and how the programme design had contributed to tackling some of the key constraints above.</li> </ul>	<p><u>Project documents:</u></p> <ul style="list-style-type: none"> <li>• Appraisal report (2006)</li> <li>• IFAD President's Report (2005)</li> <li>• Financing agreement (2006) and amendments</li> <li>• Logical framework</li> </ul> <p><u>Key informant Interviews:</u></p> <ul style="list-style-type: none"> <li>• IFAD staff</li> <li>• Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)</li> <li>• Representatives from Agricultural Development Bank and Participating Financing Institutions</li> <li>• Management and members of farmer-based organizations</li> <li>• Participant farmers</li> <li>• In-country partners and service providers (e.g. implementation partners and technical service providers (TSPs))</li> <li>• Other key informants</li> </ul>
Effectiveness	<p>To what extent have the objectives of the programme and its components been attained in quantitative and in qualitative terms?</p> <p>In particular, what changes in the overall context (e.g. policy framework, political situation, institutional set-up, economic shocks, civil unrest) had a critical bearing on project implementation and overall results?</p> <p>What factors in project design and implementation account for the estimated results in terms of effectiveness; and in terms of the achievements, challenges, and areas of unsatisfactory performance?</p>	<p><u>Project documents:</u></p> <ul style="list-style-type: none"> <li>• Mid-term review report</li> <li>• Project Completion Report (PCR)</li> <li>• RIMS data</li> <li>• Periodical project status reports with self-assessment ratings (2008-2014)</li> <li>• Baseline survey data</li> <li>• End-project survey data (2015)</li> <li>• Project Impact Assessment Learning Approach (PIALA)</li> </ul>

	<p>Are adopted approaches for roots and tuber development technically feasible and financially viable?</p> <p>To what extent has the private sector engaged with project activities?</p> <p>What factors prevented effective implementation of value chain development?</p> <p>How well balanced was the support to production (technical and volume) compared with marketing and financing?</p> <p>In particular, to what extent did the matching grants effectively engage and achieve intended results for entrepreneurial poor?</p> <p>What differences in performance were in evidence between different types of PFIs (e.g. rural leasing and commercial bank branches in rural areas)?</p> <p>Are there notable differences in performance between and among regions and are there any apparent differentiating factors (e.g. road connection)?</p> <p>Are there notable differences in results by the type of products supported (cassava, yam, etc.) and project orientation (export, regional, local)?</p> <p>Is there any difference in implementation mechanism: contract to implementation partners or TSPs, cooperative agreement, and grant, and local government direct implementation? Does the type of mechanism have any implications for results?</p> <p>Regarding value chain, the team will try to assess the effectiveness of value chains mapping in the programme: who the different value chain actor were, what were the relationships between them, the prices and quantities of R&amp;T moving through the chain, and the rationale for why processors/traders to purchase .</p> <p>Is the programme completion self-assessment rating on of moderately unsatisfactory supported by the evidence analysed in the evaluation?</p> <p>What findings or lessons learned relating to effectiveness should be considered in the corporate level evaluation on support to value chains?</p>	<p>reports</p> <ul style="list-style-type: none"> <li>• IFAD Ghana Country Programme Evaluation (CPE) (2012)</li> </ul> <p><u>Key informant Interviews:</u></p> <ul style="list-style-type: none"> <li>• IFAD staff</li> <li>• Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)</li> <li>• Representatives from Agricultural Development Bank and Participating Financing Institutions</li> <li>• Management and members of farmer-based organizations</li> <li>• Participant farmers</li> <li>• In-country partners and service providers</li> <li>• Other key informants</li> </ul> <p><u>Direct observations at selected field sites.</u></p>
Efficiency	<p>Are the economic rate of return, loan costs per beneficiary and ratio of total project management costs to total project costs acceptable and accurately reported in the PCR?</p> <p>Is the programme completion self-assessment rating on of moderately unsatisfactory supported by the evidence analysed in the evaluation?</p> <p>What are the reasons behind the reported poor financial performance of the program?</p> <p>Were cost escalations especially in the last year of implementation justified in relation to the programme's objectives and commodity chain development? To what extent were the intended synergies between RTIMP and the linked grants (particularly GEF grant) realized?</p>	<p><u>Project documents:</u></p> <ul style="list-style-type: none"> <li>• IFAD financial and disbursement data</li> <li>• Supervision and implementation support mission aide memoire and reports (2008-2014)</li> <li>• RIMS data</li> <li>• GEF Grants document (2011-2016)</li> </ul> <p><u>Key informant Interviews:</u></p> <ul style="list-style-type: none"> <li>• IFAD staff</li> <li>• Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)</li> <li>• Representatives from Agricultural Development Bank and Participating Financing Institutions</li> </ul>

Sustainability of benefits	<p>Are findings relating to sustainability of benefits from the PCR and PIALA validated by the evaluation?</p> <p>Is the PCR rating of moderately satisfactory (despite ratings of moderately unsatisfactory for effectiveness and efficiency) validated by the evaluation?</p> <p>What are the key factors that influence the likelihood of success of project activities and sustainability of outcomes?</p> <p>i) Did project activities benefit from the engagement, participation and ownership of local communities, grass-roots organizations and the rural poor?</p> <p>(ii) Is there a clear indication of Government commitment after the loan closing date, for example, in terms of provision of funds for selected activities, human resources availability, continuity of pro-poor policies and participatory development approaches, and institutional support?</p> <p>(iii) Is there evidence that benefits generated by the programme have and will continue after project closure and what is the likely resilience of economic activities to post-project risks?</p>	<ul style="list-style-type: none"> <li>• In-country partners and service providers</li> <li>• Withdraw application history</li> <li>• Other key informants</li> </ul> <p><u>Project documents:</u></p> <ul style="list-style-type: none"> <li>• Mid-term review report</li> <li>• Project Completion Report (PCR)</li> <li>• RIMS data</li> <li>• Periodical project status reports with self-assessment ratings (2008-2014)</li> <li>• Baseline survey data</li> <li>• End-project survey data (2015)</li> <li>• Project Impact Assessment Learning Approach (PIALA) reports</li> <li>• IFAD Ghana Country Programme Evaluation (CPE) (2012)</li> </ul> <p><u>Key informant Interviews:</u></p> <ul style="list-style-type: none"> <li>• IFAD staff</li> <li>• Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)</li> <li>• Representatives from Agricultural Development Bank and Participating Financing Institutions</li> <li>• Management and members of farmer-based organizations</li> <li>• Participant farmers</li> <li>• In-country partners and service providers</li> <li>• Other key informants</li> </ul> <p><u>Direct observations at selected field sites.</u></p>
Rural poverty impact	<p>Is the programme completion self-assessment rating on of moderately satisfactory supported by the evidence analysed in the evaluation?</p> <p>To what extent have the positive advances in production achieved in the programme led to supply chain development?</p> <p>How were the programme activities in the different components linked to create optimum benefits for farmers?</p> <p>What changes have taken place in the programme areas in relation to the four impact domains since project completion, and what explains such changes?</p> <p>Assess factors that influence attribution to project interventions compared to overall social economic context change.</p> <p>Is there any difference of the impact accrued among different groups of beneficiaries (by region</p>	<p><u>Project documents:</u></p> <ul style="list-style-type: none"> <li>• Mid-term review report</li> <li>• PCR</li> <li>• Baseline and end-project survey data</li> <li>• PIALA reports and data</li> <li>• RIMS data</li> <li>• Periodical project status reports with self-assessment ratings (2008-2014)</li> <li>• Baseline survey data</li> <li>• End-project survey data (2015)</li> <li>• Project Impact Assessment Learning Approach (PIALA) reports</li> <li>• IFAD Ghana Country Programme Evaluation (CPE) (2012)</li> </ul>

or by type)?

Key informant Interviews:

- IFAD staff
- Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)
- Representatives from Agricultural Development Bank and Participating Financing Institutions
- Management and members of farmer-based organizations
- Participant farmers
- In-country partners and service providers
- Other key informants

Direct observations at selected field sites.

Gender equality and women's empowerment

Are findings relating to gender equality and women's empowerment from the PCR and PIALA validated by the evaluation?

What were the programme's achievements in terms of promoting gender equality and women's empowerment? Were there any resulting changes: to women's access to resources, assets and services; to women's influence in decision-making; in workload distribution among household members; in women's health, skills, income and nutritional levels; in gender relations within households, groups and communities in the programme area; etc.

What percentage of total project resources was invested in activities to promote gender equality and women's empowerment and how does that compare with other projects funded by IFAD?

To what extent did the programme define and monitor sex-disaggregated results to ensure that gender equality and women's empowerment objectives were being met?

Was the programme implementation structure adequate to support effective implementation of gender equality and women's empowerment goals?

Project documents:

- Appraisal report (2006)
- IFAD President's Report (2005)
- IFAD gender policy
- Mid-term review report
- Project Completion Report (PCR)
- RIMS data
- Periodical project status reports with self-assessment ratings (2008-2014)
- Baseline survey data
- End-project survey data (2015)
- Project Impact Assessment Learning Approach (PIALA) reports
- IFAD Ghana Country Programme Evaluation (CPE) (2012)

Key informant Interviews:

- IFAD staff
- Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)
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- Other key informants

Innovation

Are findings relating to innovation from the PCR and PIALA validated by the evaluation?

(i) What are the characteristics of innovation(s) promoted by the intervention?

Project documents:

- Mid-term review report

(ii) Are the innovations consistent with the IFAD definition of this concept?

(iii) Are the actions in question truly innovative or are they well-established elsewhere but new to the country or project area?

(iv) Have grants been used to promote innovation in relation to climate change and other enhancements within the value chain?

- Project Completion Report (PCR)
- Periodical project status reports with self-assessment ratings (2008-2014)
- Project Impact Assessment Learning Approach (PIALA) reports

Key informant Interviews:

- IFAD staff
- Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)
- Representatives from Agricultural Development Bank and Participating Financing Institutions
- Management and members of farmer-based organizations
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- In-country partners and service providers
- Other key informants

Scaling-up

Are findings relating to scaling-up from the PCR and PIALA validated by the evaluation?

i) What evidence was used to justify scaling up, and were successfully promoted innovations documented and shared to facilitate scaling up?

(ii) Has IFAD proactively engaged in partnership-building and policy dialogue to facilitate the uptake of successful innovations?

(iii) Based on the information available, have these innovations been scaled up and, if so, by whom? If not, what are the prospects at the time of evaluation that they can and will be scaled up by the Government, other donors and/or the private sector? What were/are the pathways to scaling up?

What findings or lessons learned relating to relevance can enhance the relevance of design and implementation of ongoing and future IFAD operations in Ghana?

What findings, lessons learned or issues of importance relating to relevance should be considered in the corporate level evaluation on support to value chains?

Project documents:

- Mid-term review report
- Project Completion Report (PCR)
- Periodical project status reports with self-assessment ratings (2008-2014)
- Project Impact Assessment Learning Approach (PIALA) reports

Key informant Interviews:

- IFAD staff
- Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)
- Representatives from Agricultural Development Bank and Participating Financing Institutions
- In-country partners and service providers
- Other key informants

Environment and Natural Resource Management

Are findings relating to environment and NRM from the PCR and PIALA validated by the evaluation?

To what extent did the programme adopt approaches/measures for restoration or sustainable management of natural resources (e.g. enhancement of ecosystem services, support to training and extension to foster efficient environment and natural resource management, uptake of appropriate/new technologies)?

To what extent did the programme develop the capacity of community groups and institutions to manage environmental risks (e.g. how governance-related factors are shaping the management

Project documents:

- Appraisal report (2006)
- IFAD President's Report (2005)
- Mid-term review report
- Project Completion Report (PCR)
- Periodical project status reports with self-assessment ratings (2008-2014)
- Project Impact Assessment Learning Approach (PIALA)

of natural resources, influence of incentives and disincentives for sustainable natural resource use and natural resource-based livelihoods improvement)?

To what extent did the programme contribute to reducing the environmental vulnerability of the community and built resilience for sustainable natural resource management that contribute to poverty reduction (e.g. factors such as access to technologies, information/awareness creation)?

To what extent did the programme contribute to long-term environmental and social sustainability (e.g. through avoiding over exploitation of natural resources or loss of biodiversity or reduction of the community's livelihoods); and by empowering and strengthening the capacity of

community-based natural resource management groups to ensure sustainable natural resources management; and by ensuring strong stakeholder engagement, especially of vulnerable groups, in decision making affecting natural resources use?

To what extent did the programme follow required environmental and social risk assessment procedures (e.g. Social, Environmental and Climate

Assessment Procedures), including meaningful consultation with affected and vulnerable communities, and have complied with applicable IFAD or national environmental and social standards or norms, to ensure any harmful impacts are avoided or managed/mitigated through, where needed, the implementation of effective environmental and social management plans, including robust monitoring and supervision?

#### Adaptation to climate change

Are findings relating to climate change adaptation from the PCR and PIALA validated by the evaluation?

Is the rating of moderately unsatisfactory for adaptation to climate change validated by the evaluation?

Has any progress been achieved in relation to project activities to enhance sustainability and resilience through climate change adaptation?

To what extent did the programme demonstrate awareness and analysis of current and future climate risks?

What are the amounts and nature of funds allocated to adaptation to climate change-related risks?

What were the most important factors that helped the rural poor to restore the natural resource and environment base that (may) have been affected by climate change?

reports

#### Key informant Interviews:

- IFAD staff
- Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)
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- Management and members of farmer-based organizations
- Participant farmers
- In-country partners and service providers
- Other key informants

#### Direct observations at selected field sites.

#### Project documents:

- Appraisal report (2006)
- IFAD President's Report (2005)
- Mid-term review report
- Project Completion Report (PCR)
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- IFAD staff
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- Management and members of farmer-based organizations
- Participant farmers
- In-country partners and service providers
- Other key informants

#### Direct observations at selected field sites.

Performance of partners	<p>Are findings relating to the performance of partners from the PCR and PIALA validated by the evaluation?</p> <p><b><u>IFAD</u></b></p> <p>(i) How well were the comments and recommendations of quality enhancement and quality assurance processes, including from evaluations, included in the final project design?</p> <p>(ii) Did IFAD have a well-functioning self-evaluation system? In particular was adequate supervision and implementation support provided and a MTR undertaken in a timely manner, and portfolio performance monitored on a continuous basis?</p> <p>(iii) Did IFAD exercise its developmental and fiduciary responsibilities adequately, ensuring that projects had sound financial management systems, audit reports were submitted in a timely manner, the required provisions in the financing agreements were fully met, etc.?</p> <p>(iv) What support did the IFAD country office (where applicable) provide to the country programme and individual operations?</p> <p>(v) Did IFAD pay adequate attention to further cooperation and dialogue with the United Nations Rome-based agencies?</p> <p>How effective was coordination between the national and local RTIMP project teams?</p> <p><b><u>Government</u></b></p> <p>(i) Did the Government ensure that a baseline survey was done in a timely manner and that M&amp;E systems were properly established and functioning?</p> <p>(ii) How were periodic progress reports used and was the PCR provided in a timely manner and of the required quality?</p> <p>(iii) Were counterpart resources (funds and staffing) provided in line with the agreement at design stage?</p> <p>(iv) Were audit reports done and submitted as needed?</p> <p>(v) Were the flow of funds and procurement procedures suitable for ensuring timely implementation?</p> <p>(vi) Did the Government have the required capacity at all levels to implement the programme as per schedule?</p>	<p><b><u>Project documents:</u></b></p> <ul style="list-style-type: none"> <li>• Appraisal report (2006)</li> <li>• IFAD President's Report (2005)</li> <li>• Mid-term review report</li> <li>• Project Completion Report (PCR)</li> <li>• Periodical project status reports with self-assessment ratings (2008-2014)</li> <li>• Project Impact Assessment Learning Approach (PIALA) reports</li> </ul> <p><b><u>Key informant Interviews:</u></b></p> <ul style="list-style-type: none"> <li>• IFAD staff</li> <li>• Representatives involved in project management (former programme staff and MoFA representatives including regional and district level)</li> <li>• Representatives from Agricultural Development Bank and Participating Financing Institutions</li> <li>• In-country partners and service providers</li> <li>• Other key informants</li> </ul>
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