

Kingdom of Bhutan

**Agriculture, Marketing and Enterprise
Promotion Programme**

PROJECT PERFORMANCE ASSESSMENT



Kingdom of Bhutan

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Project Performance Assessment

Cover photos

Front cover: Market stall by the road in Zalaphangma.

Back cover: Boy buying milk produced by dairy group in Trashiyangtse (left); View over the Himalaya mountain range (right).

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Preface

The Agriculture, Marketing and Enterprise Promotion Programme was largely effective in contributing to improved road connectivity and access to services, higher income and assets for many households, and greater farm and enterprise productivity. The economic analysis in the design assumed that the benefits to farm households would accrue from the increase in production and capital growth. In response to demand, however, the development of new roads and infrastructure was prioritized over the production, marketing and enterprise-development components. This prioritization enabled beneficiaries in the project area to move products to market at a lower cost.

The project has therefore helped Eastern Bhutan to overcome its remoteness and lack of development and to commence a shift towards commercial agriculture that can help to lead the region out of poverty.

On the other hand, the likelihood of sustainability is being affected by the difficulties in infrastructure maintenance, and by social and economic processes beyond the influence of the project, including rural-urban population drift, increasing areas of fallow land, shortage of labour, crop damage by wild life and climate change.

This report was prepared by Catrina Perch, Evaluation Officer of the Independent Office of Evaluation of IFAD, with contributions from consultant Dorothy Lucks, an enterprise-development specialist. Internal peer reviewers – Miguel Torralba, Senior Evaluation Officer, and Anne-Marie Lambert, former Senior Evaluation Officer – commented on the draft; Laure Vidaud and Loulia Kayali, Evaluation Assistants, provided administrative support.

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Contents

Currency equivalent, weights and measures, and fiscal year	ii
Abbreviations and acronyms	ii
Map of the programme area	iii
Executive summary	iv
I. Objectives, methodology and process	1
II. The project	3
A. The project context	3
B. Project implementation	5
III. Review of findings	10
A. Project performance	10
B. Rural poverty impact	19
C. Other performance criteria	25
D. Performance of partners	29
E. Overall project achievement	30
IV. Conclusions and recommendations	31
A. Conclusions	31
B. Recommendations	32
Annexes	
I. Rating comparison	34
II. Basic project data	35
III. Terms of reference	36
IV. Methodological note on project performance assessments	40
V. Definition of the evaluation criteria used by IOE	44
VI. List of key persons met	45
VII. Bibliography	46
VIII. Summary of physical progress	47

Currency equivalent, weights and measures, and fiscal year

Currency equivalent

Currency unit = Bhutanese Ngultrum (BTN)
US\$1=BTN 62.36
(19 September 2013)

Weights and measures

International metric system, unless otherwise mentioned, and except for:
1 acre = 0.4047 hectares (ha)
1 hectare = 2.47 acres
1 langdo = 1,400 m²

Fiscal year

1 July to 30 June

Abbreviations and acronyms

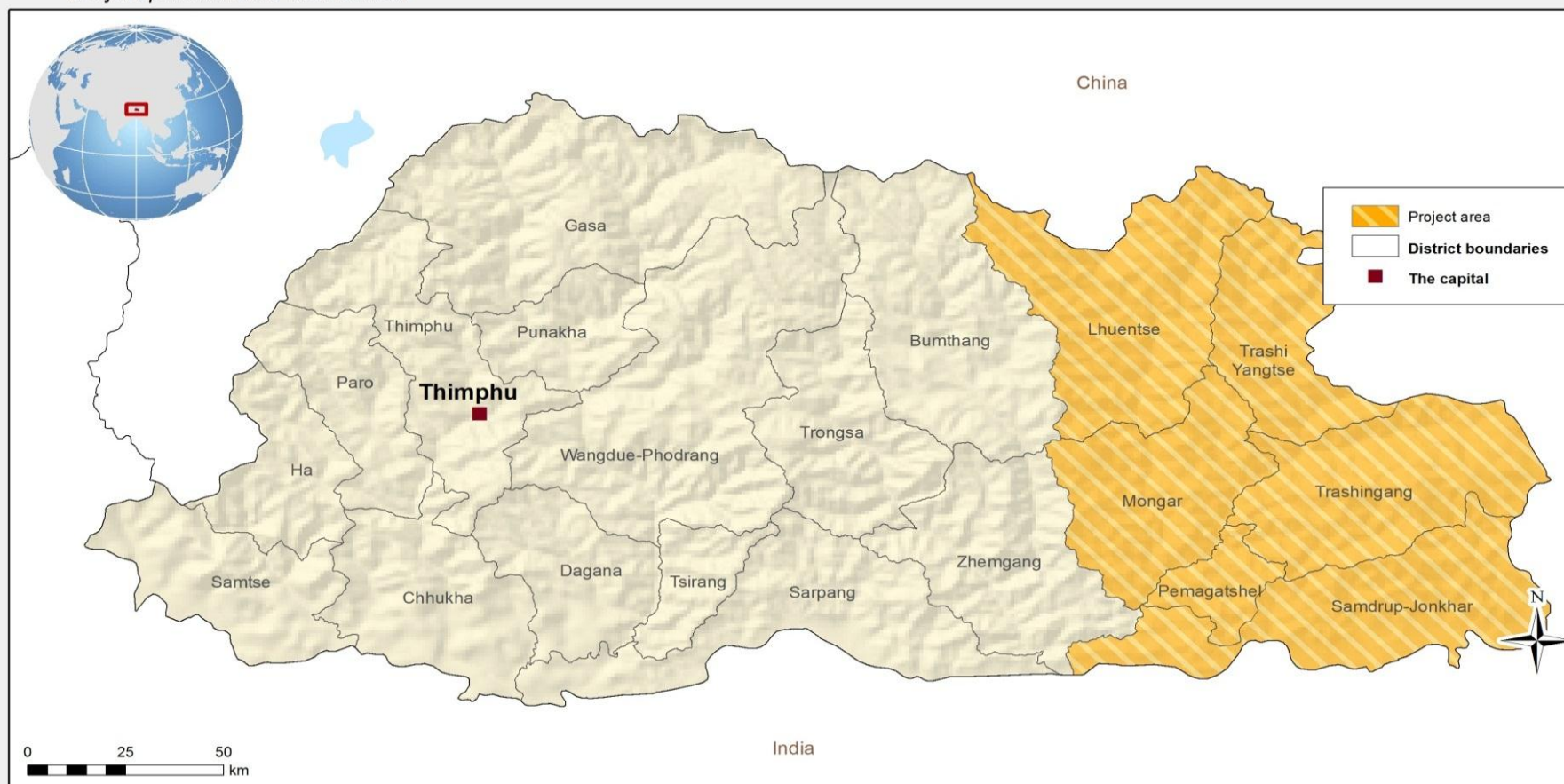
AMEPP	Agriculture, Marketing and Enterprise Promotion Programme
BDBL	Bhutan Development Bank Limited
BOF	Business Opportunities Fund
COSOP	country strategic opportunities programme
DAMCO	Department of Agricultural Marketing and Cooperatives
EFRC	environmentally friendly road construction
EIRR	economic internal rate of return
IOE	Independent Office of Evaluation of IFAD
IFAD	International Fund for Agricultural Development
M&E	monitoring and evaluation
MAGIP	Market Access and Growth Intensification Project
MIF	Micro Initiative Fund
MTR	mid-term review
PCR	project completion report
PCRV	project completion report validation
PFO	Programme Facilitation Office
PPA	project performance assessment
RAMCO	Regional Agriculture Marketing and Cooperative Office
RIMS	Results and Impact Management System
RNR	renewable natural resources
SDR	Special Drawing Rights
SNV	SNV Netherlands Development Organisation
UNOPS	United Nations Office for Project Services
VAHW	village animal health worker

Map of the programme area

Kingdom of Bhutan

Agriculture, Marketing and Enterprise Promotion Programme

Project performance assessment



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 | 06-12-2013

Executive summary

1. **Background.** This project performance assessment (PPA) of the Agriculture, Marketing and Enterprise Promotion Programme (AMEPP) was carried out in 2013 by the Independent Office of Evaluation (IOE) with a view to providing inputs for the development of a new project for Bhutan. The assessment was affected by the ongoing Market Access and Growth Intensification Project in the same area, but the specific inputs and results of AMEPP were identified as far as possible.
2. **Programme description.** AMEPP covered six *dzongkhags* (districts) in Eastern Bhutan – Samdrup Jongkhar, Pemagatshel, Trashigang, Mongar, Trashigang and Lhuentse – from 2006 to 2012. The region is one of the poorest and most isolated in Bhutan, which is one of the most mountainous countries in the world; 70 per cent of the country is forested and there are numerous national parks and wildlife corridors. Most agriculture is carried out by smallholders on less than 5 acres (2 ha) of land per household, who face considerable difficulties in producing sufficient grain for food security or enough cash crops and livestock to move above the subsistence level.
3. **Programme design.** AMEPP aimed to "... improve livelihoods of the rural poor in the programme area on a sustainable basis by enhancing productivity, income growth and access to economic and social services". The total project cost of US\$19.6 million - US\$13.9 million of which representing IFAD's contribution - was allocated to the five project components, as follows: i) farm production, 12 per cent; ii) marketing and enterprise development, 14 per cent; iii) rural financial services, 7 per cent; iv) roads, 51 per cent; and v) project management, 16 per cent, including 3 per cent for a micro initiative fund targeting the poorest households and a business opportunities fund to assist in scaling up post-harvest enterprises. The SNV Netherlands Development Organisation (SNV) provided a co-financing grant of US\$1.6 million to support project management and the development of capacity for the implementation of the project.
4. **Relevance.** The relevance of the project was considered satisfactory. The design of the project was in line with Bhutan's Tenth Five-Year Plan (2008–2013) and IFAD's Strategic Framework (2011–2015). The components were appropriate to the target area and household needs at the time of design. The major investment in roads supported the Government's thrust to improve accessibility for the rural poor. AMEPP included interventions supporting various agricultural products and practices according to farmers' capabilities and resources, most of which were appropriate to the farming systems in the area. Strong points were the implementation of the project through existing extension networks and its alignment with government programmes. Greater focus on marketing would nevertheless have been beneficial, particularly towards the end of the project as access improved.
5. The decision to target the entire eastern region reflected the intention of IFAD and the Government to provide benefits across a significant proportion of the country, rather than to a limited area. Focusing on 220,000 beneficiaries translated necessarily in a less intensive targeting than would have been the case in a small project area. In addition, given Bhutan's cultural aversion to discriminate explicitly for or against specific strata of rural households, the project's targeting approach – which divided the population into three wealth categories – was not culturally appropriate for community members to participate and for staff to implement. A less intrusive identification of target groups, e.g. through a discussion with local leaders and through self-targeting, would have been more suitable and cost-effective.
6. **Effectiveness.** The Micro Initiative Fund, the distribution of seedlings and improved access to markets helped to improve livelihoods in most communities in

Eastern Bhutan. Even communities that were not directly assisted with the road improvements benefited from the development of alternative routes to be used in the case of road blockages and landslides, enhancing their access to markets. The spread of benefits across the target area was extensive: almost all households in all *gewogs* (blocks) received benefits, but the intensity was variable. Agriculture and marketing investments in individual *gewogs* were limited in that some households only received seedlings, while some only training. Nonetheless, the combined benefits of improved roads, increased availability of credit and agricultural support contributed to poverty reduction across the region. The effectiveness of the programme is therefore considered satisfactory.

7. **Efficiency.** From PPA mission findings, efficiency has been rated moderately satisfactory. The AMEPP economic internal rate of return (EIRR) was assessed at the time of completion to be 14 per cent. The PPA mission reconfirmed the analysis and assessed that the EIRR was valid and likely to be slightly higher than estimated. The unit costs for infrastructure development were comparable with those of government and other projects, but the total budget available was insufficient. Decisions therefore had to be made between the construction of a limited number of roads of high quality and more roads of lower quality: although the former was deemed more attractive, priority was given to increasing access over a larger area. Local funds were therefore used to upgrade roads once the cuttings had been stabilized. Actual programme management costs were high at 17 per cent - excluding the grants for the Micro Initiative Fund and Business Opportunities Fund - reflecting the high expenditure on fuel and other travel costs required to reach scattered habitations in the mountainous terrain. The fact that AMEPP had a full project team was advantageous in terms of the availability of technical and management support, but also contributed to the high management costs. Efficiency was considered moderately satisfactory by the PPA mission.
8. **Impact.** Overall, the impact of AMEPP on rural poverty was satisfactory. Improved road access helped to reduce the costs of production and marketing for many households, and as a result most reported a net increase in income, with groups gradually building up savings and assets. Income sources have diversified, rural finance has become more readily available, and income streams are now more reliable throughout the year. Human and social capital and empowerment have been enhanced through the formation of 533 groups and the provision of leadership, technical training and increased access to market information. Staff training and development have enhanced capacities in the region. Food security and agricultural productivity have improved, as farmers have increased production and diversity of food and cash crops by using better seed varieties, and as markets have become more accessible. Some farmers are being linked to schools to improve the quality and reduce the cost of produce for the school feeding programme. There has been limited impact on natural resources and the environment due to minimal budget for activities in this regard. There was little emphasis on institutional and policy development, but the work on enhancing guidelines for road construction, marketing support practices and monitoring and evaluation contributed to improved national systems.
9. **Sustainability.** The sustainability of the programme is assessed as moderately satisfactory. At the household level, the activities were based on current farm practices, and improvements have largely been sustained. Access to finance has increased, and the Bhutan Development Bank has expanded its commitment to rural finance and its coverage in eastern areas. Most of the groups established in AMEPP continue to function, even though some operate at a basic level, and government extension services continue to support the targeted groups beyond the project period - but there is a high degree of dependence, and few of the groups would be independent in a sustainable manner should the support be reduced. The maintenance of infrastructure is a challenge to sustainability in that the farm roads

constructed are basic and have little compaction or drainage. In cases where funds have been provided by the Market Access and Growth Intensification Project or other sources, roads have been upgraded to require less maintenance, but in most cases maintenance relies on community labour and inadequate community and local development funds. Nonetheless, the *gewogs* maintain the roads throughout the year. The sustainability of the project is affected by factors outside its control such as climate change and the population drift to towns. The movement of farming populations, particularly young people, from remote communities is resulting in a serious labour shortage and difficulty in cultivating the available farmland: the outcome is a decline in agricultural production.

10. **Innovation and scaling up.** The project design was a scaled up and improved version of the IFAD-supported Second Eastern Zone Agricultural Project, so it did not include a high degree of innovation. Several of the innovations tested – village-level volunteering for crop production and animal health, for example – were not sustainable because there was no ongoing financing mechanism, and there was little direct focus on scaling up of activities. Nevertheless, there has been replication of activities commenced under the project through farmers adopting new practices, beyond those who were directly trained. Consequently, innovation and scaling up is considered moderately satisfactory.
11. **Gender.** The project completion report results show that the participation of women in the project was split relatively equally between men and women¹ but that the number of female headed households were on the increase and consequently more attention should have been played to the participation of women in project activities. The proposed gender focal point within the districts has not continued beyond the programme period. In terms of achieving a more equitable balance in workloads the picture was mixed. Labour saving equipment (oil expeller, rice and maize crusher and thresher) contributed to reducing drudgery. Increased access to markets, health clinics and schools and general relief from carrying loads for development works were also important benefits but there were concerns that women seemed to carry a disproportionate share of the "voluntary" and unpaid labour required for the routine maintenance of farm roads. The gender dimension of the project was considered moderately satisfactory.
12. **Performance of partners.** The project partners Royal Government of Bhutan, SNV and IFAD have operated successfully, and the partnership has been continued in the follow-on project. In the early stages of AMEPP, the project was supervised by the United Nations Office for Project Services, but guidance was too rigid and insufficient to overcome initial implementation issues. In particular, there was low capacity for, and insufficient training and support on, financial management and procurement. This led to substantial delays in financing. The Government addressed the issue by prefinancing programme activities. The problem was resolved when IFAD commenced direct supervision in Bhutan in 2008. This led to a more responsive information flow between AMEPP, the Government and IFAD. The performance of IFAD and the Royal Government of Bhutan was considered moderately satisfactory and satisfactory respectively.
13. **Conclusion.** Overall, AMEPP was rated satisfactory. It had a positive impact on the eastern region of Bhutan; the broad target area and the focus on rural access were appropriate at the time of design and the objectives and strategies were relevant to the project area. The activities were largely effective in contributing to poverty reduction, and the impact of AMEPP was felt throughout the project area, although not at high intensity, except in areas where new roads were constructed. Some replication of improved agricultural practices, inputs and marketing has occurred, resulting in a stronger agricultural sector in the east. But the likelihood of

¹ On-farm production 52 per cent; Marketing and enterprise 34 per cent; Rural finance 37 per cent; Access infrastructure 53 per cent.

sustainability is reduced by difficulties in road maintenance and factors such as a drift of population from rural to urban areas, increasing areas of fallow land, shortage of labour, crop damage by wildlife and climate change.

14. **Recommendations.** AMEPP has helped Eastern Bhutan to overcome its remoteness and lack of development and to initiate the development of a commercial agriculture sector that can help to lead the region out of poverty. It is therefore recommended that IFAD continue its support and extend it beyond the regional boundaries to assist in the development of value chains. Specific recommendations are to:

- increase on-farm and post-harvest enterprise development, for example by supporting improved business management practices, and increasing understanding of market fluctuations, viability and strategies for business adaptation;
- facilitate private/public partnerships to shift the region's agricultural and enterprise sector towards a more commercial approach and reduce dependency on government services;
- improve expertise in commercialization: each *dzongkhag* needs resources to extend businesses and markets to facilitate linkages between producers, sectors, emergent enterprises, value-chain actors and professional support systems;
- enhance regional market centres, improve the planning of land use, support decentralization and facilitate access to credit with a view to creating a more vibrant and differentiated regional population; and
- introduce environmental protection planning through building emergency-response reserves and risk-management mechanisms to prevent negative impact through potential losses, as a more commercial and asset-intensive approach is adopted in agriculture.

Chillies produced by farmers group in Yonphupam.

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Kingdom of Bhutan

Agriculture, Marketing and Enterprise Promotion Programme

Programme Performance Assessment

I. Objectives, methodology and process

1. **Objectives.** Project performance assessments (PPA), conducted by the Independent Office of Evaluation of IFAD (IOE), are project-level evaluations that are undertaken on a selected¹ number of projects for which completion reports have been validated. The PPA is undertaken shortly after the project completion report validation (PCR²) and involves field visits. A PPA aims to further validate the explanations, conclusions and lessons presented in the project completion report (PCR). PPAs focus on selected features for further analysis to strengthen accountability and contribute to learning for future programming in the country.
2. The Agriculture, Marketing and Enterprise Promotion Programme (AMEPP) has been selected for a PPA to help build up an evidence base for a proposed follow-on project in Bhutan. IFAD does not have a current country programme strategy³ in Bhutan because it has taken a programmatic approach within the country, closely following the Royal Government of Bhutan priorities as identified in the national five-year planning cycle. The Government has recently developed the National Eleventh Five-Year Plan, and it is timely that IFAD reviews its strategic approach in Bhutan and its focus within the country.
3. **Methodology.** The PPA followed the Guidelines for Project Completion Report Validation and Project Performance Assessment.⁴ A six-point rating system has been applied to all evaluation criteria.⁵ The PPA relied on an extensive range of available documents,⁶ including the PCR⁷ and impact assessments, appraisal report, mid-term review and supervision reports. During the field work, data were collected to verify available information and reach an independent assessment of programme performance and impact. Given the time and resources available, no quantitative survey was undertaken. The information gathered was therefore mainly of a qualitative nature and focused on a restricted set of topics identified during the desk review, in particular: i) Whether the choice of components and allocated resources was the right combination for achieving the project goal; ii) The extent to which the constructed roads and irrigation systems have been and are contributing to improving livelihoods, enhancing productivity and income growth; iii) Further discussion on agricultural impact. Data collection methods included individual interviews, focus group discussions with members of the former programme facilitation office (PFO), direct observations during visits to programme sites and access to updated data in continuing operation in the project area.⁸

¹ The selection criteria for PPA are: (i) Information gaps, inconsistencies and analytical weaknesses in the project completion report (PCR); (ii) Innovative project approaches; (iii) As an input to future country programme evaluations or potential follow-on projects; (iv) Geographical balance; (v) Any disconnect between the ratings contained in the PCR and those generated by IOE during the validation process.

² The project completion report validation (PCR²) is a desk review process that includes independent verification of the analytical quality of the PCR and project performance (including ratings), and summarizes key findings and lessons learned.

³ The last IFAD country strategic opportunities programme for Bhutan was undertaken in 1996.

⁴ IFAD. Guidelines for Project Completion Report Validation and Project Performance Assessment: http://www.ifad.org/evaluation/process_methodology/doc/pr_completion.pdf

⁵ 6 – highly satisfactory; 5 – satisfactory; 4 – moderately satisfactory; 3 – moderately unsatisfactory; 2 – unsatisfactory; 1 – highly unsatisfactory.

⁶ See annex VII, Bibliography.

⁷ An extensive government PCR of AMEPP was prepared by DrukRudevs Consultants in September 2012. This was followed by an IFAD PCR prepared in December 2012. In general, the IFAD PCR was the primary source of information, but where additional information was required reference was made to the Government PCR.

⁸ See annex VI for a list of persons met during the field visits.

4. **Project monitoring and evaluation system.** The AMEPP had an extensive monitoring and evaluation (M&E) system that was developed with technical support from SNV Netherlands Development Organisation (SNV). Although initially the database system was considered to be too complex with too many indicators, it was later simplified and generated credible data, including summary data for management decision-making and reporting.⁹ In addition to the M&E system, the PPA benefited from documents generated through the implementing partners, such as the Government, SNV and Bhutan Development Bank Limited (BDBL). The Government conducted a survey of 1,034 farmers, randomly selected across the project area as part of the government project completion activities, and BDBL generated an impact assessment for bank clients in the project area. These results were verified through the IFAD PCR and IFAD Results and Impact Management System (RIMS) survey from September 2012. The main source documents for the PPA included the IFAD PCR, as well as the various supervision reports during implementation. In a few instances, the Government PCR has been used where it adds additional information.
5. **PPA process.** The PPA mission was undertaken from 6-19 October 2013, in close cooperation with the Government and IFAD country office.¹⁰ The mission included field visits to AMEPP sites, and interactions with government officials, members of AMEPP-supported groups, individual farmers and other key informants. It is recognized that the scope of a PPA is limited and that it is not possible to verify all details and effectively cover more remote areas during the short period available. Therefore, at the end of the mission, a wrap-up meeting was held at Thimphu with relevant stakeholders to share preliminary findings, which was attended by the IFAD country programme officer from the New Delhi office. The preliminary findings from the mission were considered by IFAD operations in building the Government project concept paper into an IFAD project concept paper for Operational Strategy and Policy Guidance Committee (OSC) review. The draft PPA report was vetted by the IOE internal peer review process for quality assurance, and subsequently shared with respective IFAD operations staff and the Government for comments before being finalized and published.
6. **Attribution.** IFAD has been the main international financing agent in the eastern region of Bhutan over a series of projects.¹¹ There have been other government projects, including Government of India supported work in the project area. Nevertheless, the majority of farm road and irrigation infrastructure investment across the east can largely be attributed to IFAD. The current situation has been influenced by the AMEPP follow-on project, Market Access and Growth Intensification Project (MAGIP). MAGIP is working in all six districts but fewer *gewogs*¹² in the east, overlapping with the AMEPP project area. The groups participating in MAGIP activities are largely those that participated in AMEPP. Specific AMEPP physical inputs and interventions can be identified and to an extent project participants can recall AMEPP support. Nevertheless, it is difficult to distinguish the respective impacts of AMEPP and MAGIP.

⁹ The effectiveness of the M&E system was verified during the field visits and information provided from the Government indicated that the system had informed the establishment of a nationwide indicator framework and data collection system.

¹⁰ The PPA mission consisted of Catrina Perch (IOE lead evaluator) and Dorothy Lucks (enterprise development specialist). The IFAD programme officer is based in Delhi, India.

¹¹ The series of projects includes Small Farm Development and Irrigation Rehabilitation Project (1980), Tashigang and Mongar Area Development Project (1985), Punakha-Wangdi Phodrang Valley Development Project (1988), First Eastern Zone Agricultural Project (1992), Second Eastern Zone Agricultural Programme (1999) and Agriculture, Marketing and Enterprise Promotion Programme (2005).

¹² MAGIP targeted 48 *gewogs* (MAGIP Design Completion Report – Main Report October 2010) in the design, but due to demand from the project area the number of *gewogs* covered has been increased to 60.

II. The project

A. The project context

7. **Country background.** The Kingdom of Bhutan is a small, mountainous, landlocked country, located in the eastern Himalayas, bordered by India and China (Tibet Autonomous Region). Bhutan is home to a population of about 740,000 spread over approximately 47,000 square kilometres, with about 70 per cent of its land under forest cover. Much of the population lives in the central highlands, and almost two thirds are classified as rural inhabitants. The terrain is mostly mountainous, with alpine peaks in the north and some subtropical foothills in the south. Many glaciers feed a series of rivers that define Bhutan's ecology through steep slopes, ravines, alluvial platforms and micro ecological subzones. Despite the importance of agriculture, livestock and forestry – commonly referred to as the renewable natural resources (RNR) sector – this sector accounted for only 18 per cent of GDP in 2011, and the rate of growth is slower than in other sectors. The Bhutan economy is led by hydroelectricity and tourism.¹³ Per capita gross national income, one of the highest in South Asia, has consistently risen, from US\$730 in 2000 to US\$2,070 in 2011.
8. Bhutan is on track to achieve its Millennium Development Goals (MDG). However, while the poverty rate has fallen from 36 per cent in 2000, to 23 per cent in 2008 and to 12 per cent in 2012 (according to *Bhutan Poverty Analysis Report 2012*), the MDG mid-term report notes worsening conditions affecting those suffering from severe poverty. Household food security is linked to low food production and weak agricultural productivity, limited access to arable land (or availability of arable land) and other productive assets, extensive crop destruction by wildlife and pests, inadequate opportunities for rural employment, poor food use, and weak access to road and transport infrastructure. Bhutan's mountainous terrain is a fundamental constraint to growth and rural poverty reduction. Poor road access isolates a large proportion of rural people from markets and social services, and limits their livelihoods to subsistence agriculture. The Government of Bhutan and development partners have responded to this constraint by constructing more than 1,500 kilometres of farm roads and tracks since 2003. The proportion of rural people within one hour walking distance of a road had increased from 40 per cent in 2000 to 53 per cent in 2008.¹⁴
9. **Project objectives.** AMEPP was IFAD's sixth project in Bhutan. It became effective from 1 July 2006 and was completed on 31 December 2012 (six months later than planned). The project's primary objective, as stated in the President's Report, was to "improve livelihoods of the rural poor in the programme area on a sustainable basis by enhancing productivity, income growth and access to economic and social services".
10. The primary project objective was to be achieved by: i) Supporting capital formation in crop, livestock and niche-crop production; ii) Improving the conditions under which enterprises and income-generating activities are started and operated; iii) Enhancing access to rural financial services (especially credit); iv) Building the capacities of grass-roots organizations and developing skills through training; v) Improving the common socio-economic infrastructure, especially the road network and marketing support system.¹⁵
11. **Project area.** The target area for AMEPP incorporated the six eastern *dzongkhags* (districts) of Bhutan – Lhuentse, Mongar, Pemagatshel, Samdrup-Jongkhar, Trashigang and Trashigang Yangtse. The project area was composed of 70 *gewogs*

¹³ Bhutan Gender Equality Diagnostic of Selected Sectors 2013.

¹⁴ <http://www.worldbank.org/en/country/bhutan/overview> (consulted 9 December 2013).

¹⁵ AMEPP Report and Recommendations of the President, EB 2005/84/R.13/Rev.1, IFAD, April 2005.

(refers to a group of villages)¹⁶ covering an area of 11,000 square kilometres (close to 29 per cent of the total national area). The programme design document stated that the eastern region had, at the time of design, a population of some 226,200 living in 26,600 households. The 2005 AMEPP Report and Recommendations of the President reported an average rural household size of 8.5 persons. The National Statistics Bureau's Bhutan Multiple Indicator Survey in 2010 stated the average household size in rural Bhutan as 4.6 persons. This takes into account the nuclear family, whereas the appraisal report in 2006 made the point that some households are multi-generational and the actual number of people per property may be higher than the nuclear family. In the absence of data to the contrary, and in line with detailed project data of 24,082 households and observation of combined households during the field mission, the PPA retained the higher estimate of average household size and population covered. The main targeting instrument within the project area was based on the *gewog* development plans, which are drawn up through a participatory process involving the village leaders, based on an annual workplan and budget forum.

12. **Target group.** The primary target group was estimated to be 24,082 households – 80 per cent of the households in the programme area, with the other 20 per cent residing in town areas. The project separated all households in each *gewog* into three categories: A) Well off, B) Average and C) Poor. This was a comprehensive exercise that was carried out by project staff, covering 24,082 households, with 21,108 classified as average or poor (table 1).

Table 1
Wealth ranking in the programme area

<i>Population (households)</i>	<i>A</i>	<i>B</i>	<i>C</i>
Permagatsel	519	1 577	1 539
Luntze	303	898	901
Mongar	675	2 348	1 924
Samdrup	448	1 767	1 427
Tashigang	543	4 182	2 138
Yangtse	486	1 341	1 066
TOTAL (for 24 082 households)	2 974	12 113	8 995

Source: Royal Government of Bhutan–IFAD RIMS database.

13. **Project components.** The project components were: (a) On-farm production, (b) Marketing & enterprise development, (c) Rural financial services, (d) Access infrastructure, and (e) Program management.¹⁷
14. The **on-farm production** approach combined capacity building of the farmers with inputs supply to achieve higher productivity and production, and to generate marketable surplus. The main activities in the **marketing and enterprise development** component were development of market infrastructure, capacity development on market-oriented production, value chain concepts, market information and quality control.
15. The **rural financial services** component was implemented through a subsidiary loan agreement with Bhutan Development Finance Corporation to increase access to credit for productive activities in the east. The largest focus of the project was on the **access infrastructure** component, in order to improve road connectivity and facilitate movement of agricultural products to market.

¹⁶ There were 66 *gewogs* at the time of AMEPP design, but subdistrict boundaries were adjusted in 2007 to make 70 subdistricts.

¹⁷ AMEPP Report and Recommendations of the President, EB 2005/84/R.13/Rev.1, IFAD, April 2005.

16. **Project management.** The Ministry of Agriculture was the lead implementation agency, with the Ministry of Finance having overall responsibility for the flow of funds and financial monitoring. At the national level a programme steering committee provided policy and strategic direction, and endorsed the annual workplan and budget. At the regional level, a project coordination committee provided a forum for solving operational issues. A PFO operated from Khangma (Trashigang *Dzongkhag*) to facilitate implementation of the program activities in the *dzongkhags* and *gewogs*. The *dzongkhag* sector officers were responsible for their respective component activities, namely agriculture production, livestock, engineering and forestry. SNV provided technical assistance to the programme, focusing on decentralized economic management, good governance, sound infrastructure, investment planning and implementation, and M&E.
17. **Project costs.** The summary of project costs at design and completion are shown in table 2. The total programme cost was estimated at US\$19.6 million. About 71 per cent of the total programme cost was financed through IFAD loan of Bhutanese Ngultrum (BTN) 866 million (US\$13.9 million), with an additional BTN70,000 (approximately US\$1,120) as a grant for technical assistance. SNV provided around US\$1.6 million in the form of technical assistance support. The Government's contribution was US\$3.10 million and the beneficiaries contributed US\$1.0 million.

Table 2
Summary of project costs US\$ at design and completion

Components	Total US\$ million	% of base costs	Actual US\$ million	% of actual costs
On-farm production	2 085	12	3 162	18
Marketing and enterprise promotion	2 395	14	898	5
Rural financial services	1 385	8	792	5
Access infrastructure	8 630	50	8 810	50
Project management	2 801	16	3 774	22
Total costs*	17 296		17 436	

Source: IFAD President's Report, 2005 and PCR 2012. Total appraisal estimates include the Royal Government of Bhutan, SNV and beneficiary contributions.

* This figure excludes physical and price contingencies. The project management costs incorporated a 5 per cent allocation for the Micro Initiative Fund and Business Opportunities Fund grants as shown in the AMEPP Project Design Report.

18. **Changes/developments during implementation.** During implementation, there were no major changes in the project context. The main features of the project and the identified opportunities and risks remained as noted in the design. There was a shift in allocation of resources to respond to higher demand for on-farm activities, increasing the allocation for project management and on-farm production, with a respective decrease for marketing and enterprise promotion and rural financial services. The loan agreement was amended in 2010, largely in response to an earthquake in the eastern region. An amount of special drawing rights (SDR) 325,000 was allocated in a special account for earthquake rehabilitation-related activities. This included repair to roads already improved through the project. At the same time, the loan amendment incorporated some changes to the annual workplan and budget processes to align with updated procedures of both the Government and IFAD.

B. Project implementation

19. **Implementation results.** The section provides a brief summary of the main activities and results achieved per component against targets set at design (appraisal) and as revised in the mid-term review (MTR) in 2008. The MTR

revisions to targets were based on the field experience and demand from participating groups. Some targets were reduced, but others were increased or added as the PFO identified additional interests by groups.

20. **On-farm production.** AMEPP supported training and capacity-building in technical and financial skills including, amongst others, horticulture, dairy group development, dairy farm management, poultry and piggery. On-farm crop demonstrations with provision of seed materials in some cases were also provided to the farmers by the extension officers. As shown in table 3, appraisal project targets and MTR revised targets for all key activities were exceeded, except for the supply of drip and sprinkler irrigation system where the maintenance costs were considered to be high. Although the targets for training in mushroom production were both increased and exceeded, there were issues with the marketing of this commodity. In addition, there were other activities that were identified for support during project implementation; for example, distribution of improved seeds and seedlings for maize, potatoes and vegetables, and creation of 82 citrus nurseries. Some farm equipment, such as sprayers (92), were provided to the *gewog* offices for rent.

Table 3
Physical progress – On-farm production

Component	Output/activity	Unit	Appraisal target	Revised targets	Cumulative total
On-farm production	Training in cereals, vegetable production and orchards		-	1 284	1 739
	Drip and sprinkler irrigation systems supplied	No. systems	8	40	28
	Mushroom production	No. of farmers	63	372	373

Source: IFAD, AMEPP PCR. Report No: 2867-IN. December 2012, annex 5, pp. 13-14.

21. **Livestock activities.** For the livestock sector, significant outputs were achieved, such as farmer's trainings (123.5)¹⁸ and 1,586 acres of pasture development, which was considerably higher than the appraisal target of 294 acres. Other achievements in the livestock sector included supply of 302 veterinary kits (110 per cent of target), construction of 727 hygienic cow sheds,¹⁹ supply of dairy equipment and establishment of 17 milk sales booths/counters.
22. A total of 4,228 (appraisal target 3,600) animals were artificially inseminated and nine animal breeding centres were established. These centres were continuing to function at the time of the PPA mission. The target for the number of bulls supplied was reduced while that for artificial insemination was increased at the MTR, because the capacity of the *dzongkhag* artificial insemination centres proved to be successful near these centres. However, they proved to be less successful in more remote areas, so the purchase of bulls recommenced and the artificial dissemination programme scaled to fit with the ability to reach nearby communities. The progressive distribution²⁰ of bulls in more remote areas contributed to upgrading of cattle herds even in isolated areas.²¹ Training was provided to 467 livestock extension agents (appraisal target 401), and equipment was supplied to 302 community animal health workers (appraisal target 120). The programme to train and equip village animal health workers (VAHW) started well and was considered a success at the time of the MTR. Unfortunately, this did not

¹⁸ AMEPP PCR annex V, table 1, page 53.

¹⁹ The programme supplied basic construction materials and advice on design. Farmers provided the labour and local materials. The PPA mission was able to view a number of cow sheds still in active use.

²⁰ Bulls were kept in one village for one year, then were passed on to adjacent villages in succeeding years.

²¹ Some bulls did die in transit and due to ill health, but the number was relatively low.

continue as there was no ongoing allowance, and community members were not able or willing to pay for services.²²

Table 4
Physical progress – On-farm production – Livestock

<i>Component</i>	<i>Output/activity</i>	<i>Unit</i>	<i>Appraisal target</i>	<i>Revised targets</i>	<i>Total accomplishment cumulative</i>
On-farm production: Livestock	Pasture development – Area developed	Acres	294	488	1 586
	Community animal health workers – Training	No. of CAHW	330	156	270
	Community animal health workers – Equipment supplied	No. of CAHW	120	155	302
	Animal breeding – Jersey bulls supplied	No. of bulls	165	28	120
	Animal breeding	Centres established	9	8	9
	Animal breeding	Animals inseminated	3 600	6 893	4 228
	Livestock extension agents trained	No. of agents	401	93	467

Source: IFAD, AMEPP PCR. Report No: 2867-IN. December 2012, annex 5, pp. 13-14.

23. **Forestry activities.** The forestry support was largely in distribution of seedlings (over 200,000 plants) and some training for improved land management (114 acres). Watershed protection was carried out for 445 acres, particularly in areas where infrastructure activities were implemented. In addition, two studies on potential non-wood forest products were carried out (seven were targeted) and 12 rainwater harvesting ponds were established. Although these activities were considered to be successful, the extent of activities was well below those for on-farm support.
24. **Access infrastructure.** AMEPP supported the construction of 260.48 km (104.9 per cent of appraisal target) of new farm roads. Resources were switched from power tiller tracks, of which only 31 km were developed (target at design 240 km) to farm road renovation (210 km). The reason for shifting the focus to farm roads rather than tiller tracks was that the experience with tiller tracks showed that their upgrading was as expensive as building new farm roads. In addition, it placed unrealistic demands on the community for voluntary labour. SNV support included training for engineers in bioengineering, improving the quality of the roads constructed.
25. The full extent of new irrigation canal targets was not achieved because the demand for farm road access was higher than for irrigation. In addition, unit costs of materials for both roads and irrigation were higher than appraisal estimates, so the focus turned more towards rehabilitation of canals. Another barrier to installing irrigation was the lack of expertise of local engineers in how to design and develop irrigation systems.

²² There is current training for the artificial insemination programme to establish village artificial dissemination providers. Some of those trained are the CAHWs and it is hoped that this will generate a fee to allow them to function both as artificial dissemination providers and provide some animal health and nutrition advice.

Table 5
Physical progress – Infrastructure development

Component	Output/activity	Unit	Appraisal target	Revised targets	Cumulative total
Infrastructure development	Roads constructed	km (road)	155	248	260
	Power tiller tracks constructed	km (road)	240	-	31
	Irrigation canal renovated	km (canal)	-	24	123
	Irrigation canals constructed	km (canal)	75	-	7

Source: IFAD, AMEPP PCR. Report No: 2867-IN. December 2012, annex 5, pp. 13-14.

26. AMEPP, together with SNV, trained 129 *dzongkhag* engineers on environmentally friendly road construction (EFRC). However, according to the IFAD PCR, the major requirements of EFRC were not met in many cases (e.g. environmental impact assessment, cross drainage structures), and there was still a lack of awareness of EFRC concepts and objectives amongst the district engineers. Training was also provided in bioengineering, survey methodology and extension agent assessment, and on bidding procedures.²³ For routine maintenance of rural infrastructure, training was provided in community mobilization and operations for the 14 road user groups formed. Community forestry groups were established and provided basic support, and in collaboration with SNV, several watershed management plans were developed; however, no funds were provided for implementation.
27. **Marketing and enterprise development.** The results in market support activities were less successful. The construction of marketing infrastructure was the sole responsibility of the *dzongkhags* and as a result initially there was not strong collaboration with the Regional Agriculture Marketing and Cooperative Office (RAMCO).²⁴ Coordination and strategic positioning of the infrastructure improved over the programme period.²⁵ The MTR noted low performance of the component due to a lack of perceived need by the community.²⁶ Only 12 of the appraisal target of 90 village produce stores were established. This was partly as a result of the need for a wider variety and larger scale market infrastructure at strategic locations and hence higher material costs. Consequently, 16 new marketing sheds, 21 collection points, 20 produce stores, 246 small silos²⁷ (453 targeted at MTR), two crop stores (11 targeted) and 25 household-level zero-energy cooling chambers were also established.

Table 6
Physical progress – Marketing and enterprise development

Component	Output/activity	Unit	Appraisal target	Revised targets	Cumulative total
Marketing and enterprise development	Village produce stores established	No. of stores	90	120	12
	Training in value chain development	No. of people	179	-	89

Source: IFAD, AMEPP PCR. Report No: 2867-IN. December 2012, annex 5, pp. 13-14.

28. Approximately half of the appraisal target for people trained in value chain development was met. This was lower than projected because the focus on marketing came late in the programme period and was not given sufficient

²³ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. p. 10.

²⁴ Initially, RAMCO was known as RAMS until it also became responsible for supporting cooperatives in 2009.

²⁵ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. p. 89.

²⁶ IFAD, Mid-term Review, paragraph 28.

²⁷ Early in the project, three larger silos were constructed but were found not to be effective because of difficulties in collection, marketing and management systems, so smaller units were found to be more appropriate.

emphasis. In addition, a greater focus was placed on exposure visits to other locations where cooperatives were working effectively.

29. **Rural finance.** There were no specific appraisal targets set for the rural finance aspect of the programme. However, BDBL provided 3,448 loans worth BTN 130 million, showing that the programme support to BDBL of BTN 44 million was revolved close to three times. The total amount owed by borrowers exceeded BTN 50 million in June 2010, showing that BDBL was fully utilizing the funds and had mobilized its own resources. Most loans were for a term of 2 to 3 years, and the majority of the loans (88 percent) were to individuals (which required collateral) with only 12 per cent being group loans; 35 per cent of the borrowers were women.
30. Although project-supported loans were meant to be for on- and off-farm income-generating activities, the BDBL impact survey found that only 44 per cent of loans were reported as being used for these purposes (mostly livestock). Of other uses, 38 per cent were for housing, 4 per cent for education and 14 per cent for other purposes. To try and make loans more attractive for poorer households, IFAD requested a ceiling of BTN 30,000 for all loans, but this meant that they were less useful for productive investment and helps account for why so much credit was used for other purposes. At project closure, the portfolio at risk was 13 per cent, but the range across the *dzongkhags* was from 7.34 per cent in Mongar to 27.03 per cent in Samdrup Jhongkar. The feedback from BDBL at the time of the PPA was that borrowing in the east had risen sharply and that PAR had dropped significantly to around 8 per cent. This was largely achieved through better screening of proposals, identification of risk and credit discipline. However, detailed data was not available by *dzongkhag*.
31. **Programme management.** The programme management unit was based in the project area, and was active in guiding and supporting the *dzongkhags* in day-to-day operations. The unit's location in the project area was beneficial for operations, but faced challenges in relation to liaison at the national level, particularly in regard to financial management matters. Across all project components, there was training for staff. The training levels were generally in line with or exceeded the targets at appraisal; for instance, 18 staff were targeted for orchard production and 30 were trained, and 14 were identified for mushroom production and 17 were trained. However, it is indicative of the low focus on enterprise development that it was only 28 of the planned 86 staff members were trained on farm business management during the programme period. The Micro Initiative Fund (MIF) support assisted the development of 168 small enterprises and 12 enterprise proposals were funded by the Business Opportunities Fund (BOF).²⁸
32. On other aspects of programme management, all activities were adequately supported. The main implementation issue was the delay in funds flow. This was a result of inexperienced programme officers in fiduciary matters and insufficient training from IFAD. The result was that funds withdrawal applications were consistently delayed and the Government had to prefinance component activities, particularly construction where service providers reached the stage of threatening to sue the Government for non-payment of contract charges because the funds from IFAD had not been received. The cash-flow challenges delayed some project activities. However, this was addressed once the IFAD programme coordination office in Delhi was established; i.e. IFAD took over the role of direct supervision in 2008 and communication with IFAD being more direct helped improved the fiduciary situation.

²⁸ It is not clear why these activities were placed under the project management component – they would have been better placed in the marketing and enterprise component.

III. Review of findings

A. Project performance

Relevance

33. **Strategic alignment of design.** The AMEPP design was in line with national policies and priorities of the Government. AMEPP addressed stated priorities in the Ninth and Tenth Five-Year Plans, including road access networks, livelihood improvement and lack of job opportunities in rural areas.²⁹ IFAD's strategic framework at the time of AMEPP design (2002-2006) emphasized improving access to markets through integrated approaches along the full continuum of production, processing and marketing, as well as improving transport infrastructure.
34. There was no current IFAD country strategic opportunities programme (COSOP) for Bhutan at the time of design, the most recent strategy having been prepared in 1996. At that time, the eastern region was identified as the area with the highest levels of poverty and the focus for IFAD operations. It noted the geological fragility of the area, the circuitous and extreme gradients required for road alignments, the high costs of maintenance and the negative environmental implications, concluding that the construction of roads should be generally discouraged. Nevertheless, it recommended that IFAD would need to support the improvement of the farm roads network if food deficits in the area were to be addressed.
35. The OSC at the time of design questioned the relevance of the outdated COSOP and the proposal to invest a US\$14 million loan, largely for farm road infrastructure in the remote eastern region. It recommended that the socio-political aspects of Bhutan's development policies and capacity development in a regional context be strengthened. Both COSOP and OSC emphasized the importance of IFAD's support to Bhutan in pro-poor agriculture development, to ensure that from a strategic perspective Bhutan's development path would be inclusive of the rural poor.³⁰
36. **Relevance of design.** The title of the program emphasized marketing and enterprise promotion. However, investment in infrastructure comprised over 50 per cent of the loan, and the design logic, as articulated in the design framework, assumed that infrastructure would be the main driver for improving the livelihoods of the poor. On the other hand, the economic analysis in the design assumed that the benefits to farm households would accrue from the increase in on-farm production and capital growth³¹ in the programme areas. In reality, the combination of increase in access infrastructure and improved production has been relevant, resulting in an increased capability in the project area to improve productivity per acre and move product to market at a lower cost. There was a lesser focus on marketing and enterprise, which accounted for only 5 per cent of the budget at the time of project completion. The "godfather" programme³² and rural enterprise parks³³ proposed in the design were not appropriate to the context and did not proceed.
37. **Targeting.** The COSOP in 1996 called for more specific and narrower poverty identification and targeting in future projects.³⁴ However, COSOP also stated that the Government had a "general aversion" to discriminate explicitly for or against specific strata of rural households, so that use of an effective M&E system was more appropriate than explicit targeting. Despite that finding, AMEPP had a very explicit and complex targeting approach, dividing the population into three wealth

²⁹ Royal Government of Bhutan, Tenth Five-Year Plan (2008-2013), Gross National Happiness Commission.

³⁰ IFAD Intranet. Bhutan: Agriculture, Marketing and Enterprise Promotion Programme (OSC 2004/41/PI).

³¹ There is a difference in terminology between the appraisal report, which emphasizes productivity, and the Report and Recommendation of the President, which specifies supporting capital growth in agriculture.

³² The aim of the "godfather" approach was for successful entrepreneurs to mentor new entrepreneurs.

³³ The rural enterprise parks were to be comprised of simple modular buildings with basic provisions of power and water that would be managed by the *gewogs*. IFAD, January 2005, AMEPP Appraisal Report, Volume 1: Main Report Asia and the Pacific Division, Programme Management Department. page 31, para 115.

³⁴ IFAD, COSOP, 1996, page 9.

categories. The poorer categories B and C were estimated to be around 90 per cent of the population; i.e. only excluding 10 per cent of the population. Feedback from program staff was that the targeting required high time investment to interview all communities and separate households into the three categories. Identifying households as poor is considered insensitive and inappropriate from a cultural perspective. Identifying poorer households for access to the MIF and training, particularly the more remote communities, was relevant to ensure that appropriate benefits reached the poorest households. However, the targeting approach itself was reported to be cumbersome and culturally inappropriate for community members to participate in and for staff to implement. Identification of the MIF target group could have been carried out in a less intrusive manner; e.g. in discussion with local leaders and through self-targeting.

38. The six eastern *dzongkhags* represented the poorest region of the country at the time of design and still remain the area with the highest poverty.³⁵ The programme design stated that benefits would be targeted primarily to poorer households living in locations that suffer most from isolation. The approach was relevant in concept but faced challenges in implementation. For practical purposes, remote areas with no road access may require 2-4 days walking to be reached and the majority of benefits accrued to communities that were directly benefiting from new roads. The roads were constructed in a radial manner from the existing roads, gradually penetrating to more remote areas, so those in closer proximity to main roads benefited earlier in the project. The program implementers did make efforts to spread benefits to the most remote areas without roads and all communities received some benefits, but the scope of the project was insufficient to reach all *gewogs* with equal support. Nonetheless, the improved road network did benefit some remote communities by providing alternative shorter or easier routes to market, and most remote areas were targeted with MIF activities.
39. **Relevance of implementation modality.** A strength of the project was that it was implemented mainly through existing extension networks and was aligned to complementary Government programmes. Nevertheless, a stronger focus on marketing would have been beneficial, particularly towards the end of the project as access improved. With regards to appropriateness of project implementation, 65.5 per cent of the farmers interviewed³⁶ as part of the impact assessment for the Government PCR felt that the activities were appropriate to their context and needs, while another 33.4 per cent felt the activities implemented were only somewhat appropriate.³⁷ The PCR survey reflects that supply of seeds, seedlings and farm implements was the most relevant activity to the highest number of farmers (20.7 per cent), because these activities were spread widely across all *gewogs* regardless of road construction. The second most relevant support mentioned by farmers was farm roads (18.1 per cent), followed by crop production support (15.6 per cent), farmer training (13.8 per cent) and dairy production (9.7 per cent).
40. **Design assumptions.** The design assumptions related mainly to the capability of *dzongkhags* and *gewogs* to maintain and manage project inputs, including the development of transport master plans. These assumptions were partly within the control of the project to support and assist the decentralized government structures. Based on findings from the PPA, the *dzongkhag* level had been strengthened, transport master plans were produced and being implemented, and rural credit across the districts had achieved viable levels of operation.³⁸ However, *gewog* level capacity had not been strengthened to the same extent and there

³⁵ Japanese International Cooperation Agency and Kingdom of Bhutan's Study for Poverty Profiles in the Asian Region – Final Report 2010 showed that the incidence of poverty in the eastern region was (48.8 per cent), compared to central (29.5 per cent) and western (18.7 per cent).

³⁶ The PCR survey covered 1,034 farmers across the project area using a random sample.

³⁷ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012.

³⁸ Based on information from the *dzongkhags* and BDBL officers met during the field visit.

were still major questions around the ability to maintain infrastructure installed through AMEPP. Another assumption was that the project area would not be affected by major natural calamities. However, the project area was affected by a major earthquake in 2009. The project re-allocated SDR325,000 to earthquake relief to rehabilitate damaged roads and structures. One assumption not explicitly identified was sufficient availability of farm labour in order to achieve the targeted increase in agricultural production.

41. **Relevance rating.** Overall, the programme concept and design were relevant. The programme aligned well with IFAD and the Government's strategies. The target area was relevant, and although the specific household targeting strategy was less relevant, the activities were appropriate for poor households and there were no major barriers to access by poor households, apart from obvious difficulties for more remote communities. Implementation approaches were adapted to the programme context and changes during implementation helped to maintain relevance throughout the programme. Consequently, this PPA rates the relevance of the project as satisfactory (5).

Effectiveness

42. **Effectiveness of targeting.** Programme activities were spread thinly across the eastern region. In terms of effectiveness, the results show that while the intensity in each district and *gewog* was limited, the benefits were shared across the region. The improved road connectivity was of substantial benefit to many villages, improving access to a wider population than those directly adjacent to the road itself.³⁹ The improvement in connectivity added benefits to the whole region by creating alternative routes to different destinations, particularly if road blockages occurred with landslides or road works. Travel time, safety and road capacity have increased substantially across the region compared to the pre-project situation; for example the IFAD PCR cited Jangchuling where a wide range of benefits were listed.⁴⁰ Similarly, the inputs in agriculture production were widely spread across the *gewogs* and reached farmers even in the most remote areas of the region. In this respect, broad targeting across the eastern region has been effective.⁴¹
43. The MIF activities were found to be effective in relation to the capacity of the poorest households. The extension officers were responsible for working with the targeted households, community leaders and technical officers within the *dzongkhags* to identify the most appropriate activities for specific households and local markets. The proposals were prepared by the extension officers and were subject to a rigorous and consultative approval process. Although the process was protracted due to the multilayered screening and approval requirements, it reduced the risks of failure and ensured that there was sufficient market for the expected products in the majority of cases. The PPA mission was made aware of several isolated cases where too many of one activity were promoted through the MIF, resulting in oversupply in relation to market absorptive capacity. This situation appears to have happened because certain activities were strongly promoted by the project officers. This resulted in a slight drop in price for producers and some farmers then shifted to other activities.
44. Category A (well off) and B (average) households were seen to have the greater potential for rural enterprise development through the Business Opportunity Fund and accessing rural credit, as they had the required collateral and were willing to take the associated risks.⁴² The success rate of BOF enterprises was around 60 per cent at the time of the PPA based on feedback from RAMCO, which is a

³⁹ Selection criteria for the construction of farm roads activities were at least 7-10 households per km, good potential for on-farm production expansion, and technical and environmental feasibility. The IFAD PCR identified that farm roads activities benefited more than 2,500 poor and food-insecure households.

⁴⁰ IFAD, AMEPP PCR. Project Completion Report No: 2867-IN. December 2012. box 6.

⁴¹ The project database shows that each community had been targeted by MIF and agriculture support activities.

⁴² IFAD, AMEPP PCR. Project Completion Report No: 2867-IN. December 2012. pp. 3 & 14.

relatively high survival rate for enterprise support programs.⁴³ Engaging more capable households in enterprise development was realistic in maximizing effectiveness of the enterprise component. Overall, AMEPP activities seem to have been carried out by a cross section of the rural population and the risk of failure was effectively mitigated through program processes. Effectiveness by each of the five objectives has been assessed in the following paragraphs.

45. **Objective 1. Supporting capital formation in crop, livestock and niche-crop production.** Capital formation for farms is generated through improvements in farm structures and machinery, farm assets such as trees and livestock, and savings from income generation. Social capital is generated through various training and technical skills activities. An important factor in social capital generation for AMEPP was the focus on forming farmers' groups. This process commenced in the Second Eastern Zone Agricultural Project (1999-2005) and was consolidated as a main project strategy in AMEPP. The formation of groups assisted in targeting the correct support activity in line with farmers' interests and in reaching more farmers with project support.
46. The PCR survey findings indicate that crop production and productivity for staple food and on-farm assets had increased, and some crop diversification, particularly in vegetables, had occurred. For instance, the IFAD PCR study indicated that 87 per cent of farmers interviewed had increased production of cereals (rice and maize) through training and improved varieties. Government data for agriculture production in the eastern region included increases in rice (13.19 per cent), potato production (7.37 per cent), asparagus and garlic (14.73 per cent), ginger (87.46 per cent), apple (68.09 per cent) and mandarin (115.94 per cent). The cropping improvements have contributed to increased household and group income and savings. All groups met during the PPA reported an increase in group savings. Farm household members met also articulated use of increased income to add to cash savings and farm and household assets.
47. The cattle population for the year 2011 compared with 2005 shows a decrease in population of local cattle – such as for Mithun cattle (98.89 per cent) and Nublang breeds (62.12 per cent) – and an increase in pure Jersey cattle (5.95 per cent), Jersey-cross (30.15 per cent) and Brown Swiss cattle (78.05 per cent).⁴⁴ This demonstrates that there has been an improvement in the breeding stock for dairy cattle in the programme area. There has been limited increase in on-farm structures and equipment, although some equipment was provided through the MIF to help farmers reduce drudgery, and undertake quicker and quality processing of products such as milk, butter, cheese, potato chips and cornflakes. The Bhutan Agriculture and Food Regulatory Authority supported the procurement of quality control equipment, particularly in dairy, as well as training of staff. Based on the PPA findings, further technology development and improved quality control would be beneficial as commercialization progresses.
48. Overall production figures for the east have declined in recent years. Yet, this has largely been due to labour shortages as rural-urban migration occurs, to reducing water supply in some areas as streams dry up and to increasing damage from wildlife as environmental protection measures take effect. Increasingly land is being left fallow and it is not clear if capital investment is increasing or in decline. This effect is not attributable to the project; feedback from PPA respondents suggests that the programme has contributed to drawing back some households into the community, and retaining others as livelihoods and conditions have improved. Despite the decline in production figures for cereals across the project area, there is evidence that programme-supported households have increased

⁴³ Small Business & Entrepreneurship Council (SBE Council) – On average only 49.6 per cent of small enterprises survive for more than five years. <http://www.sbecouncil.org/about-us/facts-and-data/#sthash.BiQvPsi3.dpuf>.

⁴⁴ the Government's Ministry of Agriculture and Forests Bhutan RNR Statistics 2013.

overall farm production, particularly in high value-crops and livestock; consequently the investments have been effective in on-farm capital formation.

49. **Objective 2. Improving the conditions under which enterprises and income-generating activities are started and operated.** RAMCO⁴⁵ was supported to establish an office in Mongar to assist in the design of marketing infrastructure, for market research studies, and for training of extension agents and farmers groups on value chain and marketing. Establishment of RAMCO made a substantial contribution to the shift in market orientation in the east and creating an enabling environment for enterprises. However, the process took time to strengthen and the shift in market orientation occurred only later in the project. For instance, the MTR found that the market sheds and collection centres constructed with AMEPP support were overengineered and overfinished for their planned use. Later investments were more carefully considered and placed in key marketing locations. The establishment of a marketing information service through a mobile phone system was still in operation. During the PPA mission, farmers indicated that they did use the service, although radio and television were also effective means to communicate market prices. RAMCO provided valuable technical support to MIF and BOF activities and a programme of one-stop farmers' shops was commenced and is, at the time of the PPA mission being further developed.⁴⁶
50. The MIF was designed to stimulate enterprise promotion. Initially MIF guidelines were ambiguous and had to be redefined after the MTR. The demand from the group members was mostly for production related activities.⁴⁷ The most successful enterprises under AMEPP included poultry backyard farms and semi-commercial farms, semi-commercial dairy farms, milk processing, cornflake and other agroprocessing units, polytunnels for vegetable nurseries and early high-value crops (e.g. chilli), fish farms and vegetable production groups. The BOF was designed to support entrepreneurs with a higher level of capacity to grow larger enterprises. Overall the approach of MIF and BOF was effective; poor farmers received intensive support.⁴⁸ Yet the groups met during the PPA mission indicated still being dependent on the Government support when enterprise challenges arise.
51. Nevertheless, the enterprise and marketing activities have been moderately effective in achieving a shift in orientation for agriculture across the project area, and have started to influence decision-making of both implementers and amongst farmers. For example, by MTR there was a change in identification of priority road construction on the basis of market requirements, and farmers were starting to shift production to respond to feedback from the auctions held at market points. Nevertheless, the assistance to marketing and enterprise development is still at early stages.
52. **Objective 3. Enhancing access to rural finance.** Initially there was considerable delay in finalizing the subsidiary loan agreement between Ministry of Finance and BDFC.⁴⁹ Also, in the early stages of the project, there was controversy between IFAD, United Nations Office for Project Services (UNOPS), BDBL and project implementers over the loan limits. IFAD maintained that the loan limit should be BTN 30,000 (US\$625 at the time of MTR)⁵⁰, whereas both the project implementers and the bank felt that the upper limit was insufficient to build on-farm capital; for instance, the amount was not enough to buy a cow or build a shed. BDBL initially

⁴⁵ The Agriculture Marketing Service (AMS) of the Ministry of Agriculture and Forests supported the marketing of agricultural outputs, along with identification and value addition for agricultural products. IFAD supported the establishment of the regional AMS (RAMS), which functions today as the Regional Agricultural Marketing and Cooperative Office (RAMCO), based in Mongar.

⁴⁶ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. page 89.

⁴⁷ IFAD, Mid-Term Review, Aide Memoire, paragraph 26.

⁴⁸ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. page 17.

⁴⁹ The Bhutan Development Financing Corporation (BDFC) became a bank, Bhutan Development Bank Ltd (BDBL), in 2010. It is the only formal provider of financial services in rural Bhutan.

⁵⁰ IFAD, Mid-Term Review, Aide Memoire, paragraph 37.

required full security, but post-project turned to group lending based on both the support of AMEPP for group formation and its own Grameen-bank influenced national group lending programme.⁵¹

53. The PAR of 13 per cent at project closure indicated that there were some challenges with repayment, but BDBL reported that it had reduced the PAR to 8 per cent, indicating an improvement in repayment rates. During the PPA field mission, the farmers met confirmed the usefulness of access to credit, mainly to increase cattle herd size. A number of farmers took repeat loans, but then turned to self-financing from savings. There were isolated examples stated of where the activities were not viable and farmers had to repay from other sources of funds. This was the case in several dairy loans, where the cow died or did not produce as much milk as targeted for health reasons.
54. The PCR found that category C households were less likely to take loans from BDBL, partly as they did not have the required collateral, but also due to their own reluctance to borrow and on advice from the Government extension officers about their capacity to repay. BDBL was able to mobilize significant capital resources from urban savings and strengthened its reach into eastern region households so that almost all *gewogs* now have access to banking services.⁵² Overall the rural finance component was effective because it reached a significant number of borrowers, partly due to the success of AMEPP group formation. BDBL fully utilized the project funds, PAR has declined and the credit has resulted in increased on-farm investment.
55. **Objective 4. Building the capacities of grass-roots organizations and developing beneficiaries' skills through training.** The project approach of carrying out direct farmer training whilst piloting new initiatives in soil fertility, niche economic crops and preparing producers to take a more market-oriented approach did achieve a higher level of farmer knowledge and skills. There was keen interest in training and the formation of farmers groups provided an effective mechanism for multiple training to group members. The groups were largely functional although very small.⁵³ RAMCO assisted groups to improve skills in group management and record keeping as stated in the PCR.⁵⁴ During the PPA visits, the PPA team confirmed that the groups were still at a rudimentary stage.
56. There was positive feedback from the farmers during the PPA on the quality and effectiveness of training, but there were contextual issues to maximizing the potential of the training, such as availability of recommended seeds, lack of labour for more intensive on-farm activities or lack of tools to follow advice on land preparation.⁵⁵ The IFAD PCR reported adoption rates for different commodities ranging from 20-50 per cent of those trained.⁵⁶ There were slightly more adopters in villages with intensive project support, but a similar if slightly lower adoption rate was seen in other villages with less intensive support. This result affirms the information provided to the PPA team from extension staff that farmers have been replicating improved technologies introduced during the project.
57. The support for skills development of Government extension services was a key factor in effectiveness of capacity-building for both groups and individual farmers. The extension services provided both training and follow-up advice and mentoring. However, the Government policy of rotating staff did impact the continuity of support, and loss of accumulated skills and expertise to the target area. A network of lead farmers has been established through the formal attempt to train VAHW

⁵¹ Based on PPA discussions with BDBL management.

⁵² IFAD, AMEPP PCR. Report No: 2867-IN. December 2012, annex 7, page 41.

⁵³ The average group size is around eight people. The minimum size is three people. A cooperative can be formed with 15 members.

⁵⁴ AMEPP PCR. page 7.

⁵⁵ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. Report No: 2867-IN, annex 10.

⁵⁶ AMEPP and Staff from Sixth Eastern Dzongkhags. Annual Outcome Survey Report. September 2012.

and also informally through group leaders. While the village animal health workers are not operational on a self-financing basis, the capacity remains within the community. On the whole, programme support to group formation has been effective in mobilizing farm communities into acting collectively to strengthen their economic capacity.

58. **Objective 5. Improving the common socio-economic infrastructure.** The investment in farm roads has resulted in a higher level of access across the east, even than targeted at programme design. The farm roads are largely functional and accessible for most periods of the year. The improved access has been of great benefit in improving movement of the rural community for both economic and social purposes. The average travel time for communities directly affected by road construction has greatly decreased,⁵⁷ and even communities not directly reached have benefited from the improved accessibility across the region.
59. There was a quandary faced between opening new roads to improve access, at the same time as working towards specification for all-weather farm roads, inclusion of critical structures for effective maintenance such as concrete drainage canal, and for stabilization of vulnerable areas. The non-inclusion of such important features was due to the lower than required funds available. Unit costs were increased after MTR, but still below the recommended level for best practice construction. This meant that the requirements of design specification had to be balanced with available budget. In practice, there was a compromise between the number of roads opened and requirements for high quality construction. The PPA found that programme implementers tended towards more roads of lesser quality, rather than higher quality and fewer roads. The justification was that road opening was the bulk of the cost and that *dzongkhags* could use their annual development budget to gradually upgrade standards. In fact, some upgrading has already occurred with the use of MAGIP funds for the most critical roads.
60. The investment in irrigation also proved to be effective. Data from PCR⁵⁸ showed an expansion in the total irrigated area from 1,566 acres to 2,985 acres, which enabled 2,201 households to get a better supply of water; of these, 1,001 households had not been covered by irrigation prior to the improvement works. The PPA mission confirmed that some schemes were successful, with good quality work leading to an increase in water supply and with crop yields tripling. However there were reports of construction problems at some schemes, resulting in more limited benefits.
61. Some market infrastructure has also contributed to socio-economic benefits. Of particular importance are the marketing sheds at key locations, particularly within or close to towns and border areas. The design of the sheds is such that they are still open to rain and sun, but several improvements have been made in the design of later structures. The investments have been important to build knowledge and experience in the region, and the feedback from the user groups has resulted in improvements. Market infrastructure is in high demand, and there is indication of gradual import substitution occurring as farmers learn what products are in demand, and then adapt and increase their production accordingly. Group members are given priority for space in the facilities. A small fee is charged for usage.
62. The *dzongkhag* engineers faced challenges in effective contract management. There were limited funds for supervision of construction and contract enforcement proved difficult. Some contractors had insufficient technical capability and made unilateral decisions on design changes without reference back to the engineers. In order to address this issue training was provided to engineers, and Ministry of

⁵⁷ Time spent on an average journey reduced from 2 hours to 40 minutes. IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. appendix, table 9, page 34.

⁵⁸ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. page 39.

Agriculture and Forests outsourced supervision to a consultancy company. This resulted in some improvements and the engineers grew to know the capacity of available contractors, but the problems were not fully resolved.⁵⁹

63. In summary, the programme investment in infrastructure has had a substantial effect on the project area. Improvement of the access network across the project area has been reported by all stakeholders to have been effective in increasing economic progress and improving access to services for programme-supported communities. Lack of labour in the project area has been a barrier to achieving the planned community contribution during farm road construction and a continuing impediment to effective road maintenance. Nonetheless, road openings in remote areas have created new opportunities for communities for socio-economic progress.
64. **Project management.** The placement of a PFO within the programme area assisted in integration of programme activities and support to the implementers. However, the PFO took time to establish and did not follow directly after the Second Eastern Zone Agricultural Project as anticipated. The PFO faced major difficulties in financial management. There was not a clear understanding of IFAD procurement and financial procedures, and there was insufficient training and support from IFAD in the early stages of implementation. The PFO was isolated from the national government, which further delayed resolution of financial issues when they arose. The Government, implementers and contractors faced cash-flow delays, resulting from delays in processing between the Government and IFAD that negatively affected implementation schedules. Turnover of PFO staff during the programme period created a hiatus in operations as new less experienced staff needed to build up their capacity. The implementation mechanism through the *dzongkhags* was effective, although more involvement of *gewogs* might have further strengthened implementation. SNV's support for project management was important, and although the initial monitoring and evaluation system developed was too sophisticated for the context, the revised version was effective in capturing data and for the basic review of programme progress. However, more could have been done through technical assistance to assist the staff to integrate and analyse data as an input to management decision-making and for approval committees.
65. **Overall,** the project was effective in achieving a wide reach across the target area. The investment in access infrastructure made a major contribution to the capability of farmers to gain more cost-effective access to markets, and to increase productivity through improved farming systems and inputs. The direct effect of training and capacity development was moderate in that support per *gewog* was limited, but even in areas where there was less intensive support there was indirect benefit through replication of improved farming approaches. The groups contributed to the effectiveness of service delivery as did the training for extension staff. Of major importance in achieving effectiveness was the combination of inputs, access, training, extensions and credit access. The marketing support was effective but limited, especially given the stated focus of the project and small budget allocated. Strategies for reaching the poor through MIF, distribution of seedlings and improved access were effective in improving livelihoods of the most vulnerable households. The IFAD PCR rating for effectiveness was moderately satisfactory, based on the achievement of the overall programme goal. It is the evaluators' view that this rating may also reflect a weak effectiveness section in the PCR. The PPA assessment of effectiveness is based on achievement of the specific programme objectives.⁶⁰ Of the five objectives, four have been assessed as satisfactory and one as moderately satisfactory; consequently, the PPA rating for effectiveness is satisfactory (5). The reason for the increased rating is also due to:
- i) The continuing existence and growth of groups established under the project;

⁵⁹ IFAD, Mid-Term Review, paragraph 41.

⁶⁰ IFAD Evaluation Manual, 2009, page 13.

ii) The robust regional processes that have led to a wide reach of activities across the region; iii) The importance of the access infrastructure at a strategic level for the development of the region; iv) The relative investment in the various components. The three first factors are expected to contribute to ongoing progress towards the programme goal of further productivity and income growth in the project area.

Efficiency

66. AMEPP took eight months to become effective, which was close to the average for the Asia and Pacific Region (9.1 months) at that time. Due to the slow delivery of funds to the *dzongkhag* implementing agencies in the first three years, implementation only accelerated in the last three years of the project.⁶¹
67. In general, there was underestimation of costs for most of the programme activities during formulation, which resulted in challenges for implementation. This was particularly a concern for infrastructure activities requiring procurement of materials/equipment wherein the unit costs were much higher during the time of implementation, resulting in a higher than targeted expenditure for civil works (see table 7).

Table 7
Increased costs

Category	Original allocation US\$	Revised allocation US\$
Civil works buildings, road construction engineering fees and skilled labour	3 680 000	4 225 000
Goods	670 000	1 500 000
Incremental operating costs	310 000	540 000

Source: IFAD, AMEPP PCR. Report No: 2867-IN. December 2012, annex 4, page 9.

68. **Programme costs.** The programme fully used all loan funds within the time frame, demonstrating overall efficient use of funds. Yet, the delay in funds flow required the Government to prefinance programme activities to the equivalent of BTN 160 million.⁶² The Government had to borrow at short-term commercial rates to cover the delays, resulting in an additional cost to the programme, work stoppages for construction, cancellation of training programmes and delay in supply of project vehicles. Although counterpart funds were provided by the Government, the uncertainty about budget availability restricted scheduling of activities. Management costs rose from 13 per cent foreseen at design to 17 per cent at completion, excluding the MIF activities that were allocated within the project management component. The increases were mainly due to underestimated transportation costs, given the isolation and terrain. The challenges with financial management required more trips to and from Thimphu than had been estimated and the fuel costs were also higher than projected. This resulted in an increase in transportation costs that were necessary to address funds flow issues. Furthermore, when the Government policy of staff changes occurred, additional costs for staff development and reorientation in Thimphu were required.
69. The original programme design did not include an economic analysis of the overall programme citing a lack of reliable data for proper calculation of an economic internal rate of return (EIRR). In the Government PCR, the EIRR was calculated to be 19 per cent. This was based on increases in net farm income from crop and livestock production, and the development of new enterprises (via MIF and BOF) and farm roads (which resulted in reduced transport costs and travel times, and an

⁶¹ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. page 7.

⁶² The Government's Ministry of Finance PPA discussions.

increase in cash crop production). Table 8 provides a summary of calculations for the MIF, BOF and farm roads. The EIRR for roads was low due to the sparse population, averaged at 10 households per km. Dairy production was profitable, with the main net gain arising from butter and cheese production. Egg production was both profitable and had a high economic benefit from the reduced importation of eggs. During the PPA mission it was confirmed that the east was self-sufficient in egg production, largely due to AMEPP support in establishment of commercial poultry production units (see table 8).

Table 8
MIF and BOF enterprise models

	<i>FIRR*</i>	<i>EIRR</i>
MIF: poultry unit 50/150 hens	29 per cent	50 per cent
BOF: dairy processing	17 per cent	23 per cent
Farm roads: 10 households per km		8 per cent

* Financial internal rate of return

Source: IFAD, AMEPP PCR. Report No: 2867-IN. December 2012, page 8.

70. The PPA reviewed the basis of calculation the crop enterprise models for maize, potatoes, rice and mustard as valid for yield but potentially overstated for net financial gain. Nevertheless, the PPA mission also found that a major contribution to economic benefits was from vegetable production, which had not been included in the calculations, and from reduced input and marketing costs from improved access. The IFAD PCR recalculated the EIRR to be 14 per cent. This was due to the reduction of investment cost by removing the emergency funds provided for earthquake rehabilitation work, increase of the time frame for analysis from 15 to 20 years, and adjustment of the people directly benefiting from AMEPP from 160,000 to 135,000.⁶³
71. **Overall**, it was clear that there was a positive economic benefit within the region and that the EIRR would be higher than the IFAD PCR estimate of 14 per cent. However, the delays in project funds flow constrained efficient project operations and created an additional prefinancing cost to Government. Management costs were higher than projected, but using the IFAD PCR estimate of 27,000 households directly benefiting from the project – equating to 135,000 people – the cost per beneficiary amounted to BTN 6,667 (US\$120) per person, which is in line with other IFAD projects in Bhutan (US\$165/person).⁶⁴ From PPA mission findings, efficiency has been rated moderately satisfactory (4).

B. Rural poverty impact

72. The overall goal of the project was to enhance the livelihood means of 22,000 poor rural households and reduce the poverty. In addition to the PPA field visit, the sources of data on programme impact were the IFAD RIMS survey from September 2012, a BDBL-conducted impact assessment for bank clients in the project area, and a farmer survey of 1,034 farmers randomly selected across the project area conducted as part of the Government project completion activities. These results were verified through the IFAD PCR.
73. **Household income and assets.** The RIMS surveys recorded a significant reduction in the number of poor households, with the percentage of poorest and poor households declining from about 65 per cent to 15 per cent, shifting the percentage of average and better off households from 35 per cent in 2006 to 85 per cent in 2012 (table 9). The RIMS survey recorded a concomitant increase in

⁶³ Although the justification for reducing the number of beneficiaries was not stated in the IFAD PCR, it is assumed that this is due to the use of the national household size data. As stated in the programme context, the PPA supports the appraisal assumption that household size in the eastern region is higher than the national average and hence the number of beneficiaries would likely be higher as in the Government PCR.

⁶⁴ IFAD Project Completion Report December 2012, page vii.

ownership of household assets (e.g. electricity, radio, TV, refrigerator, etc.⁶⁵) in relation to higher household income.

Table 9
Change in wealth categories

	Percentage of households	
	2006	2012
Richest	6.8	33.2
Rich	12.7	27.3
Average	15.6	24.3
Poor	28	11.9
Poorest	36.9	3.2
Total	100	100

Source: RIMS surveys, 2006 and 2012.

74. The Government PCR survey results for household income status confirms the shift identified in the RIMS, finding that in 2006, 62.6 per cent of households had income of less than BTN 5,000 per annum. This dropped to 16.7 per cent of households in 2011. Conversely, 32.5 per cent of households in 2011 had income above BTN 20,000 per annum, compared to 3.5 per cent in the year 2005. Similarly, there was a shift of 30.3 per cent that reported having income between BTN 10,000 and BTN 20,000 per annum in 2011, compared to 10.8 per cent in the year 2005. The impact assessment study⁶⁶ noted that 95 per cent of MIF beneficiaries had increased their income as a direct result of the MIF.⁶⁷ Furthermore, there was improvement in their standard of living and food security.
75. In addition to the absolute recorded household income, farmers recorded positive impact from having a reliable income (95 per cent compared to 35 per cent at project commencement). The majority of farmers (69 per cent) reported their main income as derived from agriculture (44 per cent) and livestock (25 per cent) activities; 94 per cent of the 1,034 household interviewed stated that they had increased and purchased better quality household assets as compared to 2006.
76. Villages connected with farm roads in particular reported substantial improvement in income and assets, due to improved access to market, reduced transport costs, increased farm gate prices and expanding on-farm production.⁶⁸ Conversely, the agriculture production statistics showed some reduction in production data. Analysis of the data pointed to a higher level of financial return for labour in the project area due to more intensive farming, higher productivity and lower cost of production. Some of the increase in income may be attributed to growing non-farm sector income⁶⁹ for some households.
77. Improvement in physical assets were made through an increase in productive farm assets such as dairy and poultry sheds, and some rice hullers, oil expellers, corn flake making machines, cooling chambers, etc. However, these were still at a low level across the project area. With artificial dissemination and breeding, and with purchase of improved cattle breeds, farmers have increased value in their cattle

⁶⁵ TV: 11.6 per cent to 50.5 per cent. Mobile phone: 13.1 per cent to 83.6 per cent. Kitchen equipment: 19.2 per cent to 78.0 per cent. Vehicles: 2.9 per cent to 13.4 per cent. (IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. page 40).

⁶⁶ Siddarth Consultancy Services 2012, AMEPP Business Opportunity Facility (BOF) & Micro Initiative Fund (MIF) - An Impact Assessment Study, page 26.

⁶⁷ A total of 23 microenterprises supported through MIF and five supported through BOF were interviewed to assess the impact, as part of the Impact Assessment Study November 2012.

⁶⁸ For instance, fish farmers from Phuntshothang and Pemathang gewogs in Samdrup Jongkhar reported increased annual income of BTN 50,000.

⁶⁹ 69 per cent reported current income mainly derived from agriculture (44 per cent) or livestock (25 per cent) activities. IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. page 13 and annex 10, table 9.

herds. Other impacts reported during the PPA mission were an increase in funds for schooling and household improvements, savings for emergencies and ability to access credit when required. Even though some increase in household income may have been impacted by non-farm income and remittances from absent household members, the evidence indicated that AMEPP has made a substantial contribution to improvement in household income and assets. The PCR rated performance in household income and assets generation as highly satisfactory (6). The PPA concurred that the performance had been positive; however, the extent of benefits across the target area was variable with some households achieving high levels of performance and others with little benefit. Consequently this criterion has been rated as satisfactory (5), but not highly satisfactory.

78. **Human and social capital and empowerment.** Overall the impact on human and social capital appears to be considerable, driven in particular by construction of roads which has improved the mobility of the people within and outside the villages. Many farmer groups (533) have been formed some of which were registered as cooperatives. There were also water user groups, road maintenance groups and several entrepreneurial groups for livestock and agriculture. The training and on-farm mentoring support provided through AMEPP and associated regular Government programmes has contributed to stronger capability of individuals and collectives in the project. The groups provide an opportunity for people to have greater access to services and a stronger voice in accessing their requirements. Examples of such activities identified during the PPA included group members becoming office bearers and learning new skills, office bearers being included in local planning activities, members taking greater initiative for group marketing and creation of group savings accounts, amongst others. Nevertheless, groups are still at a formative stage and there is still considerable need for further development. Staff training has not only improved the knowledge of the individuals trained, but has contributed to a higher level of technical support to individual farmers.
79. The improved accessibility achieved through the new farm roads has decreased travel time significantly in all cases visited by the PPA, sometimes by more than one day. In addition, there has been an increase in visitation of government services and private sector traders to the communities. Out of the total of 70 *gewogs* in the region, more than 80 per cent now have an access to the road corridors.⁷⁰ The resultant savings in time contributes to greater availability for productive activities, particularly higher value crops that require more intensive farm practices. Faster movement of agricultural produce reduces wastage as well as decreases costs. In addition, the time taken for children to reach school, and for household members to reach health and other services, has been reduced.⁷¹ The shift to cheaper and more frequent transport has increased opportunities for employment, better access to markets and more frequent access to information. Improved market information has also provided farmers with a stronger power relationship in market negotiation. Overall, the rating for human and social capital empowerment is satisfactory (5).
80. **Food security and agricultural productivity.** Evidence regarding increased productivity is mixed. Statistics show that between 2005 and 2011 there was an 18 per cent decline in cereal production in the region, with a slight increase (5.4 per cent) in yield being offset by a 22 per cent decline in area. Production of maize, the major cereal crop, fell by 24 per cent. Crop area and yield both declined. The second most important cereal is paddy, and production of this crop increased by 13 per cent with only a marginal decline in area and 15 per cent increase in yield.⁷²

⁷⁰ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012, annex 13, page 87.

⁷¹ IFAD 2011. Supervision Report. page 9.

⁷² IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. page 10.

81. However, for other cash crops the east has done relatively well in terms of production. Department of Agriculture and Marketing data show that between 2005 and 2011 production of potatoes increased by 7.4 per cent (area declined but yield increased 36 per cent), compared with a 2.8 per cent decline for the entire country. Mandarin orange production in the east increased by 116 per cent, compared with only 26 per cent nationally. Likewise, production of milk, eggs and poultry meat in the east all increased between 2005 and 2011, although butter and cheese production declined – largely in line with national trends. The data show that the east has experienced the same decline in cereal production as is found in national trends. At the same time, the higher value crops have contributed to an overall economic gain in the agriculture sector in the eastern region, aligning with the gradual increase in GDP for Bhutan. The PPA mission was able to substantiate the PCR finding through discussions with farmers. The farmers met reported substantial increases in yield and a shift to higher value productive activities.
82. Farmers attributed the overall decline in crop production to damage by wild animals and shortage of labour, and this downward trend in the east was no slower than in the country as a whole (where cereal production fell by 6.7 per cent between 2005 and 2011). The PCR also reported that maize that was cultivated twice in a year has been replaced in many areas with one season cultivation of maize, with the second season being used to cultivate vegetables and pulses that generate higher income. Off-season vegetables, early chilli cultivation, upland paddy, intercropping with citrus and cultivation of organic buckwheat contributed to increasing productivity from the same or smaller land area. The outcome survey indicated that the shift in production systems and increase in production were higher in areas where there was intensive support, compared to areas where less intensive support from AMEPP was received. The small percentages of decreases in production for both levels of support were assumed to be related to calamities for specific farmers. The slightly higher decrease for those with intensive support was likely to be a factor of the higher level of production through value-adding activities attracting wildlife and resulting in damage during the season in which the survey was conducted.

Table 10
Change in farm production

	Percentage of respondents	
	Intensive support*	Non-intensive support
Increase in production	63	53
No change	33	45
Decrease in production	4	2
Total	100	100

* i.e. participation in MIF, BOF, etc.
Source: Outcome Survey 2012

83. **Food security.** About 96 per cent of the households, out of 1,034 interviewed, mentioned having improved on their nutritional status over the years. The survey also revealed that 69.2 per cent had food which lasted for 12 months from their own farm production. Improved on-farm storage has lengthened the period of storage without spoilage. As compared to the situation before AMEPP, this was an increase of 46.7 per cent of households.⁷³ However, food security has also been improved through increased cash income from other sources to purchase food supplies during off-season periods.

⁷³ AMEPP and staff from sixth eastern *dzongkhags*. Annual Outcome Survey Report. September 2012.

84. In the 2012 PCR survey, 95 per cent of the 1,034 interviewed households reported an improved nutritional status for their households, as compared to 2006. The RIMS impact monitoring surveys were carried out in 2006 and 2012. In 2012, 2.6 per cent of the 900 households interviewed reported a hungry season, as compared to 6.7 per cent in 2006. The data further showed that the average duration of the hungry season was 3.5 months in 2006, but only 2.3 months in 2008 – i.e. less households going hungry for a shorter length of time. The surveys also showed an overall reduction in the malnutrition of children under the age of 5 years (see table 11).

Table 11
Child malnutrition indicators

	Percentage of children under 5 years of age	
	2006	2012
Acutely malnourished (weight for height)	3.7	0.9
Chronically malnourished (height for age)	50.2	30.9
Underweight (weight for age)	20.1	6.9

Source: RIMS surveys 2006 and 2012.

85. Further to the above data, AMEPP has contributed to agriculture and food security through commencing a link between improved agriculture production and school feeding. Many children in Bhutan attend residential school because the isolation of villages prevents daily attendance. Previously most vegetables for schools in the east were purchased from India. Through the facilitation of RAMCO, a marketing linkage has been created between the schools and farmers groups. This has contributed to better quantity, quality and diversity of vegetables for children. AMEPP has also contributed to wider availability of local dairy and poultry products in the market and an improvement in diet across the region. There is consistent data that agricultural yields have increased, and that a more diversified farming systems approach has improved overall farming productivity and food security. Furthermore, if AMEPP had not supported intensification and a shift of farming practice in the targeted communities, food quality would not have improved and the cost of food would have been higher due to the transportation costs of importation. Consequently the rating for this criterion is satisfactory (5).
86. **Natural resources, environment and climate change.** AMEPP had limited resources to support environmental activities. The programme design specified that EFRC concepts and techniques (including environmental impact assessments) should be applied to all AMEPP roads, but the lack of resources meant that such practices were not widely applied. The main investment in farm roads did involve minor environmental impact and there was concern about run-off from roads without adequate drainage causing erosion damage. These impacts were designed to be mitigated by training the *dzongkhags* engineers, contractors and farmers on environmental considerations in road construction and maintenance, but the PCR found that the training and budget available were insufficient to result in wide scale adoption of recommended procedures.
87. The PCR assesses that AMEPP has overall had a beneficial impact on the environment through its soil and water conservation activities, and promotion of stall feeding of cattle.⁷⁴ AMEPP has contributed to soil and water conservation through planting pasture grasses on degraded range areas, and on-farm soil protection measures through sloping agricultural land technology; however, livestock numbers have increased and the cost of land terracing is prohibitive for farmers, so the net gain has been marginal. There is discussion of the potential for organic agriculture, and although there has been some increase in generation of

⁷⁴ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. page 44.

organic fertilizer, the current extent of inorganic fertilizer use and lack of awareness of organic production requirements means that organic agriculture is not practical at present.

88. Watershed management plans were generated with SNV support, but there were no resources for implementation of the plans. Water sources for irrigation works were protected with planting trees and fencing materials provided. Critical land erosion areas, such as Tshogonpa and Phongmey, had been controlled and stabilized. About 445 acres of land was reported to be under water conservation measures.⁷⁵ The biggest environmental problem reported by farmers was that of wild animal damage, which causes significant crop losses and requires fields to be constantly guarded at critical times. Electric fences have been developed by the Government,⁷⁶ and appear effective against deer and wild boar. Soil erosion continues to pose a risk to crop land; however, the low population density and excellent forest cover (covering 60 per cent of the land area, compared with less than 5 per cent for cultivated land) has counteracted this risk.⁷⁷
89. AMEPP did not have any specific project objectives related to climate change. However, climate change is making weather patterns unpredictable, with droughts (poor crop cover) and subsequent storms damaging both crops and topsoil, which pose risks for serious soil erosion. Increased rainfall (particularly in the monsoon period) caused by climate change, coupled with a lack of regular road drainage monitoring and cleaning, could cause significant problems to both the roads and the local environment (i.e. run-off leading to erosion). Furthermore, drying of streams is contributing to changes in waterflow patterns, which in turn impacts on farming. AMEPP did not have resources to address these issues, but they were being discussed at the time of project completion and the Government, with MAGIP support, is attempting to mitigate these changes. Given the fragility of the environment in the project area, and the positive results but limited resources for environmental protection, the rating for natural resources and environment is moderately satisfactory (4).
90. **Institutions and policies.** The programme design did not define specific policy objectives, but there has been some contribution of AMEPP to national policy processes. AMEPP supported the decentralization policy of the Government through providing support to the *dzongkhag* and *gewog* levels. The capacity-building activities were designed to ensure programme sustainability and serve as an exit strategy. Although there has been an increase in capacity, the movement of both Government staff and political leaders means that institutional strengthening has not made a major contribution to change.
91. Minor contributions have been development of the *Ddzongkhag's* transport master plans, establishment of the marketing information service, annual work programming, training in procurement and contract management, and a committee for screening MIF and BOF proposals, which provided opportunities for officers to be engaged in professional on-the-job development activities and contributed to a more effective working environment. The work in developing guidelines for farm roads has been incorporated into nationwide guidelines for rural road construction, including the formation of maintenance groups and inclusion of bioengineering. The M&E system, developed with SNV support, has been one building block for the design of a nationwide M&E online format to track progress on the five-year planning process.
92. AMEPP has been instrumental in building the capacity of the Agriculture Marketing Services in the eastern region and provision of support as it converted into RAMCO. The practical field experience in RAMCO has in turn assisted the Department of

⁷⁵ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. Report No: 2867-IN.

⁷⁶ MAGIP is supporting some electric fencing trials.

⁷⁷ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012. Report No: 2867-IN, annex 8.

Agricultural Marketing and Cooperatives (DAMCO) in the development of the draft agriculture marketing policy and Cooperatives Act 2009. DAMCO and RAMCO are taking an increasingly pivotal role in the Government, as attention turns more towards commercial agriculture, value chain development and private-public partnerships in the agriculture sector. However, both are still underresourced and require additional support to make a proactive contribution to implementation of the shift in Government policy towards commercial agriculture, post-harvest processing and cross-boundary marketing. Overall, AMEPP has made a moderately satisfactory (4) impact on institutions and policies related to programme implementation.

93. **Overall rating for rural poverty impact.** The impact on income and assets for households in the eastern region has undoubtedly been positive for the majority of households. For some households the changes in income have been small, but the programme contribution to improved access to markets and services, better quantity, quality and consistency of food supply, social and economic asset generation, buildup of savings and import substitution have all influenced a general improvement in living standards across the target area – the main goal of the programme. AMEPP activities have led to a shift in farming systems across the region and contributed to arresting urban drift. Farmers may be farming a smaller area, but productivity and overall returns for labour have increased. Substantial challenges remain, particularly outmigration and wild animal damage to crops, but given the stated scope of the design, AMEPP investments have resulted in a satisfactory (5) level of impact.

C. Other performance criteria

Sustainability

94. The assessment of sustainability in AMEPP needs to be considered in light of the presence of the follow-on project MAGIP, which is providing continued support to a number of initiatives that were commenced in AMEPP. It also needs to consider wider societal changes occurring in the east and in Bhutan at the national level.
95. **Sustainability of household impact.** The improvement in household income, as a result of higher farm productivity, is likely to be sustained due to increased knowledge, capacity and market orientation of the farmers. Farmers are at some risk from market fluctuations as they participate more in the commercial agriculture market. However, there were indications during the PPA mission that farmers are cautious about taking risks and carefully manage their farming systems to ensure that their basis livelihood is protected, either by retaining a partial staple crop for household consumption or through diversification to ensure that risks are spread. Therefore, at the household level, sustainability of impact achieved is likely.
96. **Sustainability of agriculture productivity gains.** There are risks to sustainability of increases in agriculture production. Recent data already shows a decline in agriculture production of some crops in the eastern region; increasingly, populations are declining due to urban drift and agricultural land is being abandoned. In particular, young people are leaving the harsh agricultural lifestyle for urban employment opportunities. Male farmers leave to work in India, leaving women and older people to manage on-farm activities. In addition, prime agricultural land close to urban areas is being used for construction to accommodate those who are moving to urban and peri-urban areas, and wild animals are estimated to impact around 30-40 per cent of crop yield in some areas. These issues require policy decisions and action by the Government. During the PPA mission, Government senior officials confirmed awareness of the concerns and that plans are being developed to address them. They are seeking resources for studies on how to balance the issue of wild animal damage with the conservation

and cultural objectives of the country, as well as the thrust towards ecotourism and strategies to address urban drift.⁷⁸

97. **Sustainability of enterprise and marketing initiatives.** The enterprises supported through MIF, BOF and producer groups are continuing, but they are still at a rudimentary stage and there is a high level of dependency on Government services that are overstretched. The credit available through BDBL is likely to continue to support growth, but overextension in credit needs to be guarded against. The presence of MAGIP is supporting the next stage of development in the east, but it is unlikely that it will have achieved the quantum change necessary for a more sustainable enterprise sector. The continued support of RAMCO is important to assist enterprises to become more independent and commercially viable on a sustained basis.
98. **Sustainability of infrastructure.** The maintenance arrangements for infrastructure are an issue. Although the basic arrangements are in place to manage maintenance through the user groups and Government engineers, the funds and capacity available are inadequate to cover the required costs for major maintenance and monsoon restoration works. This means that in many cases, the roads constructed are still in poor condition and not all are passable all year round. Nevertheless, roads opened through AMEPP are likely to be prioritized for Government funding to keep roads open, even if not easily passable. The current commitment by the Government to gradually upgrade farm roads will assist in reducing maintenance costs, but this will be an ongoing drain on regional resources. The biggest risk to infrastructure is through natural calamities, such as landslides and earthquakes. In this regard, it would be beneficial for the Government to consider establishing emergency funds as a quick response to any critical damage.
99. **Sustainability of institutional arrangements.** The PCR states that continued support and follow-up of agriculture development initiatives will be provided by the sector line agencies, but the effectiveness of such support is reliant on limited financial resources available through the Government Eleventh Five-Year Plan and any additional funding sources available, such as MAGIP. The resourcing of DAMCO and RAMCO will be a critical factor in whether the process of enterprise and group strengthening in Bhutan will continue to increase and move towards a more commercial and self-sufficient stage. RAMCO has been supporting “one stop farmers’ shops” and commercial cooperatives which are managed by more capable entrepreneurs. These have potential to grow but are still developing. There is also potential to develop private-public partnerships and links with professional associations, such as chambers of commerce and regional producers associations.
100. **Overall,** AMEPP gains are likely to be sustained at the household level, but there are risks to sustainability for enterprises supported. The infrastructure investments are also at risk due to lack of maintenance funds, and insufficient maintenance and risk management arrangements. The credit access and the Government services are likely to continue, but the next stage of development for the east is relying on MAGIP and the role of RAMCO. Hence, sustainability is rated as moderately satisfactory (4).

Innovation and scaling up

101. **Innovation.**⁷⁹ The President’s Report identified the following innovations: (i) Geographical targeting at the local level (*gewogs*); (ii) A gender focal point would be established in each *dzongkhag*; (iii) Mandatory application of EFRC for infrastructure development; (iv) Introduction of village level volunteers for crop production and village animal health workers to interface between isolated village

⁷⁸ IFAD has supported a study on rural-urban migration through grant financing, and MAGIP has included a pilot activity in ecotourism.

⁷⁹ IFAD. PCR Validation Report. September 2013.

communities and extension services; (v) Support for savings mobilization by the Bhutan Development Finance Corporation (later the BDBL).

102. All of the identified innovations have been implemented but with limited degrees of success. The geographical targeting was appropriate, but the PPA did not consider this as an innovation. Household targeting was innovative, but not highly appropriate within the country context. The gender focal point was established, but has not been continued. The EFRC training was important and has been implemented to some extent as budget allowed, and has contributed to a change in national guidelines. The introduction of relay farmers and VAHW has been of limited success. The training was valuable, but the system was not sustained because there was no financing mechanism. Savings generation through BDBL was successful, and most households and groups met during the PPA mission reported that they had operational bank accounts and increasing savings. However, this improvement seemed equally attributable to BDBL's own strategic thrust in rural expansion.
103. Nevertheless, there were important innovations through AMEPP. The most innovative activities were the introduction of off-season vegetable cultivation, early chilli production and value adding to local production (e.g. potato chips, improved packaging of butter and cheese, tengma making).⁸⁰ Some farm mechanization and post-harvest equipment have been introduced, but on a limited scale and with varying success. The introduction of greenhouses was innovative but the investment was high. However, the experience has triggered a stronger tie between RAMCO and the research stations to improve vegetable varieties and improve technologies. These need to be adapted more to the context, and also suitable for use by women and older people. There was also some indication during the PPA that more innovative technology in the east would contribute to retention of young people in farming.
104. **Scaling up.** AMEPP itself was a scaled up version of the first and second eastern zone agricultural programme (FESAP and SESAP) activities. The regional design was effective in scaling up activities, such as producer and user groups, productivity processes and commercialization. RAMCO itself has been a pilot for scaling up national activities within DAMCO. AMEPP activities that have already been scaled up are the diversification of farming and improved farming systems and technologies that are already being replicated by farmers without external support, other than the Government extension officers or through MAGIP. AMEPP initiatives that have potential for wider scaling up are the MIF for agriculture and for livestock. The BOF, or similar facility, would be better handled through RAMCO and BDDL as credit or a matching grant, rather than as a full grant.
105. **In summary,** the innovation and scaling up in AMEPP has been partially successful. The innovations outlined in the design were of limited success and not cutting edge, but a number of innovations introduced during the programme were relevant. Some initiatives have been scaled up, but this has been in response to ad hoc opportunities rather than a proactive and systematic programme approach. Consequently, the rating for innovation and scaling up is moderately satisfactory (4).

Gender equality and women's empowerment

106. The loan agreement (2005) stated that women would be particularly targeted under the programme as fewer opportunities exist for education and training disadvantaged women both socially and economically. This would be achieved under the rural financial services component where, inter alia, extension support and technical training would be focused on the poorest households and women. The agreement further specified that village committees should be encouraged to

⁸⁰ IFAD, AMEPP PCR. Report No: 2867-IN. December 2012.

nominate women farmers to the positions of relay farmer and/or VAHW under the extension support component.

107. Data on participation in the different programme components is shown in table 12, with overall participation being split relatively equally between men and women. According to the PCR even for aspects where there seem to be a higher ratio of male to female, usually both partners in the household were evenly engaged in the activity, although with some role distinction where the males travelled out of the area for seasonal work.

Table 12
Participation in programme activities by gender

	Male	Female	Total	Number
On-farm production	48%	52%	100%	1 028
Marketing and enterprise	66%	34%	100%	163
Rural finance	63%	37%	100%	142
Access infrastructure	47%	53%	100%	875
All activities	56%	44%	100%	2 208

Source: PCR survey 2012.

108. The November 2011 supervision mission report highlights that 80 per cent of the MIF beneficiaries were reported to be women. However they did not specifically benefit from the rural finance activities (37 per cent) as foreseen in the loan agreement. The PCR points out that although the data in table 12 suggests that men and women participated more or less equally, the RIMS baseline and impact surveys show an increase in the number of female-headed households from 25 per cent in 2006 to 36 per cent in 2012.⁸¹ The RIMS survey further states that it can safely be inferred that the financial condition of female-headed households is more unstable than that of a male-headed household in the project area.⁸² This suggests that women should have participated to a greater extent in project activities.
109. To address women's participation in AMEPP, the programme appointed a gender focal person in the PFO, and the gender focal point person in the Ministry of Agriculture and Forests was also the focal person for IFAD. A gender focal person at the *dzongkhags* was responsible for promoting and mainstreaming gender, and SNV provided support for gender mainstreaming. The technical assistance support of SNV also included gender mainstreaming activities. According to the aide memoire of the 2009 supervision mission, a five-day workshop was conducted to: i) Raise the general awareness on gender; ii) Enhance capacity in gender analysis and gender mainstreaming within implementing agencies; iii) Draw up a gender action plan for resource allocation through introduction of gender indicators in the preparation of annual workplan. Gender action plans appear to have been prepared by the Bhutan Chamber of Commerce, Bhutan Development Finance Cooperation and the various districts, but there was no information on how effective these plans were and the evaluation team was not able to verify this in the field. However, the evaluation team met with several women who had benefited from exposure trips to neighbouring countries and were able to speak confidently about these. In this way the programme contributed in a small way to breaking down traditionally imposed norms of mobility.
110. It is also clear that women's participation in programme activities will have helped provide them with exposure to decision-making forums, and opportunities for

⁸¹ The increase is attributed to the breakdown of marriages, itself linked to increased male outmigration to major towns.

⁸² RIMS Report 2012.

having equal voice and influence in rural institutions. However, apart from the number of women participants in the groups, there is little information on how active a role they played in these groups.

111. In terms of achieving a more equitable balance in workloads, and in the sharing of economic and social benefits between women and men, the picture is mixed. The women's groups met by the supervision mission in 2011 explained how the programme's provision of labour-saving equipment (oil expeller, rice and maize crusher and threshers), had contributed greatly to reducing drudgery.⁸³ With increased road access, women benefited from shorter distances to markets, health clinics and schools, and general relief from carrying loads for development works. On the other hand, there is the risk that women seemed to carry a disproportionate share of the "voluntary" and unpaid labour required for the routine maintenance of farm roads.⁸⁴
112. Overall, efforts were made by the programme to mainstream gender across the activities, and women do seem to have benefited from the programme and mainstreaming activities. Nevertheless, it cannot be concluded that women were particularly targeted as per the loan agreement. Therefore, the rating for this criterion is moderately satisfactory (4).

D. Performance of partners

113. The project partnership between the Government, SNV and IFAD largely operated successfully, with frequent and productive coordination through the AMEPP programme steering committee. This partnership has been continued in MAGIP, building from the accumulated knowledge and experience of the ongoing programme in the east. There has been little formalised cooperation with WFP and FAO during AMEPP but some farmers have been linked to school feeding programmes building on earlier WFP work. This work is expected to be extended in the follow-on project, currently being developed and discussions with WFP have been initiated.
114. **IFAD.** AMEPP was supported by three different country programme managers over its lifetime and there were two different leaders for the IFAD supervision missions, which inevitably affected continuity and led to some conflicting directions that confused field implementers. In the early stages of AMEPP, the project was supervised by UNOPS, but guidance was too rigid and insufficient to overcome initial implementation issues. In particular, there was low capacity for and insufficient training and support on financial management and procurement. IFAD eventually fielded a procurement review mission and conducted an ex-post review of farm road and power tiller track procurement actions, and provided a waiver to go ahead with the works with the exception of one farm road.⁸⁵
115. The IFAD PCR states that despite guidance from IFAD, procurement procedures were not initially clear and processing of withdrawal applications took too long. This led to substantial delays in financing early in the project that impacted implementation severely. The problems were resolved when IFAD commenced direct supervision in 2008 and was further strengthened in 2011 with the presence of an implementation support officer working from the India Country Office in Delhi. This led to a more responsive information flow between AMEPP, the Government and IFAD. The PCR states that the supervision missions were timely, with the mission terms of reference and field programmes developed in consultation with the PFO. Nevertheless, the duration of supervision missions was seen as too short, given the extensive and inaccessible project area. Consequently, the PPA has rated IFAD's performance as moderately satisfactory (4).

⁸³ Royal Government of Bhutan. AMEPP Supervision Report. November 2011.

⁸⁴ Bhutan Gender Equality Diagnostic of Selected Sectors, June 2013.

⁸⁵ IFAD. MTR. February 2008. Paragraph 47.

116. **Royal Government of Bhutan.** The institutional arrangements through the Government's decentralized structures has worked effectively and been a key factor in programme success. The Ministry of Agriculture and Forests provided policy and programme directives, and was supportive both at headquarters and in the *dzongkhags* and *gewogs*. The project implementers, PFO and Ministry of Finance initially took time to process and forward withdrawal applications to IFAD. Delays also occurred with IFAD, and the Government demonstrated additional commitment by taking loans to prefinance critical programme activities. Overall, the Government provided regular and timely release of counterpart funds, in accordance with the programme financing agreement. In spite of serious difficulties being experienced at the beginning of the project, the PFO delivered its responsibilities effectively. Transfer of personnel from the PFO, especially senior finance and M&E staff, limited its effectiveness and coordination with the *dzongkhags*, *gewogs* and other partners during the handover period. On the other hand, throughout implementation, the Government remained strongly committed to the project, provided additional and parallel financing from local government budgets where available, and deployed additional personnel resources where required to support programme activities, including retaining the same project director throughout the programme period. For these reasons, the PPA has rated the Government performance as satisfactory (5).

E. Overall project achievement

117. The level of achievement in AMEPP has been high. The primary target group has been reached, as far as possible given the challenging context of the target area. The programme inputs have largely been effective, particularly in relation to improved access and a shift towards commercial agriculture that have created a marked benefit across the target areas. Marketing and enterprise development results were commensurate with the limited budget available, although there is still considerable need and potential to further develop value chains. The programme has achieved a positive impact in terms of income and asset generation, and human and social capital strengthening. The likelihood of sustainability is mixed across the different interventions and results attained, but overall there has been a lasting and substantial impact from programme investments in the project area. The PPA's rating of AMEPP's overall achievement is satisfactory (5).
118. Annex I provides a summary of the ratings per criterion, including a comparison between the IFAD PCR by the IFAD Programme Management Department (PMD) and the PPA. Three PMD ratings were upgraded from moderately satisfactory to satisfactory, namely i) effectiveness, due to the extent of results achieved in relation to targets and the achievement of specific programme objectives; ii) human and social capital and empowerment, due to the positive results in income generation, skills development, and greater knowledge and power in market relationships, and iii) Government performance, due to additional and parallel financing from local government budgets and the deployment of additional personnel resources to support programme activities. Three PMD ratings were downgraded: income and assets impact from highly satisfactory to satisfactory, as there was a positive shift in poverty reduction but not for all households; natural resources, environment and climate change impact from satisfactory to moderately satisfactory, due to the limited budget to implement environmental standards and watershed development plans; and, sustainability due to the fragility of enterprises supported, insufficient maintenance and risk management for infrastructure investments. However, the overall PMD rating of AMEPP performance as satisfactory has been confirmed by the PPA.

Key points

- Relevance and effectiveness of AMEPP were rated as satisfactory on the basis of the programme's alignment with national and IFAD strategic directions. In addition, the context of the target area and households needs, and the overall combination of project inputs effectiveness in raising production and reducing input and marketing costs was appropriate.
- Efficiency was rated as moderately satisfactory as the infrastructure activities in particular were not able to complete design specifications in relation to recommended best practice. Project management cost was high at about 17 per cent. However, the EIRR of 14 per cent was assessed by the PPA as valid and likely to be slightly higher than estimated.
- The rural poverty impact is rated satisfactory, given the benefits that have accrued to the targeted groups in terms of income and asset generation, human and social capital, and agricultural productivity.
- Sustainability is rated moderately satisfactory as there are challenges with maintenance of infrastructure assets, user groups are weak, and funds for continued support are insufficient. There is also a high dependency on government support, but impact achieved at the household level is likely to be sustained.

IV. Conclusions and recommendations

A. Conclusions

119. **Building on success and knowledge.** Overall, AMEPP has been a successful project with one of the key success factors being the prolonged presence and support of IFAD within the region. The broad target area and the focus on rural access were appropriate at the time of design. Project objectives and strategies were relevant to the challenging context in the project area. Project activities were largely effective in contributing to poverty reduction in the project area. IFAD support has clearly contributed to improved connectivity and access to services, higher income and assets for many households, and greater farm and enterprise productivity. There are five key conclusions that have been synthesized from the PPA findings.
120. **Conclusion 1. Shift from production-driven to value-adding and market-led capability.** The project impact on agriculture production was far-reaching across the project area, although not of a high intensity. Production increased and there was evidence that farmers were gradually understanding and paying more attention to market forces. Nevertheless, the capacity in the east to capitalize on potential market opportunities and add value to agriculture production is still limited. The next stage of development is being constrained by weak enterprises and groups, and lack of labour. Strategies that were identified in AMEPP to strengthen enterprise development, labour and time-saving technologies and value-adding are still valid, but the focus and resource allocation with AMEPP were insufficient to create the required advances (paragraphs 36, 39, 49-51, 85).
121. **Conclusion 2. Overcoming dependency.** The good performance achieved has relied heavily on the support services of the Government. Groups are still dependent on government support rather than proactively finding their own business opportunities. Some steps to independence have been seen where groups are building capacity, leadership is strengthening and direct market linkages are being forged. Government services are limited and stretched, creating challenges in reaching more remote communities that are in greater need of services. For longer term development, there is a need to build independence and private sector service options for those farmers and entrepreneurs that can pay commercial fees. This is already occurring within MAGIP as value chains are developed and strengthened. However, the process is still in the early stages and requires further support and clear strategies towards sustainability (paragraph 97).

122. **Conclusion 3. Expertise in enterprise development.** A key bottleneck in building capacity in enterprise development and value chain linkages has been the reliance on agriculture staff to also carry out marketing support activities. The focus on agriculture extension has been rightly focused on farm productivity. RAMCO has an increasingly pivotal role in supporting groups and enterprises to take the next steps in commercialization. Yet, the *dzongkhag* and *gewog* agriculture officers are not qualified or sufficiently experienced to offer business advice, assist with financial management support, business record-keeping and market development. They are also not sufficiently equipped to assist enterprises to innovate in line with market demand, build capacity towards required production standards for general market and even export consumption, and prepare for niche markets, amongst others. In this regard, there is a need for different skills and expertise than is currently available in the east. Additional expertise and resources are required, particularly through the Department of Marketing and Cooperatives to facilitate and strengthen value chain linkages within the region and across regional and national borders (paragraphs 92, 99).
123. **Conclusion 4. Challenging and changing context.** It is obvious that the eastern region is a highly challenging context. Yet, the region is also experiencing socio-economic changes beyond the scope of the programme. The AMEPP design did not foresee the significant impact that rural-urban migration would have on the eastern region and the ability of farm households to take full advantage of programme support. The process of decentralization has also brought about new opportunities and challenges during the programme period. To some extent, AMEPP was able to adjust to changing circumstances and even contribute towards the retention of rural populations through improved lifestyles, encouraging the interest of younger people in farming through technology and supporting decentralization through programme planning processes. However, these activities occurred as indirect benefits from AMEPP rather than as distinct and deliberate strategies. More could be done to learn from and build on these experiences (paragraphs 48, 93).
124. **Conclusion 5. Increasing conflict between environmental protection and economic development.** The AMEPP design acknowledged the fragility of the target area but did not place a strong focus on environmental protection. The interventions of AMEPP were meagre given the importance of natural assets. During the programme period, there were signs of increasing competition and conflict between wildlife and agricultural intensification. As farmers invested more in cash crops, the higher the loss when wild animals entered their farms to feed. There are currently no clear plans on how to address these issues, nor emergency response reserves for natural calamities. There is little focus on risk management to prevent negative impact through potential losses from natural causes. There is also insufficient consideration of the potential income sources from forest products and ecotourism (paragraphs 48, 89, 96).

B. Recommendations

125. AMEPP support has taken the eastern region from a remote and impoverished region to the brink of developing a commercial agriculture sector that can contribute to leading the region out of poverty. The extent of knowledge and capacity that IFAD has supported in the east is valuable and the Government is keenly supportive of IFAD consolidating its position in the east as it takes the next steps in development. Furthermore, the Government has been working on a strategy with other donors to distribute support equitably across the country. As a result, it is recommended that IFAD continue support to the east but with support beyond the regional boundaries to assist in effective value chain development. This may include strategic alliances with other donors to share and connect efforts in value chain development across the country. Five specific recommendations are promoted for consideration. These relate directly to the five conclusions in the preceding section and include:

126. **Recommendation 1:** Strengthen the focus on on-farm and post-harvest enterprise development capacity within the eastern region; e.g. in supporting improved enterprise business management practices, and increasing understanding of market fluctuations, viability and strategies for business adaptability to market conditions. This would require assistance to existing groups that have potential to move towards a formal cooperative business structure and operations. It would also include investigation into appropriate and viable technological advances in agriculture and post-harvest processing appropriate to the local context (paragraph 120).
127. **Recommendation 2:** Facilitation of private-public partnerships to gradually shift the region's agriculture and enterprise sector towards a more commercial approach, reducing dependency on Government services. This may involve brokering arrangements with private enterprises beyond the regional and even national borders in a value chain approach. The support for value chains should be pro-poor as far as possible, reaching into remote areas, building on successes in AMEPP and MAGIP as well as opening new and improved marketing channels for niche markets (paragraph 121).
128. **Recommendation 3:** Build higher level expertise on commercialization in order to support recommendations 1 and 2. Each *dzongkhag* needs to have dedicated business and marketing extension resources to facilitate linkages between producers, sector heads, emergent enterprises, value chain actors and professional support systems. This would include direct support to the Department of Marketing and Cooperatives, and a movement away from relying only on *dzongkhag* technical agriculture staff to carry out a dual role as marketing support. Support for DAMCO would also assist to strengthen linkages with other line agencies in an integrated way to ensure compliance with national and international business standards, and to capitalize on emerging market opportunities (paragraph 122).
129. **Recommendation 4:** As the socio-economic conditions of the eastern region change, a follow-on project should support the Government to build a more vibrant, differentiated regional population. This can be achieved by strengthening regional towns as market centres, supporting decentralization of governance processes and retaining the regional population, particularly young people in agriculture. Interventions may include improved land-use mapping, strengthening capacity in participatory planning, budgeting and implementation, and improved asset and risk management (paragraph 123).
130. **Recommendation 5:** Acknowledge the environmental fragility of the programme area through environmental protection planning, particularly regarding the increasing conflicts between wildlife protection and intensification of farming. Initially, interventions could focus on building emergency response reserves and mechanisms for risk management to prevent negative impact through potential losses as a more commercial and asset-intensive approach is taken to agriculture. In this regard, it would be beneficial for the Government to consider establishing emergency funds as a quick response to any critical damage and develop appropriate insurance schemes. In addition, a longer term strategic approach to harnessing the natural environment of the region and building capacity in the region could be supported as an opportunity for eco, agri and cultural tourism development. These opportunities are likely to require partnership and potentially cofinancing with other development partners (paragraph 124).

Rating comparison

<i>Criteria</i>	<i>IFAD-PMD rating^a</i>	<i>PPA rating^a</i>	<i>Rating disconnect</i>
Project performance			
Relevance	5	5	0
Effectiveness	4	5	1
Efficiency	4	4	0
Project performance^b		5	
Rural poverty impact			
Household income and assets	6	5	-1
Human and social capital and empowerment	4	5	1
Food security and agricultural productivity	5	5	0
Natural resources, environment and climate change	5	4	-1
Institutions and policies	4	4	0
Rural poverty impact^c	5	5	0
Other performance criteria			
Sustainability	5	4	-1
Innovation and scaling up	4	4	0
Gender equality and women's empowerment	4	4	0
Overall project achievement^d	5	5	0
Performance of partners^e			
IFAD	4	4	0
Government	4	5	1
Average net disconnect			0

^a 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.

^b Arithmetic average of ratings for relevance, effectiveness and efficiency.

^c This is not an average of ratings of individual impact domains.

^d This is not an average of ratings of individual evaluation criteria but an overarching assessment of the project, drawing upon the rating for relevance, effectiveness, efficiency, rural poverty impact, sustainability, innovation and scaling up, and gender.

^e The rating for partners' performance is not a component of the overall assessment ratings.

Ratings of the PCR document

<i>Ratings of the PCR document quality</i>	<i>PMD rating</i>	<i>IOE PCRV rating</i>	<i>Net disconnect</i>
(a) Scope	5	5	0
(b) Quality (methods, data, participatory process)	4	4	0
(c) Lessons	5	5	0
(d) Candour	4	4	0
Overall rating of PCR		5	

(a) Scope: The PCR is informative and broadly follows the PCR Guidelines. The rating is satisfactory (5).

(b) Quality: The PCR relies on monitoring data and the RIMS (impact survey result report) conducted in 2010. Most information provided in the report is at output level, but some efforts have been made to include information about impact where possible. However, it remains weak. The rating is moderately satisfactory (4).

(c) Lessons: The PCR provides a list of useful lessons many of which the PCRV concurs with. Many of these lessons have been applied in the PADEE. The rating is satisfactory (5).

(d) Candour: The PCR is overly positive in certain sections and does not provide sufficient substantiation. The rating is moderately satisfactory (4).

Basic project data

			Approval (US\$ m)		Actual (US\$ m)	
Region	Asia and the Pacific	Total project costs	19.6		19.6	
Country	Bhutan	IFAD loan and percentage of total	13.9	71%	13.9	71%
Loan number	L-659-BT	Borrower	3.1	16%	3.1	16%
Type of project (subsector)	Rural development	Cofinancier 1	1.6	8%	1.6	8%
Financing type	Loan					
Lending terms ^a	Highly concessional					
Date of approval	19 th April 2005					
Date of loan signature	12 th October 2005	Beneficiaries	1.0	5%	1.0	5%
Date of effectiveness	14 th June 2006	Other sources:				
Loan amendments		Number of beneficiaries:	26 600 households 226 200 beneficiaries		27 000 households, 135 000 direct beneficiaries (220 000 beneficiaries direct and indirect)	
Loan closure extensions		Cooperating institution	UNOPS			
Country programme manager(s)	Ms Laksmi Moola ^b (current)	Loan closing date	31 st December 2012			
Regional director(s)	Hoonae Kim ^c	Mid-term review			October 2008	
Project completion report reviewer	Catrina Perch	IFAD loan disbursement at project completion (per cent)			100%	
Project completion report quality control panel	Miguel Torralba	Date of project completion report			December 2012	

Source: IFAD Project Completion Report, page v.

^a 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.

^b Mr Thierry (01/08 2013-01/06/2014), Mr Brett (06/05/2011-01/08/2013), Ms Donnat (01/11/2008-06/05/2011), Ms Manner (07/01/2008-01/11/2008); Mr Tian (05/10/2004-07/01/2008); Mr Rath 10/02/2004-05/10/2004).

^c Mr Elhaut (01/04/2004-01/10/2012).

Terms of reference

I. Background

1. The Independent Office of Evaluation of IFAD (IOE) will undertake a project performance assessment (PPA) of the Agriculture, Marketing and Enterprise Promotion Programme (AMEPP) in Bhutan. The PPA is a project-level evaluation aiming to: (i) provide an independent assessment of the overall results of projects; and (ii) generate findings and recommendations for the design and implementation of ongoing and future operations within the country.
2. A PPA is conducted as a next step after a Project Completion Report Validation (PCRVR). PCRVR performs the following functions: (i) independent verification of the analytical quality of the project completion report; (ii) independent review of project performance and results through desk review; and (iii) extrapolation of key substantive findings and lessons learnt for further synthesis. The PCRVR consists of a desk review of the project completion report and other available reports and documents. A PPA includes a country visit in order to complement the PCRVR findings and fill in information gaps identified by the PCRVR.
3. The PPA applies the evaluation criteria outlined in the IFAD Evaluation Manual. In view of the time and resources available, the PPA is generally not expected to undertake quantitative surveys. The PPA rather adds analysis based on interviews at IFAD headquarters, interactions with stakeholders in the country including project beneficiaries, and direct observations in the field. As such it relies necessarily on the data available from the project monitoring and evaluation system.
4. **Country context.**¹ Bhutan is an agricultural country in dynamic development. Whilst about 70 per cent of the population live in the rural areas, the towns and in particular the capital Thimphu are growing rapidly. Since the 1960s Bhutan started a gradual process of opening up to the outside world and the country embarked on a far-reaching development strategy that has been articulated in a series of five-year development plans. The Tenth Five-Year Plan (2008-2013) is currently under implementation, and constitutes the basis for the country's Poverty Reduction Strategy Paper. The plan's overall objective is to reduce poverty from 23 per cent in 2007 to 15 per cent by 2012-13. The annual economic growth is stable at 7-9 per cent, mainly driven by the electricity produced by hydropower plants and exported to India. Sale of electricity accounts for over 40 per cent of exports and 60 per cent of the government's revenues. More plants are under construction, funded by Indian mixed loans/grants and emphasis is also put on developing the service sector which now accounts for 40 per cent of the economy. Per capita gross national income (GNI), one of the highest in South Asia, has consistently risen from US\$730 in 2000 to US\$2,070 in 2011.
5. Bhutan is on track to achieve its Millennium Development Goals (MDGs). However, while the poverty rate has fallen, the MDG mid-term report notes worsening of conditions affecting those suffering from severe poverty. Household food security is linked to low food production and weak agricultural productivity, limited access to land and other productive assets, extensive crop destruction by wildlife and pests, inadequate opportunities for rural employment, poor food utilization, and weak access to road and transport infrastructure. Bhutan's mountainous terrain is a fundamental constraint to growth and rural poverty reduction. Poor road access isolates a large proportion of rural people from markets and social services, and limits their livelihood to subsistence agriculture. The Government of Bhutan and development partners have responded to this constraint by constructing more than 1,500 kilometres of farm roads and tracks since 2003.

¹ World Bank. <http://www.worldbank.org/en/country/bhutan/overview>

6. **Project description.** AMEPP operated in the six eastern *dzongkhags* of Bhutan – Lhuntshe, Mongar, Pemagatshel, Samdrup-Jongkhar, Trashigang and Yangtse. The programme’s primary objective was to improve livelihoods of the rural poor in the programme area on a sustainable basis by enhancing productivity, income growth and access to economic and social services. This objective was to be achieved through both land-based activities and non-land based production by: (i) supporting capital formation in crop, livestock and niche-crop production; (ii) improving the conditions under which enterprises and income-generating activities are started and operated; (iii) enhancing access to rural financial services (especially credit) so that beneficiaries can acquire the necessary inputs for productive activities; (iv) building the capacities of grass-roots organizations and developing beneficiaries’ skills through training; and (v) improving the common socio-economic infrastructure, especially the road network and marketing support system.

II. Methodology

7. **Objectives of the PPA.** The main objectives of the PPA are to: (i) assess the results of the programme; and (ii) generate findings and recommendations for the design and implementation of ongoing and future operations in Bhutan.
8. **Scope.** The PPA will take account of the preliminary findings of the PCR/V and further desk review issues emerging from interviews at IFAD headquarters, and a focused mission to the country for the purpose of generating a comprehensive, evidence-based evaluation. However, the PPA will not need to examine or re-examine the full spectrum of programme activities, achievements and drawbacks, but will focus on selected key issues. Furthermore, subject to the availability of time and budgetary resources, due attention will be paid to filling in the major evaluative information gaps of the PCR and other programme documents.
9. **Evaluation criteria.** In line with the evaluation criteria outlined in IOE’s Evaluation Manual (2009), added evaluation criteria (2010)² and IOE Guidelines for PCR/V and PPA (January 2012), the key evaluation criteria applied in this PPA will include:
- (i) **Relevance**, 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;
 - (ii) **Effectiveness**, which measures the extent to which the project’s immediate objectives were achieved, or are expected to be achieved, taking into account their relative importance;
 - (iii) **Efficiency**, which indicates how economically resources/inputs are converted into results;
 - (iv) **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. Five impact domains are employed to generate a composite indication of rural poverty impact: household income and assets; human and social capital and empowerment; food security and agricultural productivity; natural resources, environment and climate change; and institutions and policies;
 - (v) **Sustainability**, 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 project’s life;

² Gender, climate change, and scaling up.

- (vi) Pro-poor **innovation and scaling up**, assessing the extent to which IFAD development interventions have introduced innovative approaches to rural poverty reduction and the extent to which these interventions have been (or are likely to be) replicated and scaled up by government, private sector and other agencies;
 - (vii) **Gender equality and women's empowerment**. This criterion is related to the relevance of design in terms of gender equality and women's empowerment, the level of resources committed, and changes promoted by the project; and
 - (viii) Besides, the **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 project life cycle.
10. **Data collection.** The PPA will be built on the initial findings of the PCRV. For further information, interviews will be conducted both at IFAD headquarters and in Bhutan. During the mission to Bhutan, additional primary and secondary data will be collected in order to reach an independent assessment of performance and results. Data collection methods will mostly include qualitative participatory techniques. The methods deployed will consist of individual and group interviews with beneficiaries, and direct observations. The PPA will also make use – where applicable – of additional data available through the programme's monitoring and evaluation (M&E) system. Triangulation will be applied to verify findings emerging from different information sources.
 11. **Stakeholders' participation.** In compliance with the Evaluation Policy of 2011, the main programme stakeholders will be involved throughout the PPA. 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 Asia & the Pacific Division (APR) of IFAD and with the Government of Bhutan. Formal and informal opportunities will be explored during the process for the purpose of discussing findings, lessons and recommendations.

III. Evaluation process

12. In all, the PPA will involve five phases: desk work; country work; report drafting and peer review; receipt of comments from APR and the Government; and the final phase of communication and dissemination.
13. **Desk work phase.** The PCRV and further desk review provide initial findings and identify key issues to be investigated by the PPA.
14. **Country work phase.** The PPA mission is scheduled for 6-18 October 2013. It will interact with the Government, local authorities, NGOs, programme staff and beneficiaries. At the end of the mission, a brief will be provided to the IFAD partner ministry(ies), followed by a wrap-up meeting in Thimphu, the capital of Bhutan, to summarize the preliminary findings and discuss key strategic and operational issues. The IFAD Country Programme Manager (CPM) for Bhutan will also attend the wrap-up meeting.
15. **Report drafting and peer review.** At the conclusion of the field visit, a draft PPA report will be prepared and submitted to IOE internal peer review for quality assurance. Miguel Torralba, Evaluation Officer, and an additional Senior Evaluation Officer (to be determined), will be the peer reviewers for the PPA.
16. **Comments by APR and the Government.** The PPA report will be shared with APR and thereafter with the Government for comment. IOE will finalize the report following receipt of the Government's comments.

17. **Communication and dissemination.** The final report will be disseminated among key stakeholders and the evaluation report published by IOE, both online and in print.

IV. Key issues for investigation

18. Based on the PCRV there are a number of areas in the analysis which would merit further analysis to enable IOE to make a more conclusive assessment of the programme. The following key issues will be further investigated:
19. **Relevance.** Despite the title of the programme and the emphasis of the PCR on the non-infrastructure components, AMEPP was essentially a rural infrastructure project. Approximately 50 per cent of the project resources were allocated to infrastructure development and rehabilitation. Relatively few resources were left for on-farm production, marketing and financial services (excluding management costs) and were spread over six districts. The PPA will assess the theory of change and determine whether the choice of components and allocated resources was the right combination for achieving the project goal. It will do so by taking into consideration that the programme was the third project in a country strategy designed in 1996. A fourth project in the area is now under way building on this experience. The PPA will thus, to the extent possible, evaluate not just an isolated project but part of a series of projects which were designed following this strategy.
20. **Effectiveness.** The effectiveness analysis of the PCR focuses on achievement of physical outputs, but the discussion on the achievement of the project objectives is limited and would merit from additional analysis. With the large investment in infrastructure the programme logic assumed that infrastructure development would ultimately be the main driver for improving livelihoods, enhancing productivity and income growth. However, the PCR did not really evaluate this to any significant extent. The PPA will pay particular attention to the extent to which the constructed roads and irrigation systems have and are contributing to this. It will do so by assessing whether they were well planned, of adequate quality in construction in relation to the terrain, have generated the expected levels of use and have effective maintenance arrangements.
21. **Impact.** The PCR's discussion of agricultural impact would merit further analysis. The data appears to be conflicting, with agricultural production declining despite the project. The PCR states lack of labour and animal damage as the main reasons for this. The PPA will attempt to verify this conclusion and assess the implications for future investments.

V. Evaluation team

22. The PPA mission is composed of Ms Catrina Perch, IOE Evaluation Officer and lead evaluator; and IOE consultant Dr Dorothy Lucks (enterprise development specialist). Ms Lucy Ariano, Evaluation Assistant, will provide research and administrative support.

Methodological note on project performance assessments

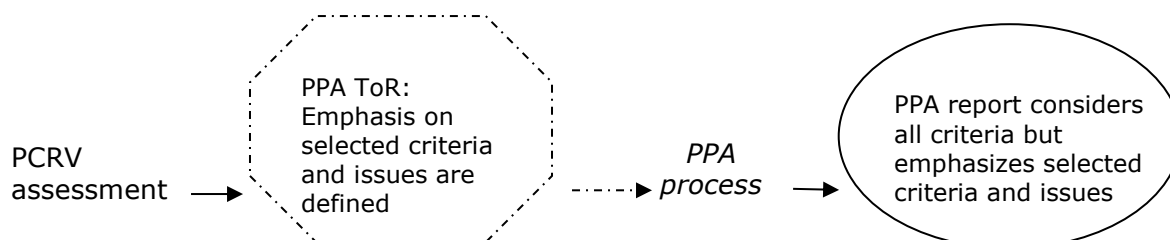
A. What is a project performance assessment?¹

1. The project performance assessment (PPA) conducted by the Independent Office of Evaluation of IFAD (IOE) entails one mission of 7-10 days² and two mission members³. PPAs are conducted on a sample of projects for which project completion reports have been validated by IOE, and take account of the following criteria (not mutually exclusive): (i) synergies with forthcoming or ongoing IOE evaluations (e.g. country programme or corporate-level evaluations); (ii) major information gaps in project completion reports (PCRs); (iii) novel approaches; and (iv) geographic balance.
2. The objectives of the PPA are to: assess the results and impact of the project under consideration; and (ii) generate findings and recommendations for the design and implementation of ongoing and future operations in the country involved. When the PPA is to be used as an input for a country programme evaluation, this should be reflected at the beginning of the report. The PPA is based on the project completion report validation (PCR/V) results, further desk review, interviews at IFAD headquarters, and a dedicated mission to the country, to include meetings in the capital city and field visits. The scope of the PPA is set out in the respective terms of reference.

B. Preparing a PPA

3. Based on the results of the PCR/V, IOE prepares brief terms of reference (ToR) for the PPA in order to sharpen the focus of the exercise.⁴ As in the case of PCR/Vs, PPAs do not attempt to respond to each and every question contained in the Evaluation Manual. Instead, they concentrate on the most salient facets of the criteria calling for PPA analysis, especially those not adequately explained in the PCR/V.
4. When preparing a PPA, the emphasis placed on each evaluation criterion will depend both on the PCR/V assessment and on findings that emerge during the PPA process. When a criterion or issue is not identified as problematic or in need of further investigation, and no additional information or evidence emerges during the PPA process, the PPA report will re-elaborate the PCR/V findings.

Scope of the PPA



¹ Extract from the PCR/V and PPA Guidelines.

² PPAs are to be conducted within a budget ceiling of US\$25,000.

³ Typically, a PPA mission would be conducted by an IOE staff member with the support of a consultant (international or national). An additional (national) consultant may be recruited if required and feasible within the evaluation budget.

⁴ Rather than an approach paper, IOE prepares terms of reference for PPAs. These terms of reference ensure coverage of information gaps, areas of focus identified through PCR/Vs and comments by the country programme manager, and will concentrate the PPA on those areas. The terms of reference will be included as an annex to the PPA.

C. Evaluation criteria

5. The PPA is well suited to provide an informed summary assessment of project relevance. This includes assessing the relevance of project objectives and of design. While, at the design stage, project logical frameworks are sometimes succinct and sketchy, they do contain a number of (tacit) assumptions on mechanisms and processes expected to generate the final results. At the post-completion phase, and with the benefit of hindsight, it will be clearer to the evaluators which of these assumptions have proved to be realistic, and which did not hold up during implementation and why.
6. For example, the PPA of a project with a major agricultural marketing component may consider whether the project framework incorporated key information on the value chain. Did it investigate issues relating to input and output markets (distance, information, monopolistic power)? Did it make realistic assumptions on post-harvest conservation and losses? In such cases, staff responsible for the PPA will not be expected to conduct extensive market analyses, but might consider the different steps (e.g. production, processing, transportation, distribution, retail) involved and conduct interviews with selected actors along the value chain.
7. An assessment of effectiveness, the extent to which a project's overall objectives have been achieved, should be preferably made at project completion, when the components are expected to have been executed and all resources fully utilized. The PPA considers the overall objectives⁵ set out in the final project design document and as modified during implementation. At the same time, it should be flexible enough to capture good performance or under-performance in areas that were not defined as an objective in the initial design but emerged during the course of implementation.
8. The PPA mission may interview farmers regarding an extension component, the objective of which was to diffuse a certain agricultural practice (say, adoption of a soil nutrient conservation technique). The purpose here would be to understand whether the farmers found it useful, to what extent they applied it and their perception of the results obtained. The PPA may look into reasons for the farmers' interest in new techniques, and into adoption rates. For example, was the extension message delivered through lectures? Did extension agents use audio-visual tools? Did extension agents engage farmers in interactive and participatory modules? These type of questions help illustrate *why* certain initiatives have been conducive (or not conducive) to obtaining the desired results.
9. The Evaluation Manual suggests methods for assessing efficiency, such as calculating the economic internal rate of return (EIRR),⁶ estimating unit costs and comparing them with standards (cost-effectiveness approach), or addressing managerial aspects of efficiency (timely delivery of activities, respect of budget provisions). The documentation used in preparing the PCRV should normally provide sufficient evidence of delays and cost overruns and make it possible to explain why they happened.
10. As far as rural poverty impact is concerned, the following domains are contemplated in the Evaluation Manual: (a) household income and assets; (b) human and social capital and empowerment; (c) food security and agricultural

⁵ Overall objectives will be considered as a reference for assessing effectiveness. However, these are not always stated clearly or consistent throughout the documentation. The assessment may be made by component if objectives are defined by components; however the evaluation will try to establish a correspondence between the overall objectives and outputs.

⁶ Calculating an EIRR may be challenging for a PPA as it is time consuming and the required high quality data are often not available. The PPA may help verify whether some of the crucial assumptions for EIRR calculation are consistent with field observations. The mission may also help shed light on the cost-effectiveness aspects of efficiency, for example whether, in an irrigation project, a simple upgrade of traditional seasonal flood water canalization systems might have been an option, rather than investing on a complex irrigation system, when access to markets is seriously constrained.

productivity; (d) natural resources, the environment and climate change;⁷ and (e) institutions and policies. As shown in past evaluations, IFAD-funded projects generally collect very little data on household or community-level impact indicators. Even when impact data are available, both their quality and the methodological rigour of impact assessments are still questionable. For example, although data report significant increases in household assets, these may be due to exogenous factors (e.g. falling prices of certain commodities; a general economic upturn; households receiving remittances), and not to the project.

11. PPAs may help address the "attribution issue" (i.e. establishing to what extent certain results are due to a development intervention rather than to exogenous factors) by:
 - (i) following the logical chain of the project, identifying key hypotheses and reassessing the plausibility chain; and
 - (ii) conducting interviews with non-beneficiaries sharing key characteristics (e.g. socio-economic status, livelihood, farming system), which would give the mission an idea of what would have happened without the project (counterfactual).⁸
12. When sufficient resources are available, simple data collection exercises (mini-surveys) may be conducted by a local consultant prior to the PPA mission.⁹ Another non-mutually exclusive option is to spot-check typical data ranges or patterns described in the PCR by means of case studies (e.g. do PCR claims regarding increases in average food-secure months fall within the typical ranges recorded in the field?). It is to be noted that, while data collected by a PPA mission may not be representative in a statistical sense, such data often provide useful reference points and insights. It is important to exercise care in selecting sites for interviews in order to avoid blatant cases of non-beneficiaries profiting from the project.). Sites for field visits are selected by IOE in consultation with the government concerned. Government staff may also accompany the PPA mission on these visits.
13. The typical timing of the PPA (1-2 years after project closure) may be useful for identifying factors that enhance or threaten the sustainability of benefits. By that stage, the project management unit may have been disbanded and some of the support activities (technical, financial, organizational) terminated, unless a second phase is going forward or other funding has become available. Typical factors of sustainability (political support, availability of budgetary resources for maintenance, technical capacity, commitment, ownership by the beneficiaries, environmental resilience) can be better understood at the ex post stage..
14. The PPA also concentrates on IFAD's role with regard to the promotion of innovations and scaling up. For example, it might be observed that some innovations are easily scaled up at low cost (e.g. simple but improved cattle-rearing practices that can be disseminated with limited funding). In other cases, scaling up may involve risks: consider the case of a high-yield crop variety for which market demand is static. Broad adoption of the variety may be beneficial in terms of ensuring food security, but may also depress market prices and thereby reduce sale revenues for many households unless there are other, complementary activities for the processing of raw products.
15. The PPA addresses gender equality and women's empowerment, a criterion recently introduced into IFAD's evaluation methodology. This relates to the emphasis placed on gender issues: whether it has been followed up during

⁷ Climate change criterion will be addressed if and when pertinent in the context of the project, as most completed projects evaluated did not integrate this issue into the project design.

⁸ See also the discussion of attribution issues in the section on PCRVs.

⁹ If the PPA is conducted in the context of a country programme evaluation, then the PPA can piggy-back on the CPE and dedicate more resources to primary data collection.

implementation, including the monitoring of gender-related indicators; and the results achieved.

16. Information from the PCRV may be often sufficient to assess the performance of partners, namely, IFAD and the government. The PPA mission may provide further insights, such as on IFAD's responsiveness, if relevant, to implementation issues or problems of coordination among the project implementation unit and local and central governments. The PPA does not assess the performance of cooperating institutions, which now has little or no learning value for IFAD.
17. Having completed the analysis, the PPA provides its own ratings in accordance with the evaluation criteria and compares them with PMD's ratings. PPA ratings are final for evaluation reporting purposes. The PPA also rates the quality of the PCR document.
18. The PPA formulates short conclusions: a storyline of the main findings. Thereafter, a few key recommendations are presented with a view to following up projects, or other interventions with a similar focus or components in different areas of the country.¹⁰

¹⁰ Practices differ among multilateral development banks, including recommendations in PPAs. At the World Bank, there are no recommendations but "lessons learned" are presented in a typical PPA. On the other hand, PPAs prepared by Asian Development Bank include "issues and lessons" as well as "follow-up actions" although the latter tend to take the form of either generic technical guidelines for a future (hypothetical) intervention in the same sector or for an ongoing follow-up project (at Asian Development Bank, PPAs are undertaken at least three years after project closure).

Definition of the evaluation criteria used by IOE

<i>Criteria</i>	<i>Definition^a</i>
Project performance	
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 in achieving its objectives.
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted into results.
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.
Household income and 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.
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 grassroots organizations and institutions, and the poor's individual and collective capacity.
Food security and agricultural productivity	Changes in food security relate to availability, access to food and stability of access, whereas changes in agricultural productivity are measured in terms of yields.
Natural resources, the environment and climate change	The focus on natural resources and the environment involves assessing the extent to which a project contributes to changes in the protection, rehabilitation or depletion of natural resources and the environment as well as in mitigating the negative impact of climate change or promoting adaptation measures.
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.
Other performance criteria	
Sustainability	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 project's life.
Innovation and scaling up	The extent to which IFAD development interventions have: (i) introduced innovative approaches to rural poverty reduction; and (ii) the extent to which these interventions have been (or are likely to be) replicated and scaled up by government authorities, donor organizations, the private sector and others agencies.
Gender equality and women's empowerment	The criterion assesses the efforts made to promote gender equality and women's empowerment in the design, implementation, supervision and implementation support, and evaluation of IFAD-assisted projects.
Overall project achievement	This provides an overarching assessment of the project, drawing upon the analysis made under the various evaluation criteria cited above.
Performance of partners	This criterion assesses the contribution of partners to project design, execution, monitoring and reporting, supervision and implementation support, and evaluation.
IFAD	It also assesses the performance of individual partners against their expected role and responsibilities in the project life cycle.
Government	

^a These definitions have been taken from the OECD/DAC *Glossary of Key Terms in Evaluation and Results-Based Management* and from the IFAD Evaluation Manual (2009).

^b The IFAD Evaluation Manual also deals with the "lack of intervention", that is, no specific intervention may have been foreseen or intended with respect to one or more of the five impact domains. In spite of this, if positive or negative changes are detected and can be attributed in whole or in part to the project, a rating should be assigned to the particular impact domain. On the other hand, if no changes are detected and no intervention was foreseen or intended, then no rating (or the mention "not applicable") is assigned.

List of key persons met

Government

Ministry of Agriculture and Forests

Sherub Gyaltshen, Secretary, Ministry of Agriculture & Forests, Thimphu

Tenzin Chopel, Chief, Policy and Planning Division, Thimphu

Tenzin, Chief Engineer, Engineering Division, Thimphu

Dorji Dhradhul, Director, Department of Agricultural Marketing and Cooperatives, Thimphu

Dr Tshering Dorji, Program Director, Regional Livestock Development Centre Khangma, Trashigang

Bhim Raj Gurung, Marketing Specialist (Agriculture), Regional Agricultural Marketing & Cooperative Office, Mongar

Eastern region

Tshewang Gyeltshen, Principal Engineer, RDC, Wengkher

Sangay Jamtsho, Assistant Program Officer, RAMCO, Mongar

Kinga Dechen, Assistant District Livestock Officer, Trashigang

Jamyang P Rabten, Planning Officer, PPD, Thimphu

Kunley Yangden, Engineer, Trashigang

Pema Choden, Agriculture Officer, Trashigang

Jigme Tshelthrim Wangyal, DzFO, Trashigang

Ngawang, District Agriculture Officer, Trashigantse

Tashi Gyelpo, ADzFO, Trashiyangtse

Ugyen norbuu, District Engineer, Trashiyangtse

Phurba Thinley, District Livestock Officer, Trashiyangtse

Kinzang Cheda, NSC,

Tshering Dorji, Assistant District Agriculture Officer, Trashiyangtse

Rinchen Dawa, Assistant District Livestock Officer, Trashiyangtse

Chhimi Rinzin, Gewog Livestock Officer

Karma Rinzin, Gewog Livestock Officer

Ugyen Tenzin, Gewog Extension Officer

Tshewang Jurmey, Assistant Engineer IV

Tenzin Dukpa, District Engineer

Sangay Wangdi, Assistant District Agriculture Officer

Pema Thinley, Assistant District Livestock Officer

Jigme Wangchuk, Forest Ranger

International and other institutions

SNV Netherlands Development Organisation

Binai Lama, Portfolio Coordinator, Bhutan

Sonam Rigyel, Dy. Managing Director, Operations, Thimphu, Bhutan Development Bank Limited

Mr. Bhawani Shankar Timsina, Deputy General Manager/Head Internal Audit, Thimphu, Bhutan Development Bank Limited

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Summary of physical progress

At December 2012

Component	Output/activity	Unit	Project targets		Actual achieved								
			Appraisal	Revised	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Cumulative Total		
1. On-farm production: A. Crops and soil conservation	Potato production (seed)	No. of farmers	0	451					738	261		999	
		Kg of seed	0	241724					37250	23150		60400	
		Acres of land	0	225						31	19		50
	Maize seed production	No. of farmers	0	271						324	304		628
		Kg of seed	0	3375						4650	6080		10730
		Acres of land	0	150						186	243		429
	Other crops and vegetables	Farmers supported	No. of farmers		1284					983	756		1739
		Area of crop	Acres	0	67					32	35		67
	Citrus orchard development	Private nurseries	No. of nurseries	0	46					82	0		82
			Seedling distribution	No. of seedlings	0	43268					23632	46233	
		Support for farmers	No. farmers	0	2202					1681	771		2452
		Compost pits	No. of pits	0	1107					252	525		777
	Temperate orchard development	Private nurseries	No. nurseries	0	6					2	0		2
		Seedling distribution	No. seedlings	0	80573					55686	40891		96577
		Support for farmers	No. farmers	0	1596					929	473		1402
	Sprayers supplied to RNR centres	No. sprayers	0	90					75	17		92	
	Vegetable production	No. of farmers	0	1284						983	756		1739
		Packets seed	0	13297						54179	241267		295446
	Drip and sprinkler irrigation systems supplied	No. systems	8	40		2				26	0		28
	Water harvesting systems	No. systems	0	12						0	12		12
	Mushroom production	Farmers supported	No. farmers	63	372	107	4	14		123	125		373
	Sloping land management: area of land	Acres	0	95						27	87		114
	Degraded watersheds planted	Acres	3	75		10	12			65	359		445
	Training of extension staff	Farm business management		No. of staff	86						27	1	28
		Mushroom production		No. of staff		15					1		1
		Fruit nursery production		No. of staff		18					30		30
		Drip/sprinkler irrigation		No. of staff		14						17	17
1. On-farm production: B. Livestock	Pasture development	HH supported	No. of farmers									0	
		Area developed	Acres	294	488	26	217	399	634	311		1586	
	Farm boundary planted with fodder trees	Acres of land	0	273	0	0	0	0	0	2		2	
	Community animal health workers	Initial training	No. of CAHW	0	57	0	0	0	0	20	52		72
		Refresher training	No. of CAHW	330	156	0	0	86	88	96		270	
		Equipment supplied	No. of CAHW	120	155	0	77	14	109	102		302	
		Animals vaccinated	No. of animals	0	151	0	0	0	21	61		82	
	Animal breeding	Jersey bulls supplied	No. of bulls	165	28	4	30	37	6	43		120	
		Mithun bulls supplied	No. of bulls	0	181	0	0	0	68	52		120	
		Artificial insemination	Centres established	9	8	0	1	2	1	5		9	
		Animals inseminated	3600	6893	0	130	0	1351	2747		4228		
	Dairy farmers	Trained in group mobilisation		No. of farmers	0	1337	0	0	0	583	863		1446
		Trained in farm business management		No. of farmers	0	293	0	0	0	314	908		1222
		Support for cow transport		No. of farmers	0	554	0	0	0	100	239		339
		Support for cow shed construction		No. of farmers	0	778	0	0	0	299	428		727
	Poultry and piggery	Training in commercial poultry raising		No. of farmers	0	36	0	0	0	63	343		406
		Poultry units established		No. of units	0	0	0	0	0	0	0		0
		Pig units established		No. of units	0	0	0	0	0	0	0		0
		Transport of chicks / pullets		No. of chicks	0	0	0	0	0	0	0		0
		Transport of piglets		No. of piglets	0	0	0	0	0	0		0	
	Milk processing & marketing	Training in dairy product diversification		No. of farmers	0	29	0	0	0	1	12		13
		Establish milk booths		No. of booths	0	39	0	0	0	3	14		17
		Butter churners supplied		No. churners	0	74	0	0	0	7	24		31
		Stainless steel milk cans supplied		No. of farmers	0	1001	0	0	0	130	334		464
		Cheese molds supplied		No. of sets	0	117	0	0	0	5	65		70
	Training in fish production		No. of farmers	0	58	0	0	0	0	0	186		186
	Chill packs supplied		No. of packs	0	53	0	0	0	0	64	12		76
Meat shops improved		No. of shops	0	6	0	0	0	0	1	0		1	
Livestock extension agents trained		No. of agents	401	93	27	82	270	67	21		467		

Annex VIII

Component	Output/activity	Unit	Project targets		Actual achieved							
			Appraisal	Revised	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	Cumulative Total	
2. Marketing and enterprose development	Zero energy cooling chambers constructed	No.chambers		575					7	18		25
	Village produce stores established	No. of stores	90	120			7	4	1			12
	Existingsales points converted to organised outlets	No. of outlets		18				4	1			5
	Storage silos constructed	No of silos		435				58	188			246
	Market information system with geog price boards	System exists		48				18				18
	Market research studies	No. of studies		8				8				8
	District Marketing Officers trained	No. of officers		6								0
	Training in value chain development	No. of people	179				89					89
	Workshops for multi-stakeholder planning	No of w'shops		10				11	1			12
	Godfathers trained to coach entrepreneurs	No. of people		30							33	33
	BOF proposals funded based on yearly targets	No. approved				4		6	1	1		12
	MIF proposals funded based on yearly targets	No. approved				8	26	26	24	58	26	168
	Annual district fairs organised	No. of fairs		12				2	2			4
	Drudgery reduction interventions	Number		48				10	29			39
	Private sector/bank/.agent workshops	No. W'shops		6								0
	Private sector participation events	No. of events		2				1			1	2
	Exposure visits for businessmen	No. of visits		2							1	1
	Storeroom at Samdrup Jongkhat market shed	Storeroom		1							1	1
	Officers trained in auction practices	No. of officers		12								0
	Buyer-seller meets	No. of meets		2				2				2
	NTPF dryer facilities established	No. of dryers		3								0
	Computer sets for DMOs & RAMS	No.computers		6				7	4			11
Mobility for DMOs and RAMS	No. of vehicles		6								0	
Citrus waxing machines	No.machines		3							3	3	
3. Rural financial services	Number of loans disbursed	Number				651	1519	180	129			2479
	Amount disbursed	Nu. million				24	56	5	4			89
	Number of loans outstanding at year-end	Number										
	Value of loans outstanding at year end	Nu. million				18	41	53	193			
	Portfolio at risk at year-end	Percent				8%	13%	15%	13%			
4. Infrastructure development	Roads constructed	Km road	155	248	44	70	72	54	11	10		260
	Roads improved	Km		211		18	23	27			141	210
	PTT constructed	Km	240			8	23					31
	PTT improved	Km										0
	Structures and stabilisation works	No. of works										0
	Monsoon restoration works	No. of works										0
		Km repaired										0
	Irrigation canals constructed	Km of canal	75		7							7
		Ha of land			26							26
	Road maintenance groups	No. of groups active in year			9	5						14
	Km road covered			70	41						111	



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