Implementation Completion Report (ICR) Review - Bhutan - Sustainable Land Management Project

1. Project Data:		ICR Review Date Posted:	08/26/2014	
Country:	Bhutan			
PROJ ID:	P087039		Appraisal	Actual
Project Name:	Bhutan - Sustainable Land Management Project	Project Costs(US $M)	10.12	10.89
L/C Number:		Loan/Credit (US $M)	7.66	7.65
Sector Board:	Environment	Cofinancing (US $M)		
Cofinanciers:		Board Approval Date		01/17/2006
		Closing Date	12/31/2012	06/30/2013
Sector(s):	General agriculture fishing and forestry sector (55%), Sub-national government administration (25%), Central government administration (20%)			
Theme(s):	Land administration and management (29% - P) Environmental policies and institutions (29% - P) Biodiversity (14% - S) Other rural development (14% - S) Participation and civic engagement (14% - S)			
Prepared by:	Reviewed by:	ICR Review Coordinator:	Group:	
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2. Project Objectives and Components:

a. Objectives:

According to the Project Appraisal Document (PAD, p. 4) the Project Development Objectives (PDO) was to: *"strengthen institutional and community capacity for anticipating and managing land degradation in Bhutan."*

According to the Project Appraisal Document (PAD, p. 4) the Global Environmental Objective (GEO) was to:*"contribute to more effective protection of trans-boundary watersheds in a manner that preserves the integrity of ecosystems in Bhutan."*

According to the Trust Fund Grant Agreement (p. 14) the PDO was to: *"assist the Recipient in strengthening institutional and community capacity to anticipate and manage land degradation."*

IEG will evaluate the project against the objectives as stated in the Trust Fund Grant Agreement. The PDO statement is seen to include two objective:

(i) to assist Recipient in strengthening institutional capacity to anticipate and manage land degradation.

(ii) to assist Recipient in strengthening community capacity to anticipate and manage land degradation.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Components:

1. Pilot projects to demonstrate effective application of land degradation prevention approaches (Appraisal cost: US$1.37 million, actual cost: US$1.47 million). The pilots would be implemented in three geogs (geog is a local government administrative area-subdistrict, Bhutan has a total of 205 geogs) that would be selected to represent a variety of the land degradation pressures in Bhutan. These are Nangkor in Zemgang Dzongkhag (a Dzongkhag is a district level administrative

area-Bhutan has twenty districts), Phuntsholing in Chhukha Dzongkhag and Radhi in Trashigang Dzongkhag. This component consists of three sub-components:
(i) support a GIS-based biophysical and socio-economic mapping exercise to identify the causes and incidence of land degradation.
(ii) information generated through the mapping exercise would be used to identify “hot-spots” and to assess the presence or absence of incentives that currently guide farming practices and inform community decisions.
(iii) support community decision making and prioritization of potential sustainable land management (SLM) investments at the chiog (chiog is a village level administrative area) level.
The project would finance a range of activities including: capacity building for community decision making and planning, training of geog staff to plan and implement SLM activities in a multi-sectoral manner, investments at the community and farm levels to strengthen the adoption of SLM practices, monitoring to validate SLM investments, and national and regional level workshops to discuss results and scaling-up implementation. Physical investments at the farm and community level might include vegetative conservation measures, terracing, forest and rangeland regeneration, reforestation, etc. where necessary. The results of the pilots would be used to replicate the application of SLM investments and policies to other geogs.

2. Mainstreaming of practices for protection against land degradation (Appraisal cost: US$4.41 million, actual cost: US$4.71 million). This component would support the scaling up of the pilots to six additional geogs (two in each of the pilot dzongkhags) based on the lessons learned from Component 1. Support to additional geogs would be phased, starting in geogs where there is substantial potential for success of SLM interventions and where existing capacity is adequate. In addition, it would facilitate coordinated and participatory planning at the dzongkhag level which integrates the cross sectoral impacts of development (e.g. infrastructure, roads, irrigation, power, agriculture and industrial development). Inter-dzongkhag conflicts (particularly over grazing) and intersectoral conflicts over land use and planning would be resolved at this level. Capacity building efforts would precede replication to new geogs. Under this component, the project would support on the ground investments, technical assistance, community cross-site visits, training, research and awareness programs, new analytical tools, geographic information systems and databases.

3. Policy support and guidance for mainstreaming land degradation prevention practices (Appraisal cost: US$1.05 million, actual cost: US$0.74 million). This component would bring lessons from Component 1 and 2 to inform national legislation and policy pertaining to watershed management, upland agriculture and livestock, forestry, urban planning and infrastructure development. It would provide technical assistance to develop guidelines for mainstreaming SLM principles into the government's five-year plans, and geog and dzongkhag five-year and annual plans. This would be undertaken through compilation and dissemination of lessons learned from pilot sites, policy guidance notes, capacity building and awareness workshops.

4. National level support for coordination of implementation of land degradation prevention practices (Actual cost: US$0.81 million, actual cost: US$:1.12 million). This component would further support the government's efforts to strengthen and build capacity within the Ministry of Agriculture (MOA) to systematically and effectively coordinate a program of activities in order to help anticipate and manage land degradation in the country. It would provide over-arching support across different sectors (i.e. agriculture and natural resources, roads, infrastructure, irrigation, etc.) and different levels of government (i.e. geog, dzongkhag and central levels) for supporting SLM activities. This would be achieved through project support for technical assistance, training, equipment, and management information systems.

d. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost. According to the PAD (Annex 5) the total project cost at appraisal was estimated to be US$10.12 million. The ICR (Annex 2) reported that total project was US$10.89 million.

Financing. At appraisal the project was estimated to receive a GEF Grant of US$7.66 million. At

completion the ICR (Annex 1) reports that the project received a GEF Grant of US$8.04 million. However, the project portal shows that the total disbursed amount was US$7.66 million. The project also received US$5.77 million of parallel financing through the Danish International Development Assistance (DANIDA).

Borrower Contribution. The borrower contributed US$1.51 million of counterpart funds (100% of appraisal estimate) and local communities contributed US$1.35 million compared to an appraisal estimate of US$0.95 million (142% of appraisal estimate).

Dates. The project closing date was extended by six months to close on June, 30, 2013. Such extension was needed to allow the Government to "mainstream some activities introduced in the latter part of the implementation period, reinforce and sustain the project benefits through integrating into the eleventh five-year plan and scale up SLM as an important tool for the management of Bhutan's land and land resources (ICR, . p. 4)."

3. Relevance of Objectives & Design:

a. Relevance of Objectives:

High. The Kingdom of Bhutan is a small land-locked country. It has limited usable land resource due to difficult
and high mountain terrain, vast areas of snow and barren rocks, and large forests - which currently cover some 72.5% of the country. Arable land constitutes only 8% of the country's territory, most of which is located in the central valleys and southern foothills, and in relatively flat areas. The majority (79%) of the country's population live in rural areas, and 98% of those are poor. The rural population relies on an integrated livelihood system of crop agriculture, livestock rearing, and use of a wide variety of forest products. However, population growth and split inheritance led to fragmented farmlands and resulted in less investment in sustainable land management by farmers. There is also ample evidence of soil erosion, landslides and forest degradation, as well as depletion of soil fertility in agricultural lands. Land degradation and fertility loss are important causes of poverty in the country. Hence, the promotion of sound and sustainable management of natural resources is a key tool to a strategy for reduction of poverty (PAD, p. 1). At project completion the objectives remain highly relevant and in line with the Government's priorities as reflected in the Eleventh Five Year Plan (2013-2018) goals and targets which include mainstreaming SLM as part of poverty reduction, agriculture diversification and responsiveness to emerging issues, such as climate change. Objectives are also consistent with the Bank's current Country Partnership Strategy (CPS, 2011-2014) where environmental sustainability is a cross-cutting theme. The CPS highlights several themes related to SLM including environmental stewardship, application of environmental safeguards, disaster risk management and adaptation to climate change.

b. Relevance of Design:

Substantial. Design included a clear PDO statement, but it could have been more focused by mentioning beneficiaries and the expected impact of project activities on their livelihood. To achieve the stated objective design relied on three main approaches, first it promoted a bottom up participatory mechanism to ensure support from beneficiary communities, second, design promoted a building block approach with phased implementation where activities started as a pilot and then scaled up; and third, design promoted learning by doing for SLM activities combined with an integrated multisectoral approach. Overall, design provided a logical link between project inputs, outputs and expected outcomes.

Design included a GEO statement that seemed ambitious given the size and duration of the project. To achieve the GEO design featured activities geared towards sustainable land management with a focus on reducing land degradation and soil run-off. A Bank Quality Assurance Group (QAG) assessment highlighted that design should have given more attention to planning and implementing watershed interventions as they constitute the foundation towards the achievement of the GEO.

4. Achievement of Objectives (Efficacy) :

PDO: to assist the Recipient in strengthening institutional and community capacity to anticipate and manage land degradation.

(i) to assist Recipient in strengthening institutional capacity to anticipate and manage land degradation (substantial).

Outputs:

By project completion the following outputs were achieved: (If no targets or baselines are shown then ICR did not provide them)

- Development of GIS-based analytical tools, tracking SLM, identifying land degradation hot-spots and prioritizing SLM investments: the GIS Section within the National Soil Services Center was strengthened with well-trained personnel and latest technology in terms of equipment and tools. SLM Action Planning Manual was prepared in 2009 and 50 renewable natural resource maps were prepared by employing GIS analytical tools, which include the resource assessments and socio-economic profiles with full participation of *chiog*. GIS-based maps identified "hotspots" that need urgent land degradation preventive practices and SLM manuals and digitization were completed. National land cover maps were updated in 2010.
- Renewable natural resources staff, Dzongkhag Yargye Tshodu and Block Development Committee members trained in multi-sectoral SLM planning: about 88% renewable natural resources staff, 90% of the Block Development Committee members and 100% Dzongkhag Yargye Tshodu members were trained compared to an appraisal target of 83% and a baseline of none. The project also sponsored 9 Masters degrees and 7 Post Graduate Diplomas. Short-term training were undertaken and 223 study tours were conducted for a total of 1,012 beneficiaries.
- Sector policies and legislation incorporating SLM principles: Land Act 2007, National Land Policy 2010, National Forest Policy 2011, National Adaptation Program of Action and National Biodiversity Action Plan incorporate SLM principles (target 100% achieved).
- Including SLM planning processes and components: Nine *geogs,* three from each of Zhemgang, Chhukha, and Trashigang *dzongkhag* incorporated SLM action planning processes into their annual development planning processes. The project introduced comprehensive planning approaches with a range of tools originating from Participatory Rural Appraisal and Participatory Learning and Action such as problem census, history lines and participatory mapping.
- Local level resource management system adopting SLM: a total of 140 local level resource management regulatory agreements were put in place (appraisal target:10). This included the establishment and certification of community forests, as well as community concurrence and agreements with water user associations and by-laws for water source protection. The large difference between the target and achievement reflects the fact that, according to the project team, not all of these regulatory arrangements were included in the appraisal target.
- National level support for coordination of implementation of land degradation prevention practices: the project supported *geog* planning and implementation of the Land Cover Mapping Project. The project also supported the development of the Land Policy document ensuring proper management and administration of limited arable land and the pristine environment of the country. The project with the technical assistance of data management and modeling experts from the University of Washington supported the development of the Dynamic Information Framework to organize, store and make natural resources management data from the project sites accessible.

Outcomes:

- The project supported updating the country's GIS analytical tools and the preparation of maps identifying land degradation hot spots. Capacity building activities were also provided to staff members involved in multi-sectoral SLM planning.
- In addition, the project supported the preparation and implementation of the Land Policy Act (2007) that incorporated SLM principles in different programs and policies such as National Land Policy, Forestry Policy and National Adaptation Program of Action and National Biodiversity Action Plan. SLM planning and processes were also included in nine geogs (target: 9 geogs) and by project completion, those geogs were implementing land degradation prevention plans. In addition, twenty three other geogs adopted SLM planning and implementation.
- Although it is challenging to demonstrate the impact of capacity building activities on anticipating and managing landing degradation within the project time frame, it is safe to argue that such efforts by the project would most probably have a positive impact on the capability of the institutions to anticipate and manage land degradation in the future.

(ii) to assist Recipient in strengthening community capacity to anticipate and manage land degradation (substantial).

Outputs:
By project completion the following outputs were achieved:(If no targets or baselines are shown then ICR did not provide them)

- Farmers trained in the application of SLM technologies: 17,500 farmers in nine geogs were trained compared to a target an appraisal target of 4,500.

Intermediate Outcomes
(If no targets or baselines are shown then ICR did not provide them)

- Number of geogs effectively adopting land degradation prevention practices: 9 geogs (100% of target) with a total of 1800 farmers adopting SLM practices in three pilot geogs and 1300 in six scale up geogs compared to an appraisal target of 650 and baseline of 255 farmers in pilot geogs and 500 farmers in scale up geogs.
- Degraded forest land regenerated and grazing lands improved in pilot geogs: a total of 8,383 acres of vulnerable lands have been improved including 2,039 acres in 3 pilot geogs and 6,412 acres in 6 scaling up geogs compared to an appraisal target of 666 acres.
- Tseri land (shifting cultivation lands) converted to sustainable land cover: the total ex-tseri land converted to more sustainable land use in nine project geogs is 9,173.1 acres out of which 2,889 acres in 3 pilot geogs and 6,259 acres in 6 scaling up geogs compared to an appraisal target of 4000 acres.
- Intra and inter Dzongkhag and Geog conflicts over grazing and forest use resolved in pilot geogs: number of resource use conflicts arising among people were reduced; hence no serious conflicts, appraisal target at least ten conflicts identified and addressed through SLM action planning.
- Local resource management regulatory systems formulated and implemented for SLM outcomes: about 140 groups (appraisal target: 10 groups focused on community forests) were formed of which about 37 agreements related to community forests natural resource management. The large difference between the target and achievement may reflect the fact that not all of these regulatory agreements were included in the appraisal target. In a further communication, the project team explained that the successful implementation of SLM activities required the formation of groups for other key areas to ensure successful management of resources and to mange resource conflicts. Therefore, the formation of groups

and regulations transcended beyond community forests. Some of the other groups and regulations that were set up in all project sites (pilot and scale-up) included: pasture development groups and their by-laws - for better provision of inputs such as seeds and fencing materials (which would have been difficult to provide otherwise) and also for efficient use of limited land resource, water users groups and their by-laws and groups - for better protection and utilization of drinking water and irrigation water, labor sharing groups and their by-laws - critical for the successful implementation of labor intensive activities such as terracing, stone bund construction and hedgerow establishment, and by-laws formed for different cash income generating enterprises - for better provision of inputs and also for efficient use of limited land resource.

Outcomes:

- The project trained farmers on the application of SLM technologies; and by project completion over 50% of the farmers in the project areas learned to identify and prioritize SLM needs and develop action plans to reduce land degradation. The number of farmers adopting SLM practices exceeded appraisal expectations (1805 compared to a target of 650 and baseline of 255).
- The project also promoted the improvement of degraded forests and grazing land and supported the conversion of Tseri lands to sustainable covered land. Such activities are expected to strengthen community capacity for anticipating and managing land degradation as well as in transforming the attitudes of land users on the significance of SLM.

GEO: to contribute to more effective protection of trans-boundary watersheds in a manner that preserves the integrity of ecosystems in Bhutan.

Outputs:
The ICR lists the indicators as both PDO and GEO indicators with no specification, so it is assumed that all output indicators under PDO (i) and (ii) apply under the GEO as well.
Outcomes:

- By project completion annual soil loss was reduced by 44% (target: 10%) to 29 Metric Ton/ha/year (compared to 2009 baseline of 52MT/ha/year) in the project sites due to management of run-off and soil erosion. The ICR (p. 15) highlights that project supported SLM activities contributed to the reduction of land degradation in targeted areas, and increased agriculture and livestock productivity, reduced damage to households and down slope land and lowered downstream sediment load.
- However, no quantitative data on such benefits were included in the ICR. Also, a draft report prepared by IFPRI in 2013 confirms that the application of SLM techniques led to country wide sediment reduction by 50% in forest land, 23% in agriculture land and 50% in orchards.
- It is challenging to gauge the impact of project activities on the integrity of ecosystems in Bhutan due to the absence of any indicators or baseline guide. That said, it is expected that the project efforts represent the beginning of a process that would positively contribute to effective protection of trans-boundary watersheds.

5. Efficiency:

Economic and Financial Efficiency
Ex-ante
The PAD (p.p. 12&13) includes an economic analysis that focuses on the value of reducing the rate of forest loss over a time frame of 20 years. The analysis considers a reduction in the rate of area loss to 0.25% per annum after 20 years of implementing improved land use planning and management

compared to 0.5% per annum prior to project intervention. The analysis estimates that the benefit-cost ratio is 3.7, and the Economic Rate of Return (ERR) to be 21%. The implication is clearly that the project yields substantial global benefits even without consideration of the on-farm benefits of sustainable land management.

Ex-post

The ICR (Annex 3) includes an ex-post cost benefit analysis which includes two separate benefit estimations: income improvements by local farmers; and ecosystem service enhancements. The analysis used a 20 year time frame and 5%,10%, and 20% for discount rate to account for the sensitivity of simulation results; and 5% and 10% for Incremental yield increase; and 2% and 5% for incremental ecosystem benefits. The analysis yielded positive results as shown below for all scenarios except at 20% discount rate and 2% incremental benefits of ecosystem service provision under the project situation. In addition, "over 97% of respondents to the beneficiary survey claimed that claimed that they benefited from higher incomes and improvements to the productivity of their land resources (ICR, p. 14)." The ICR did not provide an overall ERR for the project.

NPV and B/C-Ratio at 5% discount rate

	Incremental Ecosystem Benefits			
	2%		**5%**	
Incremental Yield Increase	**NPV**	*B/C-Ratio*	**NPV**	*B/C-Ratio*
5%	**3,89**	**1.63**	**17,84**	**3.88**
10%	**4,67**	**1.76**	**18,62**	**4.01**

NPV and B/C-Ratio at 10% discount rate

	Incremental Ecosystem Benefits			
	2%		**5%**	
Incremental Yield Increase	**NPV**	*B/C-Ratio*	**NPV**	*B/C-Ratio*
5%	**1,23**	**1.24**	**9,99**	**2.96**
10%	**1,73**	**1.34**	**10,48**	**3.06**

NPV and B/C-Ratio at 20% discount rate

	Incremental Ecosystem Benefits			
	2%		**5%**	
Incremental Yield Increase	**NPV**	*B/C-Ratio*	**NPV**	*B/C-Ratio*
5%	**-552,19**	**0.85**	**3,64**	**2.02**
10%	**-316,36**	**0.91**	**3,88**	**2.08**

Institutional and Administrative Efficiency

The costs of three out of four project components were higher than estimated at appraisal (7% higher for each of components 1 and 2 and 38% for component 4). The ICR (p. 24) notes that the difference between the actual and appraisal estimates was due to the varying exchange rates. In 2005 exchange rate was 1US$ = 44.91 Bhutanese Ngultrum and as of June 29, 2013 1US$ = 59.30 Bhutanese Ngultrum. As a result there was extra Ngultrum (Nu) to spend. There were some delays and project closing date was extended by six months.

Efficiency is rated **substantial.**

a. If available, enter the Economic Rate of Return (ERR)/Financial Rate of Return at appraisal and the re-estimated value at evaluation: </FONT< div>

	Rate Available?	Point Value	Coverage/Scope*

Appraisal:	Yes	21%	100%
ICR estimate:	No	%	%

* Refers to percent of total project cost for which ERR/FRR was calculated</FONT< div>

6. Outcome:

Relevance of objectives was rated **high** and relevance of design was rated **substantial**. The project objectives were in line with government's priorities and design featured relevant activities to achieve the stated objectives. However, watershed management and planning should have received more attention. Efficacy of both the first and second objectives were rated **substantial**. The project contributed to strengthening the institutional capacity within the country to anticipate and manage land degradation through training local staff and upgrading GIS based analytical tools. Also, the project contributed to mainstream SLM practices in sector policies and legislation. At the community level, the project provided training for farmers on SLM practices and on developing action plans to reduce land degradation. By project completion 1805 farmers adopted SLM practices exceeding appraisal estimates of 650 farmers. It is expected that the project efforts represent the beginning of a process that would positively contribute to effective protection of trans-boundary watersheds. The SLM activities promoted by the project contributed to the reduction of land degradation in targeted area.However, it is difficult to gauge the impact of project activities on the integrity of ecosystems in Bhutan due to the absence of any indicators or baseline guide. Efficiency was rated **substantial**.

a. Outcome Rating: Satisfactory

7. Rationale for Risk to Development Outcome Rating:

The project helped in building a foundation for understanding the need for watershed protection as well as for knowledge and capital investment in appropriate SLM technology. The project also helped build institutional capacity and community ownership to sustain SLM investments. However, it takes time for farmers to realize SLM benefits and adopt and maintain technologies on their own. Furthermore, the rural-urban migration in Bhutan creates pressure on the availability of farm labor at the household level which is a key constraint for adoption and successful implementation of project interventions. This, combined with the lack of access to markets makes it difficult for vulnerable households with small landholdings to adopt SLM interventions (ICR, p. 67). Hence, additional support might be required to facilitate the consolidation of ongoing SLM activities in critical sites. The sustainability of project outcomes would also benefit from the shared interest from the international community on water shed management --which raises the possibility of external financing to future SLM projects. In addition, the Royal Government of Bhutan has also taken a number of steps to ensure the sustainability of the project outcomes including: establishment of the SLM unit, mainstreaming SLM approaches under the project into other donor financed projects such as the: (i) Market Access Growth Intensification Project (US$12.5 million) funded by the International Fund for Agricultural Development and RGoB; (ii) Accelerated Bhutan Socio- Economic Development (US$700,000 annually) funded by RGoB and the European Union (EU); (iii) Remote Rural Communities Development Project supported by the International Development Association (IDA) (US$9 million), also the Ministry of Agriculture and Forests have requested that geogs make adequate allocations for SLM activities in their annual and five year plans, and Royal Government of Bhutan is currently aligning its National Action Program (NAP) to combat desertification with the United Nations Convention to Combat Desertification (UNCCD's) 10-year strategy which may enable future access to Global Environmental Facility (GEF) or UNCCD financing.

a. Risk to Development Outcome Rating: Significant

8. Assessment of Bank Performance:

a. Quality at entry:

- The Royal Government of Bhutan asked for support from GEF under its Operational Program 15 (Sustainable Land Management) implemented by the World Bank to address its critical land degradation situation (PAD, p. 3). The project addresses issues at the top of the Government's priorities.
- Project preparation involved a number of specialists who provided a good skill mix to address sector issues and develop project design. The project preparation also benefited from the GEF preparation Grant which supported the analysis of sector issues linked to environmental sustainability, global practices for addressing the drivers of land degradation and the possible impact of government strategies on project implementation and sustainability (ICR, p. 4).
- Design benefitted from lessons learned from ongoing and completed projects in the environment sector supported mainly by the United Nations Development Programme (UNDP). Most notable: maintaining a flexible and adaptive approach to project design and implementation, ensuring that realistic targets were set that also were commensurate with actual staff strength; and the importance of tangible visible results to encourage community participation in activities.
- The project was designed as a pilot due to limited experience on implementing similar projects in Bhutan. This gave enough flexibility for learning and adaptive management decisions. Preparation of the project was lengthy and involved participation of communities and local officials to ensure an acceptable design to beneficiaries.
- Design relied on a bottom-up approach that involved communities in decision making to effectively incorporate ecological, economic and social dimensions into sustainable land use decisions and investments at all levels. Project management arrangements included a multisectoral technical advisory committee that enabled effective coordination between the three sectors (agriculture, forestry and livestock) involved in project implementation.
- Several risks were identified and appropriate mitigation measures were included in the PAD. Design included relevant M&E arrangements, but the choice of indicators could have been more comprehensive (see section 10).
- The project was rated by the Quality Assurance Group (QAG) as moderately satisfactory. QAG reviewers highlighted that little attention was given to watershed management which is the foundation for planning and implementing interventions towards the achievement of the GEO (ICR, p. 19).

Quality-at-Entry Rating: Moderately Satisfactory

b. Quality of supervision:

- The Bank supervision team had a good skill mix with technical, environmental, social development, procurement, and financial management specialists. The supervision team adequately guided the project towards the achievement of the PDO.
- The team promptly alerted the RGoB and National Soil Services Center about any constraints during implementation and promptly facilitated needed corrective actions. The recommendations of the 2008 Mid Term Review were all implemented and improved project performance (ICR, p. 20).
- The task team also monitored safeguard compliance, however, in the latter part of the project the team did not include a social development specialist due to budget reasons.
- The project could have benefitted from more effective engagement of the supervision team if the task team had participated in field monitoring to guide local level implementation (ICR, p. 21).
- QAG rated Bank supervision satisfactory.

Quality of Supervision Rating: Satisfactory
Overall Bank Performance Rating: Satisfactory

9. Assessment of Borrower Performance:

a. Government Performance:

The Government demonstrated early commitment to the project since the preparation stage. Such commitment continued throughout implementation. The Government also worked closely with the Bank team and reacted promptly to address any issues that arose during implementation. Overall, there was no problem with the allocation of financial resources except for the timely flow of funds to pilot geogs at the early stages of project implementation.

Government Performance Rating: Satisfactory

b. Implementing Agency Performance:

The project was implemented by the Ministry of Agriculture and Forests (MoAF) which also provided policy guidance to the project management team. The National Soil Services Center (NSSC) was committed to implementation and resolving issues and submitted required quarterly and annual reports in a timely manner. Such reports provided useful input for Bank supervision missions. The NSSC through the project management team effectively managed the project, oversaw safeguard compliance and M&E activities. The Results Framework was regularly updated and the results were shared with the Bank. The project management team regularly visited project sites and achievements were documented through reports, posters, brochures and manuals.

Implementing Agency Performance Rating: Satisfactory
Overall Borrower Performance Rating: Satisfactory

10. M&E Design, Implementation, & Utilization:

a. M&E Design:

The PAD (Annex 3) includes a detailed Results Framework that relies on a participatory M&E mechanism. The set of indicators included in the Results Framework were adequate to capture the achievement of the project's outputs and outcomes. However, baseline information was not available for many indicators. This required the development and application of new analytical tools to collect reliable data that would inform SLM planning and project management. In late 2012, two core sector indicators required by the Bank: (i) area brought under enhanced biodiversity protection; and (ii) number of farmers practicing SLM activities, were introduced to better capture the project outcomes. M&E design could have benefited from including two additional indicators, one to gauge the impact of project activities on agricultural productivity and the other to gauge the impact of the project on poverty levels in project areas.

b. M&E Implementation:

M&E implementation was overseen by the Ministry of Agriculture and Forests where the project activities were monitored and data fed into the project management unit tracking system. Monitoring responsibilities were carried out at all administrative levels and data collection was built into a bottom-up planning process. The ICR (p. 9) notes that the farmers received training on data collection in addition to SLM techniques. The key GEO indicator which called for a 10% reduction of sediment flow in selected micro-watersheds in pilot geogs was revised in March 2007 to rely on erosion plots to quantify and monitor reduction in soil erosion and run-off in pilot geogs. This revision was prompted by the difficulty to establish a baseline which required a time series data of mountain stream discharge; and according to the ICR (p. 2) this was too difficult to undertake. In addition, it was also difficult to quantify sediment flux due to its dependence on peak flow incidence and even if sediment flows were quantified, it would still be challenging to attribute reduction in sediment flow in micro-watersheds to SLM activities alone. The introduction of erosion plots demonstrated to farmers the benefits of SLM on land productivity and prevention of soil loss. Process monitoring also helped to identify implementation challenges and good practices for replication. The Mid Term Review highlighted that tangible evidence on SLM benefits from the project activities would be difficult to demonstrate due to the wide spread

nature of implementation. Therefore, two randomly selected villages in each geog were selected for demonstration purposes.

a. M&E Utilization:
According to the ICR (p. 9) data collection was adequate and fed into a bottom-up planning process. The data collected were used for national decision making beyond project activities, including the preparation of the Eleventh Five Year Plan, the 2010 land cover update as well as national planning (ICR, 10). Consolidated M&E reports were submitted bi-annually.

M&E Quality Rating: Substantial

11. Other Issues:

a. Safeguards:
The project was a category B. It triggered three safeguard policies: environmental assessment (OPBP/GP 4.01), forests (OPBP 4.36), and pest management (OP 4.09). Policies on natural habitats (OPBP 4.04), and cultural property (OPN 11.03) have some applicability and care should be taken during replication to other geogs to ensure such impacts are anticipated and managed (PAD, p. 16). As part of the project preparation, an Environmental Management Framework was developed to ensure that the environmental assessment and management process is incorporated into the entire land use planning and management process.

According to the ICR (p. 10) the environmental and social safeguard compliance was rated satisfactory with "no cases of environmental or social issues that were not successfully managed."

b. Fiduciary Compliance:
According to the ICR (p. 10) fiduciary compliance was rated satisfactory. The project complied with fiduciary covenants and financial management system and records were adequate. There were no reported mis-procurement of activities.

c. Unintended Impacts (positive or negative):
Positive. The Royal Government of Bhutan utilized the expertise of the Geographic Information System (GIS) which was strengthened under the project to manage a recent flood in the country.

d. Other:
None.

12. Ratings:	ICR	IEG Review	Reason for Disagreement/Comments
Outcome:	Satisfactory	Satisfactory	
Risk to Development Outcome:	Moderate	Significant	Concerns on adoption of SLM technologies in light of limited farm labor and limited market access for small landholders.
Bank Performance:	Satisfactory	Satisfactory	
Borrower Performance:	Satisfactory	Satisfactory	
Quality of ICR:		Satisfactory	

NOTES:
- When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as

warranted beginning July 1, 2006.
- The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons:

The following lessons are emphasized from the ICR:

- **A simple and flexible project design is important for a country with limited resources and prior experience that was still developing its approach to address a national priority.** Such a design recognizes the need for allowing sufficient time for capacity building to become fruitful and for the implementing agencies to take on increasingly complex activities at the right time if it is to be adaptive to the changing needs of beneficiaries and decision-makers. Learning by doing or piloting during the early stages of the project in a new area of intervention is critical to building the knowledge and expertise of the project team, local officials and the communities prior to scaling up the project in a larger geographical area.
- **The multi-sectoral approach adopted by the project proved to be an effective means of managing natural resources.** The well-being of the environment and natural resources is fundamental to the long-term sustainability of many sectors. Hence, bringing practitioners from various sectors together, creating and enhancing synergies, promoting collective processes and encouraging adaptation to joint decision-making are basic to the project's success. The appointment of a multi-sectoral technical advisory team centrally ensures that the technical knowledge for implementing project activities is consolidated and made available to field level staff to build strong ownership of the project among stakeholders. Collaboration among relevant ministries and agencies, as well as with other donor agencies on sectoral, as well as crosssectoral issues can help address them expeditiously. The synergy created by this collaboration and cooperation enables the government to carry out related policy changes more effectively.
- **Providing short-term livelihood incentives to communities facilitated the effective adoption of natural resource management practices.** For a project where the activities are labor-intensive and most of the impacts are long-term, providing short-term livelihood incentives raises the willingness of communities to adopt new techniques and ease the burden on the most vulnerable groups. When the benefits are realized, the need to continue with the short-term incentives diminishes substantially. Training and awareness raising and developing clear linkages to livelihood outcomes enable community understanding of the significance of the project interventions. Close and continued interaction with the communities for a considerable amount of time helps to change their attitudes and behaviors towards the adoption of new technologies with long-term benefits.
- **The use of existing institutional structures for project implementation instead of creating a separate project management unit is effective when implementing institutional capacity building projects.** The approach encourages institutional enhancements after the project closure and instills project ownership within the country. Disruptions to project implementation would need to be minimized by limiting the turnover of key project staff. To ensure continuity, key staff should be appointed for the entire project period. When this is not possible, the availability of proper documentation and handover arrangements (including overlap between incoming and outgoing staff) must accompany staff changes for the continuation of systems, procedures and documentation.

14. Assessment Recommended?

Yes

Why?

To further confirm the impact of SLM activities supported by the project and to verify the achievement of GEO.

15. Comments on Quality of ICR:

The ICR provided a through yet concise coverage of project activities. It included four lessons that reflected the project experience and have potential to be applied to other projects. The ICR also included a logical discussion on the achievement of project outcomes and a relevant economic analysis. However, the ICR provided limited information on the relevance of the GEO with regards to GEF priorities.

a. Quality of ICR Rating: Satisfactory