



Technical Assistance Report

Project Number: 41220
July 2008

Republic of the Philippines: Preparing the Integrated
Natural Resources and Environmental Management
Sector Development Program
(Financed by the Japan Special Fund)

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 07 July 2008)

Currency Unit	–	peso/s (P)
P1.00	=	\$0.022
\$1.00	=	P45.20

ABBREVIATIONS

ADB	–	Asian Development Bank
CDM	–	Clean Development Mechanism
GEF	–	Global Environment Facility
Ha	–	Hectare
IEE	–	initial environmental examination
IFAD	–	International Fund for Agricultural Development
INREM	–	integrated natural resources and environmental management program
LGU	–	local government unit
PPTA	–	project preparatory technical assistance

TECHNICAL ASSISTANCE CLASSIFICATION

Targeting Classification	–	General intervention
Sector	–	Agriculture and natural Resources
Subsector	–	Environment and biodiversity
Themes	–	Inclusive social development, environmental sustainability, capacity development
Subthemes	–	Indigenous peoples, natural resources conservation, institutional development

GLOSSARY

River basin	–	A river basin is the portion of land drained by a river and its tributaries. It encompasses the entire land surface dissected and drained by many streams and creeks that flow downhill into one another, and eventually into one river. The final destination is an estuary or an ocean.
Vulnerability assessment	–	An analysis of the relationship between natural and anthropogenic hazards and recipient subject (watershed). It identifies the strength and weaknesses of the recipient subject in relation to the identified hazard.
Watershed	–	A land area drained by a stream or fixed body of water and its tributaries having a common outlet for surface runoff. It includes small watersheds with an area of 10,000 hectares (ha) and less; medium-scale watersheds of more than 10,000 ha to 50,000 ha; and large-scale watersheds of more than 50,000 ha.
Watershed characterization	–	The process of describing the biophysical and socioeconomic characteristics and features of a watershed to have an understanding

of the various processes within it.

- Watershed condition – Quantifies disturbances (stressors) the watersheds are subjected to; vulnerability denotes parameters at risk that could be changed (positive or negative) as a result of management activities.
- Watershed functions – Ecological services performed by a healthy watershed, including maintenance of water flow regimes to benefit aquatic resources, groundwater recharge, municipal water supply, or other uses; and maintaining or restoring ecological conditions needed for ecosystem and species diversity.
- Watershed integrity – A stable overall physical condition of the watershed (bedrock, landforms, soil, drainage) within which transfers of energy, matter, and, especially water occur. It is a prerequisite for the security of terrestrial and aquatic ecosystems. Watersheds with high integrity operate within their perceived natural range of variability and respond to disturbances with a trend to the watershed's "norm" in a reasonable time period.
- Watershed management – The process of guiding and organizing land and other resource uses in a watershed to provide desired goods and services without adversely affecting soil, water, and other natural resources.
- Uplands – Land areas located on slopes of more than 18%.

NOTE

In this report, "\$" refers to US dollars.

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I. INTRODUCTION

1. During the country program consultations (March 2007), the Government of the Philippines requested Asian Development Bank (ADB) assistance to prepare a comprehensive upland development program in tandem with possible support for the third phase of the Cordillera Highland Agricultural Resource Management Project (CHARMP2) recently approved by the International Fund for Agricultural Development (IFAD).¹ In subsequent discussions with the Government, ADB was requested to prepare a framework which would help prioritize investments in watersheds of national importance in all regions of the Philippines. The Fact-Finding Mission for the technical assistance to prepare the Integrated Natural Resources and Environmental Management (INREM) Sector Development Program was fielded in February 2008 to develop the scope of work and implementation arrangements with the Government. A design and monitoring framework for the project preparatory technical assistance (PPTA) is in Appendix 1 and initial poverty and social analysis in Appendix 2.²

II. ISSUES

2. **Watersheds Degradation and Poverty.** Watersheds, which constitute a large proportion of the total land base of the Philippines, provide vital resources for the well-being of the society. Most watersheds are located on mountainous and steep slopes, with 16.3 million hectares (ha) on slopes over 18% (upland), and 68% of this upland area is on slopes of more than 30%. These watersheds are also a source of livelihood for rural communities. Degradation of these watersheds, especially in the uplands, which constitute the bulk of these resources, is a significant contributor to poverty, inequality, and loss of livelihood. About 18 million of the poorest of the poor upland farmer households, mainly indigenous people and landless peasants, depend on marginal hilly uplands for their livelihood; subsistence farming, a mixture of agriculture, forestry, and fishing is the main source of their livelihood. Unsustainable land use practices leading to accelerated erosion and watershed degradation adversely impact the life and well-being of these poor communities, rendering them poorer and more vulnerable to climatic extremes associated with such degradation. Poverty incidence in the Philippines, which is largely a rural phenomenon, varies widely among regions. The poverty incidence in all regions in Mindanao is higher than the national average. The poorest is the Autonomous Region of Muslim Mindanao (ARMM) with a poverty incidence of 55.3%. In contrast, Luzon has a poverty incidence of 20% with intraregional differences as in the Cordillera Autonomous Region (CAR) where the incidence is 28.8%. Both Mindanao and CAR have the largest populations of indigenous people. The present trend of increasing food prices is expected to further erode the purchasing power of the poor and is already leading to competing demands on arable land. This further underscores the need to sustainably expand the productive capacity of the natural resource assets that provide livelihood and food to the rural communities.

3. **Watershed Integrity and Climate Change.** Slash and burn farming, forest fires, illegal logging, deforestation, and illegal mining concessions within proclaimed watersheds contribute to severe degradation of watersheds, adversely impacting their ecological functions, and compromising their integrity. Deforestation alone has contributed to accelerated soil erosion with

¹ Earlier, ADB and IFAD have cofinanced the Highland Agriculture Development Project in 1987-1993 and the Cordillera Highland Agricultural Resource Management Project (CHARMP) in 1997-2004. IFAD has now asked ADB to cofinance CHARMP2 approved by IFAD in April 2008. At a high-level meeting held in Manila in April 2008, ADB reiterated its commitment to allocate \$10 million for CHARMP2 from the ensuing loan expected to result following the proposed PPTA (Integrated Natural Resources and Environmental Management Sector Development Program), subject to the preparation of the Program in agreement with the Government and consideration by the ADB Board.

² The TA first appeared in the business opportunities section of ADB's website on 9 March 2008.

an estimated soil loss between 74 million and 81 million tons per year, and affecting about 77% of the country. Consequently, the storage capacity of the reservoirs and the dry season served area of irrigation systems is reduced directly contributing to reduced agricultural production. Silting of rivers and lake systems has shortened the life-span of reservoirs and dams affecting power generation. Furthermore, the loss of forest coupled with the expansion of economic activities results in positive net emission of greenhouse gases.

4. The Philippines, being an archipelagic country with a prevailing tropical climate remains highly vulnerable to the impacts of climate change. The effects of climate change on agriculture, forestry and water resources will further encumber a country already reeling from a host of socioeconomic and environmental problems. In the uplands, predictions indicate that changes in rainfall pattern may increase the rate of conversion of forests to agricultural lands due to human migration from areas degraded by drought and erosion to more productive forest lands. A decrease in soil moisture in drier areas may accelerate forest loss while an increase in precipitation beyond evaporation demand could increase runoff resulting in soil erosion and flood occurrences. Adaptation to climate change impacts would mitigate potentially adverse impacts on food production and associated adverse environmental impacts.

5. **Inadequacy of Support to Decentralized Environment and Natural Resource Management in Watersheds.** Effective functioning of local government units (LGUs) at the decentralized levels of administration have been constrained due to institutional fragmentation and funding limitation. Unless the appropriations and qualified personnel for the devolved functions are transferred to the LGUs, there remain limited incentives for the LGUs to accord due priority to effective management of natural resources in the watersheds under their jurisdictions. Furthermore, no incentives are being provided to LGUs to invest in environmentally rewarding interventions in watershed management under a fiscally decentralized framework, a constraint that must be addressed for sustaining the integrity of the watersheds.

6. **Multiplicity of Institutions and Ineffective Policies.** Despite the Government's demonstrated commitment to environmental protection and natural resource management in the form of legal and regulatory instruments, the problem of watershed degradation continues to exacerbate. Lack of institutional integration in planning and management is a continuing constraint in instituting a financially sustainable decentralized regime of integrated natural resource management for the watersheds that, by their very nature, are multi-sector. A weak institutional framework has resulted in fragmented approaches to watershed management. Regulations pertaining to watershed management are scattered in several policy issuances and administrative orders. In addition, several laws intended to prevent further degradation of watersheds have been enacted but they fail to address the key areas of watershed management such as (i) conflicting land uses and practices within watershed areas, (ii) inappropriate land classification and disposition of watershed areas; (iii) continued encroachment and illegal occupancy; and (iv) lack of economic incentives for watershed protection by the LGUs.

7. **Experiences and Lessons.** Several interventions by the Government on its own and with development partner assistance have resulted in the design and implementation of a number of projects, programs, and strategies. In this context, IFAD's evaluation of CHARMP and the recommendations that have been integrated in the design of CHARMP2 are particularly relevant to INREM, and include (i) improving internal capacity for implementers rather than replacing it; (ii) focusing local implementation needs at the municipal level, with greater emphasis on strengthening engagement of the LGUs and community groups; (iii) exploring opportunities for innovation through agricultural research by improved focus on applied research and replication processes; and (iv) further developing the level of environmental best practices

by continuing work on valuing environmental services, improving environmental assessment for infrastructure construction, and strengthening the link between sustainable agriculture and forest management. Lessons from other upland interventions include (i) detailed sector analysis prior to project design for identifying appropriate modalities for effective implementation; (ii) national agencies and LGUs can be effective, equal partners in achieving national goals under well-defined roles and constructive partnerships; (iii) adoption and implementation of joint and complementary initiatives by government agencies to harmonize programs; (iv) participatory processes reduces politicization of project activities, increases stakeholders' confidence, and promotes transparency and accountability; (v) the needs, situation and resource use patterns of indigenous people, which are different from lowlanders and upland migrants, should be studied separately so that approaches more suitable to a particular group can be formulated; (vi) interventions to support agricultural productivity needs to be compatible with the principles of sustainable natural resource management; (vii) economic incentives for watershed protection need to be institutionalized; and (viii) projects and programs attempting to address multi-sector problems through single-sector interventions using multiple institutions without adequate attention to the institutional integration, and cohesive and concerted implementation in an enabling policy environment are unlikely to succeed.

8. IFAD is launching CHARMP2, following successful completion of CHARMP. Interventions under CHARMP2, which covers all six provinces of the CAR, include a) social mobilization, participatory planning and land titling; b) community watershed management, reforestation and agroforestry; c) agricultural services, value chain development and micro-finance; and d) rural infrastructure. Being implemented in highland areas, these interventions are directly relevant to effective and sustainable management of watersheds in CAR and will provide valuable lessons for design and implementation of INREM in similar watersheds in other regions. In line with the agreement with the Government, policy and design parameters enshrined under CHARMP2 and those being pursued by other development partners, such as the World Bank-assisted National Program Support to Environment and Natural Resource Management Program, need to be carefully assessed to ensure sector-wide complementarity in further developing a robust policy and institutional framework required to promote an integrated approach to environment and natural resource management. This requires a detailed sector review and policy analysis as the basis for an investment framework to address the challenges facing watershed management. A sector development program approach, which provides a long-term policy improvement and an investment framework to address such challenges, appears to be the most plausible approach.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

9. The impact of the proposed TA will be adoption of financially sustainable and environmentally sound investment practices for management of watersheds. The outcome of the TA will be an agreed design of an investment proposal through a sector development program modality for priority watersheds.

B. Methodology and Key Activities

10. The PPTA will adopt a phased sequential approach starting phase I with a comprehensive sector analysis and an assessment of experience and lessons to better understand the issues, constraints and opportunities that have not been appropriately addressed. This will lead to the preparation of the strategy and investment program. Phase II will include preparation of a feasibility study for a possible SDP endorsed by all stakeholders, using watershed as the management unit. A summary of key activities follows.

11. **Phase I.** Key activities include (i) sector analysis and other associated analyses including a comprehensive analysis of existing policies and legislation, assessment of organizational capacities and desire for institutional change, and identification of criteria for prioritization; (ii) stakeholder identification and workshops at various levels to obtain feedback; (iii) preparation of a draft strategy and investment program including its strategic environmental assessment, climate change implications, associated adaptation measures, and national food requirements; and (iv) finalization of the strategy and the investment program, taking stakeholder response into account, for priority watersheds in selected river basins.

12. **Phase II.** The feasibility study for an SDP under the strategy's investment program will comprise an investment proposal and a policy reform agenda. Key activities include (i) collecting and analyzing of information for preparing reports for (a) detailed design for an SDP for INREM of priority watersheds; (b) poverty and social assessment, and poverty reduction strategy; (c) external assistance and lessons; (d) environmental assessment encompassing potential climate change implications, adaptation measures and national food requirements, and assessment of the environmental implications of the policy reform agenda; (e) indigenous peoples' development plan (if applicable); (f) involuntary resettlement plan (if applicable); (g) institutional assessment and capacity building plan; (h) cost estimates; (i) financing options; (j) economic and financial analysis; (k) gender action plan; (l) procurement plan; and (m) terms of reference (TOR) for consulting services; (ii) preparing a policy reform agenda; (iii) conducting stakeholder workshops to present the SDP; and (iv) preparing a final feasibility study.

C. Cost and Financing

13. The total cost of the PPTA is estimated at \$1.15 million equivalent. ADB will provide \$850,000 to be financed on a grant basis by the Japan Special Fund, funded by the Government of Japan.³ The Government, through the concerned agencies, will provide in-kind contributions to the value of \$300,000. The detailed cost estimates and proposed financing plan are in Appendix 3. The Government has been informed that approval of the PPTA does not commit ADB to finance any ensuing program.

D. Implementation Arrangements

14. The Department of Environment and Natural Resources (DENR) will be the Executing Agency for the PPTA. The National Convergence Steering Committee will monitor implementation progress. A technical working group, coordinated by DENR and comprising participating agencies, including the Department of Agriculture, Department of Agrarian Reform, National Irrigation Administration and National Commission on Indigenous People, will provide technical guidance and support during implementation. To ensure coordination with all development partners and relevant stakeholders, ADB and DENR will dedicate staff and consultancy resources through an appropriate secretariat to facilitate consultations with the development partners and nongovernment organizations.

15. Implementation will be carried out in two phases: Phase I will last for about 4.5 months (August–November 2008) and culminate with the preparation of the strategy and the investment program. Stakeholder workshops will be held during various stages of implementation to discuss and agree on the strategy, program, and scope of the SDP. Phase II, expected to last for about

³ Application for project development funding will be made to the Global Environment Facility (GEF). The TA is expected to be co-financed by GEF on a grant basis to support detailed studies for specific GEF-eligible interventions in selected sites including climate change impacts and adaptation measures.

4.5 months (December 2008–April 2009), will result in the preparation of the SDP feasibility study. During the interim, following the conclusion of phase I and prior to initiation of phase II, an open forum of concerned development partners will be organized where the approved strategy and the investment program will be presented, and the development partners invited to participate in the implementation of the investment program. Also, during this period, a decision will be made regarding adoption of the SDP modality, and accordingly, the work program for phase II will be refined, and the TOR and implementation plan updated taking account of the final outcome of phase I and agreed scope of SDP. Progress and performance will be monitored by design and implementation of a project management information system.

16. The two phases of implementation will require an estimated 27 person-months of international consulting and 46 person-months of national consulting. Given the broad focus of phase I, flexibility will be required for undertaking a range of tasks to enhance engagement with the stakeholders and prepare a stakeholder responsive strategy and investment program. Key experts will therefore be engaged on an individual basis following ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). An international consultant with expertise in integrated natural resources and environmental management will be engaged as the team leader (resource person) for phase I. In addition, international and national expertise will be required in policies and institutions, social and poverty development, public participation, strategic environmental assessment, and land use planning and management. For phase II, a consulting firm will be engaged in accordance with ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time) following the quality- and cost-based selection procedure (technical and cost ratio of 80:20). While the level of effort of consultants may change in phase II, depending on the outcome of phase I, the international and national expertise required is anticipated to comprise economics and finance, policies and institutions, social and poverty development, land use planning and management, geographic information systems and mapping, upland agriculture, and environmental safeguards. Procurement will be carried out in accordance with ADB's *Procurement Guidelines* (2007, as amended). Upon completion, equipment will be handed over to DENR.

17. To provide continued leadership in adjusting the TOR following stakeholders' agreement on the scope of phase I, provide continuity in design, and ensure the updated scope of work finalized in the phase I is adhered to and the final output is fully responsive to the requirements of the feasibility study and objectives of the PPTA, the phase I team leader will be retained as an advisor for phase II. The consultants' TOR are in Appendix 4.

IV. THE PRESIDENT'S DECISION

18. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$850,000 on a grant basis to the Government of the Philippines for preparing the Integrated Natural Resources and Environmental Management Sector Development Program, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
<p>Impact Adoption of financially sustainable and environmentally sound investment practices for integrated natural resources and environmental management (INREM) of watersheds.</p>	<ul style="list-style-type: none"> • Completion of the Sector Development Program by 2015 • Appropriate INREM strategies and policies adopted for all watersheds across the country by 2013. • Institutional convergence and respective mandates of concerned institutions operationalised through appropriate directives of the Government by 2011. • Strategies for mobilizing resources for management of watersheds are developed and implemented by 2010. 	<ul style="list-style-type: none"> • Appropriate annual budgetary appropriations, and Government approved policy guidelines • Executive Order/Policy Framework • Medium-Term Expenditure Framework for INREM • Monitoring reports of implementation of ensuing sector development program (SDP) ; using a the project performance management system to be designed during program preparatory technical assistance (PPTA) • Government's Medium-Term Philippines Development Plan 	<p>Assumptions</p> <ul style="list-style-type: none"> • Government demonstrates its willingness to adopt INREM • Government continues its program on poverty reduction and environmental conservation • Government's fiscal position continues to improve • Adequate funding is available for the investments required for adoption of INREM practices <p>Risks</p> <ul style="list-style-type: none"> • Delays in completing rationalization of institutions • Delays in mainstreaming institutional convergence under a decentralized natural resource management framework • Change in government priorities may favor large-scale unsustainable resource exploitation.
<p>Outcome An agreed design of an investment proposal through a sector development program modality for priority watersheds.</p>	<ul style="list-style-type: none"> • Agreement on the investment proposal reached between the Government and ADB by May 2009. 	<ul style="list-style-type: none"> • Memorandum of Understanding agreed with the Government on the investment proposal. 	<p>Assumptions</p> <ul style="list-style-type: none"> • Government is willing, supportive, and in a position to provide leadership to facilitate policy level interventions to support a decentralized INREM framework for prioritized watersheds. <p>Risk</p> <ul style="list-style-type: none"> • Extensive delays in decision making on

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
			key policy and institutional change-related issues delays agreement on the proposed sector development program.
<p>Outputs PPTA, First Phase: 1. Sector Assessment completed</p> <p>2. Assessment of constraints and gaps in existing watershed/ upland development frameworks, plans, policies and legislation completed.</p> <p>3. Documentation and analysis of experience from past initiatives and investments in forestry, watershed management, and natural resources management and associated policy initiatives completed.</p> <p>4. Examination of the fiscal and managerial capacity of the local government institutions and</p>	<p>By December 2008</p> <ul style="list-style-type: none"> • Watershed Sector Assessment Report of watersheds in selected river basins including <ul style="list-style-type: none"> (i) status of watershed health and integrity of three river basins of the Philippines (Luzon, Visayas and Mindanao); (ii) proposed criteria for prioritization of watersheds in selected river basins; and (iii) profile of priority watersheds in selected river basins • An appropriate policy reform agenda to institutionalize INREM of watersheds for conservation and development • Documented experience and lessons in INREM and associated policy initiatives • Report on fiscal and managerial capacity of local government institutions and the 	<ul style="list-style-type: none"> • PPTA review mission reports • PPTA sector and other subject-specific analytical reports • PPTA first phase report, proceedings of stakeholder workshops, sector/sub-sector analyses documents • Documentation pertaining to watershed health and integrity • PPTA completion report 	<p>Assumptions</p> <ul style="list-style-type: none"> • Despite the complexity and multi-sector nature of various assessments to be carried out, appropriate Government decision making proceeds • The participating counterpart agencies provide inputs under an integrated work plan • Concerned agencies endorse INREM as the approach most likely to succeed, given the multisector nature, multiplicity of stakeholders, extensive magnitude of the problem, and vast spatial distribution of river basins.

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
<p>institutional coordination completed.</p> <p>5. Socioeconomic analysis and social safeguards compliance documentation completed.</p> <p>6. A comprehensive monitoring and evaluation framework with appropriate indicators initiated based on an assessment of critical environmental issues pertaining to INREM of watersheds. These may include sources of pollution, land use degradation, and other adverse impacts on water quality.</p> <p>7. A stakeholder endorsed comprehensive strategy and a phased investment program for INREM including a strategic environmental assessment (SEA) of the investment program completed.</p>	<p>processes available to enhance result-based management approaches and coordination</p> <ul style="list-style-type: none"> • Report on (i) socioeconomic situation including poverty and social assessment (PSA) and specific reports on constraints and opportunities for indigenous people's development; and (ii) potential resettlement issues, with appropriate recommendations for detailed analysis in phase II. • Environmental conditions report and recommendations to institute a comprehensive monitoring and evaluation framework for sustainable INREM of watersheds • A comprehensive strategy and a phased investment program for INREM of watersheds agreed by stakeholders • SEA report 		

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
<p>Second Phase: Feasibility study of an SDP under the strategy and investment program, comprising an investment proposal for a possible \$100 million and the associated policy reform agenda completed.</p>	<ul style="list-style-type: none"> • An agreed environmentally sound strategy and the investment program for consideration by the Government <p>The investment proposal comprises:</p> <ul style="list-style-type: none"> • detailed design including a DMF for an SDP by May 2009 • poverty and social assessment and poverty reduction strategy • environmental assessment • indigenous peoples development plan (if applicable) • involuntary resettlement plan (if applicable) • institutional assessment and capacity building plan • investment options including livelihood activities in the investment framework • cost estimates • financing options (including possible financing options, including grant financing from various global conservation/ environmental funds). • economic and financial analysis • a policy reform agenda • Systematic planning, monitoring and evaluation, procurement, and reporting of milestones, events, and progress. 	<ul style="list-style-type: none"> • Feasibility study report • PPTA review missions reports • PPTA sector and other subject-specific analytical reports • PPTA first phase report • Government documents reports • Stakeholder workshop proceedings • TA completion report • PPTA review missions reports • Government monitoring reports • TA progress reports 	<p>Assumption</p> <ul style="list-style-type: none"> • Concerned agencies endorse INREM as the approach most likely to succeed, given the multisector nature of the approach, and multiplicity of stakeholders.

Activities with Milestones	Inputs
<p>Phase I: Comprehensive strategy for INREM of watersheds and a phased investment program for implementation of the strategy: (4.5 months)</p> <p>1.1 Mobilization of EA staff, establishment of Technical Working Group and Coordination Office and setting up of Project Management Information System</p> <p>1.2 Submission of the Phase 1 work plan and associated monitoring and evaluation framework to the National Convergence Steering Committee for endorsement</p> <p>1.3 Undertake Sector and other associated assessments, including organizational capacities</p> <p>1.4 Compete Stakeholder identification: national, provincial and local</p> <p>1.5 Conduct Stakeholder workshop to present the sector assessment and criteria for prioritization and obtain feedback</p> <p>1.6 Prioritize watersheds based on agreed criteria</p> <p>1.7 Prepare draft strategy and phased investment program</p> <p>1.8 Conduct Stakeholder workshops for national, provincial, and local governments to present the reports on (i) prioritization of watersheds; and (ii) draft strategy and investment program</p> <p>1.9 Undertake Strategic environmental assessment (SEA) of the investment program, including climate change implications, associated adaptation measures and possible impact on sustainable agricultural production.</p> <p>1.10 Conduct Stakeholder workshops at the national, provincial, and local governments to present the SEA report and obtain feedback</p> <p>1.11 Finalize the strategy and the investment program for watersheds in the Philippines: Luzon, Visayas, and Mindanao</p> <p>Phase II: Complete feasibility study for an SDP as the first outcome of the strategy and investment program, comprising (i) investment proposal and (ii) policy reform agenda (4.5 months)</p> <p>2.1 Collect and analyze information for (i) detailed design of an SDP for INREM of watersheds including a DMF; (ii) poverty and social assessment and poverty reduction strategy; (iii) external assistance and lessons; (iv) environmental and social safeguards compliance documents, as appropriate; (v) institutional assessment and capacity building plan; (viii) cost estimates; (ix) financing options (including cofinancing options for investment, including GEF, CDM, and/or others); (x) economic and financial analyses; (xi) gender action plan; (xii) procurement plan; (xiii) TOR for consulting services; and other reports, as required.</p> <p>2.2 Develop a policy reform agenda indicating milestones for compliance and bench marks for monitoring</p> <p>2.3 Conduct Stakeholder workshops to present the SDP and obtain feedback and concurrence on proposed investment options and policy reform agenda under INREM for priority watersheds</p> <p>2.4 Compete the final design and the feasibility study for the SDP investment</p>	<p>ADB: \$850,000</p> <ul style="list-style-type: none"> • Consulting Services: \$720,000 • Travel \$70,000 • Materials and equipment: \$10,000 • Workshops: \$20,000 • Reports and publications, etc: \$5,000 • Miscellaneous: \$5,000 • Contingencies: \$20,000 <p>Government Financing: \$300,000 (including office accommodation and counter-part support costs)</p>

INITIAL POVERTY AND SOCIAL ANALYSIS

Country/Project Title:	Integrated Natural Resources and Environmental Management Program Sector Development Program		
Lending/Financing Modality:	Sector Development Program	Department/ Division:	Southeast Asia Department / Agriculture, Environment, and Natural Resources Division

I. POVERTY ISSUES

A. Linkages to the National Poverty Reduction Strategy and Country Partnership Strategy

The Philippine country sector and theme road map clearly convey the intention of the Asian Development Bank (ADB) to continue concentrating on agriculture, environment, natural resources, and rural development as priority development sectors. This reflects the four thematic constraints that impede rapid poverty reduction in the Philippines as identified in the 2005-2007 country strategy and program: geographic inequalities, inadequate infrastructure, poor management of assets and resources, and low institutional capacity. The proposed sector development program (SDP) will respond to these constraints through its geographic and demographic focus and components. Its geographic focus is on priority watersheds within selected river basins within the poorest regions of the Philippines, which are home to a large rural population and where poverty is high. The percentage and number of poor people living in rural areas are about twice that of urban areas. Those living in the upstream and midstream of watersheds are even poorer than those downstream. In the upstream and midstream areas, indigenous people are poorer than the migrants but their socioeconomic conditions are interlinked. For the SDP to reduce the poverty of one group, it must include both as its demographic focus. The SDP is expected to cover selected watersheds in Luzon and Visayas, with its greatest emphasis in the Mindanao region, which lags the two geographic regions in all development indicators. The Mindanao region is a special focus area of ADB and the Government; the SDP is part of the effort to put it on equal footing with rest of the country after long years of conflict and neglect.

The SDP will provide a more systematic and rational approach to poverty reduction and environmental rehabilitation in the priority watersheds through three levels of effort. The first is the formulation of a strategy and a phased investment program for integrated natural resources and environmental management (INREM) of watersheds, using a watershed based approach in the selected river basins. Through this strategy and investment program, experienced-based interventions for natural resource conservation, rehabilitation, and management will be prepared for priority watersheds in selected river basins (watersheds will be prioritized based on stakeholders' agreed criteria and resource availability) and coherence in interventions will be attained. Second, INREM plans will be developed for priority watersheds in selected river basins. The plans will define site-specific interventions given existing conditions, needs, inputs, and institutional and financial requirements. Third, investment packages will be prepared from among the watershed interventions identified under the INREM. These packages may include small-scale infrastructure, land tenure provision, targeted resource management interventions, and strengthening of policies and institutions. Small-scale infrastructure such as farm-to-market roads, communal irrigation systems, and foot bridges are needed to raise productivity by improving farm input quality and increasing market links. More secure tenure through ancestral domain titling for indigenous peoples and stewardship certification for upland migrants will increase their ownership of land and mitigate open access. Resource management interventions revolve around quality market access improvement, demand-driven applied research, and sustainable financing development for conservation.

B. Targeting Classification

- 1. Select the targeting classification of the project:
 General Intervention Individual or Household (TI-H); Geographic (TI-G); Non-Income MDGs (TI-M1, M2, etc.)
- 2. Basis for the classification: The SDP is expected to cover geographic areas with higher incidence of poverty than the national average. The possible inclusion of areas in Mindanao is likely to respond to the priorities in the country strategy and program and the Medium Term Philippines Development Plan (2004-2010). The 2006 provincial poverty measures highlight regional income disparities in the country in 2006 given that 6 out of 10 poorest provinces were in Mindanao. The SDP components aim to address the constraints responsible for rural poverty and their link to environmental degradation in a comprehensive and integrated manner.

C. Poverty Analysis

- 1. If the project is classified as TI-H, or if it is policy-based, what type of poverty impact analysis is needed? Not Applicable
- 2. What resources are allocated in the PPTA/due diligence? The Asian Development Bank will provide \$850,000 from the Japan Special Fund and the Government will provide \$300,000 equivalent as in-kind support. In addition, sufficient emphasis is placed on analyzing issues directly relevant to resource poor and marginalized communities including land tenure and access to markets and services by the upland poor.
- 3. If GI, is there any opportunity for pro-poor design (e.g., social inclusion subcomponents, cross subsidy, pro-poor governance, and pro-poor growth)? The design is geared to improve the lives of the rural poor particularly those in the upstream and midstream portions of priority watersheds.

II. SOCIAL DEVELOPMENT ISSUES

A. Initial Social Analysis

Based on existing information:

- 1. Who are the potential primary beneficiaries of the project? How do the poor and the socially excluded benefit from the project? The rural population in priority watersheds whose poverty will worsen under the downward spiral of environmental quality will benefit. These include indigenous people and upland migrants who are among the poorest and long excluded from lowland and urban-biased development investments.
- 2. What are the potential needs of beneficiaries in relation to the proposed project? Comprehensive and integrated management of watershed areas; improvement of security of tenure over natural resources; access to markets, capital and services; sustainable management of the resource base; and the responsiveness of policies and institutions to their poverty reduction and environmental management requirements.
- 3. What are the potential constraints in accessing the proposed benefits and services, and how will the project address them? The gaps in government plans and resources as well as in the capacity of various stakeholder groups to produce the proposed benefits and services will be filled by the SDP by providing financing, technical assistance, and management guidance.

B. Consultation and Participation

1. Indicate the potential initial stakeholders. (i) National government agencies including Department of Environment and Natural Resources, Department of Agrarian Reform, National Commission on Indigenous People, and Department of Agriculture; local government units with jurisdiction over critical watersheds; (ii) users of upland resources such as water for domestic, commercial and agricultural purposes; timber; non-timber forest products; hydro and geothermal power; and agricultural produce; (iii) corporations (e.g., plantation, mining and hydropower operators) and small and medium scale enterprises dependent on watershed products (e.g., wood processors and construction aggregates extractors); (iv) community-based organizations; indigenous peoples groups; upland migrants; and nongovernment organizations.
2. What type of consultation and participation (C&P) is required during the PPTA or project processing (e.g., workshops, community mobilization, involvement of non-government organizations and community-based organizations, etc.)? National stakeholder consultation workshops will set the criteria, prioritize critical watersheds, and key issues to be addressed. Stakeholder analysis will be carried out in selected watersheds; the results will provide a basis for on-site consultations. The issues identified in the national level consultation will be validated in a stakeholder workshop in selected watersheds and actions taken will be drawn upon to guide the preparation of investment packages.
3. What level of participation is envisaged for project design?

Information sharing
 Consultation
 Collaborative decision making
 Empowerment
4. Will a C&P plan be prepared? Yes No The consultation and participation plan will be prepared based on the result of the stakeholder analysis and capacity assessment. The social development specialist will prepare the plan. The plan will specify activities to involve the stakeholder groups in the following activities: (i) data collection and analysis, (ii) criteria for prioritization of watersheds, (iii) identification of issues and responsive actions, (iv) validation of the feasibility of the actions proposed, (v) management arrangements to conduct participation activities, and (vi) budget formulation for the participation activities.

C. Gender and Development

1. What are the key gender issues in the sector/subsector that are likely to be relevant to this project/program? They are exclusion of women in granting of tenure instruments, displacement of women in the adoption of new production and marketing practices, alteration of existing work relationship between genders, and existing values that may put women at a disadvantage.
2. Does the proposed project/program have the potential to promote gender equality and/or women's empowerment by improving women's access to and use of opportunities, services, resources, assets, and participation in decision making? Yes No A gender action plan will be prepared during the project preparatory technical assistance to ensure the following: (i) women will not be disadvantaged by the interventions, (ii) interventions will rectify any existing gender inequities, (iii) opportunities that will be realized from the interventions will equally benefit men and women, (iv) involved institutions will have the capability to ensure that gender equity will be upheld in project implementation, (v) the SDP will be consistent with the national gender plan.
3. Could the proposed project have an adverse impact on women and/or girls or to widen gender inequality? Yes No The SDP will have no adverse impact on women or increase gender inequality if all the interventions are thoroughly assessed, and at the planning stage the interest of women are well incorporated into all the activities. The SDP may even enhance the role of women in watershed development.

III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS			
Issue	Nature of Social Issue	Significant/Limited/No Impact/Not Known	Plan or Other Action Required
<u>Involuntary Resettlement</u>	The SDP will only improve existing small infrastructure; the chance that involuntary resettlement will occur is minimal	Limited or no impact	<input type="checkbox"/> Full Plan <input checked="" type="checkbox"/> Short Plan <input type="checkbox"/> Resettlement Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
<u>Indigenous Peoples</u>	The SDP targets indigenous people and is expected to have extensive impact on their conditions	Significant Impact	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> Indigenous Peoples Framework <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Labor <input type="checkbox"/> Employment Opportunities <input type="checkbox"/> Labor Retrenchment <input type="checkbox"/> Core Labor Standards		No Impact	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Affordability	Payment for environmental services is critical to make SDP's impact sustainable. But apart from a need to have a strong regulatory framework, the capability of the resource users to pay the amount commensurate to the services they obtain could be a constraint.	Significant	<input checked="" type="checkbox"/> Action <input type="checkbox"/> No Action <input type="checkbox"/> Uncertain
Other Risks and/or Vulnerabilities <input type="checkbox"/> HIV/AIDS <input type="checkbox"/> Human Trafficking <input type="checkbox"/> Others (conflict, political instability, etc.), please specify		No Impact	<input type="checkbox"/> Plan <input type="checkbox"/> Other Action <input checked="" type="checkbox"/> No Action <input type="checkbox"/> Uncertain
IV. PPTA/DUE DILIGENCE RESOURCE REQUIREMENT			
<p>1. Does the TOR for the PPTA (or other due diligence) include poverty, social and gender analysis and the relevant specialist/s? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p> <p>2. Are resources (consultants, survey budget, and workshop) allocated for conducting poverty, social and/or gender analysis, and C&P during the PPTA/due diligence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain why.</p>			

^a ADB. 2005. *Country Strategy and Program 2005–2007, Philippines*. Manila.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
A. Asian Development Bank Financing^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	500.0
ii. National Consultants	220.0
b. International Travel	50.0
c. Local Travel	20.0
d. Reports, Communications and Publications	5.0
2. Materials and Equipment ^b	10.0
3. Workshop and Meetings	20.0
4. Miscellaneous Administration and Support Costs	5.0
5. Contingencies	20.0
Subtotal (A)	850.0
B. Government Financing^c	
Subtotal (B)	300.0
Total	1,150.0

^a Financed by the Japan Special Fund, funded by the Government of Japan

^b Computers, printer, and associated materials.

^c The Government of the Philippines, through agencies concerned, will make in-kind contributions to the implementation of the project preparatory technical assistance estimated at \$300,000 equivalent.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. Team Leader

1. The consultant will undertake the following:

- (i) Analyze policies and major lessons learned in addressing critical constraints facing the watersheds in selected river basins of the Philippines, including environmental sustainability and climate impact and adaptation considerations.
- (ii) Organize and guide associated assessments in social, environment (including potential climate change impacts), institutional, and policy aspects to be undertaken by other members of the team with a particular focus on traditional sustainable development management practices in line with the needs and aspirations of the indigenous population.
- (iii) With the assistance of the deputy team leader (national), undertake identification of national, provincial, and local stakeholders.
- (iv) In consultation with other team members, propose criteria for characterizing and prioritizing watersheds in selected river basins and develop guidelines for institutionalizing a monitoring and evaluation framework for systematically assessing best practices and watershed management parameters. .
- (v) Based on the analysis, sector assessments, other associated analyses, and input from other members of the consulting team, develop a draft strategy and a phased investment program, including an appropriate monitoring and evaluation framework, corresponding monitoring indicators and guidelines for baseline data to be collated for benchmarking information relevant to the design of the program.

B. Policies and Institutions

2. The consultant will review and analyze natural resources, environmental management policies and institutions and associated micro credit, land tenure, and other relevant issues as input to the strategy and investment program, including the following activities:

- (i) Collect and document available information and secondary data for assessment of current policies and institutions and associated issues with specific reference to watersheds in selected river basins in each of the major administrative regions of the Philippines.
- (ii) Conduct an institutional assessment of existing government organizations, multisector councils, nongovernment organizations, community groups, and private sector groups engaged in managing land uses in watersheds in selected river basins.
- (iii) Analyze policy and institutional issues related to integrated natural resource and environmental management (INREM) of watersheds, and associated climate change implications, microcredit, and land and tree tenure policies for inclusion in a policy dialogue with the Government.
- (iv) Identify national and regional stakeholders within each priority watershed in selected river basin with specific reference to INREM.
- (v) Examine the legal framework and assessment of the institutions and groups involved in management of watersheds in the river basins.
- (vi) Work with the watershed management expert and economist in identifying and designing interventions on payment for environmental services.
- (vii) Identify critical institutional issues including those relating to unsustainable logging and mining concessions, and inadequate enforcement and implementation of stated

policies as relevant to environmental management in coordination with other national consultants.

- (viii) Within an agreed coordinated framework, design milestones for articulating a comprehensive strategy and an investment program for INREM in consultation with development partners and other key stakeholders.

C. Social and Poverty Development and Public Participation Specialist

3. The consultant will assess the social dimensions (including indigenous people and resettlement) during the two phases of implementation. Responsibilities include:

- (i) Collect and document available information and secondary data for assessment of the current policies and institutions and associated issues with specific reference to social dimensions relevant to watersheds in selected river basins in each of the major administrative regions, with particular reference to culturally appropriate and traditionally sustainable development management practices.
- (ii) Identify national and regional stakeholders within each priority watershed in selected river basin with specific reference to INREM.
- (iii) Assess existing government organizations, multisector councils, nongovernment organizations, community groups, and private sector groups engaged in the management of various land uses in watersheds in selected river basins.
- (iv) Formulate recommendations to bring about greater accountability and transparency in the local development process through empowered communities and genuine participation in development processes.
- (v) Document relevant experiences from the Agrarian Reform Communities Project and other relevant projects, and identify useful lessons that can be applied to the INREM program.
- (vi) Based on the social assessment and where indigenous peoples will be involved/affected directly or indirectly, recommend culturally appropriate strategies and options to mitigate impacts as a result of new schemes to be introduced that will potentially change livelihoods and/or demand for socioeconomic services.
- (vii) Organize stakeholder workshops to seek agreement with stakeholders on criteria for classification of watersheds in the selected and river basins into various categories.
- (viii) Provide input for classifying watersheds in the selected river basins on the basis of agreed criteria and list them in order of priority and urgency.

D. Environment Specialist for Strategic Environmental Assessment

4. The consultant will assess the broad level impact of the sector plan and identify how these inputs could be addressed, both within the project and external to the project. The basic steps to be conducted in the strategic environmental assessment are as follows:

- (i) **Conduct screening and scoping.** Confirm that the investment program is the appropriate plan to be the focus of assessment.
- (ii) **Define indicators.** Review available sustainability indicators, adopt/adapt a simple and clear set of indicators to evaluate environmental effects.
- (iii) **Engage stakeholders.** Identify and analyze interests, incentives, roles, mandate, and linkages of the various stakeholders.
- (iv) **Identify, predict, and evaluate effects.** Identify social and economic changes that will be created by the investment program.

- (v) **Integration.** Integrate the environmental criteria in the sector development program (SDP) and plans that will be specified in the integrated natural resource management strategy of the selected watersheds.
- (vi) **Mitigation.** Based on the review, feedback from stakeholders, and assessment of critical environmental issues, make appropriate recommendations for incorporation in the strategy and investment program and overall implementation of the investment program.
- (vii) **Monitoring.** Prepare a monitoring plan to measure environmental effects of mitigation measures.
- (viii) **Independent review.** Submit strategic environmental assessment documents for independent review.

E. Economics and Finance

5. The experts will undertake estimation of the cost of implementation of the proposed SDP as well as economic and financial analysis, as appropriate. In this context, the experts will:

- (i) Review the strategy and the investment program, and assist in determining the final scope of the SDP.
- (ii) Assist in formulating the investment project and designing various components as well as the policy agenda, including the design and monitoring framework.
- (iii) Assist in identifying inputs required for various components of the SDP and assess their costs.
- (iv) Assess the cost-benefit of integrating adaptive components into project design and operations, using existing cost-benefit methodology(ies).
- (v) Work with the other international consultants to identify and design interventions for payment for environmental services.
- (vi) Prepare detailed cost estimates for the SDP using COSTAB software.
- (vii) Undertake economic analysis of the proposed program using the Asian Development Bank (ADB) *Guidelines for Economic Analysis of Projects*.¹
- (viii) Compute the economic internal rate of return of the investment project, and as appropriate, internalize externalities in the analysis, including the impact on the natural environment, climate extremes/variability, and price distortions.
- (ix) Assist the team leader in carrying out an assessment of financial management capacity of the institutions likely to be considered for executing the SDP; and design fund flow processes to be instituted for managing a decentralized program keeping in view ADB guidelines on disbursements and those relating to the Government's financial management procedures.

F. Land Use Planning and Management Specialist

6. As deputy team leader, the consultant will support the team leader and also be responsible for logistics and liaison, and other day-to-day operations, including the following activities:

- (i) Contribute to the preparation of the watershed sector assessment.
- (ii) Prepare a watershed specific river basin-specific land use assessment report for selected river basins based on secondary data and information and input from other members of the team, in accordance with the Integrated Watershed Management Guidelines.

¹ ADB. 1997. *Economic Analysis of Projects, Philippines*. Manila

- (iii) Develop a user-friendly, environmentally sound land use plan for target watersheds, based on existing methodology(ies) for consideration by stakeholders.
- (iv) Contribute to the development of the strategy and investment program, as well as preparation of the feasibility study for the SDP.

G. Environmental Safeguards Specialist

7. The consultant will work with members of the team during phase II of implementation and undertake an assessment of the environmental safeguards dimensions of the investment project, as well as the policy agenda of the sector development program in accordance with the national environmental policies and assessment guidelines and ADB's *Environmental Policies and Guidelines*.²

- (i) Review the strategy and the investment program, and provide appropriate input in the development of the investment component and policy agenda for the SDP; and prepare an environmental assessment of the investment project in tandem with an environmental assessment of policy implications.
- (ii) Identify applicable policy options pertaining to environmental safeguards compliance requirements for inclusion in the proposed INREM program that will ensure its effective implementation in the watersheds in selected river basins in close consultation with stakeholder groups.
- (iii) Propose options for enhancing the role of local communities in monitoring environmental compliance dimensions during implementation of the proposed INREM program.
- (iv) Propose capacity-building options for various local community groups and organizations that may be involved in monitoring environmental compliance dimensions, including climate risk reduction during implementation; and identify the means and institutions for such capacity-building measures.
- (v) Conduct an environmental assessment of the representative component and the proposed policy agenda, and prepare an initial environmental examination (IEE) report on potential environmental impacts.
- (vi) Present the IEE at the stakeholder workshop, obtain feedback, and incorporate comments and concerns of stakeholders, as appropriate.
- (vii) Finalize the IEE and prepare a summary IEE as part of the final report.
- (viii) Develop an environmental assessment and review framework for each of the selected watersheds to guide relevant local governments to carry out adequate environmental assessments for future investment within the watersheds.

H. Clean Development Mechanism Specialist

8. The consultant will review the strategy and the investment program and provide appropriate input in the development of the investment component and policy agenda of the SDP, with specific reference to various aspects pertaining to Clean Development Mechanism (CDM). In this context, the consultant will:

- (i) Identify possible afforestation and/or reforestation or other interventions that are responsive to the CDM of the Kyoto Protocol as components under the SDP; provide an assessment and a rationale for how such interventions qualify for assistance under the CDM.

² ADB. 2002. *Environmental Policies and Guidelines, Philippines*. Manila

- (ii) Develop an appropriate design for such CDM-related afforestation and/or reforestation or other interventions under the investment project for priority watersheds in selected river basins, and determine their relevance to various options under the CDM, in consultation with other team members.
- (iii) In accordance with the design of CDM-related interventions, make a preliminary assessment of the net changes in greenhouse gas emissions by source and removal by sinks resulting from the proposed interventions in accordance with the CDM of the Kyoto Protocol assessment procedures and tools.
- (iv) Outline anticipated CDM registration costs and possible financing sources for proposed CDM activities.
- (v) Prepare a report on the proposed design of CDM relevant interventions, including the associated policy reform agenda under the SDP, with a summary to be included in the main text of the SDP document.

I. Geographic Information Systems and Mapping Expert

9. The consultant will review the strategy and the investment program and provide appropriate input in the development of the investment component and policy agenda of the SDP, with specific reference to spatial and geographic aspects of investment. In this context, the consultant will:

- (i) Review satellite images and work with other specialists in updating the data on the biophysical, socioeconomic, climatic, and institutional conditions of the watersheds in support of various sector assessments and characterization of watersheds in accordance with the integrated watershed management guidelines of the Department of Environment and Natural Resources.
- (ii) In coordination with other consultants, prepare maps including land use, drainage, political boundaries, hydrological vulnerabilities, population and settlement, infrastructure, location of indigenous people, cultural resources, and critical areas for biodiversity conservation in the watershed.
- (iii) Establish whether target end-users require software upgrading and data management training to enable effective use of the procured/developed geographic information system data sets from the modeling studies.
- (iv) Establish data presentation formats following ADB guidelines on logos and spellings, and interface it with the management information system so that data can be made available to partners in a user-friendly format for maps and presentations and program implementation.
- (v) Collaborate closely with concerned government agencies involved in monitoring and spatial mapping.
- (vi) Prepare the required maps and data sets with specific reference to the priority watersheds included under the investment project for INREM
- (vii) Help the team leader with any other tasks relevant to the expertise of the consultant including preparing various reports and other documents required by ADB and concerned government institutions.

J. Upland Agriculture Specialist

10. The consultant will review the strategy and the investment program and provide appropriate input in the development of the investment component and policy agenda of the SDP, with specific reference to upland agriculture options. In this context, the consultant will:

- (i) Review the experience in annual and perennial crop production in similar climatic regions, and recommend annual and perennial crops (adaptive where possible) to enhance farm productivity and farmer household income.
- (ii) Assess the potential for participation of the private sector in supporting farmer households in production and processing of annual and perennial crops through technical and financial support.
- (iii) Prepare appropriate farm production models for consideration in the investment project that do not compromise watershed integrity and ensure sustainable production.