

Country: India

UNDAF Outcome(s): Communities are aware of their vulnerabilities, and adequately prepared to manage (and reduce) disaster and environmental related risks

Expected Outcome(s): Progress towards meeting national commitment under multilateral environment agreements

Expected Output(s): Capacities built and pro-poor initiatives supported at national and local levels to directly address environmental issues

Implementing partner: Government of Nagaland

Narrative


One of the key direct drivers of degradation of the forest ecosystem in Nagaland, and the associated services it generates, is related to the practice of shifting cultivation (locally referred to as "jhum") which is practiced over a large part of the NER. Jhum is the socially-preferred practice in the North East Region and it is often the most suitable form of agriculture for the agro climatic conditions and steep terrain; the system is also rich in crop genetic diversity. However, in recent years, a shortened jhum cycle is observed allowing insufficient time for restoring of soil fertility so that land is ready cultivation again. Thus yields have successively declined over time, and families that were once secure for food now not meeting their requirements.

The project will introduce participatory planning processes and will prioritize activities identified through the involvement of the entire community in the development of community resource management plans which reflect more productive and sustainable use of available resources. The overall goal will be to maintain ecosystem services while also meeting livelihood needs.

Programme Period: 2008-2012	Total Budget : USD 29,016,612
Programme Component: Energy and Environment	Allocated Resources:
Project Title: Sustainable land and ecosystem management in shifting cultivation areas of Nagaland for ecological and livelihood security	Government :USD 25,426,612
Award ID 00057120 (PIMS 4073)	Regular –GEF :USD 3,600,000
Project ID: 00070449	Other :USD
Project Duration: 5 years	Donor _____
Management Arrangement: National	Donor _____
Implementation	In kind contribution:
	Unfunded budget: _NIL

Agreed by (Implementing Partner): Commissioner and Secretary, Soil and Water Department
Government of Nagaland


Date: 20-07-09

Signature: 
Commissioner & Secretary
to the Govt. of Nagaland
Soil & Water Department.

Agreed by (UNDP):

Date:

Deirdre Boyd, Country Director, UNDP, India

Signature: 

COMPONENT 1: PROJECT OVERVIEW

The North Eastern Region (NER) of India, of which Nagaland forms a part, is situated at the confluence of Indo-China, Indo-Myanmar, and Indian bio-geographical features. It is a region endowed with great species diversity and endemism in terms of flora and fauna. The biodiversity of the NER has made it a priority area for investment by the leading conservation agencies of the world. WWF has identified the entire Eastern Himalaya as a priority Global 200 Ecoregion. One of the key direct drivers of degradation of the forest ecosystem in Nagaland, and the associated services it generates, is related to the practice of shifting cultivation (locally referred to as “jhum”) which is practiced over a large part of the NER. Jhum is the socially-preferred practice in the NER and it is often the most suitable form of agriculture for the agro climatic conditions and steep terrain; the system is also rich in crop genetic diversity. However, in recent years, more and more land is being brought under jhum and a shortened jhum cycle is being observed. The cycle that was once 14 years or more has been reduced to 6 years or less in many places, leaving little time for regeneration and resulting in accelerated soil erosion and disruption of the hydrology of the area. It is estimated that 70% of the top soil loss, land degradation and water source deterioration is attributed to the practice of shifting cultivation. The shortened jhum cycle is insufficient to allow for the restoration of soil fertility before the land is again cultivated, with the result that yields have successively declined over time, and families that were once almost totally self sufficient in food grains are not able to produce enough food even for a few months of the year.

The main indirect driver of this adverse change in the jhum system is rapid population growth. Thus, the major challenge continuing to face Nagaland is how to adapt this land use and production system to rising populations and changing lifestyles, while also maintaining its ecological sustainability. The primary thrust of government efforts has been on weaning away tribal families from the practice of jhum by providing assets for settled agriculture. Many of these programmes, however, are yet to make a significant impact. Under the business-as-usual scenario, shifting cultivation systems will continue to play an important role in the local economy and, given population and economic pressures, jhum cultivation is unlikely to go back to the longer, more sustainable cropping-fallow cycles. This will continue to lead to increasing rates of soil erosion, disruption of hydrology and undermining of ecosystem services. Under the alternative, GEF resources will catalyze changes to the enabling environment (institution building, capacity building) so that existing government programs/ schemes earmarked for shifting cultivation areas can be mobilized in support of a paradigm shift from “replacing jhum” to “improved jhum that integrates principles of SLEM”. The project will introduce participatory planning processes and will prioritize activities identified through the involvement of the entire community in the development of community resource management plans which reflect more productive and sustainable use of available resources. The overall goal will be to maintain ecosystem services while also meeting livelihood needs.

The project will contribute to the overall goal of the SLEM Programme “To promote sustainable land management and use of biodiversity as well as maintain the capacity of ecosystems to deliver goods and services while taking account of climate change.” The project will contribute to this goal along with the other projects being developed under the Sustainable Land and Ecosystem Management Programme. Specifically the project envisages to develop, demonstrate and upscale sustainable land management practices for the conservation of *jhum* (shifting cultivation) lands in Nagaland through an ecosystem approach providing policy, regulatory interventions, adopting sustainable jhum cultivation and enhancing capacity of stakeholders to replicate the lessons in the neighboring states.

COMPONENT 2: ANNUAL WORK PLAN AND BUDGET SHEET FOR THE YEAR 2009

EXPECTED CP OUTPUTS: Capacities built and pro-poor initiatives supported at national and local levels to directly address environmental issues.									
Project Outputs that support CP outputs	PLANNED ACTIVITIES	TIME FRAME				Responsible Party	PLANNED BUDGET		Amount (USD)
		Q1	Q2	Q3	Q4		Source of Funds	Budget Description	
<p>Output 1: Policy regulatory and institutional environment in support of <i>jhum</i> agroforestry strengthened.</p> <p>Indicators: Number of consultations for providing inputs for a draft policy on sustainable practice of <i>jhum</i> in Nagaland conducted</p> <p>Baseline: No consultations and meetings (2008)</p> <p>Targets: a) 2 Consultations held (2009) b) Project Team in place and Project Management Unit set up (2009)</p>	<p>Activity Strengthened agriculture framework that explicitly support enhancing sustainability of <i>Jhum</i> system</p> <p>Result:</p> <p>Actions: a) Project logistics and services: Project inception and orientation and setting up of PMU b) Consultative meeting with stakeholders on <i>jhum</i> systems to identify gaps and list actions to be taken. c) Initiate Review and documentation of existing literature on policies and regulatory patterns related to agricultural systems in the state d) Awareness generation activities</p>			X	x	Department of Soil and water conservation	GEF	72100 Local consultants	10000
								76100 Travel	5000
								74500 Miscellaneous	5000
								72300 Materials and Goods	5000
								74500 Meetings	5000
	72100 Contractual Services	2500							
Total Output 1									32,500

Output 4 : Project monitoring and management	Knowledge management and sharing			x	x	Department of Soil and water conservation	GEF	72100 Local consultants	5000
	Monitoring visits							72300 Materials and Goods	5000
								71600 Travel	2000
								74500 Miscellaneous	3000
UNDP Project Assurance	Implementation Support Services			x	x	UNDP	GEF	75100	2500
	Monitoring and Evaluation							74500	1500
	Communication and gender advocacy							72100	500
	Audit							74100	2000
	Travel							71600	2000
	Total Project management and Assurance								23,500
Total output									56,000

COMPONENT 3: MANAGEMENT ARRANGEMENTS

3 MANAGEMENT ARRANGEMENTS

Implementing Partner: The project will be implemented by the Department of Soil and Water Conservation Department, Government of Nagaland. Department of Soil and Water conservation will assume the overall responsibility for the achievement of the project results. The director, Soil and Water Conservation has been designated as Project Director (PD) for the project. The PD will be responsible for overall management, including achievement of planned results, and for the use of UNDP funds through effective management and well established project review and oversight mechanisms. The Department of Soil and water conservation will sign a budgeted Annual Work Plan (AWP) with UNDP on an annual basis, as per UNDP rules and regulations.

Responsible Party: District officers at the three project districts will be the responsible parties carrying out the project activities and results achievement on the ground. Under the guidance of the Project Steering Committee, the Responsible Party will undertake project activities on the ground, including preparation of AWP, budget, financial reports, etc.. The Responsible Parties is also entrusted with coordination and implementation at the state level and coordinates with the Project Management Units in the three project districts, Mokakchung, Mon and Wokha.

Project Steering Committee

The Project Steering Committee (PSC) will be chaired by Project Director for the Government Nagaland . The PSC members would include representatives from MoEF, Department of Agriculture, Department of Forest, Department of horticulture, designated officials from the three project districts, UNDP and other key stakeholders. The PSC will be responsible for ensuring the overall project implementation with agreed project design, results achievement, and, consistency with national and state development policies. The PSC will meet twice a year and provide required oversight to this project and ensure the overall co-ordination of the project. Specifically, PSC will carry out the following functions:

- Ensure that the project goals and objectives are achieved in the defined timeframe;
- Review the project progress and suggest implementation strategies periodically;
- Review the project expenditures against activities, outputs and outcomes;
- Approve Annual and Quarterly Work Plans;
- Review progress report

The PSC will be responsible for making, by consensus, management decisions for the projects and holding periodic reviews. In order to ensure UNDP's ultimate accountability, the final decision making rests with UNDP in accordance with its applicable regulations, rules, policies and procedures. Project reviews by the PSC will be carried out on a mandated quarterly basis during the running of the project.

Programme Management Board (PMB) is an oversight body set up for the Energy and Environment Programme Outcome co-chaired by the MoEF and UNDP. The PMB will administer the overall outcome and delivery of the programme results of the Energy and Environment Unit at the outcome level and provide strategic direction for future programmes. The PMB will comprise all Implementing Parties under the programme represented by NPDs, relevant ministries, concerned GEF-Operational Focal Point and other main stakeholders involved in the implementation of the GoI - UNDP Energy and Environment programme. The PMB will meet twice a year to assess and analyze the progress towards achievement of all planned objectives and outputs of the Programme. Department of Economic Affairs will be a special invitee to these meetings.

Project Management Unit

The PMC will be headed by the National Project Director, who is also the Chairperson of the National Biodiversity Authority. The PMU will be responsible for the day-to-day management, monitoring and reporting of the project activities at all levels and also liaise with UNDP. The PMU will comprise of representative from respective departments, three project district representatives and a special invitee(s) as per need of the project. The PMC will meet quarterly to review the technical and financial progress of the project in the three project districts and make suitable recommendation to the PSC for effective implementation of the programmes. Accordingly, the PMU will help in identification of success stories, problems if any and undertake on-course corrections.

Project Support Staff

a) Project Management Unit

A Project Management Unit (PMU), headed by the PD, will be established at Department of Soil and Conservation Department, Kohima for overall coordination of the activities. The PMU will be represented by a Project Manager hired for the specific purpose of handling the implementation of the project. The Project Manager is accountable to the PD and the PSC. The Project Manager will be entrusted with the day-to-day project execution and management of project activities, organizing and overseeing monitoring, review and evaluation, and ensuring that the project is on track. The NPD shall oversee the functioning of the PMU and shall be authorised to approve the staff positions. The PMU staff shall be hired only for project duration and their services will be coterminous with the project. With the help of appropriate technical, scientific, managerial, finance and administrative staff the Project Manager will coordinate with members of the PSC and work with the Responsible Parties and other stakeholders on a regular basis to ensure that project-related activities proceed on schedule. The Project Manager is also responsible for the preparation and timely submission of the budgeted Annual Work Plan (AWP) and the quarterly and annual progress and financial reports to UNDP. The Project Manager also ensures that the project undertakes the activities and yields results indicated in the project document and the AWP within the specified time and cost. The recruitment and staffing process will give due attention to considerations of gender equality and promoting diversity at workplace.

District Unit

District Unit (DU) will be set up in the three project districts to carry out district-related activities and will coordinate and report with the PMU based in the Kohima. The Project Coordinators for the DU will be hired for the project period with concurrence from PD. The staff for the project at PMU and DU shall be hired for the project duration and will be coterminous with the project. The PD shall decide the mode and modalities for hiring such services. The hiring of the services may be facilitated and carried out by the UNDP on the basis of TOR to be finalised in consultation with the NPD.

Project Assurance: Project Assurance will be the responsibility of UNDP. The Project Assurance role will support the PSC and PMB by carrying out objective and independent project oversight and monitoring functions. During the implementation of the project, this role ensures (through periodic monitoring, assessment and evaluations) that appropriate project management milestones are managed and completed.

PD, in collaboration with the Project Manager, will convene an annual review meeting involving the Implementing Partners and Responsible Parties to review the progress in the year and approve the work plan for the coming year. This may be combined with the fourth quarter PSC meeting as appropriate. An independent external review may be conducted through resource persons/groups to feed into this process. Project Assurance and Project Manager will meet quarterly (or whenever guidance/decision is required by an implementing partner).

Fund Flow Arrangements and Financial Management

Department of Soil and Water Conservation will make suitable provisions for UNDP funds for this project. UNDP will directly release funds to Department of Soil and Water Conservation, as per the signed Annual Work Plan and PD shall have the authority for its utilisation for the project. Department of Soil and Water Conservation will account for funds received from UNDP on quarterly basis through the standard Fund Authorization and Certificate of Expenditures (FACE) Report duly signed by the PD. No funds shall be released by UNDP without prior submission of a duly filled and signed FACE report. The Project Manager will be responsible for compilation and collation of the Financial Reports. Unspent funds from the approved AWP's will be reviewed in the early part of the last quarter of the calendar year and funds reallocated accordingly. Only after 80% of last advance and 100% of all the previous advances are spent will the next advance be released. The detailed UNDP financial guidelines will be provided on signature of the project.

The Department of Soil and Water Conservation will enter into an agreement with UNDP for the provision of implementation support services (ISS) by UNDP in the form of procurement of goods and services. UNDP rules and regulations as well as charges will apply in such cases. Also the cost for the implementation support services provided by UNDP will be charged as per UNDP rules and regulations. Charges for UNDP Implementation Support Service cost will be made, as outlined in the Annual Work Plan and Budgets Sheet and the ISS Letter of Agreement, attached herewith.

A separate bank account will be opened and maintained by NBA in the project name to track and report the utilisation on UNDP funds. Any interest accrued, including any fluctuation in the value of the US dollar, on the project funds during the project cycle will be ploughed back into the project in consultation with NBA and UNDP and project budgets will stand revised to this extent. If there is no scope for ploughing back the interest will be refunded to UNDP and budget revised accordingly.

1. **Audit:** The project shall be subject to audit in accordance with UNDP procedures and as per the annual audit plan drawn up in consultation with Department of Soil and Water Conservation and DEA. The project shall be informed of the audit requirements by January of the following year. The audit will focus on financial accounting, documenting and reporting, monitoring, evaluation and reporting. In line with the UN Audit Board requirements for submitting the final audit reports by 30 April, the auditors will carry out field visits during February/March. Detailed instructions on audit will be circulated by UNDP separately and on signature. For the purpose of submission of duly audited statement of expenditure for release of funds by the UNDP and by PMU, the services of Chartered Accountants from amongst the CAG's empanelled CAs may be utilised. The cost to this effect shall be charged through the project.
- 2.

COMPONENT 4: MONITORING AND EVALUATION PLAN AND LOGICAL FRAMEWORK

3. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures by the project team and the UNDP Country Office (UNDP-CO), with support from UNDP-GEF. The Logical Framework Matrix provides performance and impact indicators for project implementation along with their corresponding means of verification. These will form the basis on which the project's impacts will be monitored and evaluated.
4. The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Workshop following a collective fine-tuning of indicators, means of verification, and the full definition of M&E responsibilities.

Project Inception Phase

5. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as appropriate. A key objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as to finalize preparation of the project's first annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and, on the basis of this exercise, finalizing the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project. More specifically, the Inception Workshop will:
 - Introduce project staff to the UNDP-GEF expanded team which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff
 - Detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis-à-vis the project team
 - Ensure that all parties understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms (Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities during the project's implementation phase).
 - Provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations
 - Inform the project team about UNDP's project related budgetary planning, budget reviews, and mandatory budget re-phasing
 - Fine-tune the progress and performance/impact indicators of the project in consultation with the full project team with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals

will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.

- Develop a detailed schedule of project reviews meetings in consultation with project implementation partners and stakeholder representatives and incorporate it in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

Day to day monitoring of implementation progress

6. This will be the responsibility of the Project Coordinator, assisted by experts as deemed necessary, and will be based on the project's Annual Work Plan. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.
7. Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop, using impact indicators identified in the logframe (impact indicators are identified at the level of the project objective). The measurement of these will be undertaken through subcontracts to relevant institutions.

Periodic monitoring of implementation progress

8. This will be undertaken by the Project Steering Committee meetings every quarter or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.
9. The UNDP Country Office will conduct yearly visits to field sites based on an agreed upon schedule to be detailed in the project's Inception Report / Annual Work Plan to assess first hand project progress. When feasible, a member of the Steering Committee will also participate in this annual field visit. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all PSC members, and UNDP-GEF.

Annual Monitoring

10. Annual Monitoring will occur through the Project Board Meetings (PBM). This is the highest policy-level meeting of the parties directly involved in the implementation of the project. The project will be subject to Steering Committee Meetings at least every 6 months. The first such meeting will be held within the first 6 months of the start of full implementation.
11. The Project Coordinator in consultation with the CO will prepare a UNDP/GEF PIR/APR and submit it to UNDP-CO at least two weeks prior to the Annual Steering Committee Meeting for review and comments. The PIR/APR will be used as one of the basic documents for discussions in the TPR meeting. The Project Coordinator will present the PIR/APR to the Steering Committee, highlighting policy issues and recommendations for the decision of the SCM participants.
12. In the last month of project operations, a Terminal Tripartite Review (TTR) will be held. The Project Coordinator will be responsible for preparing the Terminal Report and submitting it to the UNDP-CO and the UNDP-GEF Regional Centre. It shall be prepared in draft at least two months in advance of the TTR in order to allow time for review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated

objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation of formulation.

Monitoring Reports to be generated by the project

13. The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process.
 - (a) Inception Report (IR)
 14. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Centre or consultants, as well as timing of meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the first 12 months.
 15. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.
 16. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Centre will review the document.
 - (b) Annual Project Report (APR)
 17. The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self -assessment report by project management to the CO and provides input to the country office reporting process, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The format of the APR is flexible but should include the following:
 - An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
 - The constraints experienced in the progress towards results and the reasons for these
 - The three (at most) major constraints to achievement of results
 - AWP, CAE and other expenditure reports (ERP generated)
 - Lessons learned
 - Clear recommendations for future orientation in addressing key problems in lack of progress
- (c) Project Implementation Review (PIR)

18. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project teams and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the CO together with the project. The PIR can be prepared any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.
 19. The individual PIRs are collected, reviewed and analyzed by the Regional Centre prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters, supported by the UNDP/GEF M&E Unit, analyze the PIRs by focal area, theme and region for common issues/results and lessons. The UNDP-GEF Regional Technical Advisors and Principal Technical Advisors play a key role in this consolidating analysis.
 20. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference.
- (d) Quarterly Progress Reports
21. These are short reports providing important updates in project progress to the UNDP Country Office and the UNDP Regional Centre by the project team.
- (e) Periodic Thematic Reports
22. As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.
- (f) Project Terminal Report
23. During the last three months of the project, the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met (or not achieved), structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.
- (g) Project Publications
24. Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. The project will dedicate resources (Output 3.2) to compiling lessons learned on the main elements of the project strategy. These will be geared to the different audiences and translated in local languages as appropriate. The project team will determine if any of the Technical Reports merit formal publication, and will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format.

Independent Evaluations

25. Mid-term Evaluation: An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from UNDP-GEF.
26. Final Evaluation: An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Centre and UNDP-GEF.

Audit Clause

27. The Government will provide the UNDP Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in UNDP's Programming and Finance Manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Learning and Knowledge Sharing

28. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition, the project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics, which may be of benefit to project implementation though lessons learned. Through these electronic networks, the project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identifying and analyzing lessons learned is an on-going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. Project resources under Output 3.2 have been allocated for these activities.

Table 1. Indicative Monitoring and Evaluation Budget

Type of M&E activity	Responsible Parties	US\$	Time frame
Inception Workshop	Project Coordinator UNDP CO UNDP GEF	5,000	Within first 2 months of project start up
Inception Report	Project Team UNDP CO	None	Immediately following IW

Type of M&E activity	Responsible Parties	US\$	Time frame
Measurement of Means of Verification, baselines for Project Purpose Indicators	Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	25,000	Start, mid and end of project
Measurement of Means of Verification, baselines for Project Progress and Performance (measured on an annual basis)	Oversight by Project GEF Technical Advisor and Project Coordinator Measurements at local/ community level by trained personnel	25,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	Project Team UNDP-CO UNDP-GEF	None	Annually
TPR and TPR report	Government Counterparts UNDP CO Project team UNDP Regional Centre	None	Every year, upon receipt of APR
Steering Committee Meetings	Project Coordinator UNDP CO	10,000	Following Project IW and subsequently at least once a year
Periodic status reports	Project team	None	To be determined by Project team and UNDP CO
Mid-term External Evaluation	Project team UNDP- CO	20,000	At the mid-point of project implementation.
	UNDP Regional Centre		
	External Consultants (i.e. evaluation team)		
Final External Evaluation	Project team, UNDP-CO UNDP Regional Centre External Consultants (i.e. evaluation team)	30,000	At the end of project implementation
Terminal Report	Project team UNDP-CO External Consultant	None	At least one month before the end of the project
Lessons learned	Project team UNDP Regional Centre (suggested formats for documenting best practices, etc)	22,000	Yearly
Audit	UNDP-CO Project team	8,000	Yearly
Visits to field sites (UNDP	UNDP Country Office	None	Yearly

Type of M&E activity	Responsible Parties	US\$	Time frame
staff travel costs to be charged to IA fees)	UNDP Regional Centre (as appropriate) Government representatives		
TOTAL COST (Excluding project team staff time and UNDP staff and travel expenses)		145,000	

LOGICAL FRAMEWORK

Overall goal: To promote sustainable land management and use of biodiversity as well as maintain the capacity of ecosystems to deliver goods and services while taking account of climate change. The project will contribute to this goal along with the other projects being developed under the Sustainable Land and Ecosystem Management Programme.

Project Strategy	Objectively verifiable indicators	Baseline	Target	Sources of verification	Assumptions
Objective: To develop, demonstrate and upscale sustainable land management practices for the conservation of <i>jhum</i> (shifting cultivation) lands in Nagaland through an ecosystem approach	No change in primary forest cover in project sites	Baseline measured in Y1	In Y4, improved forest cover or remains the same as in baseline	Annual independent ecological performance audit; mid-term and final independent evaluation	There is a high level of political acceptance of the project approach of supporting <i>jhum</i> as an essential component of a long-term strategy to promote biodiversity conservation and control of land degradation in hilly areas
	Land area where improved <i>jhum</i> agroforestry systems are in place	0	90,000 hectares of land covering approximately 70 villages in 3 districts by Y4	Annual independent ecological performance audit; mid-term and final independent evaluation	
	Decrease in rates of soil erosion in project sites	Baseline for project sites to be measured in Y1; erosion rates for the target districts are estimated as: Mokokchung: 60 mt/ha/year Mon: 40-50 mt/ha/year Wokha: 40-50 mt/ha/year	Same or less than baseline	Annual independent ecological performance audit	
	Increase in incomes of target communities	Baseline to be measured during the project inception phase	10% improved income	Annual project monitoring report; mid-term and final independent evaluation	

Project Strategy	Objectively verifiable indicators	Baseline	Target	Sources of verification	Assumptions
Outcome 1: The policy, regulatory and institutional environment in support of <i>jhum</i> agroforestry systems is strengthened	Strengthened Agriculture frameworks that explicitly support enhancing sustainability of <i>jhum</i> systems	Policy does not support enhancing sustainability of <i>jhum</i> systems	Policy explicitly supports enhancing sustainability of <i>jhum</i> systems by Y4	Annual project monitoring report; mid-term and final independent evaluation	There is close cooperation among the various state departments that address <i>jhum</i> land issues - Agriculture, Horticulture, Forest, Land Resource Development, Animal Husbandry
	Creating enabling environment in Forest regulations that explicitly recognize and support improved <i>jhum</i> systems as sustainable agroforestry systems that improve forest health	Stresses adverse environmental impact of <i>jhum</i>	Explicit recognition and support for improved <i>jhum</i> systems as sustainable agroforestry systems that improve forest health by Y4	Annual project monitoring report; mid-term and final independent evaluation	
	Credit provisioning systems enabled for farmers who work on communally owned lands	No support for extending credit to farmers who work on communally owned lands	Provisions for extending credit to such farmers are integrated into the policy by Y4	Annual project monitoring report; mid-term and final independent evaluation	
	Integrated land-use planning at landscape level encouraged and strengthened.	No guidelines	Draft guidelines approved by Y2	Annual project monitoring report; mid-term and final independent evaluation	
	Increase in joint extension activities by different departments (agriculture, horticulture, S&WC, land resource development, forest, animal husbandry)	Extension activities are undertaken separately	In target villages all extension services are coordinated according to an integrated plan by Y2	Annual project monitoring report; mid-term and final independent evaluation	
Outcome 2: Options for improving the sustainability of <i>jhum</i> agroforestry systems	Land productivity indicator (measure of returns from farming calculated as outputs minus inputs, e.g. yield minus inputs)	Baseline measured in Y1	Productivity improved by 5% over the baseline	Annual project monitoring report; mid-term and final independent evaluation	There is active community participation and adoption of improved approaches

Project Strategy	Objectively verifiable indicators	Baseline	Target	Sources of verification	Assumptions
are developed and demonstrated in selected project sites (70 villages spread over the 3 districts of Mon, Mokokchung and Wokha in Nagaland)	Lengthening of <i>jhum</i> cropping phase	2 years	3 years by Y4	Annual project monitoring report; mid-term and final independent evaluation	Cofinancing commitments are realized
	Lengthening of <i>jhum</i> fallow phase	8 years	9 years	Annual project monitoring report; mid-term and final independent evaluation	
	Contribution of income from sale of (organically grown) produce to local economy increases	Baseline measured in Y1	Increase of 5% over baseline. Effort will be made to include as much as women beneficiaries as possible (say 50%)	Annual project monitoring report; mid-term and final independent evaluation	
	Number of women benefiting from marketing of produce from <i>jhum</i> fields	Baseline measured in target villages in Y1	300 women beneficiaries (100 from each district)		
Outcome 3: Enhanced capacity to replicate the project's policy reform and field-level experiences in other parts of Nagaland, as well as in other States of India, where shifting cultivation agroforestry systems are prevalent	Number of requests from other districts and states to visit project sites and obtain assistance from the Center of Excellence	0	At least 5-6 requests by Y4	Annual project monitoring report; mid-term and final independent evaluation	The central institutional mechanism that is to be established under the SLEM programme is operational, and is effectively fulfilling its knowledge management, dissemination and uptake role
Plan for extending project strategy to additional villages and districts with associated resource commitments from government	0	By Y4, at least 3 more districts have a budgeted plan for replicating	Annual project monitoring report; final independent evaluation		

COMPONENT 5: LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together the instrument envisaged in the [Supplemental Provisions](#) to the Project Document. Consistent with the above Supplemental Provisions, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

COMPONENT 6: ANNEXE

Annex A Terms of References for key project staff and main sub-contracts

1. Project Coordinator

Duration: 5 years, full-time

Location: Based in Nagaland; duty travel in India

Scope of the assignment: The Project Coordinator assumes overall responsibility for the successful implementation of project activities and the achievement of planned project outputs. He/she reports to the National Project Director assigned by the DS&WC, and the UNDP Country Office.

Duties and responsibilities:

Supervise and coordinate the project to ensure its results are in accordance with the Project Document and the rules and procedures established in the UNDP Programming Manual;

Assume primary responsibility for daily project management - both organizational and substantive matters – budgeting, planning and general monitoring of the project;

Ensure adequate information flow, discussions and feedback among the various stakeholders of the project;

Ensure that participatory methodologies employed by the project are particularly sensitive to women's participation;

Ensure adherence to the project's work plan, prepare revisions of the work plan, if required;

Assume overall responsibility for the proper handling of logistics related to project workshops and events;

Prepare GEF quarterly project progress reports, as well as any other reports requested by the Executing Agency and UNDP;

Prepare, and agree with UNDP on, terms of reference for national and international consultants and subcontractors;

Guide the work of local consultants and subcontractors and oversee compliance with the agreed work plan;

Maintain regular contact with UNDP Country Office and the National Project Director on project implementation issues of their respective competence;

Monitor the expenditures, commitments and balance of funds under the project budget lines, and draft project budget revisions;

Assume overall responsibility for the meeting financial delivery targets set out in the agreed annual work plans, reporting on project funds and related record keeping;

Liaise with project partners to ensure their co-financing contributions are provided within the agreed terms;

Ensure collection of relevant data necessary to monitor progress against indicators specified in the logframe;

Assume overall responsibility for reporting on project progress vis-à-vis indicators in the logframe;

Undertake any other actions related to the project as requested by UNDP or the National Project Director.

Expected Results: Successful delivery of all project outputs and milestones, as indicated in the project logical framework.

Qualifications and skills:

University degree (Post-Graduate) in the field of environment protection and management, sustainable human development or related field.

Outstanding communication, project management and organizational skills.

At least 8 years of experience in development cooperation and project management.
Familiarity with the working environment and professional standards of international non-profit organizations.
Working experience with GOI institutions involved in sustainable land management.
Experience in working with NGOs and civil society, and with participatory approaches.
Proficiency in English and Hindi.
Computer literacy.

Terms and conditions for provision of the services:

The Project Coordinator reports to the National Project Director at DS&WC.

Citizen of India.

The Project Coordinator cannot be employed elsewhere during the entire course of the project.

2. Administrative Assistant

Duration: 5 years, full-time

Location: Based in Nagaland; duty travel in India

Scope of assignment: The Administrative and Financial Assistant provides assistance to the Project Coordinator in the implementation of day-to-day project activities. He/she is responsible for all administrative (contractual, organizational and logistical) and all accounting (disbursements, record-keeping, cash management) matters under the project.

Duties and responsibilities:

Provide general administrative support to ensure the smooth running of the project management unit;

Provide logistical support to the Project Coordinator and project consultants in conducting different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.);

During the visits of international experts, bear the responsibility for their visa support, transportation, hotel accommodation etc;

Maintain the project's disbursement ledger and journal;

Keep files with project documents, expert reports;

Control the usage of non expendable equipment (record keeping, drawing up regular inventories);

Keep regular contact with project experts and consultants to inform them about the project details and changes;

Provide English translation as required;

Draft correspondence and documents; finalize correspondence of administrative nature; edit reports and other documents for correctness of form and content;

Arrange duty travel;

Act on telephone inquiries, fax, post and e-mail transmissions, and co-ordinate appointments;

Perform any other administrative duties as requested by the Project Coordinator;

Organize and coordinate the procurement of services and goods under the project.

Expected Results: Successful operation of project office.

Qualifications and skills:

University degree (Graduate).

Fluency in written and spoken English.

Outstanding time-management, organizational and inter-personal skills.

At least 2-year experience in office administration, preferably within UNDP projects.

Excellent computer literacy.

Terms and conditions for provision of the services:

The Administrative Assistant reports to the Project Coordinator and works under direct supervision.
Citizen of India.

The Administrative Assistant cannot be employed elsewhere during the entire course of the project.

3 Financial Assistant

Duration: 5 years, full-time

Location: Based in Nagaland; duty travel in India

Scope of assignment: The Financial Assistant provides assistance to the Project Coordinator in the implementation of day-to-day project activities. He/she is responsible for all accounting (disbursements, record-keeping, cash management) matters under the project.

Duties and responsibilities:

Provide logistical support to the Project Coordinator and project consultants in conducting different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.);

Organize control of budget expenditures by preparing payment documents, and compiling financial reports;

Maintain the project's disbursement ledger and journal;

Keep files with project documents, expert reports;

Control the usage of non expendable equipment (record keeping, drawing up regular inventories);

Keep regular contact with project experts and consultants to inform them about the project details and changes;

Act on telephone inquiries, fax, post and e-mail transmissions, and co-ordinate appointments;

Perform financial duties as requested by the Project Coordinator;

Organize and coordinate the procurement of services and goods under the project.

Expected Results: Successful operation of project office.

Qualifications and skills:

University degree (Graduate).

Fluency in written and spoken English.

Outstanding time-management, organizational and inter-personal skills.

At least 2-year experience in financial management.

Excellent computer literacy.

Terms and conditions for provision of the services:

The Financial Assistant reports to the Project Coordinator and works under his/her direct supervision
A Citizen of India

The Financial Assistant cannot be employed elsewhere during the entire course of the project

4 District Project Officer

Duration: 5 years, full-time

Location: Based in three project districts in Nagaland; duty travel to DS&WC project office and

UNDP-CO, if required.

Scope of assignment: The District Project Officer would share and coordinate information about the project development with the Project Coordinator. Besides he/she will be a frequent field visitor to target villages in the three project districts.

Duties and responsibilities:

Coordinate the project activities in the respective project districts to ensure its results are in accordance with the Project Document and the rules and procedures established in the UNDP Programming Manual;

Assume primary responsibility like planning and general monitoring of the project;

Ensure adequate information flow, discussions and feedback among the villagers and village councils in the target villages;

Ensure that participatory methodologies employed by the project are particularly sensitive to women's participation;

Ensure adherence to the project's work plan;

Prepare GEF quarterly project progress reports, as well as any other reports requested by the Executing Agency and UNDP in coordination with the Project Coordinator;

Guide and provide logistic support to the local consultants and subcontractors and oversee compliance with the agreed work plan;

Maintain regular contact with Project Coordinator on project implementation issues of their respective competence;

Ensure collection of relevant data necessary to monitor progress against indicators specified in the logframe;

Assume responsibility for reporting on project progress vis-à-vis indicators in the logframe;

Project logistical support to the Project Coordinator and local consultants in conducting different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.)

Expected Results: Successful delivery of all project outputs and milestones, as indicated in the project logical framework.

Qualifications and skills:

University degree (Post-Graduate) in the field of environment protection and management, sustainable human development or related field.

Project management and organizational skills.

At least 3-5 years of experience in development cooperation and project management.

Familiarity with the working environment and professional standards of international non-profit organizations.

Experience in working with NGOs and civil society, and with participatory approaches.

Proficiency in English and Hindi and preferably local language of the area.

Computer literacy.

Terms and conditions for provision of the services:

The District Project Officer reports to Project Coordinator at DS&WC and UNDP-CO.

Citizen of India.

The District Project Officer cannot be employed elsewhere during the entire course of the project.

Annexe B: TOTAL BUDGET AND WORK PLAN (UNDP ATLAS)

Award ID	00057120
Award Title:	PIMS 4073 MFA FSP: Nagaland Sustainable Land and Ecosystem Management
Business Unit:	IND10
Project Title:	PIMS 4073 MFA FSP: Nagaland Sustainable Land and Ecosystem Management
Implementing Partner (Executing Agency)	National Implementation

GEF Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Account Code	ATLAS Description	Budget Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)
Outcome 1: The policy, regulatory and institutional environment supports the integration of sustainable land management practices on <i>jhum</i> lands.	Dept. of Soil & Water Conservation, Nagaland.	62000	GEF	71300	Local Consultants	20,000	20,000	20,000	20,000	20,000	100,000
				72100	Contractual services	60,000	60,000	60,000	60,000	60,000	300,000
				74525	Workshop/Meeting	15,000	15,000	15,000	15,000	15,000	75,000
				72200	Equipments	25,000	0	25,000	0	0	50,000
				71600	Travel	20,000	20,000	20,000	20,000	20,000	100,000
				74500	Miscellaneous	15,000	15,000	15,000	15,000	15,000	75,000
					Sub-total GEF	155,000	130,000	155,000	130,000	130,000	700,000
	Total Outcome 1	155,000	130,000	155,000	130,000	130,000	700,000				
Outcome 2: Options for improving the sustainability of <i>jhum</i> agroforestry systems are developed and demonstrated in selected	Dept. of Soil & Water Conservation, Nagaland.	62000	GEF	71300	Local Consultants	50,000	50,000	50,000	50,000	50,000	250,000
				72100	Contractual services	200,000	250,000	250,000	200,000	150,000	1,050,000
				74505	Workshop/Meeting	30,000	30,000	30,000	30,000	30,000	150,000
				71600	Travel	35,000	35,000	35,000	35,000	35,000	175,000
				74500	Miscellaneous	25,000	25,000	25,000	25,000	25,000	125,000
					Sub-total GEF	340,000	390,000	390,000	340,000	290,000	1,750,000
					Total Outcome 2	340,000	390,000	390,000	340,000	290,000	1,750,000

project sites.											
Outcome 3: Enhanced capacity to replicate the project's policy reform and field-level experiences in other parts of Nagaland, as well as in other States of India, where shifting cultivation agroforestry systems are prevalent.	Dept. of Soil & Water Conservation, Nagaland.	62000	GEF	71300	Local Consultants	10,000	15,000	50,000	50,000	50,000	175,000
				72100	Contractual services	35,000	50,000	100,000	100,000	100,000	385,000
				74505	Workshop/Meeting	5,000	10,000	50,000	50,000	50,000	165,000
				74500	Miscellaneous	5,000	10,000	20,000	20,000	20,000	75,000
					Sub-total GEF	55,000	85,000	220,000	220,000	220,000	800,000
					Total Outcome 3	55,000	85,000	220,000	220,000	220,000	800,000
Project Management Cost	Deptt. of Soil & Water Conservation, Nagaland.	62000	GEF	71300	Local Consultants	50,000	60,000	60,000	60,000	45,000	275,000
				71600	Travel	5,000	5,000	5,000	5,000	5,000	25,000
				72500	Office Supplies	5,000	5,000	5,000	5,000	5,000	25,000
				74500	Miscellaneous	5,000	5,000	5,000	5,000	5,000	25,000
					Sub-total GEF	65,000	75,000	75,000	75,000	60,000	350,000
	Total Management cost	65,000	75,000	75,000	75,000	60,000	350,000				
Total Cost						615,000	680,000	840,000	765,000	700,000	3,600,000

Annex C: ACRONYMS AND ABBREVIATIONS

AOFG-India	Agriculture & Organic Farming Group of India
APEDA	Agricultural and Processed Food Products Export Development Authority
APR	Annual Project Review
ATLAS	UNDP's Enterprise Resources Platform
AWP	Annual Work Plan
CBIA	Community Based Impact Assessment
CO	Country Office
Dept.	Department
DONER	Ministry for the Development of the North East Region
DS&WC	Department for Soil and Water Conservation
GEF	Global Environment Facility
GOI	Government of India
Ha	Hectares
IC	Incremental cost
ICAR	Indian Council of Agricultural Research
ICIMOD	International Centre for Integrated Mountain Development
IIRR	International Institute of Rural Reconstruction
IR	Inception Report
ITC	International Trade Centre
IW	Inception Workshop
IWDP	Integrated Wasteland Development Program
IWMP	Integrated Watershed Management Program
JFM	Joint Forest Management
M&E	Monitoring and Evaluation
MOEF	Ministry of Environment and Forests
MSP	Medium Size Project
NABARD	National Bank for Agriculture and Rural Development
NAEB	National Afforestation and Eco-Development Board
NAP	National Action Programme
NEFA	North East Frontier Area
NEFP	North East Forest Policy
NEHU	North Eastern Hill University
NEPED Phase I	Nagaland Environmental Protection and Economic Development, 1995-2000
NEPED Phase II	Nagaland Empowerment of People through Economic Development, 2001-2006
NER	North East Region
NERCORMP	North-Eastern Region Community Resource Management Project
NERIWALM	North Eastern Regional Institute of Water and Land Management
NEX	National Execution
NGO	Non-government Organization
NSSO	National Sample Survey Organisation
NTFP	Non Timber Forest Products
NWDPPRA	National Watershed Development Project for Rainfed Areas
P3DM	Participatory 3 Dimensional Modelling
PBRs	Peoples' Biodiversity Registers
PIMS	Project Information Management System
PIR	Project Implementation Review
PSC	Project Steering Committee
RCU	Regional Coordination Unit
REDD	Reduced Emissions from Deforestation and Degradation

RRL-Jorhat	Regional Research Laboratory in Jorhat
RVP	River Valley Project
SACON	The Salim Ali Centre for Ornithology and Natural History
SALT	Sloping Agriculture Land Technology
SBAA	Standard Basic Assistance Agreement
SCM	Steering Committee Meeting
SHGs	Self-help Groups
SLEM	Sustainable Land and Ecosystem Management
SLI	Standard of Living Index
SLM	Sustainable Land Management
SO	Strategic Objective
SP	Strategic Priority
spp.	Species
Sq. km.	Square kilometre
SRF	Strategic Results Framework
SWC	Soil and Water Conservation
TORs	Terms of Reference
TPR	Tri-partite Review
TRC	Terraced Rice Cultivation
TTR	Terminal Tri-partite Review
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme – Country Office
UNDP-GEF	United Nations Development Programme – Global Environment Facility Unit
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
VDB	Village Development Board
WDPSCA	Watershed Development Project in Shifting Cultivation Areas
WWF	World Wildlife Fund

Annex D: Letter of Endorsement from the GEF operational focal point,



D. O. No. 4 (2)/1/ 2008 - IC & SD.I



भारत सरकार
पर्यावरण एवं वन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS
2nd April 2009

To: Mr Yannick Glemarec
GEF Executive Coordinator
UNDP, New York

Subject: Endorsement for 'Sustainable Land and Ecosystem Management in Shifting Cultivation Areas of Nagaland for Ecological and Livelihood Security'

This is in continuation to our letter dated: 12th September 2007. In my capacity as GEF Operational Focal Point for India, I confirm that the above project proposal (a) is in accordance with the government's national priorities and the commitments made by India under the relevant global environmental conventions and (b) has been discussed with relevant stakeholders, including the global environmental convention focal points, in accordance with GEF's policy on public involvement.

Accordingly, I am please to endorse this Full Size Project (FSP), which has been prepared as a part of 'Sustainable Land and Ecosystem Management (SLEM) Programmatic Approach' with the support of UNDP for GEF CEO endorsement. If approved, the proposal will be implemented by Department of Soil and Water Conservation, Government of Nagaland and other stakeholders.

I understand that the total GEF financing being requested for this project is USD 3.6 million from USD 30 million allocated for SLEM, which is exclusive of the agency fee (10 %) to UNDP for project cycle management services associated with this project.

(Hem Pande)
Joint Secretary

& GEF Operational Focal Point India

Copy to:

- Dr K Chuba, Commissioner and Secretary to the Govt of Nagaland, Kohima
- Ms Kavita Prasad, Director and GEF Political Focal Point India, Department of Economic Affairs, Government of India, New Delhi
- Ms Adriana Damianova, Lead Environmental Specialist and Task Team Leader, Social, Environment and Water Resources Management Unit, World Bank, Washington
- Dr. Anna Tengberg, Regional Technical Advisor, UNDP, Bangkok
- Dr Preeti Soni, Assistant Country Director, Energy and Environment Unit, UNDP, New Delhi



जहाँ है हरियाली।
वहाँ है खुशहाली।।

पर्यावरण भवन, सी.जी.ओ. कॉम्प्लैक्स, लोदी रोड, नई दिल्ली - 110 510
PARYAVARAN BHAWAN, C.G.O. COMPLEX, LODHI ROAD, NEW DELHI - 110 510

Annex D: Co finance letter from the Government of

GOVERNMENT OF NAGALAND
DEPARTMENT OF SOIL & WATER CONSERVATION
NAGALAND : KOHIMA

NO.SOIL-31/2005-06/

Dated Kohima, the 2nd March 2009

To
Mr. Hem Pande
Joint Secretary (GEF OFP),
Ministry of Environment & Forests
Government of India
Paryavaran Bhawan,
CGO Complex, Lodhi Road
New Delhi – 110003

Sub: - **GOI-UNDP-GEF project “Sustainable Land and Ecosystem management in Shifting Cultivation areas of Nagaland for Ecological and Livelihood Security” – Co-financing commitment of Govt. of Nagaland.**

Dear Sir,

Government of Nagaland has prepared a project to seek support from the Global Environment Facility (GEF) – United Nation Development Program (UNDP) as titled above. The project has been prepared in consultation with the State Government and we are committed to implement it at the earliest. The total budget for the project from GEF as a grant would be ~~US\$~~ 3.6 million USD only for five years of project implementation. The project co-financing commitment is for 25,416,612 (USD twenty five million four hundred sixteen thousand six hundred twelve only amounting to INR one hundred nine crore twenty nine lakh fourteen thousand three hundred sixteen) for the five year project implementation period. The total budget for the project including co-financing and GEF grant is USD 29,016,612 (USD twenty nine million, sixteen thousand six hundred twelve only amounting to INR one hundred twenty four crore, seventy seven lakh fourteen thousand three hundred sixteen only)

The Government of Nagaland is agreeable to above amount of co-financing for the project over the five year implementation period as both cash (USD eighteen million five hundred seventy two thousand amounting to INR seventy nine crore eighty six thousand only) and kind contribution (USD six million eight hundred thirty six thousand six hundred twelve only amounting to INR twenty nine crore thirty nine lakh seventy four thousand three hundred sixteen only) in the three project districts of Wokha, Mon and Mokokchung in Nagaland.

We are enclosing the project document prepared from the Government of Nagaland for your consideration and forwarding to United Nations Development Programme (UNDP) for onward submission to Global Environment Facility (GEF)

We hope and trust that the Ministry of Environment and Forests will accord early approval to the project.

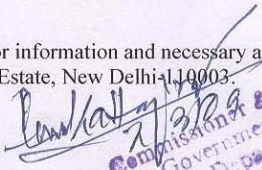
(DR. K. CHUBA)

Commissioner & Secretary to the Govt. of Nagaland
Dept. of Soil & Water Conservation
Kohima

Copy to:

The Director, Soil & Water Conservation, Nagaland, Kohima for information and necessary action.

The Unit Head, Energy & Environment Unit, UNDP, 55 Lodhi Estate, New Delhi-110003.


Commissioner & Secretary
to the Government of Nagaland
Department, Kohima

Annex E: Project Document approved from GEF CEO



PROJECT DOCUMENT

(PIMS 4073)

Government of India

Global Environment Facility

United Nations Development Programme

SUSTAINABLE LAND AND ECOSYSTEM MANAGEMENT IN SHIFTING CULTIVATION AREAS OF NAGALAND FOR ECOLOGICAL AND LIVELIHOOD SECURITY

Brief description: The North Eastern Region (NER) of India, of which Nagaland forms a part, is situated at the confluence of Indo-China, Indo-Myanmar, and Indian biogeographical features. It is a region endowed with great species diversity and endemism in terms of flora and fauna. The biodiversity of the NER has made it a priority area for investment by the leading conservation agencies of the world. WWF has identified the entire Eastern Himalaya as a priority Global 200 Ecoregion. One of the key direct drivers of degradation of the forest ecosystem in Nagaland, and the associated services it generates, is related to the practice of shifting cultivation (locally referred to as "jhum") which is practiced over a large part of the NER. Jhum is the socially-preferred practice in the NER and it is often the most suitable form of agriculture for the agro climatic conditions and steep terrain; the system is also rich in crop genetic diversity. However, in recent years, more and more land is being brought under jhum and a shortened jhum cycle is being observed. The cycle that was once 14 years or more has been reduced to 6 years or less in many places, leaving little time for regeneration and resulting in accelerated soil erosion and disruption of the hydrology of the area. It is estimated that 70% of the top soil loss, land degradation and water source deterioration is attributed to the practice of shifting cultivation. The shortened jhum cycle is insufficient to allow for the restoration of soil fertility before the land is again cultivated, with the result that yields have successively declined over time, and families that were once almost totally self sufficient in food grains are not able to produce enough food even for a few months of the year. The main indirect driver of this adverse change in the jhum system is rapid population growth. Thus, the major challenge continuing to face Nagaland is how to adapt this land use and production system to rising populations and changing lifestyles, while also maintaining its ecological sustainability. The primary thrust of government efforts has been on weaning away tribal families from the practice of jhum by providing assets for settled agriculture. Many of these programmes, however, are yet to make a significant impact. Under the business-as-usual scenario, shifting cultivation systems will continue to play an important role in the local economy and, given population and economic pressures, jhum cultivation is unlikely to go back to the longer, more sustainable cropping-fallow cycles. This will continue to lead to increasing rates of soil erosion, disruption of hydrology and undermining of ecosystem services. Under the alternative, GEF resources will catalyze changes to the enabling environment (institution building, capacity building) so that existing government programs/ schemes earmarked for shifting cultivation areas can be mobilized in support of a paradigm shift from "replacing jhum" to "improved jhum that integrates principles of SLEM". The project will introduce participatory planning processes and will prioritize activities identified through the involvement of the entire community in the development of community resource management plans which reflect more productive and sustainable use of available resources. The overall goal will be to maintain ecosystem services while also meeting livelihood needs.

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Acronyms and Abbreviations

AOFG-India	Agriculture & Organic Farming Group of India
APEDA	Agricultural and Processed Food Products Export Development Authority
APR	Annual Project Review
ATLAS	UNDP's Enterprise Resources Platform
AWP	Annual Work Plan
CBIA	Community Based Impact Assessment
CO	Country Office
Dept.	Department
DONER	Ministry for the Development of the North East Region
DS&WC	Department for Soil and Water Conservation
GEF	Global Environment Facility
GOI	Government of India
Ha	Hectares
IC	Incremental cost
ICAR	Indian Council of Agricultural Research
ICIMOD	International Centre for Integrated Mountain Development
IIRR	International Institute of Rural Reconstruction
IR	Inception Report
ITC	International Trade Centre
IW	Inception Workshop
IWDP	Integrated Wasteland Development Program
IWMP	Integrated Watershed Management Program
JFM	Joint Forest Management
M&E	Monitoring and Evaluation
MOEF	Ministry of Environment and Forests
MSP	Medium Size Project
NABARD	National Bank for Agriculture and Rural Development
NAEB	National Afforestation and Eco-Development Board
NAP	National Action Programme
NEFA	North East Frontier Area
NEFP	North East Forest Policy
NEHU	North Eastern Hill University
NEPED Phase I	Nagaland Environmental Protection and Economic Development, 1995-2000
NEPED Phase II	Nagaland Empowerment of People through Economic Development, 2001-2006
NER	North East Region
NERCORMP	North-Eastern Region Community Resource Management Project
NERIWALM	North Eastern Regional Institute of Water and Land Management
NEX	National Execution
NGO	Non-government Organization
NSSO	National Sample Survey Organisation
NTFP	Non Timber Forest Products
NWDPRA	National Watershed Development Project for Rainfed Areas
P3DM	Participatory 3 Dimensional Modelling
PBRs	Peoples' Biodiversity Registers
PIMS	Project Information Management System
PIR	Project Implementation Review
PSC	Project Steering Committee
RCU	Regional Coordination Unit
REDD	Reduced Emissions from Deforestation and Degradation
RRL-Jorhat	Regional Research Laboratory in Jorhat
RVP	River Valley Project
SACON	The Salim Ali Centre for Ornithology and Natural History
SALT	Sloping Agriculture Land Technology

SBAA	Standard Basic Assistance Agreement
SCM	Steering Committee Meeting
SHGs	Self-help Groups
SLEM	Sustainable Land and Ecosystem Management
SLI	Standard of Living Index
SLM	Sustainable Land Management
SO	Strategic Objective
SP	Strategic Priority
spp.	Species
Sq. km.	Square kilometre
SRF	Strategic Results Framework
SWC	Soil and Water Conservation
TORs	Terms of Reference
TPR	Tri-partite Review
TRC	Terraced Rice Cultivation
TTR	Terminal Tri-partite Review
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme – Country Office
UNDP-GEF	United Nations Development Programme – Global Environment Facility Unit
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar
VDB	Village Development Board
WDPSCA	Watershed Development Project in Shifting Cultivation Areas
WWF	World Wildlife Fund

SECTION A: ELABORATION OF THE NARRATIVE

PART A.1 Situation Analysis

1.1 Environmental context and global significance

29. The North Eastern Region (NER) of India, situated at the confluence of Indo-China, Indo-Myanmar, and Indian biogeographical features, is a region endowed with great species diversity and endemism in terms of flora and fauna. The region's lowland and montane moist to wet tropical evergreen forests are considered to be the northernmost limit of true tropical rainforests in the world (Proctor, Haridasan, and Smith, 1998). It is one of the recognized biodiversity hot spot regions, and is also a part of the Vavilovian centres of biodiversity and origin of diversity of crop plants ¹. The biodiversity of the NER has made it a priority area for investment by the leading conservation agencies of the world. WWF has identified the entire Eastern Himalayas as a priority Global 200 Ecoregion². Conservation
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¹ Agarwal, K. C., *Biodiversity*, Agra Botanical Publishers, India, 1996

² WWF identifies five ecoregions in NER: (i) Brahmaputra valley semi evergreen forests, (ii) The eastern Himalaya broadleaved forests, (iii) The eastern Himalaya sub alpine coniferous forests, (iv) Mizoram-Manipur Kachin rainforest, and (v) Indo-Myanmar pine forests.

International has subsumed its eastern Himalaya “hotspot” into a wider Indo-Burma hotspot, which now includes all the eight states of the NER. (Myers and others, 2000).

30. Nagaland is one of the states of the NER³ and has a total land area of 16,579 sq. km. Altitude ranges from 100 m to 3,840 m and climatic conditions vary from sub-temperate to sub-tropical. The isolated geographical location and varied climatic conditions have contributed to the State’s unique ecosystems that are home to numerous endemic and endangered species of flora and fauna. The agrobiodiversity (both wild and domesticated varieties of plants and fruits) is among the most diverse in the region. Among the ecoregions identified by WWF (see footnote 3), Nagaland mainly falls under the Mizoram-Manipur Kachin rainforest.
 31. The biological distinctiveness of this ecoregion is globally outstanding. This large ecoregion represents the semievergreen submontane rainforest that extends from the mid ranges of the Arakan Yoma and Chin Hills north into the Chittagong Hills, and the Mizo and Naga Hills. It divides the Bhamaputra and Irrawaddy valleys, through which Asia’s largest rivers flow. The semievergreen forests are characterized by several species of dipterocarps, including *Dipterocarpus alatus*, *D. turbinatus* and *D. griffithii*. The region includes two near-endemic species: the bat *Pipistrellus joffrei* and the murid rodent *Hadromys humei*. The
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³ The NER is comprised of eight states – Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

lower forests in Nagaland harbor two primates: the stump-tailed macaque (*Macaca arctoides*) and the pig-tailed macaque (*Macaca nemestrina*). This ecoregion has the highest bird species richness of all ecoregions within the Indo-Pacific region.

32. The hills of Nagaland exhibit a remarkable topographic diversity and are dissected by a number of seasonal and perennial rivers with more or less 'V' shaped valleys in between. There are 4 major river systems in the State, namely Doyang, Dhansiri, Dikhu and Tizu. Of these, the first three flow towards the west through the Assam plains to join the mighty Brahmaputra; while the Tizu river system flows towards the east and southeast and pours into the Irrawady. All these rivers receive a number of tributaries, which are all very short and run for only a few kilometers.
33. The State harbors a very rich floristic diversity. The angiospermic flora is represented by 2,431 species belonging to 963 genera and 186 families. In this, the share of dicots is 1,688 species, 724 genera from 158 families and the share of monocots is 743 species under 239 genera from 28 families. Gymnosperms also register their presence with 9 species, under 6 genera from 5 families. Nagaland harbors a large number of plant species which are endemic to the State or the NER. The State is a rich repository for orchids; 340 spp. out of 1250 spp. of orchids in India are found in Nagaland.

34. Wetlands cover around 9.16 square kilometers in this narrow, rugged, mountainous state of Nagaland. Four endangered and 18 vulnerable species of fish, one each of endangered and near-threatened species of freshwater turtle, and one threatened species of bird are reported. Three wetlands, namely Shilloi Lake, Doyang reservoir, and Dzudu Lake, have been prioritized by SACON⁴.
 35. So far 64 species of amphibians have been recorded from northeast India. A survey of amphibians conducted in Nagaland from 1998 to 2002 resulted in 19 species as new records for the state and 5 species (*Megophrys wuliangshanensis*, *M. glandulosa*, *Amolops viridimaculatus*, *Rana humeralis*, and *Rhacophorus gongshanensis*) as new records for India.
 36. The NER supports one of the highest bird diversities in the Orient, with about 850 bird species. The richness of the region's avifauna largely reflects the diversity of habitats associated with a wide altitudinal range. The NER forms part of the eastern Himalaya and the Assam plains endemic bird area (Bibby and others, 1992). This endemic bird area follows the Himalayan range in the Indian states of Sikkim, northern West Bengal, Arunachal Pradesh, southern Assam, Nagaland, Manipur, Meghalaya, and Mizoram.
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⁴ The Salim Ali Centre for Ornithology and Natural History (SACON) is one of the centres of excellence of the Ministry of Environment and Forests (MoEF), Government of India. SACON's mission is "To help conserve India's biodiversity and its sustainable use through research, education and peoples' participation with birds at the centre stage".

Because this mountain range is further south than other Himalayan ranges it has a distinctly different climate, with warmer mean temperatures and fewer days with frost, and much higher rainfall. This has resulted in the occurrence of a rich array of restricted-range bird species, including two critically endangered species, three endangered species, and 14 vulnerable species of birds within this endemic bird area (Islam and Rahmani, 2004). Stattersfield and others (1998) identified 22 restricted-range species, 19 of which are confined to this region and the remaining three are also present in other endemic and secondary areas. Eleven of the 22 restricted-range species found in this region are considered as threatened (BirdLife International 2001), a number greater than in any other endemic bird area of India (Stattersfield and others 1998). Important Bird Areas of Nagaland include: Fakim Wildlife Sanctuary and Saramati area, Intanki National Park, Khonoma Nature Conservation and Tragopan Sanctuary, Mount Paona, Mount Zanibu, Mount Ziphu, Pfutsero-Chizami, Pulibadze Wildlife Sanctuary, and Satoi Range.

37. Geologically, the NER consists of sandstone, salt stone, shale conglomerates and limestone. The soils of Nagaland are derived from tertiary rocks belonging to Barails and Disang series. The soils of the region are broadly represented by four groups, viz., Inceptisols, Ultisols, Entisols and Alfisols. Although the fertility status of these soils varies greatly, they are usually rich in organic matter and are acidic to strongly acidic in reaction. The low pH (ranging from 4.8 to 6.5) of the soil is attributed to leaching of bases under the

influence of high rainfall in the hills. In general, the soils of entire Meghalaya, Tripura, Arunachal Pradesh, Manipur and over 50% of the soils of Nagaland, and 40% of the soils of Mizoram are deficient in available Phosphorus (2 kg/ha). The reason for low availability of phosphorus in the soils is the high content of exchangeable aluminum. The organic carbon content of the most of the soil of the region is high (2.94%). Most of the soils of Tripura (north and south districts), and Tuensang and Kohima districts of Nagaland are low in available Potassium (120 kg/ha). The soil of Nagaland is generally fertile except on extreme slopes.

38. The biodiversity and ecosystems of Nagaland, in addition to being valuable for their intrinsic value, also provide various ecosystem services such as, provisioning services (food, fresh water, fuel wood, fibre, and other non-timber forest products), cultural services (the social, religious and cultural life of the tribal communities residing in Nagaland are closely linked to the forest), and supporting services (soil formation, nutrient cycling and primary production). The watersheds are critical catchments that regulate hydrological flows to some of the world's most densely populated agricultural lands and cities.
39. The ecosystems and watersheds of Nagaland are, however, experiencing an extensive process of degradation and deforestation, and a significant contributory factor is a shortening of the fallow cycle in the traditional system of *jhum* (shifting) agriculture

practiced in the State, that is allowing less time for cultivated areas to return to secondary forest.

1.2 Socio-economic context⁵

40. The population of Nagaland by the 2001 Census is estimated at 1.989 million; population density is 120 persons per sq. km. It is the homeland of 16 odd tribes and sub-tribes, each of which can be easily distinguished by the colorful and intricately designed costumes, jewelry and beads they adorn. As per the NSSO (55th Round), 1999-00, 32.67% of the population lives below the poverty line. According to the Standard of Living Index (SLI) estimated by the National Sample Survey and the National Family Health Survey for 1998-99, 27% of the people have low SLI while 60% are in the medium category.

Land ownership

41. Nagaland has a unique pattern of land ownership. Land is owned either by the village community as a whole or by a clan within the village or by individuals. There are no records for conferring such ownership; nevertheless individual rights are exclusively determined by tradition, also referred to as "customary laws". These customary laws are

⁵ Socio-economic data are taken from Nagaland: State Human Development Report (2004).

un-codified, yet very effectively applied and interpreted by the traditional Village Councils in the event of any dispute. The Forest Department owns certain areas classified as Reserved Forests, Protected Forests, Wildlife Sanctuaries, National Parks, Nurseries and Botanical Gardens. The land use pattern in Nagaland is as follows: 80.48% under forest cover, 13.44% under agriculture, and the rest are habited areas such as towns and villages, rivers and streams.

Agriculture

42. Agriculture has traditionally been and continues to be the mainstay of Naga life. 73% of the population is engaged in agriculture. Like most of the world's tribal population, the production system in Nagaland has been close to proto-agriculture, which has enabled close links between nature and people from generation to generation. Shifting cultivation or *jhum* continues to be the major type of agriculture practiced in Nagaland. Area cultivated under *jhum* is approximately 917,087 hectares; the annual cultivated area under *jhum* is 131,349 hectares and this alone accounts for 58.95% of the total net cultivated area. In other areas, terraced rice cultivation (TRC) or combined *jhum* and TRC are practiced.

Livestock rearing

43. Villagers generally rear pigs, cattle and semi-domesticated bison called *Mithun*. Animals are often allowed to graze freely in village lands where villagers have grazing rights approved by the Village Council. Uncontrolled grazing by cattle and pigs has become a major problem for farmers, as these animals stray into the gardens, paddy fields and plantations. Farmers have adopted various innovative measures to prevent cattle, pigs and goats from straying into their fields. These include physical and social barriers, where the latter are implemented through decisions of the Village Council with the imposition of fines for violation of the resolution. In addition to Village Council resolutions, the Government of Nagaland has, from time to time, issued orders restricting the movement of stray animals within town limits, the latest one being the "Nagaland Cattle Trespasses Act, 1985"

Forest sector

44. Forests cover approximately 80% of the total land area of the State, and, as such, represent its richest natural resource. Major forest types represented include Assam Valley Tropical Evergreen Forests, Tropical Moist Deciduous Forests, East Himalayan Wet Temperate Forests, and Assam Sub Tropical Pine Forests. While some of the primary forests are still in pristine condition, secondary forests (land that is left fallow under the *jhum* system of agriculture on which forests regenerate under natural processes) constitute a larger chunk

of forests. About 88.3% of the forests belong to communities and individuals, and only 11.7% of the total recorded forests constitute government forests.

45. The primary use of forest land is for *jhum* agriculture, non-timber forest products, and as sacred and watershed forests⁶. (See Table below for data on forest cover.) The State has 1 National Park and 3 Wildlife Sanctuaries. The total area under the protected area network is 22,236 ha constituting 1.34% of the land area of the State.

Table 2. Forest cover of Nagaland

Geographical area of Nagaland		16,579 km ²
Total Forest Cover		13,719 km ²
Of which,		
Very dense forest	236 km ²	
Moderately dense	5,602 km ²	
Open forest ⁷	7,881 km ²	
Forest cover as % of geographical area		83%

Source: State of Forest Report, 2005

⁶ Poffenberger (ed.), 2007, *Indigenous Forest Stewards of Northeast India*, Community Forestry International

⁷ Shifting cultivation (*jhum* fallow) is responsible for much of the forest being classified as "open".

46. Timber operations: The government allows felling of trees from plantations after ascertaining the volume of trees to be felled by the field officers of the Forest Department. The owners of felled trees can transport the timber after getting transit passes from the Forest Range Officer of the area by paying forest royalty as per actual measurement. In the case of timber felled by the villagers in *jhum* lands, the government allows the concerned owner to transport the felled timber up to the nearest notified timber depot without any documents. The Forest Range Officer with jurisdiction for the depot issues transit passes after measuring the timber and collecting royalty for transportation of the timber. Further, there is a ban on export of round logs less than 4 feet in girth to any place outside the State.
47. Non-timber forest products: Forest produce other than timber (such as cane, agar, etc.) are generally regulated by the "Mahal" system on outright sale basis as per the provisions of Mahal settlement rules contained in the Nagaland Forest Act of 1968. Minor forest produce include: bamboo, cane, dhuna, aghor, phul jharu, thatch grass, bally post firewood, and such. Some are regulated through the Mahal system and others by numbers or by prescribed unit wise measurements. In addition, there are several non-timber forest products (NTFP) that occur and tend to regenerate naturally in *jhum* fields. These include *Ficus globules*, *Elaeocarpus* sp., *Phyllanthus officinalis* and *Garcinia* sp. which are species that are used as wildwood, while *Zanthoxylum acanthopodium*, *Cinnamomum* sp. and *Sapium baccatum* are used for medicinal purposes. Other NTFPs that the farmers collect from the fallowed *jhum* fields are barks of *Sterculia villosa* and *Trema orientalis* that are used for rope making. *Canarium resiniferum* is another species from which resins are collected.

1.3 Analysis of drivers of loss of ecosystem services

48. One of the key direct drivers of degradation of the forest ecosystem in Nagaland, and the associated loss of ecosystem services, is related to the practice of *jhum* agriculture. Shifting cultivation (locally referred to as "*jhum*") is practiced over a large part of the NER and has been a traditional practice over generations. Though reliable figures about the exact extent of *jhum* land and other related practices are not available, broad estimates indicate that out of the total area of 25.5 million ha of land in the NER, about 3 million ha is under settled agriculture and about 2.7 million ha is under *jhum*. At any given time, roughly about one-sixth of total *jhum* land is under current *jhum* cultivation. It is practiced by tribal populations which comprise 80% or more of the total population in the States of Arunachal Pradesh, Manipur, Mizoram and Nagaland.
49. The basic principle of *jhum* cultivation is the alternation of short cropping phases (usually one or two years) with phases of natural (or slightly modified) vegetational fallow. Yield is thus managed on a long-term basis, rather than by maximization in the short-term. Shifting agricultural systems traditionally maintain diversity in the cropping phase through mixed cropping, the perennial shrubs and trees being separated in time and confined to the fallow regenerative phase of the forest, in a temporally separated agro-forestry system. Here, regulating ecosystem services such as nutrient cycling and pest population dynamics are controlled both through the complex cropping and the fallow phases. The key for the stability of the system thus lies in retaining a minimum agricultural cycle length (length of the fallow period before the farmer returns to the same site for another cropping phase). In the NER, where shifting agriculture is the major land use, a minimum 10 year cycle was found to be necessary for the system's economic and ecological sustainability.
50. *Jhum* cultivation, though complex in terms of biodiversity, generally, tend to be casually managed. The number of crop species in the mixture may vary considerably, from 6 to over 40, depending upon the agricultural cycle. Linked to traditional animal husbandry such as poultry and swine, and also with the forest sector, this land use is highly complex, with differences in details, such as agricultural procedures, cropping and yield patterns. As a consequence, the ecological and economic efficiencies of these systems may differ considerably as shown through extensive studies done for the NER. The crop diversity

alone does not express the total biodiversity in the system. The species diversity in a plot may go up to about 60 or more, if weeds are considered; when the fallow phase is included, the number may run into more than a hundred.

Table 3. Crop germplasm in shifting cultivation fields in the NER

	Crops	No. of germplasm varieties
1.	Upland rice	298
2.	Brinjal	37
3.	Ginger	60
4.	Chillies	68
5.	Maize	674
6.	Turmeric	60
7.	Grain legumes	200
8.	Sweet potato	5
9.	Cucurbitis	76
10.	Taros	250
11.	Yams	242

Source: NBPGR, Barapani, Shillong

51. As *jhum* has been subjected to a decreasing fallow cycle over the years, the system has changed from its original form and transformed with time. Tiwari (2005) has identified four categories of *jhum* which are prevalent in the NER.
- Traditional *Jhum* is practiced in the interior areas where human population has not increased much. The system is generally sustainable but may not fulfill all the needs and aspirations of a modern livelihood. Traditional *jhum* helps conserve forests as the land is rotated in land use between a long fallow period with forest, followed by a short cropping phase. The traditional *jhum* has survived the test of time for thousands of years and it enabled the people to live in harmony with nature in the most hostile rugged environment, often amidst dense moist evergreen forests teeming with wildlife. Examples can be found in the buffer zone of Nokrek Biosphere Reserve, Garo Hills, Meghalaya and in Nongching village of Nagaland.
 - Distorted *Jhum*: As population increases, the villagers are forced to reduce the fallow period in order to allot *jhum* land to newly married couples. In such cases, the fallow period is reduced to 1-3 years which is not enough for regeneration of the land, resulting in degradation and encroachment on steep slopes. This type of *jhum* is neither productive nor sustainable. Examples: many parts of Mizoram, parts of Arunachal Pradesh, Manipur hills and in West Khasi Hills of Meghalaya.
 - Improvised *Jhum*: This includes recently adapted cultivation of cash crops in *jhum* fields, e.g. green peas in Pamlakarai, Meghalaya and indigenous Kolar Beans (Rajma) in high altitude villages of Nagaland where rice cannot be grown. Such practices help in maintenance of soil fertility and also bring cash income to the family. Another example of improvised *jhum* comes from the village Lazami, Nagaland where the farmers practice unusually long cropping phase, unique weeding system with almost no fallow period.
 - Modified *Jhum*: During the past decade two externally funded development projects have been implemented viz., Nagaland Environmental Protection and Economic Development, and North-Eastern Region Community Resource Management Project (NERCORMP) in Meghalaya, Manipur, and hill districts of Assam. Each of these projects had a major component on improvement of *jhum*. While the first has excelled in improving the livelihoods through promotion of tree husbandry and cash crops; the NERCORMP has done exceptional work in institution building and microfinance. These projects have demonstrated that through multi-pronged external intervention, productivity levels of *jhum* can be improved.

52. *Jhum* in Nagaland: Approximately 0.45 million families are reported to be involved in shifting cultivation in Nagaland (see table below). About 72% of the population in the state depends on agriculture. Predominantly a State with 89% tribal population, each tribal community is intricately linked with the practice of *jhum* in one way or other. *Jhum* is rooted in customs, beliefs and folklore, and greatly influences the cultural ethos of the agrarian society and social fabric in Nagaland (Darlong, 2004).⁸
53. Though often considered primitive and unproductive, *jhum* is a complex agricultural system that is well adapted under certain conditions, and requires exhaustive comprehension of the environment to succeed. It is a time-tested system of cultivation, drawing upon traditional knowledge and indigenous practices (NEPED and IIRR, 1999)⁹. Out of eleven districts in Nagaland, *jhum* is mostly practiced in the districts of Mokokchung, Tuensang, Longleng, Kiphire, Wokha, Zunheboto and Mon.

Table 4. Number of families and fallow cycle involved in *jhum* in the NER

⁸ Darlong, V.T. (2004). *To Jhum Or Not To Jhum – policy perspectives on shifting cultivation*, The Missing Link – Society for Environment & Communication, Guwahati, Assam, India.

⁹ NEPED and IIRR (1999). *Building Upon Traditional Agriculture in Nagaland, India*. NEPED and IIRR, Philippines.

States	Families (in 000s)	Annual area under <i>jhum</i>	Minimum area under <i>jhum</i> one time or other (sq km)	Fallow period (in years)
Arunachal Pradesh	54	700	2100	3-10
Assam	58	696	1392	2-10
Manipur	70	900	3600	4-7
Meghalaya	52.3	530	2550	5-7
Mizoram	50	630	1890	3-4
Nagaland	116.1	190	950	5-8
Tripura	43	223	1115	5-9
Total	445.9	3869		

Source: Task Force Report on *Jhum* Families in India, 2006.

54. The pattern of *jhum* practiced in Nagaland consists of the burning of felling, drying and burning of the *jhum* field, followed by, sowing, inter-cultural operation, harvest, and fallowing. The crops sown are based on tradition. Mixed cropping is the main cropping system. Crops are sown in irregular fashion or random planting. There are no definite crop mixtures. Every cultivator follows his/her own system of crop combination according to his/her family requirements. Naga *jhum* farmers normally grow as many crops as possible, as decided by the community. In terms of soil conservation practices, the farmers of Nagaland have developed a number of mechanical and vegetative barriers to sustain cultivation in these conditions. For instance, Ao, Konyak and Lotha tribes construct boulder and stone barriers and practice log bunding. They also plant nitrogen-fixing alder trees in the fields to check soil erosion.
55. However, an increased area of land is now being brought under *jhum* and a shortened *jhum* cycle is being observed. An estimated area of about 1,000 square kilometers has been brought under *jhum* cultivation within the last decade. The cycle that was once 14 years or more has been reduced to 6 years or less in many places. The shortening of the *jhum* cycle and extension of the area under *jhum* cultivation has resulted in accelerated soil erosion and disruption of the hydrology of the area. It is estimated that 70% of the top soil loss, land degradation and water source deterioration is attributed to the practice of shifting cultivation. The system of cultivation coupled with high rainfall causes heavy erosion to the extent of removing up to 40 tonnes of top soil per hectare in a year. Land slip occurrences are common in many areas in the monsoon seasons.
56. The shortened *jhum* cycle is insufficient to allow for the restoration of soil fertility before the land is again cultivated, with the result that yields have successively declined over time. Families that were once almost totally self sufficient in food grains are not able to produce enough food even for a few months of the year.
57. The main indirect driver of this adverse change in the *jhum* system is rapid population growth. The population of the NER has quadrupled over the past 50 years, leading to a highly adverse land-man ratio. In addition, economic factors such as lack of income opportunities and lack of access to markets restrict the ability to realize greater value from production and sale. There is also a cultural driver in that Naga tribals believe in the Cornucopian school of thought according to which "nature is bountiful with infinite resources". Thus, the major challenge continuing to face Nagaland is how to adapt this land use and production system to the increased population and changing lifestyles, while also maintaining its ecological sustainability.

1.4 Legislative, institutional, policy and programming context

1.4.1 Legislative context

58. *Constitutional Provisions and Obligations:* Environmental conservation has been an integral part of the Indian ethos, as reflected in India's Constitution adopted in 1950. Articles 48A and 51G of the Directive Principles of State Policy enjoin upon the State to protect and improve the environment and safeguard forests and wildlife. The Constitution also enables the Centre and the States to enact laws to carry out the duties of preservation, afforestation and conservation of natural resources. Article 39(b) and (c) lays down the duty of the State and the Centre to develop natural resources for common good. Land and Water are subjects that fall within the State List¹⁰ and therefore are under the purview of the State government; Forests fall under the Concurrent List, and therefore are under the purview of both the central and state government. Article 40 of the Constitution calls for organization of villages as units of self-government. Thus, a favorable atmosphere for

¹⁰ Under the Constitution the central government has the powers to enact laws on subjects under the Union List, while the state governments have the powers to enact laws on subjects under the State List. Both the central as well as the state governments can enact laws on subjects under the Concurrent List. However, the laws enacted by the central government under the concurrent list override the laws enacted by the state government when a conflict arises between those laws.

empowering grassroots communities and for assisting them to take initiatives in the areas of environmental management, including combating desertification, already exists.

59. *Legislative Acts and Bills*: There are several Acts and Bills that provide the legislative foundation for addressing ecosystem degradation trends in forests and agriculture in Nagaland. However, it is important to note that special constitutional provisions are provided for guarding the customary rights of tribals in Nagaland. The two main provisions which govern the applicability of Acts of Parliament and the State Legislature to the NER are Article 371 and 244 of the Constitution. So far as the State of Nagaland is concerned, Article 371A of the Constitution states that “no Act of Parliament in respect of religious or social practices of the Nagas, Naga customary law and procedures, administration of civil and criminal justice involving decisions according to Naga customary law, and ownership and transfer of land and its resources, shall apply to the State of Nagaland unless the Legislative Assembly of Nagaland by a resolution so decides”.

Table 5. Legislative foundation for addressing ecosystem degradation

Name of Act	Year	Objectives
National level		
Forest (Conservation) Act	1980	To check indiscriminate diversion of forest land for non-forestry purposes.
Environment (Protection) Act	1986	To conserve and protect the environment of the country.
Wildlife (Protection) Act	1988 (amended)	Provides for the conservation of wildlife in the country.
The Biological Diversity Act	2002	To provide for conservation of Biological Diversity, sustainable use of its components and equitable sharing of the benefits arising out of the use of biological resources and for matters connected therewith or incidental thereto.
The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006	2006	To recognize the usufruct rights over the natural resources and access to various other resources that the tribal's are traditionally using.
State level		
The Naga Hills Jhumland Regulation Act	1946	This Act is unique because it is perhaps the only piece of legislation that talks of giving recognition to the customary laws and rights of the people. It gave the original inhabitants absolute right over their <i>jhum</i> land and recognized their eligibility for practicing shifting cultivation, grazing of cattle, etc.
The Nagaland Tribal Area, Range and Village Council Act	1966	The Act provides for the creation of a Tribal Council for each tribe, an Area Council for Kohima and Dimapur, a Range Council where there is a recognized range in the Mokokchung and Kohima Districts and Village Councils for one or more villages in Kohima and Mokokchung, wherever they may be deemed necessary by the Deputy Commissioner.
Nagaland Forest Act	1968	The Act gives the Government absolute right to carve out forest reserves and acquire any plot of land for its purpose.
Nagaland Jhumland Act	1970	This Act is applicable to the whole State since 12 th April, 1974. It has broadened the meaning of forests to include any land, except the land which has been put to terrace

Name of Act	Year	Objectives
		<p>for the purpose of permanent or semi-permanent cultivation or any land attached or appurtenant to a dwelling house. It has brought <i>jhum</i> land under the ambit of Forest Department as far as movement of forest produce emanating from there is concerned. It provides for ejection of squatters, a detailed chapter on penalties and procedures on the lines of the forest acts such as prison sentences and fines or impounding in case of contravention, etc. It also gives rule-making power that, <i>interalia</i>, authorizes regulation of collection and removal of forest produce from <i>jhum</i> land. This is a significant provision that would help retrieval of valuable timber for productive use instead of allowing it to be burnt away as part of shifting cultivation process. While this provision exists, it is rarely exercised by the concerned authorities due to involvement of cost for removal of forest produce. The <i>jhumias</i> themselves too do not remove timber, except for personal use, as transportation of any timber is now</p>

Name of Act	Year	Objectives
		regulated in accordance with the provisions of the 12.12.1996 order of the Supreme Court of India. ¹¹
The Nagaland Village Area and Regional Council Act	1970	The Village Development Board (VDB) programme is a component of the act to undertake rural development through resource mobilization and decentralized planning with involvement of local community in preparation and execution of model schemes. It is the popular institution at micro level in the state which executes the programme components viz., Grant-in-Aid and matching cash grants under the direction and guidance of the village council and its chairman. Plans prepared are assisted and approved by Block

¹¹ The case is known as T.N.Godavarman Tirumulkpad Vs Union of India & Others and resulted in an Order of Supreme Court on banning of timber felling in India & Northeastern states in particular. Before this order, Nagaland had a thriving timber-based industry. The ban imposed by the Supreme Court on export of timber from the North-East in view of the overexploitation of the forests seriously affected the industry and impacted employment opportunities. Ever since the ban, a policy of sustainable use of plantations on community and private lands has evolved and activities in this sector are being revived as mentioned in the Nagaland Tree Felling Regulation Rules 2002.

Name of Act	Year	Objectives
		Development Officers and Deputy Commissioners, respectively.
Joint Forest Management Resolution, Nagaland	1997	<p>To elicit active participation of villagers in (a) creation (b) management and (c) protection of plantations</p> <p>To achieve ecological needs consonant with sustainable productivity of wood and other non-timber forest resources</p> <p>To wean away the land owning communities from shifting cultivation by adopting an alternative (Tree Farming)</p> <p>To productively utilize the degraded jhumland thereby checking soil erosion;</p> <p>To conserve Biodiversity through people's action</p> <p>To create and generate forest-based economy for the villagers</p> <p>As per the JFM resolution, community forest committees have been formed in Kohima (8), Mokokchung (33), Tuensang (30), Wokha (34), Doyang (9), Zunheboto (37),</p>

Name of Act	Year	Objectives
		Mon (19), Peren (12) forest divisions and formation of more committees is in progress in different forest divisions. Training has been provided to officials from Forest/ Agriculture/ Horticulture Departments/ Village Development Boards/ NEPED on various aspects of JFM. Information on theoretical background and methods for micro plan through Participatory Rural Appraisal and various other issues related to JFM such as gender, equity, conflict resolution has been provided through the involvement of the Regional Center, NAEB, MOEF, and other eminent resource persons.

60. In Nagaland, about 92% of the land is unclassified and are under community ownership, which may fall under any one of the recognized four categories, viz., Private land, Clan land, Morung land¹², and Common Village land. *Jhum* land¹³ comes under the category of

¹² *Morung* land is invariably land near the village containing standing timber and bamboo used for construction and repairing of houses in the village, including the *Morung* or the bachelors' community.

¹³ As per The Nagaland Jhumland Act, 1970, "Jhumland" means such land which any member or members of a village or a community have a customary right to cultivate by means of shifting cultivation or to utilise by

common village land, which does not belong to any individual but is owned by the community and regulated through Village Councils. Despite the presence of the Nagaland Forest Act, 1968, it is customary laws that regulate the use of forests and jhumland in Nagaland.

1.4.2 Institutional framework

61. Given that the State has the responsibility for land, water, and forests (with the last being shared with the Centre), the discussion here on the institutional framework that can support the control of ecosystem degradation is limited to the State level. The table below lists key State-level institutions and their main responsibilities.

Table 6. Institutional framework at the State-level

Name of State Department	Responsibilities
Department of Soil and Water Conservation	Embarked on a policy of sustainable production and protection through environmentally viable measures and

clearing jungle or for grazing livestock and includes any beds of rivers provided that such village or community is in a permanent location, but it does not include: (i) Any land which has been terraced or may be terraced for the purpose of permanent or semi-permanent cultivation whether by means of irrigation or not, or (ii) Any land attached to or appurtenant to a dwelling house and used for the purpose of permanent cultivation, or (iii) Any land which is under permanent cultivation.

Name of State Department	Responsibilities
	<p>conservation of natural resources. Carrying soil survey and testing for land use planning, cartography, soil analytical works, and meteorological observatories. Stabilizing <i>jhum</i> cultivated areas in various conservation, development and management measures both in arable and non-arable lands for increasing agricultural productivity. Conserving, developing, and proper management of soil and water and its natural resources for sustainable agricultural production. Rainwater harvesting operated through building and maintaining conservation structures. Providing safe drinking water to the rural masses by development of water resources. Establishment of model farms in various districts to reclaim soil fertility and promote organic farming in large scale. Application of remote sensing technology for generating multi-thematic maps for integrated planning and implementation. Generating employment in rural areas.</p>
Department of Forests, Ecology, Environment and Wildlife	<p><i>In-situ</i> conservation and management of biodiversity Forestry extension and education programs. Maintenance of eco-balance through eco-restoration measures and environmental protection programs Manage timber operations in line with the Nagaland Tree Farm and Timber Regulations, 2000</p>
Department of Agriculture	<p>Promoting Nagaland agriculture to commercial agriculture in a sustainable manner by extending demand driven service Making Nagaland a leading State in sustainable rain-fed farming Promoting organic agriculture</p>
Department of Land Resource Development	<p>Conducting training to create awareness on degradation of land resources, protection of environment and economic sustainability of the farmers. Forming watershed committees in watershed villages. Construction of contour bunds, terraces, water-harvesting structures and farm ponds. Promoting indigenous medicinal crops through germplasm collection. Providing technical support to farmers.</p>
Department of Horticulture	<p>Crop zoning, based on the strength of each district Encourage commercial scale production with high density plantation and technically sound plantation techniques Emphasize quality and quantity with better management practices Vegetable cultivation through Vegetable Villages, for self-sufficiency and to meet off-season demands Intensive monitoring and follow-up Capacity building of department functionaries as well as farmers Promote private sector partnerships with technical support, and buy back arrangements</p>

Name of State Department	Responsibilities
	Awareness campaigns
Department of Veterinary and Animal Husbandry	Livestock and poultry development Prevention of livestock diseases Dairy development Feed & fodder development Livestock statistics of the state During the 10 th Five year Plan the focus of the department was further intensified through appropriate techniques of breeding, feeding, health coverage and production oriented management programs
Village Councils (VCs) and Village Development Boards (VDBs)	Apex regulatory body Allocates <i>jhum</i> fields Decides and pronounces calendar of <i>jhum</i> events Coordinates other <i>jhum</i> related communal activities such as clearing and maintenance of footpaths from the village to <i>jhum</i> fields, construction of cattle protection fences, barricades, bridges, celebration of festivals, etc

1.4.3 Government policies that have a bearing on *jhum*

62. *Development planning process*: The overarching planning tool of the Government of India to chart the country's development trajectory (covering economic, social, and environmental objectives) is the Five-Year Plan. These are developed, executed and monitored by the Planning Commission, with the Prime Minister as the *ex officio* Chairman. The tenth plan completed its term in March 2007 and the eleventh plan is currently underway. A central theme of the 11th plan that runs from 2007-08 to 2011-12 is to achieve inclusive economic growth, based on the recognition that India needs a "...growth process that will achieve a rapid reduction in poverty, accelerate the pace of both industrialization and employment-generation, reduce the rural-urban divide, and bring measurable benefits to Scheduled Castes/ Scheduled Tribes, minorities and other excluded groups". This central planning theme for the next 5 years fits very well with the objective of addressing ecosystem degradation trends in Nagaland that are having a disproportionate effect on tribal communities that comprise 89% of the total population.

63. There are various national and state-level policies that have implications for *jhum* agriculture and, in turn, the ability to regulate its impacts on land and ecosystem degradation (see table below). The changing tone of national policies related to shifting cultivation is summarized in the table below.

Table 7. Relevant policies at the National and State levels

Policy	Year	Views
National Level		
National Forest Policy	1894	The practice of shifting cultivation first came up for administrative review with the enactment of National Forest Policy, 1894 during the British regime. The policy observed: "...a system of shifting cultivation which denudes large area of forest growth in order to place small areas under crops costs more to the community than it is worth and can only be permitted under due regulation where forest tribes depend on it for their sustenance."
National Forest Policy (Revised)	1952	The same policy was revised in 1952 after independence where the practice of shifting cultivation was viewed with understanding and sympathy. The policy stated: "The demand caused to forests by shifting cultivation in certain areas must be guarded against. To wean the aborigines who eke out a

Policy	Year	Views
		precarious living from axe cultivation, moving from area to area, away from their very age old and wasteful practices requires persuasion, not coercion, a missionary not an authoritarian approach. Possibilities for regulating shifting cultivation by combining it with forest regeneration to the benefit of both should be explored. Success in this direction largely depends upon enlisting the cooperation of cultivators and gaining their confidence and showing consideration to their needs and wishes. " A year later in 1953, while studying the shifting cultivation of Assam (undivided Assam and NEFA or present Arunachal Pradesh), the then Inspector General of Forests said, "The correct approach to the problem of shifting cultivation lies in accepting it is not a necessary evil, but recognizing it as a way of life, not condemning it as an evil practice but regarding it as an agricultural practice evolved as a reflex to the physiography of the land...".
National Forest Policy	1988	The National Forest Policy of 1988 stressed on the adverse environmental impact of shifting cultivation. According to this policy, alternative avenues of income, suitably harmonized with the right land-use practices, should be devised to discourage shifting cultivation. Efforts should be made to contain such cultivation within an area already affected, by propagating improved agricultural practices. Area already damaged by such cultivation should be rehabilitated through social forestry and energy plantations.
North East Forest Policy (Draft version)	2002	The Draft North East Forest Policy (NEFP) was formulated in 2002. Though formulated within the ambit of the National Forest Policy, 1988, as regards to shifting cultivation the NEFP emphasizes innovative community based afforestation/agroforestry schemes with a significant input of horticulture and the cultivation of certain state-specific approved cash crops on gentle slopes, for which the nodal agency should be the forest department to ensure primacy of conservation.
National Policy on Tribals (Draft version)	2002	The National Policy on Tribals, 2002 (Draft) recognizes shifting cultivation as the basis of life for many tribals. It reiterates the fact that the practice is widely spread in the hill areas of Northeast India. With respect to shifting cultivation, the policy focuses on the need for rationalization of land tenure system with secure ownership rights, evolution of suitable technologies for improved production, encourage cultivation of cash crops in lieu of which grain banks would be established with improved public distribution system for ensuring supply of sufficient food grains, training and improved extension services for sensitizing alternative economic strategies.
National Environment Policy	2006	Promotes sustainable alternatives to agriculture where it is no longer ecologically viable, ensuring the culture and social organization of the local people are not disrupted
National Biodiversity Action plan	2008	Promotes sustainable alternatives to agriculture where it is no longer ecologically viable, ensuring the culture and social organization of the local people are not disrupted
State Level		
State Forest Policy		In consonance with the objectives of National Forest Policy, 1988, the State Policy has been designed to:

Policy		Year	Views
			<p>Convert <i>Jhum</i>land areas into economically and ecologically sustainable woodlands</p> <p>Regulate harvesting of forest resources on principles of sustainability</p> <p>Protect and conserve fauna and flora including endangered species</p> <p>Protect, conserve and manage biodiversity in and outside National Park, Sanctuaries and Reserve Forests based on sound scientific principles for <i>in-situ</i> and <i>ex-situ</i> conservation</p> <p>Raise and develop commercially important species</p> <p>Bamboo policy with valuable and active inputs from the Department has been formulated by the State Government</p>
Nagaland	Bamboo Policy	2004	<p>Keeping in view the ecological significance and vast economic potential of bamboo in the State, the Nagaland Bamboo Policy envisages the following aims and objectives:</p> <p>Protection & conservation of rich bio-diversity associated with bamboo forests and bamboo growth areas in the state.</p> <p>Sustainable development and utilization of bamboo resources through scientific management.</p> <p>Promotion of bamboo plantation (by Government, Individuals and communities) as they key thrust area for future economy of the state.</p> <p>Promotion of bamboo based industries for utilizing the available resource for generating income.</p> <p>Revitalization and promotion of local traditional bamboo craft & art with improved technology & design and value addition for export through industrialized mode of production.</p> <p>Promotion of bamboo as an essential wood substitute by increasing bamboo production and promotion of bamboo based enterprise in the state in order to reduce pressure on forests.</p> <p>Promotion of awareness and understanding of bamboo as "Green Gold" among farmers, traders, industry, and the people in the state with a view to utilizing its full potential and to galvanize the rural and industrial economy in the state.</p> <p>Effective exploitation of existing mature bamboos before the impending gregarious flowering.</p>
State Policy	Agriculture	Under prep.	<p>A rational agriculture policy and land use policy for Nagaland, aimed towards sustainable development, would soon be in place in Nagaland. Through such policies, by 2020, the present permanent forest reserve areas in the State would increase from 12 percent to 30 percent while another 30 percent surface area would have been brought under forest and tree cover through measures such as commercial plantations (10 percent), agro-forestry and cash crops under trees in the form of high value aromatic and medicinal plants (10 percent), and the present bamboo-growing areas increased from 5 percent to 10 percent. Such activities would ensure sustaining permanent tree cover areas in the State.</p>
State Policy	Land Use		

1.4.4 Government baseline programs related to management of *jhum* land

64. The State Government through its centrally-sponsored and other schemes, as well as through donor resources, has undertaken a number of different programs/ schemes

related to land, water and forest management in general and the *jhum* cultivation system in particular. These efforts are summarized in the table below.

Table 8. State government programs for management of forests, natural resources, and watersheds

Program	Department	Objectives
National Watershed Development Project for Rainfed Areas (NWDPPRA)	Department of Agriculture	To produce sufficient food grain Restoration of ecological balance in degraded and fragile rain fed ecosystem by greening these areas through appropriate mixture of tree species, shrubs and grasses Reduction of regional disparity between irrigated and rain fed areas Creation of sustainable employment for the rural poor Increase in income levels of people living in rain fed areas
<i>Jhum</i> intensification and extension of cropping phase	Dept. of Agriculture	The objectives of this scheme are: To increase the <i>jhum</i> cycle for higher production and productivity through adoption of improved farming practices and fallow management. Establishing multipurpose tree species and introducing shade loving plants are major activities. Introducing wild sunflower as fallow species under short <i>jhum</i> cycle to improve soil fertility. Constructing terraces wherever feasible. Awareness and training programs and organizing seminars for the farming community of the state.
Land Development & Farm Water Management	Dept. of Agriculture	To motivate farmers to adopt permanent terraced cultivation through land development and farm water management, thereby enhancing production and reducing <i>jhum</i> practices.
Joint Forest Management Program	Dept. of Forest, Ecology, Environment & Wildlife	To elicit active participation of villagers in (a) creation (b) management and (c) protection of plantations. To achieve ecological needs consonant with sustainable productive forestry. To create a wood-based economy for the people. To constitute "Community Forest Committee" at village level under JFM scheme. As per JFM resolution, community forest committees have been formed in Kohima (8), Mokokchung (33), Tuensang (30), Wokha (34), Zunheboto (37), Mon (19), Peren (12).
Integrated Village Afforestation and Eco Development Scheme (<i>Samanvit Gram Vanikaran Samridhi Yojana</i>)	Forest Development Agency (A district-level body under Dept. of Forest, Ecology, Environment & Wildlife)	To control removal of forest produce from forests by making the community responsible for monitoring removals from the forests. To provide sustainable and assured employment opportunities to the tribals in such areas. Creation of durable assets for tribal population which contribute to over all eco development in the area. To ensure local participation in implementation of scheme. To make self income generating schemes for villagers to stop cutting of forests by them. To check environmental degradation and soil erosion. To increase area under forest cover and to conserve biodiversity.
Integrated Wasteland	Dept. of Land Resource	Formed watershed committees in watershed villages. Conducted training for Watershed Association, SHG

Program	Department	Objectives
Development Program (IWDP)	Development	members and beneficiaries for the implementation of IWDP programme. Conducted training to create awareness on degradation of land resources, protection of environment and economic sustainability of the farmers. Constructed contour bunds, terraces, water-harvesting structures and farm ponds.
Integrated Watershed Management Program (IWMP)	Dept. of Soil & Water Conservation	Contour Bunding for protection and production. Mini Watershed Projects.
Watershed Development Project in Shifting Cultivation Areas (WDPSCA)	Dept. of Soil & Water Conservation	Overall development of <i>jhum</i> areas on watershed basis Reclaiming the land affected by shifting cultivation Upgrading the socioeconomic situation of <i>jhumia</i> families so as to encourage them to go in for settled agriculture
Contour bunding	Dept. of Soil & Water Conservation	Development of bench terracing, contour bunding and plantation activities.
Integrated Land Development	Dept. of Soil & Water Conservation	Stabilizing land degradation through integrated land development under NABARD.
River Valley Project (RVP)	Dept. of Soil & Water Conservation	Promotion of horticulture, agro-forestry, contour-vegetative hedge, sowing and planting and drainage line treatment in the catchment of river valleys
NEPED Phase I (Nagaland Environmental Protection and Economic Development, 1995-2000)		Aimed to develop sustainable management of the land base by the intensification of <i>jhum</i> cultivation. The strategy chosen was farmer-led development, testing and demonstration of agroforestry-based intensified systems.
NEPED Phase II (Nagaland Empowerment of People through Economic Development, 2001-2006)		Aimed to reinforce, assist and empower traditional institutions as agents of delivery mechanism, and to engage communities in agro-based income generation activities through micro credit and support community-based natural resource management.

65. The main thrust of government efforts has been on weaning away tribal families from the practice of *jhum* by providing assets for settled agriculture. Many of these programs, however, are yet to make a significant impact in weaning people away from shifting cultivation. At a workshop in September 2006 titled "Shifting Agriculture, Environmental Conservation and Sustainable Livelihoods in Marginal Mountain Environment" held in Guwahati (India), researchers and scientists from India, Nepal, Thailand, Laos, and Japan presented papers on diverse aspects of shifting cultivation. The experience of all these countries by and large confirms that state intervention to rehabilitate shifting cultivators has not achieved intended results and in very many cases, *jhumias* were turning back to shifting agriculture. A number of papers and studies presented at the Guwahati workshop bear testimony to this.

66. The Department of Agriculture's scheme on intensification of *jhum* (2nd row of the table) has tried to focus on strengthening *jhum*, rather than replacing it. It has, however, achieved only partial success. Close collaboration with the Department of Agriculture to learn from this experience and mount joint efforts to modify baseline programs will be pursued during the initiation phase of the project.

67. The 2 NEPED projects (last 2 rows of the table) have supported farmer-led modifications of *jhum* cultivation by promoting tree husbandry and cash crops that have improved

productivity and livelihoods in Nagaland. Thus, an important lesson that has emerged is that if the adverse impacts of *jhum* on land and ecosystems are to be effectively mitigated, the emphasis needs to be on controlling distortions or retrogressive developments rather than on controlling shifting agriculture itself.

68. In light of these findings, there appears to be some acceptance for considering alternatives to the prevalent approach of converting *jhumias* to settled agriculture. The [Shillong Declaration](#) is a case in point, as is the decision of the Government of Meghalaya in April 2006 to no longer try to suppress shifting cultivation and would instead examine ways of integrating soil and water conservation measures within it. In the case of Nagaland, this support is evident in the fact that the Department of Soil and Water Conservation, which was specifically established to tackle various soil and water conservation problems and specially to draw up schemes for weaning away the people from *jhum* cultivation, is the key state-level counterpart for this project aimed at conserving and enhancing *jhum* cultivation so that it can continue to contribute to ecosystem health and resilience.
69. It is clear that an effective solution to the problem of *jhum* has become critical, not only from the point of biodiversity conservation and controlling land degradation, but also for productive agriculture and livelihoods in the region. Given that *jhum* is the socially-preferred practice in the NER and that it is often the most suitable form of agriculture for the agro climatic conditions and steep terrain, the preferred solution to the problem of the shortening fallow cycle lies in strengthening this weakened agro-forestry system.
70. The long term goal should be to promote a mix of different sustainable land uses which, when integrated across the landscape (watershed), both maintain ecosystem services and meet the livelihood needs of the growing population. The mix of land uses would consist of a combination of *jhum* fields, secondary forest (*jhum* fallows), intensive organic farming, and community-based biodiversity conservation sites. Each of these land uses would be managed in a sustainable manner to enhance local livelihood opportunities and preserve ecosystem services as follows:

Table 9. Promoting a mosaic of different land uses at the landscape level

Land use type	Current land use strategy	Enhanced land use strategy
<i>Jhum</i> fields	Subsistence cultivation of a traditional mix of <i>jhum</i> crops	Increase the <i>jhum</i> cropping phase to 3 years (leaving more time for the fallow period) while also enhancing productivity, production and value of <i>jhum</i> fields by integrating the following with the traditional <i>jhum</i> crop-mix: Integration of annual legume crop Integration of <i>arhar</i> as a strip crop Addition of indigenous tree species that can add value to the fallow period by raising cash income and restoring soil fertility Integration of cash crops that fetch a good price in the market (e.g., cardamom, French beans) + aim to secure a “green premium” for the organically cultivated crops Integration of under-storey crops Integration of SALT (Sloping Agriculture Land Technology) trials that have been conducted by research institutes in Nagaland with ICIMOD funding
	Traditional weed management	Integrated weed management (combination of different methods including hand weeding, salt, pre-emergence weed management, use of <i>tithonia</i> and velvet bean to control thatch)
	Traditional soil	Build on traditional practices and improve soil

Land use type	Current land use strategy	Enhanced land use strategy
	conservation practices that are not always effective because they are used in an irregular manner	conservation strategies by promoting systematic deployment of a combination of strategies with farmer inputs (logs and stones, whole bamboo, bamboo splits, crops, broom grass).
<i>Jhum</i> fallow (secondary forest)	The tendency is to consider fallow land as wasteland and not as a productive asset.	Enhanced fallow management using traditional knowledge and technologies so that (i) rate of restoration of soil fertility is improved (e.g., use of wild sunflower, alder), (ii) sustainable harvest of timber and NTFPs (bamboo, medicinal plants) generates greater income for <i>jhumias</i> .
Intensive organic farming	Limited	Build on successful experiences (like those tested under NEPED Phase II) in terms of micro-credit, market linkages, government support services (buy-back policies, crop zoning, Agriculture Produce Marketing Facilities, Agricultural Produce Processing Facilities) to increase the contribution of vegetable and cash crops to farmer incomes. Support use of indigenous bio-fertilizers Emphasis on post-harvest practices (processing and improved storage)
Livestock	Cattle, dairy and piggery development to support the largely non-vegetarian diet.	Continue this, as appropriate, to diversify incomes as part of a sustainable agro-forestry system.
Community-based biodiversity conservation sites (primary forest)	Land between villages is often designated as common property with no village having exclusive access or control over its resources; through negotiation villages can gain some access to resources from such land. Forests covering inaccessible mountain area are considered as Sacred Forests.	Mobilize the conservation support of village-elders and environmentally conscious citizens of the community who understand the long term benefits of in situ biodiversity conservation Set aside primary forest areas as sanctuaries (with technical support of the Forest Department under the JFM Resolution) Highlight the potential of these set-asides to generate eco-tourism revenues by working with the Tourism Department (example of Ghosu Bird Reserve)

1.4.5 Barriers to promoting SLEM on *jhum* lands

71. However, there are several barriers to realizing this vision of *jhum* cultivation being an integral part of a sustainable land and ecosystem management strategy for Nagaland. These range from weaknesses in the policy, planning and institutional environment that influence *jhum*, to weak capacities at the local level among village institutions and *jhumias* to promote sustainable *jhum*-based livelihoods. These barriers are briefly summarized below.
72. Institutional barriers: There is a need to better integrate local knowledge and technologies to improve *jhum* cultivation into institutional mandates of concerned departments (Agriculture, Land Resources, Soil and Water Conservation), to ensure that an enabling environment for *jhum* cultivation is created, as government programs and extension

services are largely geared towards supporting settled agriculture. Programs tend to focus on one component of the livelihood system alone (for example, cropping phase of *jhum* agriculture, wet rice cultivation, tree plantation) rather than considering all these different land uses and/ or phases together as an integrated livelihood system and finding ways to achieve livelihood security and ecological objectives by optimizing a mix of different land uses. Further, there is limited coordination among different government agencies that have responsibilities for different aspects of the livelihood system of shifting cultivators.

73. Barriers imposed by tenure insecurity and related difficulties in obtaining credit: Shifting cultivators do not have adequate security of land tenure for both the agricultural and fallow phases. *Jhum* land comes under the category of common village land, which does not belong to any individual but is owned by the community and regulated through Village Councils. Existing common property regimes need to be strengthened, to avoid capture of the land and improved fallows by elites from within the communities. Related to this is the need to reorient existing credit policies to be sensitive and proactive to situations where common property regimes apply. Availability of credit and investment capital to maximize production beyond subsistence needs to generate marketable surplus are limited. Without access to credit, it is difficult for farmers to invest in activities that can diversify and increase their livelihood opportunities so that *jhum* cultivation does not remain their sole source of livelihood.
74. Capacity barriers: At the community-level, customary institutions and farmers do not have the ability to undertake community-based land use planning that promotes a mosaic of different land uses that together can meet livelihood needs and also maintain ecosystem health. Local governance of community-owned natural resources needs to be strengthened so that it can support a mosaic of different land uses. Similarly, state department staff and extension agents do not have the experience and skills to work with *jhumias* to promote improved, sustainable *jhum* practices as part of a SLEM strategy.

PART A.2 Project Strategy

75. Based on consultations with project partners, the project will focus on removing the above outlined barriers to promoting improved *jhum* practices as part of a SLEM strategy at the community level. The strategy is to introduce participatory planning processes and to finance priority activities that are identified through the involvement of the entire community in the development of community resource management plans which reflect more productive and sustainable use of available resources. The overall goal will be to maintain ecosystem services while also meeting livelihood needs. By removing barriers the project will demonstrate this approach in selected districts/ villages. The project will involve all relevant government departments (Soil and Water Conservation; Land Resource Development; Agriculture; Horticulture; and Forests, Ecology, Environment and Wildlife). It will work at all administrative levels – State, district-level staff, and through Village Councils and Village Development Boards – to ensure that the tested approach can be effectively internalized in development planning for the State. The project will also involve research institutions and NGOs working on sustainable development issues facing the NER (North Eastern Hill University, The Missing Link, ICIMOD, Nagaland University, ICAR Barapani and its Regional Centers, Assam Agriculture University (Jorhat), Regional Research Laboratory (Jorhat), North Eastern Regional Institute of Water & Land Management (NERIWALM) in Tezpur, Agriculture and Organic Farming Group (AOFG-India), North Eastern Council).

2.1 Conformity with GEF Policy

76. The proposed project is being developed under the Sustainable Land and Ecosystem Management Country Partnership Program (henceforth referred to as the SLEM Program), which was approved by the GEF Council in 2007. The project is aligned with GEF policies and priorities in the Land Degradation and Biodiversity focal areas.

77. Land degradation: The project is consistent with Strategic Objective 1 (SO1) of the land degradation focal area, which is to develop an enabling environment that will place Sustainable Land Management (SLM) in the mainstream of development policy and practices at the regional, national, and local levels. Further, the project objective fits well with Strategic Priorities 1 and 2 (SP 1, SP 2) under the land degradation focal area i.e. Supporting Sustainable Agriculture and Rangeland Management; and, Supporting Sustainable Forest Management in Production Landscapes, respectively.
78. The project will address the regulatory and institutional constraints in India's NER, and Nagaland in particular. It will focus on introducing approaches which: (a) are responsive to community's perceptions of needs and priorities; (b) involve communities more in decision making and planning; (c) make communities more responsible for management of development programs in order to generate a greater sense of ownership of development interventions; and (d) are consistent with traditional values of community participation and utilize the strengths of village institutions and other community organizations (Village Council and Village Development Board). The project will contribute to mainstreaming of land degradation concerns into national level policies and regulatory framework through the SLEM partnership.
79. Biodiversity conservation: The project will also address the regulatory and institutional constraints to mainstreaming of biodiversity conservation into livelihood activities that impact on forested habitats that harbor globally significant biodiversity. By ensuring that biodiversity conservation concerns are integrated into community resource management plans, the project will contribute to the biodiversity focal area's Strategic Priority 4 (SP 4) on Strengthening the Policy and Regulatory Framework for Mainstreaming Biodiversity.

2.2 Project Goal, Objective, Outcomes and Outputs

80. The project will contribute to the achievement of the following goal of the SLEM Programme: "To promote sustainable land management and use of biodiversity as well as maintain the capacity of ecosystems to deliver goods and services while taking account of climate change." The project will contribute to this goal along with the other projects being developed under the Sustainable Land and Ecosystem Management Programme.
81. The project objective is: To develop, demonstrate and upscale sustainable land management practices for the conservation of *jhum* (shifting cultivation) lands in Nagaland through an ecosystem approach. The project objective will be achieved through the following outcomes.
 - Outcome 1: The policy, regulatory and institutional environment supports the integration of sustainable land management practices on *jhum* lands
 - Outcome 2: Options for improving the sustainability of *jhum* agroforestry systems are developed and demonstrated in selected project sites (70 villages spread over the 3 districts of Mon, Mokokchung and Wokha in Nagaland)
 - Outcome 3: Enhanced capacity to replicate the project's policy reform and field-level experiences in other parts of Nagaland, as well as in other States of India, where shifting cultivation agroforestry systems are prevalent

Outcome 1: The policy, regulatory and institutional environment supports the integration of sustainable land management practices on *jhum* lands

82. The objective of this project outcome is to ensure an enabling environment is created, which may include strengthening of policies, institutions and related programs in ways that support sustainable management of *jhum* lands or provide for sustainable alternatives where *Jhum* is no longer ecologically viable.. Historically, the emphasis has been on replacing *jhum* and this approach has not received much success. In addition, there are a number of different institutions working on different aspects of the livelihood system of

jhumias (subsistence agriculture, market agriculture, timber and NTFPs, livestock). What is needed is an integrated approach at the community-level. Further policies need to be modified to take into account the unique situation of the NER and *jhum* lands in particular.

Output 1.1 Establishment of an inter-sectoral coordination platform on jhum policies and programs

83. This group will bring together representatives from state government departments (namely, Soil and Water Conservation; Agriculture; Horticulture; Forests, Ecology, Environment and Wildlife; and Land Resource Development), academic institutions (Nagaland University, North Eastern Hill University), and community-based organizations.
84. The primary mandate of this group will be to focus on how government policies, programs and resources can be mobilized to support *jhum* cultivation as an integral part of a landscape-level sustainable land and ecosystem management strategy. The group will be formed by a notification from the state government detailing its mandate, functions, and responsibilities. In order to develop the capacity of the group to be effective agents of change at the policy-level, training and information exchange workshops will be held to share international best-practice on the issue of enhancing sustainability of *jhum* lands.

Output 1.2 Recommendations for strengthening the policy and regulatory environment affecting jhum lands

85. An analytical review will be undertaken of the main policy gaps that pose barriers to mainstreaming sustainable land and ecosystem management practices in *jhum* agriculture. Policies to be analyzed include, but are not limited to, the State Forest Policy, the State Agricultural Policy and Land Use Policy that are under development, Credit Policy, and the Bamboo Policy. Specific amendments to these policies will be recommended. These policies will be assessed to identify how they can directly support sustainability of *jhum* lands. The policies should support a mosaic of different land uses which when integrated across the landscape diversify and enhance livelihoods as well as maintain ecosystem services. In addition, an integrated plan will be prepared for coordinated, joint delivery of extension services to farmers in project sites across the different departments (agriculture, horticulture, S&WC, land resource development, forest, and animal husbandry).
86. The analytical review will be followed by a consultative dialogue involving inputs from government, non-government, and research institutions, in order to facilitate policy change. The dialogue and follow-up process will be led by the inter-sectoral coordination group.

Output 1.3 Guidelines for integrated land-use planning at the landscape/ village level

87. Based on existing good practice guidelines on community-based, landscape-level land use planning, specific guidelines will be developed for Nagaland. The guidelines will outline the key steps and process for stakeholders (community members, Village Councils, Village Development Boards, scientists, government representatives, and private businesses if applicable) to come together and discuss how to manage lands for the benefit of current and future generations and to ensure ecological sustainability of lands and resources. The purpose of the planning process will be to develop management and governance strategies that respond to scientific understanding of natural and social systems as well as changing societal conditions and values.

Outcome 2: Options for improving the sustainability of *jhum* agroforestry systems are developed and demonstrated in selected project sites

88. The development and implementation of community-based sustainable land use plans will be organized on a watershed basis (clustering villages/ communities within the watershed). The aim is to reach out to approximately 70 villages (Mokokchung – 30, Mon - 21, Wokha – 19). The three districts of Mon, Mokokchung and Wokha have been selected

for demonstrating the project strategy primarily because *jhum* cultivation is widely practiced here. Within these districts, those villages with the greatest proportion of *jhumia* families will be selected. Where feasible, sites will be chosen based on their proximity to biodiversity hot spots (see map in Part D5). The main outputs under this outcome are as follows.

Output 2.1 Agri-silvi-pastoral models developed for enhancing alternative sources of livelihoods, mainstreaming biodiversity considerations and promoting greater ecological and cultural security

89. In order to tailor agri-silvi-pastoral models to community needs and circumstances, under this output, biophysical characteristics (e.g., soil, biodiversity richness), socio-economic characteristics, and important cultural considerations will be documented for the target villages. This baseline information will be useful for designing integrated land use plans, and monitoring impacts. In order to properly document traditional knowledge, Village Biodiversity Boards will be revived in target villages. These Boards are mandated to maintain Peoples' Biodiversity Registers (PBRs).
90. In recent years, efforts have been made to identify techniques for reducing the adverse impacts of *jhum* systems on biodiversity and to enhance their role in controlling land degradation (most notably through the NEPED programs, as well as research trials being conducted by institutes in the NER). Based on this existing documentation and consultation with local farmers and state-level stakeholders, an inventory will be prepared of techniques that can be successfully adopted in the target sites. Special emphasis will be placed on obtaining women's input on the feasibility of proposed techniques because women conduct almost 70% of activities in *jhum* systems. For each target village, based on its biophysical and socio-economic baseline, the most appropriate agro-silvi-pastoral model will be identified.

Output 2.2 Linkages established for alternate agri-silvi-pastoral practices

91. Some of the key barriers to adoption of alternative models are the absence of adequate forward (access to markets, green premiums for organic produce) and backward linkages (services such as storage facilities, access to credit, and other inputs that can support sustainable production practices) that enable farmers to generate greater value from their existing production. This output will focus on identifying and ensuring that these linkages are made for target villages.
92. Credit: The project will improve the availability of credit and investment to enhance the generation of marketable surplus from the agri-silvi-pastoral system. This will be achieved through the establishment of micro-credit facilities (such as revolving funds), as well as by encouraging local level credit institutions to increase lending to farmers. The project will work to further enhance and empower existing credit systems (like those operated by NEPED in Phase II).
93. Quality control, storage, transportation and marketing: Resources will be targeted to improving the system of collection, quality-control, storage, transportation and marketing of the produce. In terms of marketing, special emphasis will be placed on brokering favorable agreements for the organically produced outputs of the agri-silvi-pastoral system (which is a defining characteristic of *jhum* agricultural systems). The project will draw on the growing experience in the NER with marketing of organic produce and tap into existing institutional capacities to help farmers' groups in project sites access organic markets (see [Part D7](#) for more information on the promotion of organic certification and the export of organic spices from the NER).

Output 2.3 Capacity building of farmers, government extension workers, and Village Councils

94. One of the lessons learned from past experience is that there is a lack of awareness among the shifting cultivators on possible means to integrate SLEM principles into their farming

practices. Further, there is a lack of trained and dedicated extension workers. The project will, therefore, target resources for building farmers' capacities and that of government extension workers in SLEM practices. Capacity building and input support will be provided to farmer self-help groups (SHGs). Adequate representation of women in these SHGs will be ensured. Training will be provided in (a) relevant government policies that provide the framework for undertaking sustainable use of forest and land resources, (b) application of improved techniques and approaches that enhance livelihoods and ecosystem health, (c) accessing credit to maximize value of production, (d) quality control methods, storage techniques and facilities, and transportation and marketing opportunities.

95. Government agriculture/ horticulture/ soil and water conservation extension agents are not trained in participatory land management and supporting community-selected priorities. Therefore, capacity building efforts will also include selected local representatives of government line departments (forest, agriculture, horticulture, land development, soil and water conservation). Training will focus on (a) application of improved techniques and approaches that enhance livelihoods and ecosystem health, (b) relevant government policies that provide the framework for undertaking sustainable use of forest and land resources, (c) application of participatory methods (principles and techniques).
96. Similarly, the capacity of Village Councils and Village Development Boards to promote biodiversity conservation and sustainable land management in their decision-making will be enhanced through training on (a) application of improved techniques and approaches that enhance livelihoods and ecosystem health, (b) relevant government policies that provide the framework for undertaking sustainable use of forest and land resources, (c) application of participatory methods (principles and techniques), (d) project planning and management, (e) community mobilization, and (f) conflict resolution.

Output 2.4 Development and implementation of integrated land use plans on a watershed basis that improve delivery of ecosystem services and livelihood benefits

97. For each watershed a comprehensive, integrated land use plan will be developed based on community priorities and in line with land capability. The Department of Soil and Water Conservation has introduced the concept of participatory three-dimension model maps (P3DM). This will be used to produce a scale relief model of a community-defined management area as a first step for the community to understand its land and biodiversity resources. Communities will be supported with a community-based landscape planning approach consisting of: (a) identifying and demarcating areas suitable for *jhum*, (b) maintaining and enforcing sustainable *jhum* cycle by appropriately dividing the available *jhum* land into several blocks with community regulation ensuring that only 1 block is cultivated per year (as practiced by the Ao tribe); (c) identifying and demarcating areas not suitable for *jhum* and implementing alternative land use systems; (d) identifying areas for soil and water conservation; (e) implementing improved farming systems (both technology and cropping patterns) to increase the productivity and sustainability of *jhum*.
98. Pilot farms/ plots will be identified in the 70 villages on which the alternative land and water management practices are to be implemented. Full participation of Village Councils will be ensured because they have the authority to determine and allocate village lands to different uses. Land will be allocated to different uses with the dual objective of promoting biodiversity conservation and sustaining livelihoods. The VCs will issue guidelines/ codes of conduct on how the different land uses (*jhum* fields, fallows, intensive farming areas, and community-based biodiversity conservation sites) are to be undertaken. Resources will be allocated to different land users/ self-help groups to undertake activities in these lands according to the issued guidelines.

Output 2.5 Establishment of community biodiversity conservation sites

99. In villages that are close to biodiversity hot spots (see map in Part D5), the project will work with the Village Council to establish community biodiversity conservation sites. Building on recent experience in this regard, agreements will be reached with communities on conservation set-asides. Community representatives will be provided with training in the management of these areas, with the technical assistance of the Forest Department. The potential to tap in to ecotourism revenues will also be explored with the collaboration of the Tourism Department.

Outcome 3: Enhanced capacity to replicate the project's experiences in other parts of Nagaland, as well as in other States of India, where shifting cultivation agroforestry systems are prevalent

Output 3.1 Community-based system for monitoring change realized by the project at the farm/village level and in terms of policies in support of jhum

100. The project's effectiveness will be monitored and evaluated throughout its course against set performance indicators (the initial set of indicators have been outlined in the project's logframe; these will be refined and fine-tuned during the project's initiation phase). Adaptive management will be employed to provide a basis for learning lessons and adjusting the project to maximize its effectiveness. Project monitoring and evaluation will follow the UNDP/GEF quality guidelines as described in detail in the project's M&E Plan and M&E Budget.

101. In line with GEF and UNDP policy independent, external, mid-term and final evaluations of the project will be conducted. In terms of ecological evaluation, the project would envisage an annual ecological performance audit, to be carried out by an independent organization in collaboration with regional environment and natural resources protection agencies. Results from the audit will be fed back to the project and to the local authorities via an audit report, in order that the identified recommendations and environmental mitigation and/or enhancement measures can be considered and adopted by the project moving forward. Moreover, the audit process will also include parallel (mainly on-the-job) training, awareness and capacity-building in sustainable natural resource management for both project beneficiaries and regulatory authorities, such that in time the awareness and capacity to identify and address environmental issues is mainstreamed within both the project communities and regional natural resources protection agencies alike.

102. The monitoring of impacts of modified land use practices on *jhum* lands will be undertaken by community representatives. Community Based Impact Assessment (CBIA) and other techniques will be employed, while also incorporating indigenous knowledge on impact monitoring. Community representatives participating in monitoring field-level impacts will be trained in documenting and mapping village level natural resources and their status and collecting data on change realized as a result of project interventions. Technical advice and guidance will be provided by external competent support agencies. Measurement of impact indicators related to global benefits (impact indicators are identified at the level of the project objective) will be undertaken through subcontracts to qualified institutions.

Output 3.2 Documentation of project experiences with improved land management techniques and approaches at the village level

103. The Sustainable Land and Ecosystem Management Programme (of which this project forms a part) addresses the issue of institutional coordination, and outreach and scaling up of SLM solutions through an MSP titled "Policy and Institutional Reform for Mainstreaming and Upscaling SLM in India" that is to be established within the MoEF. This is to serve as the node for the management, outreach and M&E functions of the Program. Lessons learned under this project in Nagaland will be fed into this system for replication in other parts of the country where shifting cultivation is practiced.

104. To facilitate the dissemination and replication of best practices, the project will dedicate resources to compiling lessons learned on the main elements of the project strategy – policy reform to support integration of SLEM in *jhum* lands, as well as field level demonstrations of more sustainable community-based management of land resources. These will be geared to the different audiences and translated in local languages as appropriate. A replication plan will be developed and agreed on by the Steering Committee of the project. It will identify other watersheds and villages for application of project lessons and instruments, in 5 and 10 year increments, following project closure.

Output 3.3 Assessment of the potential (carbon storage, benefit sharing possibilities) of these improved shifting cultivation agroforestry systems to be replicated and upscaled

105. The evolving opportunities for developing countries to mobilize financing for preserving ecosystem services. Reduced Emissions from Deforestation and Degradation (REDD) is one such area. Under this output a study will be undertaken to assess the potential for tapping into REDD schemes. The study will cover all aspects including the enabling environment that needs to be in place (public policies, institutions, human resource capacities) so that Nagaland is in a better position to leverage these new sources of environmental finance, as well as operational aspects such how the payments should be made to ensure equity and efficiency.

Output 3.4 Center of Excellence is established comprising a consortium of different institutions in Nagaland

106. Given the strong historical emphasis on replacing *jhum* and converting *jhumias* to settled agriculture, special efforts will have to be made to promote and popularize the project’s approach of integrating sustainable land and ecosystem management principles into the socially-preferred *jhum* cultivation system. To mobilize a critical mass of thought leaders, the project will establish a Centre of Excellence on Sustainable *Jhum* that will bring together and support the work of existing, like-minded research groups and individuals. This will largely be co-financed. GEF resources will cover the necessary institutional assessments and technical analysis to determine the most appropriate and effective institutional make-up of the Center. Any recurrent costs of the Center (such as space, salaries) will be covered by the State government.

2.3 Project Indicators

107. The indicators and their baseline and target values are presented in the [project's logical framework](#) and key indicators are summarized here.

Table 10. Summary of indicators

Objective/ outcome	Indicators
Objective: To develop, demonstrate and upscale sustainable land management practices for the conservation of <i>jhum</i> (shifting cultivation) lands in Nagaland through an ecosystem approach	No change in primary forest cover in project sites 90,000 hectares of land covering approximately 70 villages in 3 districts are under improved <i>jhum</i> agroforestry systems by Y4 Decrease in rates of soil erosion in project sites by 5-10 % over baseline 10-15% Increase in incomes of target communities by Y4
Outcome 1: The policy, regulatory and institutional environment in support of <i>jhum</i> agroforestry systems is strengthened	Strengthened Agriculture frameworks that explicitly support enhancing sustainability of <i>jhum</i> systems Creating enabling environment in in Forest regulations that explicitly recognize and support improved <i>jhum</i> systems as sustainable agroforestry systems that improve forest health Credit provisioning systems enabled for farmers who work on communally owned lands

Objective/ outcome	Indicators
	Integrated land-use planning at landscape level encouraged and strengthened In target villages all extension services by different departments (agriculture, horticulture, S&WC, land resource development, forest, animal husbandry) are coordinated according to an integrated plan by Y2
Outcome 2: Options for improving the sustainability of <i>jhum</i> agroforestry systems are developed and demonstrated in selected project sites (70 villages spread over the 3 districts of Mon, Mokokchung and Wokha in Nagaland)	Productivity improved by 5% over the baseline Lengthening of <i>jhum</i> cropping phase from 2 years to 3 years by Y4 Lengthening of <i>jhum</i> fallow phase from 8 years to 9 years (long term goal to be pursued even after project end) Contribution of income from sale of (organically grown) produce to local economy increases by 5% over baseline Number of women benefiting from marketing of produce from <i>jhum</i> fields increases by 25% over baseline
Outcome 3: Enhanced capacity to replicate the project's policy reform and field-level experiences in other parts of Nagaland, as well as in other States of India, where shifting cultivation agroforestry systems are prevalent	At least 5-6 requests from other districts and states to visit project sites and obtain assistance from the Center of Excellence by Y4 By Y4, at least 3 more districts have a budgeted plan for replicating and extending the project strategy to additional villages and districts

2.4 Project Risks and Assumptions

108. Based on discussions during project preparation, the following risks were identified. Means to mitigate these risks were also discussed and integrated into the project strategy.

Component	Risk	Rating	Mitigation strategy
Project objective level	Political acceptance of the project approach of supporting <i>jhum</i> as an essential component of a long-term strategy to promote biodiversity conservation and control of land degradation in hilly areas is low	Low to medium	In recent years there has been a change in the prevailing perception of <i>jhum</i> as a destructive practice. This is illustrated by the acceptance of the potential role that sustainable <i>jhum</i> systems can play in maintaining biodiversity and curtailing land degradation in policy-level publications such as the Nagaland Human Development Report (2004) and the Shillong Declaration . The project will build on this momentum. Its high-level Steering Committee will also include representation from the Central MOEF and <i>jhum</i> advocacy groups.

Component	Risk	Rating	Mitigation strategy
Outcome 1	Cooperation among the various state departments that address <i>jhum</i> land issues – Agriculture, Horticulture, Forest, Land Resource Development, Animal Husbandry – is not forthcoming.	Low to medium	The project will ensure that key state-level departments are involved in an inter-sectoral coordination platform on <i>jhum</i> and capacity of members will be enhanced to ensure that they are effective agents of change receive (Output 1.1). The project will also ensure that an integrated plan will be prepared for coordinated, joint delivery of extension services to farmers in project sites across the different departments (Output 1.2).
Outcome 2	Communities are not actively involved in demonstration activities and adoption of improved approaches is low.	Low	As recent experience has shown, when communities are presented with viable options for improving their livelihood security and reducing adverse impacts on land and biodiversity, they are active participants. The project will ensure that selection of demonstration measures is driven by local needs and context (Output 2.1), farmers are helped with backward and forward linkages to support alternative practices (Output 2.2), and they are provided training and technical assistance (Output 2.3)
	Cofinancing commitments by the state government are not kept.	Low	This risk is low as cofinancing commitments have been officially committed by the Department of Soil and Water Conservation from allocations under the 11 th five-year plan. These commitments have been confirmed through a letter.
Outcome 3	The central institutional mechanism that is to be established under the SLEM programme is not leading to expected dissemination and replication of results.	Low	The mechanism is expected to be established under the aegis of a GEF-funded MSP, as part of the overall SLEM program. The project will ensure that appropriate publications documenting the challenge and successes of this project are made available to this central institutional mechanism (Output 3.2).

2.5 Expected global, national and local benefits

109. Through promoting sustainable *jhum* practices the project will reduce degradation pressures on the globally significant and biologically distinctive ecosystems of Nagaland (Mizoram-Manipur Kachin Rainforest Ecoregion). By reducing pressures on the unique ecosystems of this region, benefits will also be realized in terms of sustaining a range of services that the ecosystems provide within and outside the state of Nagaland (supporting, regulating, provisioning and cultural services). Benefits expected from this project include improved agricultural land quality, arresting loss of soil fertility, enhanced tree cover, maintenance of globally significant on-farm and off-farm biodiversity, and enhanced carbon sequestration capacity of the land. Local benefits include improvements in the livelihood security of farmers engaged in *jhum* cultivation.

2.6 Country Ownership: Country Eligibility and Country Driven-ness

2.6.1 Country Eligibility

110. India ratified the UNCCD on 17 December 1996, is party to the UNCBD since 18 February 1994, and has ratified the UNFCCC on 1 November 1993 and the Kyoto Protocol on 26 August 2002. India has also effectively fulfilled various assessment and reporting requirements under these Conventions. It is, therefore, eligible to receive funding from the GEF. It is also eligible to receive development assistance from the World Bank and UNDP.

2.6.2 Country Drivenness

111. Environmental protection is an integral part of the constitutional, legislative, policy and programming foundation of the GOI, as highlighted in [Section 1.4](#). There is recognition of the adverse impacts of land and ecosystem degradation on the sustainable development trajectory of the country. Chapter 5 of the National Action Programme to Combat Desertification (2001) notes that “the process of desertification is impacting every aspect - loss of agricultural productivity, loss of natural resources (forests and vegetative cover, biodiversity, soil changes), socio-economic conditions (economic losses, problems of sustenance, decline in quality of life), etc.” This recognition is also being supported by various policies and programs by the GOI ranging from social sector and community development programs, to conservation of land resources and eco-restoration of degraded lands. Further, GOI recognizes the importance of (a) shifting from sectoral to integrated watershed management approaches, and (b) moving to more decentralized governance systems that are underpinned by greater community and NGO involvement in decision-making and implementation, in successfully addressing the drivers of land and ecosystem degradation.
112. To translate this momentum into a more systematic national approach, the GOI has been engaged with the GEF and its Agencies (World Bank, FAO and UNDP) in the development of the Sustainable Land and Ecosystem Management (SLEM) Partnership. This project in Nagaland has been prioritized by the GOI as a critical component of the SLEM partnership insofar as it focuses on the issue of shifting cultivation that has been identified in the National Action Programme (NAP, 2001) of the UNCCD as “one of the major causes of desertification in the country”. Further, the NAP notes that “the annual erosion rate in the north-eastern region (which practice shifting cultivation) show top soil losses exceeding 40 t/ha/yr”. The NER is an area of the country where degradation of ecosystems has a significant impact on both the long term well-being of poor, marginalized sections of society, and also compromises the production of ecosystem goods and services.
113. The Government of Nagaland is committed to aligning its various sectoral efforts at the State-level that have a bearing on sustainable land and ecosystem management with the integrated strategy being proposed under this GEF project (see section on [project strategy](#)), and with the SLEM partnership more broadly. This is reflected in the financial support being provided by the State government from its own budgetary resources.

2.7 Sustainability

114. Institutional sustainability: To ensure that project activities are continued and benefits sustained beyond the time frame of this GEF funded project it will be important that the project approach and strategy be internalized by state-level and local institutions. Therefore, the project will rely on the existing institutional structure for implementing project activities and delivering outputs. Staff from the relevant sectoral departments covering all administrative levels – Block, District, and State – will be key partners in implementing the project strategy. An equally important element of this institutional structure is local government, socio-environmental NGOs and community-based organizations, which will also be tapped for organizing, promoting, monitoring and assessing implementation.

115. Social sustainability: The project targets tribal families for whom shifting cultivation is a way of life. These families are the primary agents of change in terms of promoting a paradigm shift towards increased sustainability of *jhum* lands. If project benefits are to be sustained, these groups must become champions of the project strategy. The project will, therefore, dedicate significant resources on capacity building efforts to overcome barriers to adoption which currently prevent communities from moving to improved practices. Further, the development of integrated land-use plans and the selection of techniques that can enhance sustainability at the landscape level will be done
116. Financial sustainability: Recent experience has shown that when farmers are supported with barriers they face in terms of credit and market linkages, it is possible to integrate improved techniques into the existing shifting cultivation system that not only add value and increase incomes of farmers, but also enhance ecosystem services. The critical measure of success of improved techniques will be their ability to diversify and create greater security of livelihoods. The project will therefore focus on introducing techniques that meet this financial need of farmers. In terms of government financial support for continuing activities commenced under the project, there are several government schemes that can be leveraged to support the project strategy. Government cofinancing for the project is being mobilized through these schemes and it is expected that the success of project activities at the field level will secure these financial commitments going into the future.

2.8 Replicability

117. It is expected that the integrated and cross-sectoral approach to land and ecosystem management promoted by the project can be replicated in other parts of the State and the NER where *jhum* cultivation systems are prevalent. To some extent replication will be driven by spontaneous adoption and replication, by individuals and communities, of practices that are seen as viable and effective by them. Training of the local community in applying these practices will support the permanence of these competencies in the rural communities. The participatory methodologies adopted for field trials in partnership with communities will also support autonomy and continuity of the process. Further, the adaptation of technologies to local realities via experimentation by the beneficiaries themselves will also help sustain spontaneous adoption and replication. In addition to this, the project will further support uptake and replication of project lessons and experiences as follows:
118. Step 1: Knowledge management and dissemination. Knowledge management and dissemination is one of the main building blocks for replication. The project will produce methodological and technical tools in the form of user-friendly guides and manuals. Extension services agents of the Departments of Agriculture and SWC in Nagaland will be trained in using these manuals and in promoting improved *jhum* models and practices at the District level. The knowledge products will be further disseminated through the replication/ dissemination mechanism established under the overall SLEM Programme (SLEM Policy and Institutional MSP led by the World Bank).
119. Step 2: Drafting of a Replication Strategy and Budget by the Project Coordinator that specifies the locus for replication within Nagaland (other watersheds) and the associated budgetary implications.

PART A.3 Management Arrangements

120. The project will be implemented following established UNDP national implementation (NIM) procedures. The Executing Agency will be the Nagaland Soil and Water Conservation Department. The Government of Nagaland will appoint a Project Director, and will hire, with GEF funding, a Project Coordinator and an Administrative and Financial Assistant. A summary of the roles and responsibilities of the National Project

Director, the Project Coordinator, and the Administrative and Financial Assistant are provided below (detailed TORs for the Project Coordinator and Assistant are in [Part D.3](#)).

121. The Project Director will be a senior government official with primary responsibility for overall implementation of the Project. This responsibility includes representing and furthering project objectives at high decision making levels within the GOI. The Project Director also takes the primary responsibility for representing the Project to co-financiers, as well as for ensuring that the required government support to reach the milestones of the project is available.
122. The Project Coordinator will assume overall responsibility for the successful implementation of project activities and the achievement of planned project outputs. S/he will work closely with the national and international experts hired under the project, as well as the Project Assistant, and will report to the Project Director (assigned by the Nagaland Soil and Water Conservation Department). The Project Coordinator will be responsible for ensuring that the project is implemented in close coordination and collaboration with all relevant government institutions, local communities and NGOs, as well as with other related projects in the project area.
123. The Administrative and Financial Assistant will provide assistance to the Project Coordinator in the implementation of day-to-day project activities. S/he is responsible for all administrative (contractual, organizational and logistical) and accounting (disbursements, record-keeping, cash management) matters related to the project.
124. The Government of Nagaland will establish a Project Board (PB) to give advice and guide project implementation, chaired by the Secretary, Department of Environment, Govt of Nagaland. The PB will consist of representatives of all key stakeholders and will ensure the inclusion of community level interests. Potential PB participants will be UNDP, MOEF, DONER (Ministry for the Development of the NER), Nagaland Soil and Water Conservation Department, Department of Agriculture, Department of Animal Husbandry, Department of Horticulture, Department of Land Resources Development, Nagaland University, North Eastern Hill University (NEHU), Assam Agriculture University, NERIWALM, RRL-Jorhat, The Missing Link , AOFG-India, and ICIMOD.
125. The PB will monitor the project's implementation, provide guidance and advice, and facilitate communication, cooperation, and coordination among stakeholders and other project partners. Annual Monitoring will occur through the Project Board Meetings (PBM). This is the highest policy-level meeting of the parties directly involved in the implementation of the project. The project will be subject to Steering Committee Meetings at least once every year. The first such meeting will be held within the first 6 months of the start of full implementation. At the initial stage of project implementation, the PB may, if deemed advantageous, wish to meet more frequently to build common understanding and to ensure that the project is initiated properly.
126. There will be Project Steering Committee (PSC) headed by the project director (Director, Soil and water conservation department) for implementation of the project and taking decisions at the local level. The PSC will be supported by the project manager, administrative and finance assistants. The project director will be overall in charge of the project.
127. The project will hire short term national and international experts for specific project assignments (see [Part D.3](#) for indicative scope of the assignment of key experts/consultants). Project activities will be contracted out on a competitive basis through tenders.
128. The UNDP-CO assume project assurance role drawing on its knowledge networks to provide best practice methodologies to the project team as deemed necessary. The UNDP-CO will also monitor the project's implementation and achievement of the project outcomes and outputs, and will ensure the proper use of UNDP/GEF funds. Financial

transactions, reporting and auditing will be carried out in compliance with national regulations and established UNDP rules and procedures for national project execution.

129. In order to accord proper acknowledgement to the GEF for providing funding, a GEF logo will appear on all relevant GEF project publications, including among others, project hardware purchased with GEF funds. Any citation on publications regarding this project funded by the GEF will also accord proper acknowledgment to GEF. The UNDP logo will be more prominent (and separated from the GEF logo if possible), as UN visibility is important for security purposes.

PART A.4 Monitoring and Evaluation Plan and Budget

130. Project monitoring and evaluation will be conducted in accordance with established UNDP and GEF procedures by the project team and the UNDP Country Office (UNDP-CO), with support from UNDP-GEF. The [Logical Framework Matrix](#) provides performance and impact indicators for project implementation along with their corresponding means of verification. These will form the basis on which the project's impacts will be monitored and evaluated.
131. The following sections outline the principle components of the Monitoring and Evaluation Plan and indicative cost estimates related to M&E activities. The project's Monitoring and Evaluation Plan will be presented and finalized at the Project's Inception Workshop following a collective fine-tuning of indicators, means of verification, and the full definition of M&E responsibilities.

Project Inception Phase

132. A Project Inception Workshop will be conducted with the full project team, relevant government counterparts, co-financing partners, the UNDP-CO and representation from the UNDP-GEF Regional Coordinating Unit, as appropriate. A key objective of this Inception Workshop will be to assist the project team to understand and take ownership of the project's goals and objectives, as well as to finalize preparation of the project's first annual work plan on the basis of the project's logframe matrix. This will include reviewing the logframe (indicators, means of verification, assumptions), imparting additional detail as needed, and, on the basis of this exercise, finalizing the Annual Work Plan (AWP) with precise and measurable performance indicators, and in a manner consistent with the expected outcomes for the project. More specifically, the Inception Workshop will:
- Introduce project staff to the UNDP-GEF expanded team which will support the project during its implementation, namely the CO and responsible Regional Coordinating Unit staff
 - Detail the roles, support services and complementary responsibilities of UNDP-CO and RCU staff vis-à-vis the project team
 - Ensure that all parties understand their roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms (Terms of Reference for project staff and decision-making structures will be discussed again, as needed, in order to clarify for all, each party's responsibilities during the project's implementation phase).
 - Provide a detailed overview of UNDP-GEF reporting and monitoring and evaluation (M&E) requirements, with particular emphasis on the Annual Project Implementation Reviews (PIRs) and related documentation, the Annual Project Report (APR), Tripartite Review Meetings, as well as mid-term and final evaluations
 - Inform the project team about UNDP's project related budgetary planning, budget reviews, and mandatory budget re-phasing

- Fine-tune the progress and performance/impact indicators of the project in consultation with the full project team with support from UNDP-CO and assisted by the UNDP-GEF Regional Coordinating Unit. Specific targets for the first year implementation progress indicators together with their means of verification will be developed at this Workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. The local implementing agencies will also take part in the Inception Workshop in which a common vision of overall project goals will be established. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.
- Develop a detailed schedule of project reviews meetings in consultation with project implementation partners and stakeholder representatives and incorporate it in the Project Inception Report. Such a schedule will include: (i) tentative time frames for Tripartite Reviews, Steering Committee Meetings, (or relevant advisory and/or coordination mechanisms) and (ii) project related Monitoring and Evaluation activities.

Day to day monitoring of implementation progress

133. This will be the responsibility of the Project Coordinator, assisted by experts as deemed necessary, and will be based on the project's Annual Work Plan. The Project Team will inform the UNDP-CO of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.
134. Measurement of impact indicators related to global benefits will occur according to the schedules defined in the Inception Workshop, using impact indicators identified in the logframe (impact indicators are identified at the level of the project objective). The measurement of these will be undertaken through subcontracts to relevant institutions.

Periodic monitoring of implementation progress

135. This will be undertaken by the Project Steering Committee meetings every quarter or more frequently as deemed necessary. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities.
136. The UNDP Country Office will conduct yearly visits to field sites based on an agreed upon schedule to be detailed in the project's Inception Report / Annual Work Plan to assess first hand project progress. When feasible, a member of the Steering Committee will also participate in this annual field visit. A Field Visit Report will be prepared by the CO and circulated no less than one month after the visit to the project team, all PSC members, and UNDP-GEF.

Annual Monitoring

137. Annual Monitoring will occur through the Project Board Meetings (PBM). This is the highest policy-level meeting of the parties directly involved in the implementation of the project. The project will be subject to Steering Committee Meetings at least every 6 months. The first such meeting will be held within the first 6 months of the start of full implementation.
138. The Project Coordinator in consultation with the CO will prepare a UNDP/GEF PIR/APR and submit it to UNDP-CO at least two weeks prior to the Annual Steering Committee Meeting for review and comments. The PIR/APR will be used as one of the basic documents for discussions in the TPR meeting. The Project Coordinator will present the PIR/APR to the Steering Committee, highlighting policy issues and recommendations for the decision of the SCM participants.

139. In the last month of project operations, a Terminal Tripartite Review (TTR) will be held. The Project Coordinator will be responsible for preparing the Terminal Report and submitting it to the UNDP-CO and the UNDP-GEF Regional Centre. It shall be prepared in draft at least two months in advance of the TTR in order to allow time for review, and will serve as the basis for discussions in the TTR. The terminal tripartite review considers the implementation of the project as a whole, paying particular attention to whether the project has achieved its stated objectives and contributed to the broader environmental objective. It decides whether any actions are still necessary, particularly in relation to sustainability of project results, and acts as a vehicle through which lessons learnt can be captured to feed into other projects under implementation or formulation.

Monitoring Reports to be generated by the project

140. The Project Coordinator in conjunction with the UNDP-GEF extended team will be responsible for the preparation and submission of the following reports that form part of the monitoring process.

(a) Inception Report (IR)

141. A Project Inception Report will be prepared immediately following the Inception Workshop. It will include a detailed First Year/ Annual Work Plan detailing the activities and progress indicators that will guide implementation during the first year of the project. This Work Plan would include the dates of specific field visits, support missions from the UNDP-CO or the Regional Centre or consultants, as well as timing of meetings of the project's decision making structures. The Report will also include the detailed project budget for the first full year of implementation, prepared on the basis of the Annual Work Plan, and including any monitoring and evaluation requirements to effectively measure project performance during the first 12 months.

142. The Inception Report will include a more detailed narrative on the institutional roles, responsibilities, coordinating actions and feedback mechanisms of project related partners. In addition, a section will be included on progress to date on project establishment and start-up activities and an update of any changed external conditions that may effect project implementation.

143. When finalized the report will be circulated to project counterparts who will be given a period of one calendar month in which to respond with comments or queries. Prior to this circulation of the IR, the UNDP Country Office and UNDP-GEF's Regional Centre will review the document.

(b) Annual Project Report (APR)

144. The APR is a UNDP requirement and part of UNDP's Country Office central oversight, monitoring and project management. It is a self -assessment report by project management to the CO and provides input to the country office reporting process, as well as forming a key input to the Tripartite Project Review. An APR will be prepared on an annual basis prior to the Tripartite Project Review, to reflect progress achieved in meeting the project's Annual Work Plan and assess performance of the project in contributing to intended outcomes through outputs and partnership work. The format of the APR is flexible but should include the following:

- An analysis of project performance over the reporting period, including outputs produced and, where possible, information on the status of the outcome
- The constraints experienced in the progress towards results and the reasons for these
- The three (at most) major constraints to achievement of results
- AWP, CAE and other expenditure reports (ERP generated)
- Lessons learned

- Clear recommendations for future orientation in addressing key problems in lack of progress
- (c) Project Implementation Review (PIR)
145. The PIR is an annual monitoring process mandated by the GEF. It has become an essential management and monitoring tool for project teams and offers the main vehicle for extracting lessons from ongoing projects. Once the project has been under implementation for a year, a Project Implementation Report must be completed by the CO together with the project. The PIR can be prepared any time during the year (July-June) and ideally prior to the TPR. The PIR should then be discussed in the TPR so that the result would be a PIR that has been agreed upon by the project, the executing agency, UNDP CO and the concerned RC.
146. The individual PIRs are collected, reviewed and analyzed by the Regional Centre prior to sending them to the focal area clusters at the UNDP/GEF headquarters. The focal area clusters, supported by the UNDP/GEF M&E Unit, analyze the PIRs by focal area, theme and region for common issues/results and lessons. The UNDP-GEF Regional Technical Advisors and Principal Technical Advisors play a key role in this consolidating analysis.
147. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces in or around November each year and consolidated reports by focal area are collated by the GEF Independent M&E Unit based on the Task Force findings. The GEF M&E Unit provides the scope and content of the PIR. In light of the similarities of both APR and PIR, UNDP/GEF has prepared a harmonized format for reference.
- (d) Quarterly Progress Reports
148. These are short reports providing important updates in project progress to the UNDP Country Office and the UNDP Regional Centre by the project team.
- (e) Periodic Thematic Reports
149. As and when called for by UNDP, UNDP-GEF or the Implementing Partner, the project team will prepare specific Thematic Reports, focusing on specific issues or areas of activity. The request for a Thematic Report will be provided to the project team in written form by UNDP and will clearly state the issue or activities that need to be reported on. These reports can be used as a form of lessons learnt exercise, specific oversight in key areas, or as troubleshooting exercises to evaluate and overcome obstacles and difficulties encountered. UNDP is requested to minimize its requests for Thematic Reports, and when such are necessary will allow reasonable timeframes for their preparation by the project team.
- (f) Project Terminal Report
150. During the last three months of the project, the project team will prepare the Project Terminal Report. This comprehensive report will summarize all activities, achievements and outputs of the Project, lessons learnt, objectives met (or not achieved), structures and systems implemented, etc. and will be the definitive statement of the Project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the Project's activities.
- (g) Project Publications
151. Project Publications will form a key method of crystallizing and disseminating the results and achievements of the Project. The project will dedicate resources (Output 3.2) to compiling lessons learned on the main elements of the project strategy. These will be geared to the different audiences and translated in local languages as appropriate. The project team will determine if any of the Technical Reports merit formal publication, and

will also (in consultation with UNDP, the government and other relevant stakeholder groups) plan and produce these Publications in a consistent and recognizable format.

Independent Evaluations

152. Mid-term Evaluation: An independent Mid-Term Evaluation will be undertaken at the end of the second year of implementation. The Mid-Term Evaluation will determine progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from UNDP-GEF.
153. Final Evaluation: An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Centre and UNDP-GEF.

Audit Clause

154. The Government will provide the UNDP Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in UNDP's Programming and Finance Manuals. The Audit will be conducted by the legally recognized auditor of the Government, or by a commercial auditor engaged by the Government.

Learning and Knowledge Sharing

155. Results from the project will be disseminated within and beyond the project intervention zone through a number of existing information sharing networks and forums. In addition, the project will participate, as relevant and appropriate, in UNDP/GEF sponsored networks, organized for Senior Personnel working on projects that share common characteristics, which may be of benefit to project implementation through lessons learned. Through these electronic networks, the project will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects. Identifying and analyzing lessons learned is an on-going process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered not less frequently than once every 12 months. UNDP/GEF shall provide a format and assist the project team in categorizing, documenting and reporting on lessons learned. Project resources under Output 3.2 have been allocated for these activities.

Table 11. Indicative Monitoring and Evaluation Budget

Type of M&E activity	Responsible Parties	US\$	Time frame
Inception Workshop	Project Coordinator UNDP CO UNDP GEF	5,000	Within first 2 months of project start up
Inception Report	Project Team	None	Immediately

Type of M&E activity	Responsible Parties	US\$	Time frame
	UNDP CO		following IW
Measurement of Means of Verification, baselines for Project Purpose Indicators	Project Coordinator will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members	25,000	Start, mid and end of project
Measurement of Means of Verification, baselines for Project Progress and Performance (measured on an annual basis)	Oversight by Project GEF Technical Advisor and Project Coordinator Measurements at local/community level by trained personnel	25,000	Annually prior to APR/PIR and to the definition of annual work plans
APR and PIR	Project Team UNDP-CO UNDP-GEF	None	Annually
TPR and TPR report	Government Counterparts UNDP CO Project team UNDP Regional Centre	None	Every year, upon receipt of APR
Steering Committee Meetings	Project Coordinator UNDP CO	10,000	Following Project IW and subsequently at least once a year
Periodic status reports	Project team	None	To be determined by Project team and UNDP CO
Mid-term External Evaluation	Project team UNDP- CO	20,000	At the mid-point of project implementation.
	UNDP Regional Centre		
	External Consultants (i.e. evaluation team)		
Final External Evaluation	Project team, UNDP-CO UNDP Regional Centre External Consultants (i.e. evaluation team)	30,000	At the end of project implementation
Terminal Report	Project team UNDP-CO External Consultant	None	At least one month before the end of the project
Lessons learned	Project team UNDPRegional Centre (suggested formats for documenting best practices, etc)	22,000	Yearly
Audit	UNDP-CO Project team	8,000	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	UNDP Country Office UNDP Regional Centre (as appropriate)	None	Yearly

Type of M&E activity	Responsible Parties	US\$	Time frame
	Government representatives		
TOTAL COST (Excluding project team staff time and UNDP staff and travel expenses)		145,000	

PART A.5 Budget and Cost Effectiveness

5.1 Budget

Total project financing amounts to US\$ 27,666,612.00, excluding preparatory costs. Of this, the GEF is requested to finance US\$ 3,600,000.00. Total co-financing amounts to US\$ 25,416,612.00.

	Project Outcomes	Total (USD)	GEF (USD)	Cofinancing (USD)
Outcome 1	The policy, regulatory and institutional environment supports the integration of sustainable land management practices on <i>jhum</i> lands	10,501,612	700,000	9,801,612
Outcome 2	Options for improving the sustainability of <i>jhum</i> agroforestry systems are developed and demonstrated in selected project sites	13,365,000	1,750,000	11,615,000
Outcome 3	Enhanced capacity to replicate the project's policy reform and field-level experiences	3,800,000	800,000	3,000,000
	Project management	1,350,00	350,000	1,000,000
	TOTAL	27,666,612	3,600,000	25,416,612

Project management Budget

Project management inputs	Estimated staff weeks	GEF (\$)	Other sources (\$)	Total (\$)
Local consultants*				
Project Coordinator	367 (500/wk)	183,500	334,000	517,500
Administrative and Financial Assistant	366 (250/wk)	91,500	36,600	128,100
Travel		25,000	100,000	12,500
Office supplies		25,000	100,000	12,500
Miscellaneous		25,000	100,000	12,500
Total		350,000	1,000,000	1,350,000

* Local consultants in this table are those who are hired for functions related to the management of the project. Consultants who are hired to do a special task are referred to as consultants providing technical assistance, and the cost details of their services are provided in Table below.

Consultants working for technical assistance components

Component	Estimated person weeks	GEF (\$)	Other sources (\$)	Total (\$)
Local consultants (At the rate of 500 USD/week for 5 specialists)	1050 weeks (total)	525,000 (Outcomes 1+2+3)	2,100,000	1,625,000
Total		525,000	2,100,000	1,625,000

5.2 Cost-effectiveness

156. Shifting cultivation has been identified in India's National Action Programme (NAP, 2001) of the UNCCD as "one of the major causes of desertification in the country". Further, the NAP notes that "the annual erosion rate in the north-eastern region (which practice shifting cultivation) show top soil losses exceeding 40 t/ha/yr". Recognizing that the degradation of ecosystems has a significant impact on both the long term well-being of poor, marginalized sections of society, and also compromises the production of ecosystem goods and services, the government is looking to develop a strategic response as part of the SLEM Program.

157. Historically, the approach to reducing degradation in shifting cultivation areas has been to motivate a shift to settled agriculture (settling each shifting cultivator family on 1-2 ha of wet land terrace for permanent cultivation), thereby reducing the area that is brought under *jhum*. This strategy has had limited success, given the role of *jhum* in the social fabric of Nagaland. Another way of maintaining ecosystem goods and services could be to protect wide swaths of the landscape. This, however, is not feasible in Nagaland where 92% of the land is under community ownership and only 8% under government ownership. The fact that 60% of Naga farmers practice *jhum* and consider this a way of life, suggests that the most effective solution would be to engage them in more sustainable management of forest and land resources through community-based management of local natural resources. The critical need is to remove barriers that farmers face in adopting sustainable land management practices. This underpins the project's barrier-removal strategy. The demonstration of how sustainable land and ecosystem management practices can be integrated into *jhum* systems will positively influence how government resources earmarked for shifting cultivation areas under the current, and future, five-year plans are spent. Further, the project has been designed taking into account the experience and lessons from past *jhum* control efforts to enhance effectiveness (see table below).

Table 12. Lessons learned and how they have influenced project design

Lessons learned	Impact on project design
Settled cultivation cuts into socio-cultural life.	The project has chosen to focus on improving sustainability of <i>jhum</i> systems, rather than replacing them with settled agriculture.
Selection of beneficiary families tends to be skewed in favor of those with some private ownership of land; families solely dependent on shifting cultivation constitute the weaker section and tend to be excluded.	The project will ensure that the composition of beneficiary farmers groups favors marginalized segments of the community with special emphasis on involving women.
Lack of awareness among the shifting	The project will target resources for building

Lessons learned	Impact on project design
cultivators together with lack of trained and dedicated extension workers.	farmers' capacities and that of government extension workers in SLEM practices (Output 2.3).
Women perform about 70% of activities in <i>jhum</i> ; many of the alternative models are not gender sensitive.	Special attention will be paid to obtaining feedback from women on the feasibility of potential techniques for improving sustainability of <i>jhum</i> systems (Output 2.1).
Most alternative models are cash crop or horticulture based, which require strong financial and market support together with good link road. Absence or poor development of such supporting infrastructure and institutions are impediments to acceptance and non-sustainability of alternative models.	The project will focus on making these critical forward and backward linkages under Output 2.2.
Various agencies/ departments implement <i>jhum</i> control programs in isolation without proper coordination.	The project will establish an inter-sectoral coordination group on <i>jhum</i> policies and programs that brings together representatives from state government departments (soil and water conservation, agriculture, horticulture, forests, land resources), academic institutions (Nagaland University, North Eastern Hill University), and community-based organizations (Output 1.1). This group will receive support for capacity development. It will also be tasked with carrying through specific means for strengthening the policy environment for sustainable <i>jhum</i> and identifying a coordinated plan for delivering joint extension support (Output 1.2).
Failure to recognize and support the innovations of the farmers, which they have developed to enhance sustainability of the practice (such as kolar bean farming; alder based farming).	Output 2.1 will document techniques for reducing the adverse impacts of <i>jhum</i> systems on biodiversity and to enhance their role in controlling land degradation. Based on consultation with local farmers and state-level stakeholders, an inventory will be prepared of techniques that can be successfully adopted in the target sites.
The integration of socioeconomic, political and agroecological dimensions affecting shifting cultivators is central in the design and implementation of effective policies and programs.	Noting the critical role of <i>jhum</i> systems in the socio-cultural fabric, the project objective is to strengthen the sustainability of <i>jhum</i> cultivation, rather than replace it with settled agriculture. The selection of agri-silvi-pastoral models for enhancing sustainability will be based not only on biophysical characteristics (e.g., soil, biodiversity richness), but also socio-economic characteristics, and important cultural considerations for the target villages.
Lessons from past experience and the knowledge and experience of shifting cultivators provide useful insights for agricultural development.	Output 2.1 will draw on past experience and farmer experience in identifying agri-silvi-pastoral models.
Hybrid strategies that include principles from local techniques as well as scientific methods are more likely to be adopted successfully.	Output 2.1 will also draw on scientific methods by considering the result of research trials being carried out in the NER.

PART A.6 Legal Context

131. This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together the instrument envisaged in the [Supplemental Provisions](#) to the Project Document. Consistent with the above Supplemental Provisions, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

132. The implementing partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

133. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

134. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

SECTION B: STRATEGIC RESULTS FRAMEWORK (SRF) AND GEF INCREMENT

Part B.1 Incremental Cost Assessment

Project background

158. The North Eastern Region (NER) of India, of which Nagaland forms a part, is situated at the confluence of Indo-China, Indo-Myanmar, and Indian biogeographical features. It is a region endowed with great species diversity and endemism in terms of flora and fauna. The biodiversity of the NER has made it a priority area for investment by the leading conservation agencies of the world. WWF has identified the entire Eastern Himalaya as a priority Global 2000 Ecoregion.
159. One of the key direct drivers of degradation of the forest ecosystem in Nagaland, and the associated services it generates, is related to the practice of shifting cultivation (locally referred to as "*jhum*") which is practiced over a large part of the NER. Area cultivated under *jhum* is approximately 917,087 hectares; the annual cultivated area under *jhum* is 131,349 hectares and this alone accounts for 58.95% of the total net cultivated area; approximately 0.45 million families are reported to be involved in shifting cultivation. *Jhum* is the socially-preferred practice in the NER and it is often the most suitable form of agriculture for the agro climatic conditions and steep terrain; the system is also rich in crop genetic diversity.
160. The basic principle of *jhum* cultivation is the alternation of short cropping phases (usually one or two years) with longer phases of natural (or slightly modified) vegetational fallow. However, in recent years, more and more land is being brought under *jhum* and a shortened *jhum* cycle is being observed. The cycle that was once 14 years or more has been reduced to 6 years or less in many places. The intensification of the *jhum* cycle and extension of the area under *jhum* cultivation has resulted in accelerated soil erosion and disruption of the hydrology of the area. It is estimated that 70% of the top soil loss, land degradation and water source deterioration is attributed to the practice of shifting cultivation. The system of cultivation coupled with high rainfall causes heavy erosion to the extent of removing up to 40 tonnes of top soil per hectare in a year. The shortened *jhum* cycle is insufficient to allow for the restoration of soil fertility before the land is again cultivated, with the result that yields have successively declined over time, and families that were once almost totally self sufficient in food grains are not able to produce enough food even for a few months of the year.
161. The main indirect driver of this adverse change in the *jhum* system is rapid population growth. The population of the NER has quadrupled over the past 50 years, leading to a highly adverse land-man ratio. In addition, economic factors such as lack of income opportunities and lack of access to markets restrict the ability to realize greater value from production and sale. There is also a cultural driver in that Naga tribals believe in the Cornucopian school of thought according to which "nature is bountiful with infinite resources". Thus, the major challenge continuing to face Nagaland is how to adapt this land use and production system to the increased population and changing lifestyles, while also maintaining its ecological sustainability.

Baseline scenario

162. The primary thrust of government efforts is on weaning away tribal families from the practice of *jhum* by providing assets for settled agriculture. Many of these programmes, however, are yet to make a significant impact in weaning people away from shifting cultivation. Thus, under the baseline (business-as-usual) scenario, shifting cultivation systems will continue to play an important role in the local economy and, given population and economic pressures, *jhum* cultivation is unlikely to go back to the longer,

more sustainable cropping-fallow cycles. This will continue to lead to increasing rates of soil erosion, disruption of hydrology and undermining of ecosystem services.

163. Over the next 4 years, the Department of Soil and Water Conservation (State Government of Nagaland) resource allocation for the 3 project districts of Mon, Mokokchung and Wokha can be described as follows.
164. Enabling environment: Department allocation to staff salaries and training, including the 3 project districts, is estimated at USD 8,801,612. However, under the baseline there will be no emphasis on reforming the policy and institutional environment so that it can provide greater support to integrating SLEM principles on *jhum* lands. The enabling environment does not fully support interests of the majority of farmers for whom shifting cultivation is a way of life, and that, if managed sustainably, generates global environmental benefits by maintaining ecosystem services.
165. Community level activities for sustainable land and ecosystem management: Resources of the Department of Soil and Water Conservation (DS&WC), through various projects and schemes in the 3 project districts, will be dedicated largely to promoting settled agriculture, and not to integrating techniques that can render the socially-preferred *jhum* system more economically and ecologically sustainable. These programs will generate limited benefits because most farmers are not adopting settled agriculture as *jhum* is the socially-preferred system. Soil erosion, disruption of hydrological services, biodiversity loss is likely to continue. Baseline expenditures for this are estimated at USD 11,615,000. These baseline resources will be leveraged by the GEF project by modifying their allocation towards activities that are fully in line with the project strategy of integrating SLEM principles into *jhum* cultivation practices.
166. Activities for enhancing learning and replication: Under the baseline there are no government programs for promoting cross community learning on more sustainable *jhum* systems. Some resources are allocated for educational tours for farmers under the WDPSCA. However, given the current focus on settled agriculture it is unlikely that these tours will be designed to promote learning on more sustainable *jhum* systems. The information and knowledge about the role that sustainable *jhum* can play in maintaining ecosystem services is not being promoted among farmers.

Alternative strategy

167. Under the alternative, GEF resources will catalyze changes to the enabling environment (institution building, capacity building) so that existing government programs/ schemes earmarked for shifting cultivation areas can be mobilized in support of a paradigm shift from “replacing *jhum*” to “improved *jhum* that integrates principles of SLEM”. The IC matrix below details the baseline expenditures, and the incremental cost of realizing each outcome, as well as how the incremental costs are to be shared by the GEF and national government.

IC matrix (in USD)

Outcome	Cost type	Costs in USD		National Benefits	Global Benefits
Outcome 1: The policy, regulatory and institutional environment supports the integration of sustainable land management practices on	Baseline	DS&WC	8,801,612	Policy and institutional environment does not adequately support interests of the majority of farmers for whom shifting cultivation is a way of life.	Enabling environment supporting sustainable <i>jhum</i> , generates global environmental benefits by maintaining higher biodiversity and ecosystem

Outcome	Cost type	Costs in USD		National Benefits	Global Benefits
<i>jhum</i> lands					services
	Increment	GEF	700,000		
		DS&WC	1,000,000		
		Total	1,700,000		
	Alternative	Total	10,501,612	Sectoral policies and capacities are better geared to promoting sustainable <i>jhum</i> systems, generating economic benefits for farmers	Ecosystem services are maintained, and degradation trends are reduced on <i>jhum</i> lands
Outcome 2: Options for improving the sustainability of <i>jhum</i> agroforestry systems are developed and demonstrated in selected project sites	Baseline (to be modified to fit the project strategy)	DS&WC	11,615,000	Limited benefit from programs to move to settled agriculture; most farmers are not adopting settled agriculture as <i>jhum</i> is the socially-preferred system that is also more suitable to local agro climatic conditions.	Soil erosion, disruption of hydrological services, loss of carbon stocks below and above ground, and biodiversity loss continue
	Increment	GEF	1,750,000		
		Total	1,750,000		
	Alternative	Total	13,365,000	Greater income and livelihood security for farmers from the improved <i>jhum</i> system	Ecosystem health, function and resilience are enhanced in the 3 target districts
Outcome 3: Enhanced capacity to replicate the project's policy reform and field-level experiences	Baseline	DS&WC	0	Cross-community learning largely geared to settled agriculture; farmers do not have adequate extension support for improved <i>jhum</i>	The information and knowledge about the role that sustainable <i>jhum</i> can play in maintaining ecosystem services is not being promoted among farmers
	Increment	GEF	800,000		
		DS&WC	3,000,000		
		Total	3,800,000		
	Alternative	Total	3,800,000	Farmers have easy access to SLEM techniques that can enhance their long-term livelihood prospects	Enhanced farmer uptake and replication of SLEM approaches which in turn helps secure

Outcome	Cost type	Costs in USD		National Benefits	Global Benefits
					ecosystem services
Project management		GEF	350,000		
		DS&WC	1,000,000		
		Total	1,350,000		

Summary Incremental Cost Matrix (in USD)

Grand Totals	Baseline		8,801,612
	Modified Baseline (considered as cofinancing)		11,615,000
	Total Baseline		20,416,612
	Increment	GEF	3,600,000
		Non GEF	5,000,000
Alternative		29,016,612	

Part B.2 Logical Framework

Overall goal: To promote sustainable land management and use of biodiversity as well as maintain the capacity of ecosystems to deliver goods and services while taking account of climate change. The project will contribute to this goal along with the other projects being developed under the Sustainable Land and Ecosystem Management Programme.

Project Strategy	Objectively verifiable indicators	Baseline	Target	Sources of verification	Assumptions
Objective: To develop, demonstrate and upscale sustainable land management practices for the conservation of <i>jhum</i> (shifting cultivation) lands in Nagaland through an ecosystem approach	No change in primary forest cover in project sites	Baseline measured in Y1	In Y4, improved forest cover or remains the same as in baseline	Annual independent ecological performance audit; mid-term and final independent evaluation	There is a high level of political acceptance of the project approach of supporting <i>jhum</i> as an essential component of a long-term strategy to promote biodiversity conservation and control of land degradation in hilly areas
	Land area where improved <i>jhum</i> agroforestry systems are in place	0	90,000 hectares of land covering approximately 70 villages in 3 districts by Y4	Annual independent ecological performance audit; mid-term and final independent evaluation	
	Decrease in rates of soil erosion in project sites	Baseline for project sites to be measured in Y1; erosion rates for the target districts are estimated as: Mokokchung: 60 mt/ha/year Mon: 40-50 mt/ha/year Wokha: 40-50 mt/ha/year	Same or less than baseline	Annual independent ecological performance audit	
	Increase in incomes of target communities	Baseline to be measured during the project inception phase	10% improved income	Annual project monitoring report; mid-term and final independent evaluation	

Project Strategy	Objectively verifiable indicators	Baseline	Target	Sources of verification	Assumptions
Outcome 1: The policy, regulatory and institutional environment in support of <i>jhum</i> agroforestry systems is strengthened	Strengthened Agriculture frameworks that explicitly support enhancing sustainability of <i>jhum</i> systems	Policy does not support enhancing sustainability of <i>jhum</i> systems	Policy explicitly supports enhancing sustainability of <i>jhum</i> systems by Y4	Annual project monitoring report; mid-term and final independent evaluation	There is close cooperation among the various state departments that address <i>jhum</i> land issues – Agriculture, Horticulture, Forest, Land Resource Development, Animal Husbandry
	Creating enabling environment in Forest regulations that explicitly recognize and support improved <i>jhum</i> systems as sustainable agroforestry systems that improve forest health	Stresses adverse environmental impact of <i>jhum</i>	Explicit recognition and support for improved <i>jhum</i> systems as sustainable agroforestry systems that improve forest health by Y4	Annual project monitoring report; mid-term and final independent evaluation	
	Credit provisioning systems enabled for farmers who work on communally owned lands	No support for extending credit to farmers who work on communally owned lands	Provisions for extending credit to such farmers are integrated into the policy by Y4	Annual project monitoring report; mid-term and final independent evaluation	
	Integrated land-use planning at landscape level encouraged and strengthened.	No guidelines	Draft guidelines approved by Y2	Annual project monitoring report; mid-term and final independent evaluation	
	Increase in joint extension activities by different departments (agriculture, horticulture, S&WC, land resource development, forest, animal husbandry)	Extension activities are undertaken separately	In target villages all extension services are coordinated according to an integrated plan by Y2	Annual project monitoring report; mid-term and final independent evaluation	
Outcome 2: Options for improving the sustainability of <i>jhum</i> agroforestry systems	Land productivity indicator (measure of returns from farming calculated as outputs minus inputs, e.g. yield minus inputs)	Baseline measured in Y1	Productivity improved by 5% over the baseline	Annual project monitoring report; mid-term and final independent evaluation	There is active community participation and adoption of improved approaches

Project Strategy	Objectively verifiable indicators	Baseline	Target	Sources of verification	Assumptions
are developed and demonstrated in selected project sites (70 villages spread over the 3 districts of Mon, Mokokchung and Wokha in Nagaland)	Lengthening of <i>jhum</i> cropping phase	2 years	3 years by Y4	Annual project monitoring report; mid-term and final independent evaluation	Cofinancing commitments are realized
	Lengthening of <i>jhum</i> fallow phase	8 years	9 years	Annual project monitoring report; mid-term and final independent evaluation	
	Contribution of income from sale of (organically grown) produce to local economy increases	Baseline measured in Y1	Increase of 5% over baseline. Effort will be made to include as much as women beneficiaries as possible (say 50%)	Annual project monitoring report; mid-term and final independent evaluation	
	Number of women benefiting from marketing of produce from <i>jhum</i> fields	Baseline measured in target villages in Y1	300 women beneficiaries (100 from each district)		
Outcome 3: Enhanced capacity to replicate the project's policy reform and field-level experiences in other parts of Nagaland, as well as in other States of India, where shifting cultivation agroforestry systems are prevalent	Number of requests from other districts and states to visit project sites and obtain assistance from the Center of Excellence	0	At least 5-6 requests by Y4	Annual project monitoring report; mid-term and final independent evaluation	The central institutional mechanism that is to be established under the SLEM programme is operational, and is effectively fulfilling its knowledge management, dissemination and uptake role
Plan for extending project strategy to additional villages and districts with associated resource commitments from government	0	By Y4, at least 3 more districts have a budgeted plan for replicating	Annual project monitoring report; final independent evaluation		

Outcome 1: The policy, regulatory and institutional environment in support of *jhum* agroforestry systems strengthened
Output 1.1 Establishment of an inter-sectoral coordination group on *jhum* policies and programs that brings together representatives from state government departments (soil and water conservation, agriculture, horticulture, forests, land resource development), academic institutions (Nagaland University, North Eastern

<p>Hill University), and community-based organizations.</p> <p>Output 1.2 Recommendations for strengthening the policy and regulatory environment affecting <i>jhum</i> (Forest Policy, Agricultural Policy, etc) based on (a) an analytical review of policy gaps and (b) a consultative dialogue among the group of stakeholders identified in 1.1 above.</p> <p>Output 1.3 Recommendations for integrated land-use planning at landscape/village level.</p>
<p>Outcome 2: Options for improving the sustainability of <i>jhum</i> agroforestry systems are developed and demonstrated in selected project sites (70 villages spread over the 3 districts of Mon, Mokokchung and Wokha in Nagaland)</p> <p>Output 2.1 Agri-silvi-pastoral models for enhancing alternative sources of livelihoods, mainstreaming biodiversity considerations and promoting greater ecological and cultural security</p> <p>Output 2.2 Linkages established for alternate agri-silvi-pastoral practices</p> <p>Output 2.3 Capacity building of farmers, government extension workers, and Village Councils (with a special emphasis on adequate representation of women)</p> <p>Output 2.4 Development and implementation of integrated land use plans on a watershed basis that improve delivery of ecosystem services and livelihood benefits</p>
<p>Outcome 3: Enhanced capacity to replicate the project's policy reform and field-level experiences in other parts of Nagaland, as well as in other States of India where shifting cultivation agroforestry systems are prevalent</p> <p>Output 3.1 Monitoring system to measure change realized by the project at the farm/ village level and in terms of policies in support of <i>jhum</i>.</p> <p>Output 3.2 Documentation of project experiences with policy-reform and improved land management techniques and approaches at the village level – various information dissemination products, in different languages, geared to different audiences.</p> <p>Output 3.3 An assessment of the potential (carbon storage, benefit sharing possibilities) of these improved shifting cultivation agroforestry systems to be replicated and up scaled.</p> <p>Output 3.4 A Center of Excellence is established comprising a consortium of different institutions in Nagaland.</p>

SECTION C: TOTAL BUDGET AND WORK PLAN (UNDP ATLAS)

Award ID	00057120
Award Title:	PIMS 4073 MFA FSP: Nagaland Sustainable Land and Ecosystem Management
Business Unit:	IND10
Project Title:	PIMS 4073 MFA FSP: Nagaland Sustainable Land and Ecosystem Management
Implementing Partner (Executing Agency)	National Implementation

TOTAL BUDGET AND WORK PLAN (UNDP ATLAS)

GEF Outcome/Atlas Activity	Responsible Party/Implementing Agent	Fund ID	Donor Name	Atlas Account Code	ATLAS Description	Budget	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
Outcome 1: The policy, regulatory and institutional environment supports the integration of sustainable land management practices on <i>jhum</i> lands.	Dept. of Soil & Water Conservation, Nagaland.	62000	GEF	71300	Local Consultants		20,000	20,000	20,000	20,000	20,000	100,000	
				72100	Contractual services		60,000	60,000	60,000	60,000	60,000	300,000	
				74525	Workshop/Meeting		15,000	15,000	15,000	15,000	15,000	75,000	
				72200	Equipments		25,000	0	25,000	0	0	50,000	
				71600	Travel		20,000	20,000	20,000	20,000	20,000	100,000	
				74500	Miscellaneous		15,000	15,000	15,000	15,000	15,000	75,000	
					Sub-total GEF		155,000	130,000	155,000	130,000	130,000	700,000	
	Total Outcome 1		155,000	130,000	155,000	130,000	130,000	700,000					
Outcome 2: Options for improving the sustainability of <i>jhum</i> agroforestry systems are	Dept. of Soil & Water Conservation, Nagaland.	62000	GEF	71300	Local Consultants		50,000	50,000	50,000	50,000	50,000	250,000	
				72100	Contractual services		200,000	250,000	250,000	200,000	150,000	1,050,000	
				74505	Workshop/Meeting		30,000	30,000	30,000	30,000	30,000	150,000	
				71600	Travel		35,000	35,000	35,000	35,000	35,000	175,000	
				74500	Miscellaneous		25,000	25,000	25,000	25,000	25,000	125,000	
					Sub-total GEF		340,000	390,000	390,000	340,000	290,000	1,750,000	

developed and demonstrated in selected project sites.					Total Outcome 2	340,000	390,000	390,000	340,000	290,000	1,750,000	
Outcome 3: Enhanced capacity to replicate the project's policy reform and field-level experiences in other parts of Nagaland, as well as in other States of India, where shifting cultivation agroforestry systems are prevalent.	Dept. of Soil & Water Conservation, Nagaland.	62000	GEF	71300	Local Consultants	10,000	15,000	50,000	50,000	50,000	175,000	
				72100	Contractual services	35,000	50,000	100,000	100,000	100,000	385,000	
				74505	Workshop/Meeting	5,000	10,000	50,000	50,000	50,000	165,000	
				74500	Miscellaneous	5,000	10,000	20,000	20,000	20,000	75,000	
					Sub-total GEF	55,000	85,000	220,000	220,000	220,000	800,000	
	Total Outcome 3	55,000	85,000	220,000	220,000	220,000	800,000					
Project Management Cost	Deptt. of Soil & Water Conservation, Nagaland.	62000	GEF	71300	Local Consultants	50,000	60,000	60,000	60,000	45,000	275,000	
				71600	Travel	5,000	5,000	5,000	5,000	5,000	25,000	
				72500	Office Supplies	5,000	5,000	5,000	5,000	5,000	25,000	
				74500	Miscellaneous	5,000	5,000	5,000	5,000	5,000	25,000	
	Sub-total GEF	65,000	75,000	75,000	75,000	60,000	350,000					
	Total Management cost	65,000	75,000	75,000	75,000	60,000	350,000					
Total Cost						615,000	680,000	840,000	765,000	700,000	3,600,000	

Detailed Budget Notes:

Budget Note	Detailed costing and explanation
Outcome 1	

1*	The local consultants (about 5 consultants for 42 weeks each) will undertake review of various policies that are in force in the state and the central government towards SLEM and revise them for the successful implementation of the same and also propose addressing policy requirements. Besides, the consultants would initiate consultative dialogue among the group of stakeholders seeking recommendations for integrated land-use planning at landscape/village level. The consultants will be hired from their field of expertise as for issues like agriculture, soil and water conservation, watershed development, biodiversity conservation and climate change.
2	Contractual services are involved to develop programmes, interact with various stakeholders, and local consultants.
3	Workshop in the form of interactive session (with stakeholders) would be held in Kohima/or in other places in Nagaland. Formation of both the steering committee and project coordination committee would take place during this session.
4	Equipments include digital cameras, laptops, desktops, photo-copy machine, LCD printer, connection of Broad-band internet and other necessary stationeries.
5	Travel involved the consultants travelling to various places for meeting the stakeholders and specialists in the SLEM issues, travel to meetings organised by the project within the state.
6	Miscellaneous expenses include local help, photocopying etc.
Outcome 2	
7*	Local consultants will primarily involve 5 consultants for 42 weeks (42x5) each, working on the issues of agriculture, watershed development, soil and water conservation, biodiversity conservation and climate change. These activities would involve collection of field-based data from the project districts, preparation of village-centric inventory for identifying the best possible techniques for reducing the adverse impacts of jhum on biodiversity and in controlling land degradation.
8	Contractual services are involved to facilitate the development of pilot programmes for demonstration in consultation with the project management unit.
9	Training workshop providing joint extension services to farmers in project sites in coordination with different state depts.
10	Travel here involved primarily the travelling cost given for local consultants for their local visits to project districts specially the demonstration sites and state govt. offices/departments in – Mon, Mokokchung and Wokha.
11	Miscellaneous involves people's participation, food expenses for local people and any other sundry expenses during the meetings.
Outcome 3	
12*	Local consultants will be hired to develop documented materials for watershed programmes, cropping patterns, biodiversity conservations (forestry), energy utilisation issues within the system and soil and water conservation issues. The materials will be considered as an indicator for assessment in the project. It will involve 5 consultants for 42 weeks (42x5) each.
13	Contractual services will be hired for organising meetings, preparation of documents, publication of documents etc.
14	Workshop/meeting organised for highlighting the assessment report of the project, dissemination of published materials documented during the project tenure, and mooted the idea of establishing an appropriate ground for a Centre for Excellence in consortium with different institutions in Nagaland. The workshop would include committee members, the important stakeholders and representatives of project districts.
15	Miscellaneous expenses include local help, photocopying etc.
Project Management	

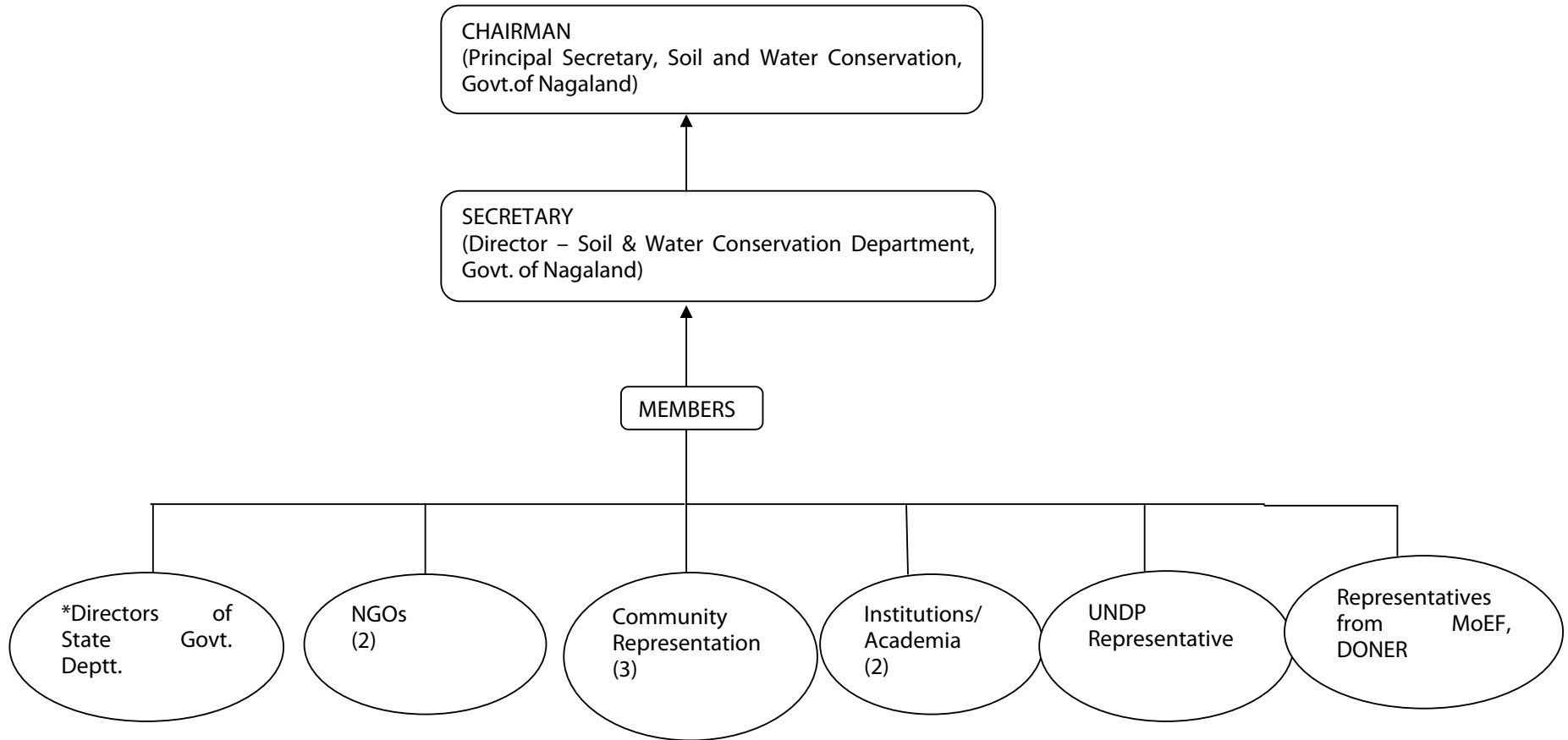
16	Local consultants are those who are hired for functions related to the management of the project. It also includes the cost incurred for other staff members including the Project coordinator, Administrative assistant and Financial assistant.
17	Travel borne the expenses during field tour made by the project management team.
18	Office Supplies include necessary stationeries, almirahs for keeping important files and other related documents, furniture etc.
19	Miscellaneous expenses include local help, telephoning, faxing, reporting to UNDP-CO, etc.

SECTION D: ADDITIONAL INFORMATION

PART D.1 Other agreements

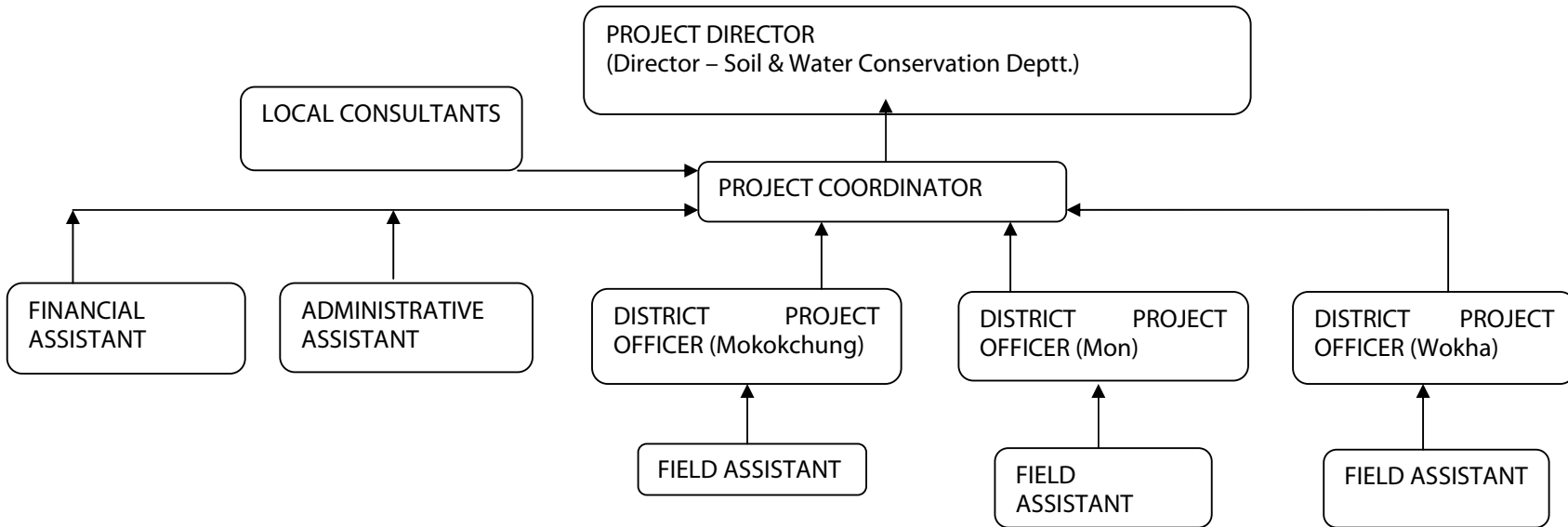
PART D.2 Organization Chart of the Project

STRUCTURE OF THE PROJECT BOARD/STEERING COMMITTEE



*Directors will be from the departments of – Agriculture, Horticulture, Land Resources, Forest & Environment, Soil & Water Conservation, Rural Development, & Fisheries.

STRUCTURE OF PROJECT MONITORING UNIT



PART D.3 Terms of References for key project staff and main sub-contracts

Project Coordinator

Duration: 5 years, full-time

Location: Based in Nagaland; duty travel in India

Scope of the assignment:

The Project Coordinator assumes overall responsibility for the successful implementation of project activities and the achievement of planned project outputs. He/she reports to the National Project Director assigned by the DS&WC, and the UNDP Country Office.

Duties and responsibilities:

Supervise and coordinate the project to ensure its results are in accordance with the Project Document and the rules and procedures established in the UNDP Programming Manual;

Assume primary responsibility for daily project management - both organizational and substantive matters – budgeting, planning and general monitoring of the project;

Ensure adequate information flow, discussions and feedback among the various stakeholders of the project;

Ensure that participatory methodologies employed by the project are particularly sensitive to women's participation;

Ensure adherence to the project's work plan, prepare revisions of the work plan, if required;

Assume overall responsibility for the proper handling of logistics related to project workshops and events;

Prepare GEF quarterly project progress reports, as well as any other reports requested by the Executing Agency and UNDP;

Prepare, and agree with UNDP on, terms of reference for national and international consultants and subcontractors;

Guide the work of local consultants and subcontractors and oversee compliance with the agreed work plan;

Maintain regular contact with UNDP Country Office and the National Project Director on project implementation issues of their respective competence;

Monitor the expenditures, commitments and balance of funds under the project budget lines, and draft project budget revisions;

Assume overall responsibility for the meeting financial delivery targets set out in the agreed annual work plans, reporting on project funds and related record keeping;

Liaise with project partners to ensure their co-financing contributions are provided within the agreed terms;

Ensure collection of relevant data necessary to monitor progress against indicators specified in the logframe;

Assume overall responsibility for reporting on project progress vis-à-vis indicators in the logframe;

Undertake any other actions related to the project as requested by UNDP or the National Project Director.

Expected Results:

Successful delivery of all project outputs and milestones, as indicated in the project logical framework.

Qualifications and skills:

University degree (Post-Graduate) in the field of environment protection and management, sustainable human development or related field.

Outstanding communication, project management and organizational skills.

At least 8 years of experience in development cooperation and project management.

Familiarity with the working environment and professional standards of international non-profit organizations.

Working experience with GOI institutions involved in sustainable land management.

Experience in working with NGOs and civil society, and with participatory approaches.
Proficiency in English and Hindi.
Computer literacy.

Terms and conditions for provision of the services:

The Project Coordinator reports to UNDP and to the National Project Director at DS&WC.

Citizen of India.

The Project Coordinator cannot be employed elsewhere during the entire course of the project.

Administrative Assistant

Duration: 5 years, full-time

Location: Based in Nagaland; duty travel in India

Scope of assignment:

The Administrative and Financial Assistant provides assistance to the Project Coordinator in the implementation of day-to-day project activities. He/she is responsible for all administrative (contractual, organizational and logistical) and all accounting (disbursements, record-keeping, cash management) matters under the project.

Duties and responsibilities:

Provide general administrative support to ensure the smooth running of the project management unit;

Provide logistical support to the Project Coordinator and project consultants in conducting different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.);

During the visits of international experts, bear the responsibility for their visa support, transportation, hotel accommodation etc;

Maintain the project's disbursement ledger and journal;

Keep files with project documents, expert reports;

Control the usage of non expendable equipment (record keeping, drawing up regular inventories);

Keep regular contact with project experts and consultants to inform them about the project details and changes;

Provide English translation as required;

Draft correspondence and documents; finalize correspondence of administrative nature; edit reports and other documents for correctness of form and content;

Arrange duty travel;

Act on telephone inquiries, fax, post and e-mail transmissions, and co-ordinate appointments;

Perform any other administrative duties as requested by the Project Coordinator;

Organize and coordinate the procurement of services and goods under the project.

Expected Results:

Successful operation of project office.

Qualifications and skills:

University degree (Graduate).

Fluency in written and spoken English.

Outstanding time-management, organizational and inter-personal skills.

At least 2-year experience in office administration, preferably within UNDP projects.

Excellent computer literacy.

Terms and conditions for provision of the services:

The Administrative Assistant reports to the Project Coordinator and works under his/her direct supervision.

Citizen of India.

The Administrative Assistant cannot be employed elsewhere during the entire course of the project.

Financial Assistant

Duration: 5 years, full-time

Location: Based in Nagaland; duty travel in India

Scope of assignment:

The Financial Assistant provides assistance to the Project Coordinator in the implementation of day-to-day project activities. He/she is responsible for all accounting (disbursements, record-keeping, cash management) matters under the project.

Duties and responsibilities:

Provide logistical support to the Project Coordinator and project consultants in conducting different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.);

Organize control of budget expenditures by preparing payment documents, and compiling financial reports;

Maintain the project's disbursement ledger and journal;

Keep files with project documents, expert reports;

Control the usage of non expendable equipment (record keeping, drawing up regular inventories);

Keep regular contact with project experts and consultants to inform them about the project details and changes;

Act on telephone inquiries, fax, post and e-mail transmissions, and co-ordinate appointments;

Perform financial duties as requested by the Project Coordinator;

Organize and coordinate the procurement of services and goods under the project.

Expected Results:

Successful operation of project office.

Qualifications and skills:

University degree (Graduate).

Fluency in written and spoken English.

Outstanding time-management, organizational and inter-personal skills.

At least 2-year experience in financial management.

Excellent computer literacy.

Terms and conditions for provision of the services:

The Financial Assistant reports to the Project Coordinator and works under his/her direct supervision

A Citizen of India

The Financial Assistant cannot be employed elsewhere during the entire course of the project

District Project Officer

Duration: 5 years, full-time

Location: Based in three project districts in Nagaland; duty travel to DS&WC project office and

UNDP-CO, if required.

Scope of assignment:

The District Project Officer would share and coordinate information about the project development with the Project Coordinator. Besides he/she will be a frequent field visitor to target villages in the three project districts.

Duties and responsibilities:

Coordinate the project activities in the respective project districts to ensure its results are in accordance with the Project Document and the rules and procedures established in the UNDP Programming Manual;

Assume primary responsibility like planning and general monitoring of the project;

Ensure adequate information flow, discussions and feedback among the villagers and village councils in the target villages;

Ensure that participatory methodologies employed by the project are particularly sensitive to women's participation;

Ensure adherence to the project's work plan;

Prepare GEF quarterly project progress reports, as well as any other reports requested by the Executing Agency and UNDP in coordination with the Project Coordinator;

Guide and provide logistic support to the local consultants and subcontractors and oversee compliance with the agreed work plan;

Maintain regular contact with Project Coordinator on project implementation issues of their respective competence;

Ensure collection of relevant data necessary to monitor progress against indicators specified in the logframe;

Assume responsibility for reporting on project progress vis-à-vis indicators in the logframe;

Project logistical support to the Project Coordinator and local consultants in conducting different project activities (trainings, workshops, stakeholder consultations, arrangements of study tour, etc.)

Expected Results:

Successful delivery of all project outputs and milestones, as indicated in the project logical framework.

Qualifications and skills:

University degree (Post-Graduate) in the field of environment protection and management, sustainable human development or related field.

Project management and organizational skills.

At least 3-5 years of experience in development cooperation and project management.

Familiarity with the working environment and professional standards of international non-profit organizations.

Experience in working with NGOs and civil society, and with participatory approaches.

Proficiency in English and Hindi and preferably local language of the area.

Computer literacy.

Terms and conditions for provision of the services:

The District Project Officer reports to Project Coordinator at DS&WC and UNDP-CO.

Citizen of India.

The District Project Officer cannot be employed elsewhere during the entire course of the project.

PART D.4 Stakeholder Involvement Plan

168. The following table lists the main stakeholders of the project and how they are to be mobilized in realizing the project objective.

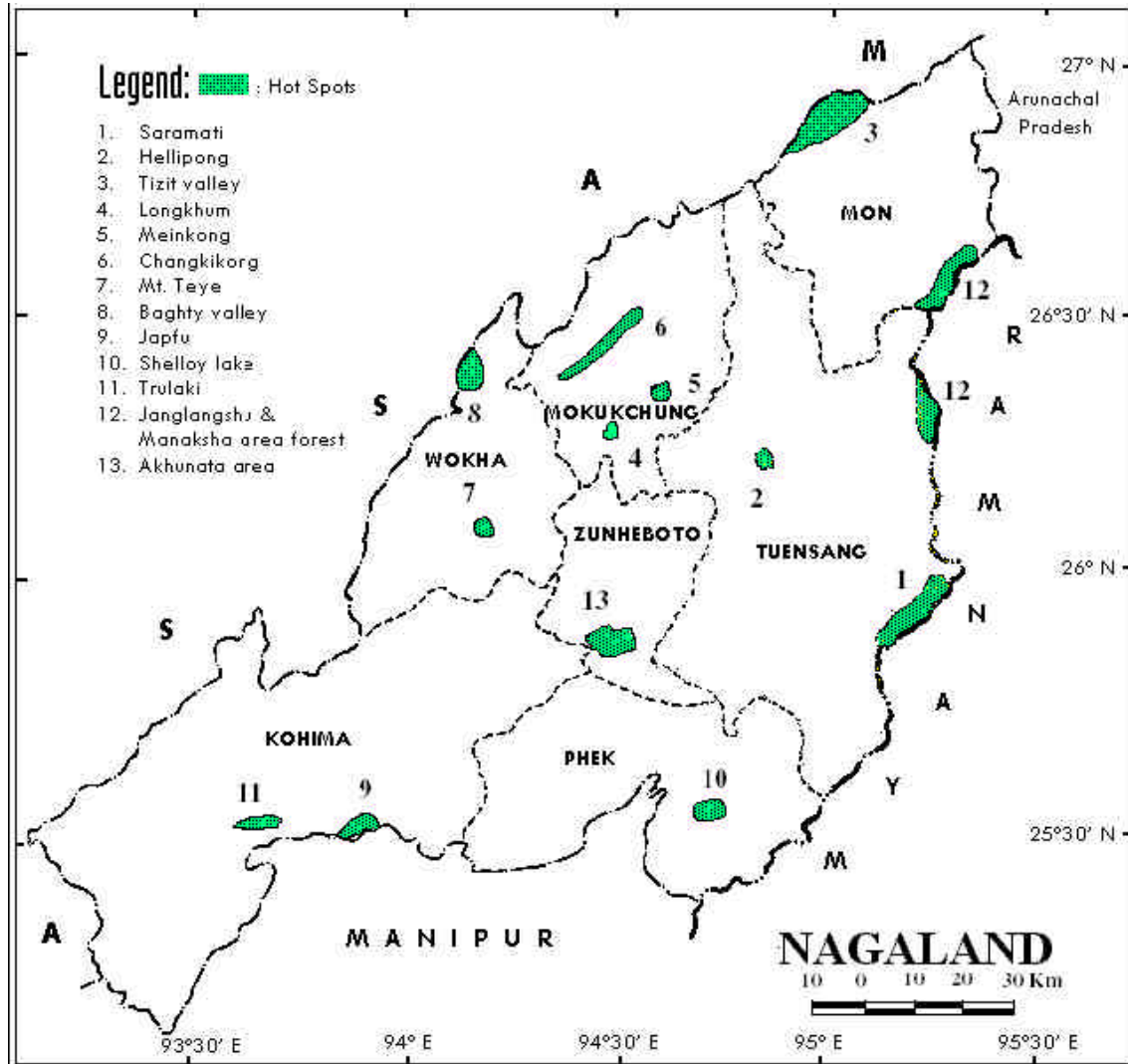
Stakeholder	Mandate	Contribution to project objective
Government		
State Agriculture Department	To promote agricultural development in the State, primarily through organic means, with the following goals: Food safety Food security Food quality Conservation Environmental impact Economic stability Facilitate increase in production and productivity Promote farm mechanization wherever feasible Improve the capacity of officers and extension functionaries.	<ul style="list-style-type: none"> - Support with strengthening agricultural policy to accept the role of <i>jhum</i> in a SLEM strategy - Providing expertise, extension services on the extension of the <i>jhum</i> cycle - Monitoring impacts
State Horticulture Department	Support the development of a horticulture-based economy (fruits, vegetables, spices, mushrooms, medicinal and aromatic plants) in line with agroclimatic, topographical and soil conditions.	<ul style="list-style-type: none"> - Selection of horticultural crops suitable to local agro ecological conditions and with good economic returns that can be integrated into the project's demonstration sites so as to reduce pressures to shorten the <i>jhum</i> cycle - Providing expertise, extension services - Monitoring impacts
State Department of Land Resources Development	To develop village/ micro-watershed plans that take into consideration land capability, site conditions and local needs of the people to fulfil the following objectives: Increase productivity of the land Create employment opportunities Raise rural incomes and living standard Reduction in migration from rural areas Increase in water table in the area Restore ecological balance and overall environmental improvement	<ul style="list-style-type: none"> - Support formation of watershed committees that will lead on land use planning by watershed - Participation in training for integrated land use planning on a watershed basis - Raising awareness on degradation of land resources, protection of environment and economic sustainability of the farmers - Internalization of integrated land use planning approach/ guidelines (prepared under the project) into their regular operations - Providing expertise, extension services - Monitoring impacts
State	To implement the State Forest Policy	<ul style="list-style-type: none"> - Support with constituting

Stakeholder	Mandate	Contribution to project objective
Forest & Environment Department	which includes: Economically and ecologically sustainable management of <i>jhum</i> areas; regulate harvesting of forest resources on principles of sustainability; protect and conserve fauna and flora including endangered species; protect, conserve and manage biodiversity in and outside National Parks, Sanctuaries, Reserve Forests based on sound scientific principles for in situ and ex situ conservation; Raise and develop commercially important species; inputs to development of State Bamboo Policy	<p>Village Biodiversity Boards where appropriate</p> <ul style="list-style-type: none"> - In line with the State's Bamboo Policy, advising on integration of bamboo in the agroforestry system - Advice on including biodiversity conservation concerns as a part of the sustainable <i>jhum</i> system promoted by the project - Technical support on putting in place community biodiversity conservation sites, where appropriate - Advice on sustainable harvest of NTFPs - Monitoring impacts
State Soil & Water Conservation Department	To tackle various Soil & Water conservation problems and specially to draw up scheme for weaning away the people from <i>jhum</i> cultivation Imparting Soil & Water Conservation oriented land use technology in order to enhance their production and maintain ecological balance	<ul style="list-style-type: none"> - Ensuring that sustainable <i>jhum</i> systems are accepted as part of the SLEM strategy for Nagaland - Internalizing the improved land management practices demonstrated by the project for <i>jhum</i> lands into its regular operations - Providing expertise, extension services - Monitoring impacts
NEPED	To develop sustainable management of the land base by the intensification of <i>jhum</i> cultivation through farmer-led development, testing and demonstration of agroforestry-based intensified systems. Reinforcement of traditional institutions as agents of delivery mechanism, and to engage communities in agro-based income generation activities through micro credit and support community-based natural resource management Energy security	<ul style="list-style-type: none"> - Sharing experiences from the results of their project (phase-wise). - Providing expertise, extension services
Village Council	Maintaining law and order and administer justice within the village limits in accordance with the customary laws and usages.	<ul style="list-style-type: none"> - Principal counterpart at the village/ community level - Active involvement in developing integrated land use plans - Determining land where demonstrations are to take place - Taking responsibility for demonstration sites - Providing expertise

Stakeholder	Mandate	Contribution to project objective
		- Monitoring impacts
Universities/ Research Institutions		
Nagaland University	The Medziphema campus has 12 departments: Agricultural Chemistry & Soil Sciences, Agricultural Economics & Statistics, Agricultural Engineering, Agricultural Extension, Agronomy, Animal production & Management, Entomology, Genetics & Plant Breeding, Horticulture, Plant Pathology, Rural Development & Planning and Soil Conservation. Several staff members have done extensive work in the field of natural resource management specifically focusing on <i>jhum</i> cultivation.	- Providing research support, information building, and dissemination
North Eastern Hill University	The Centre for Environmental Studies has been working on the promotion of scientific management of natural resources and conservation of fragile ecosystems of North-Eastern India. The focal areas of research have been environmental management, environmental impact assessment, biomass energy, conservation ecology, natural resource management, wasteland development, eco-development and biodiversity conservation. The Department of Sociology works on areas of Social Change, amongst which are included Demography, and Ecology & Environment.	- Providing research support, information building, and dissemination
Assam Agriculture University	The objectives of the University are to: impart education in agriculture and other allied branches of learning, advancing learning and research in agriculture and other allied sciences, undertake the extension of such sciences specially to the rural people of the state	- Providing research support, information building, and dissemination
North Eastern Regional Institute of Water and Land Management (NERIWALM)	The institute organised capacity building programmers, conduct action research project on actual field problems and provides technical backup services to various state and central Government organization working in the field of water and land management.	- Providing consultancy services in the matters of watershed management. - Arranging and facilitating training components for farmers.
Regional Research Laboratory (RRL) - Jorhat	Major thrust of R&D activities has been to develop indigenous technologies by utilising the immense natural wealth of India.	Providing research support, information building, and dissemination.

Stakeholder	Mandate	Contribution to project objective
NGOs		
The Missing Link	To advocate for Agriculture policies that recognize Shifting Cultivation as a unique agricultural system with a forestry phase, rather than just an age-old primitive form of cultivation.	<ul style="list-style-type: none"> - Policy Advocacy - Providing expertise - Monitoring impacts
Agriculture & Organic Farming Group (AOFG-India)	It is a network of farmers associations, farmer federations, grassroots development organizations and community based organizations. Work with small farmers and indigenous communities in the rain-fed & hill slope farming areas including shifting cultivation areas.	<ul style="list-style-type: none"> - Organizing and conducting trainings on organic farming, fair-trade, farmer-led certification (for both ecological and social standards), entrepreneurship for rural development, natural resource management and conservation of mountain ecology & biodiversity.
ICIMOD	Working on stability of fragile mountain ecosystems and the livelihoods of mountain people in Himalayan and Hindukush chain. Presently focussing in four strategic programmes: Integrated Water and Hazard Management Environmental Change and Ecosystem Services Sustainable Livelihoods and Poverty Reduction Integrated Knowledge Management	<ul style="list-style-type: none"> - Policy Advocacy - Providing expertise - Monitoring impacts
Communities		
Farming families in project sites		<ul style="list-style-type: none"> - Provide their local knowledge in development of integrated land use plans, and selection of strategies that can lengthen the jhum cycle - Active participants in all project-led training and capacity building efforts - Monitoring impacts

PART D.5 Biodiversity Hotspots in Nagaland



Source: State Level Biodiversity Strategy and Action Plan of Nagaland
 (The locations and area of the Hot Spots are not to scale and are purely indicative)

PART D.6 Shillong Declaration

The Shillong Declaration on Shifting Cultivation in the Eastern Himalayas

Responding to the suggestion of the Hon'ble Union Minister of the Government of India on Tribal Affairs and Development of the North East Region, Mr P. R. Kyndiah, to propose a Shillong Declaration,

Recognising that Shifting Cultivation is key to production systems, both agriculture and forestry, for providing livelihoods to many ethnic and tribal groups in the tropical and sub-tropical highlands of Asia and Africa as well as Latin America,

Recognising that Shifting Cultivation is one of the most complex and multifaceted forms of traditional agroforestry practice in the world reflecting a robust traditional ecological knowledge,

Realising that Shifting Cultivation evolved as a traditional practice and is an institutionalised resources management mechanism at a species, ecosystem and landscape level ensuring ecological security and food security and thus providing a social safety net,

Being conscious of the diverse traditional institutions and tenurial systems pertaining to Shifting Cultivation in the eastern Himalayan region comprising Bangladesh, Bhutan, China, India, Myanmar, and Nepal,

Understanding that the institutional mechanisms ingrained in traditional Shifting Cultivation systems can ensure access to productive resources for every member of the community including landless people and the most marginalised groups,

Recognising that Shifting Cultivation is a way of life for a large number of indigenous, tribal, and other poor and marginalised upland communities,

Recognising that traditional Shifting Cultivation systems have been stressed by external and internal forces,

Having knowledge on existing policies on Shifting Cultivation in the countries of the Eastern Himalayas.

We, the participants from the eastern Himalayan countries, representing government agencies, farmers, international bodies, non-government organisations, academia, science and research institutions, local institutions, international donors and development assistance agencies, the private sector, and other professionals, concerned about Shifting Cultivation and shifting cultivators, regionally and worldwide, assembled in Shillong in Meghalaya, India from 6 to 8 October 2004 declare as hereunder:

- a) That Shifting Cultivation must be recognised as an agricultural and an adaptive forest management practice which is based on scientific and sound ecological principles.

- b) That it is imperative to provide an enabling environment in order to address the urgent livelihood and ecological concerns arising out of rapid transformations driven by development and other externalities including market forces.
- c) That it is imperative to empower shifting cultivators as practitioners of rotational agroforestry to become active participants in decision making and policy processes that impact them most.
- d) That it is essential to make existing research and extension services sensitive and relevant to the needs and challenges of Shifting Cultivation and shifting cultivators and simultaneously assimilate the traditional ecological knowledge of Shifting Cultivation into future research, development and extension processes.
- e) That it is necessary to recognise the traditional institutions and intellectual capital generated from traditional practices relating to Shifting Cultivation and ensure its protection in the legal and policy regime.
- f) That it is essential to provide interactive forums and environment for information access and sharing between multiple stakeholders at local, national, regional and global levels.
- g) That it is imperative to acknowledge that women usually play the most critical role in Shifting Cultivation both at the activity and the impact level and therefore any development intervention must be sensitive to this fact.

AND THEREFORE

The regional, national, and local policies for Shifting Cultivation need to be re-appraised and, where necessary, reformulated. For this purpose, the detailed recommendations of the 'Shifting Cultivation Regional Policy Dialogue Workshop for the Eastern Himalayas', 6-8 October 2004, Shillong can provide input.

WHERE ALL POLICIES AND ACTIONS SHOULD BE FOUNDED ON THE FOLLOWING GUIDING PRINCIPLES

To support decentralised, participatory, multi-stakeholder, interdisciplinary, eco-regional, and adaptive management approaches that respect human and cultural diversity, gender equity, livelihood security, and enhancement as well as environmental sustainability, where we value and build upon both traditional and scientific information and knowledge.

Adopted: 8 October 2004 at Shillong, Meghalaya, India

PART D.7 Organic certification and export of organic spices in the NER

169. According to the Vision 2020 document for the NER prepared by the Ministry for Development of North Eastern Region, Government of India, there is great scope in promoting production of organic spices in NER states.
170. The International Trade Centre (UNCTAD/WTO) has shown willingness to work in Sikkim, Meghalaya and Nagaland, in cooperation with the Spice Board of India, for cultivation, processing and export of organic spices (cardamom, ginger, turmeric and Naga chillies). ITC entered into an agreement with the Nagaland Government and the Spice Board in October, 2007, with a view to developing organic spice cultivation in Nagaland.
171. The Spice Board pays the cost for obtaining organic certification for the growers and has recognised 12 agencies for this purpose. The Spice Board needs to strengthen its presence in NER and assist the states and growers for improving productivity and marketing the produce, and there are resources allocated for this under the 11th Five-year Plan. Funding from the Export Development Fund is also available for cluster development of farms for organic farming. Farmer groups will be given adequate planting material and training in good agricultural practices (GAP) and post-harvest management, and raising awareness about productivity, food safety, quality and marketability of spices.
172. The Agricultural and Processed Food Products Export Development Authority (APEDA) of the Government of India has been working to establish model organic farms for passion fruit in Manipur. Similar attempts have been attempted by other buyers to source passion fruit juice from Nagaland.
- 173.