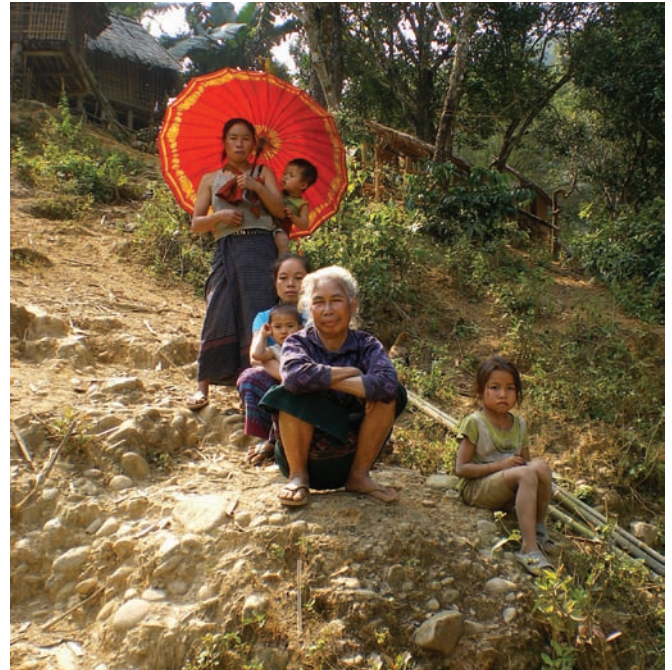


Building Sustainable Landscape Management in the Lao P.D.R.

Improving the income of forest-dependent communities through more profitable and sustainable land uses is the primary pathway out of poverty for many in the Lao P.D.R. **Sustainable Landscape Management** is about balancing the development needs of rural communities against sustaining the natural environment and its biodiversity and ecosystem services. **Participatory Agricultural and Forest Land Use Planning** at the Village and Village Cluster level (PLUP) is a process that has the potential to contribute to achieving this balance in Laos. The research conducted by the National Agriculture and Forestry Research Institute (NAFRI) in partnership with the Center for International Forestry Research (CIFOR), suggests that this is possible, however, only if improvements are made to the land use planning process and follow-up activities implemented after. The PLUP implementation should pay greater attention to *visualization and learning* in order to ensure that local stakeholders become the main actors of a process that will affect their future livelihoods. *Networking and extension* will support the transformation of the resulting land use plan into sustainable landscape management.



Policy messages

- Participation is more than just gathering people in a meeting room. Improved methods and the systematic consideration of visualization and learning are greatly improving the efficacy, efficiency and equity of PLUP.
- The proposed negotiation support instruments for PLUP allow for more balanced power relations when multiple stakeholders (villagers, District Agriculture and Forestry Office (DAFO), Provincial Land Management Authority (PLMA), District Land Management Authority (DLMA), Provincial Agriculture and Forestry Office (PAFO)) discuss landscape management at the village and village cluster levels.
- Undertaking PLUP should only be considered when there is adequate support for networking and extension. These are concrete activities that transform plans into sustainable landscape management.
- Monitoring is an essential part of Sustainable Landscape Management. The PLUP process should be monitored to ensure that the pillars of Sustainable Landscape Management are implemented. Landscape Monitoring should be undertaken to provide landscape managers with the information needed to assess and adapt plans and management strategies.



Pillars of Sustainable Landscape Management in Laos

Sustainable landscape management in Laos is supported by three pillars: *participation, integration and monitoring*. These pillars support the process of PLUP and sustaining

landscape management after. Five instruments are suggested for improving the PLUP process and ensuring the transformation of land use plans into sustainable landscape management: *visualization, learning, networking, extension and monitoring*.

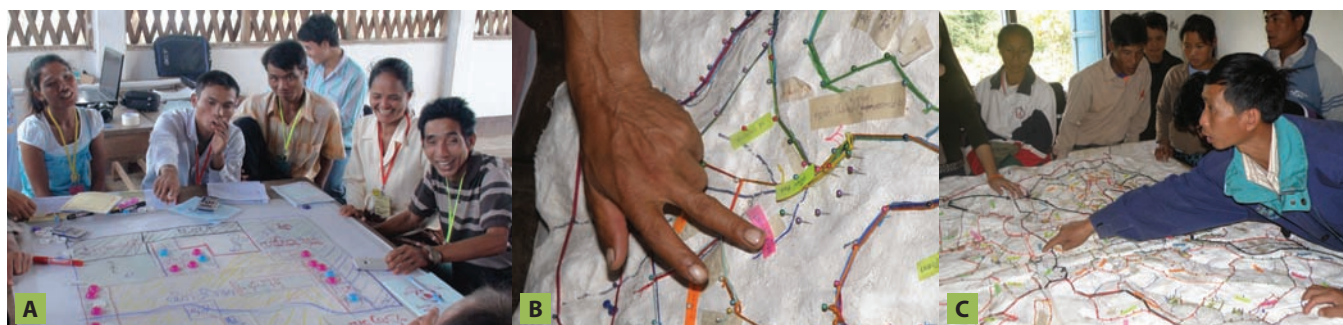
From Participatory Land-Use Planning to Sustainable Landscape Management				
Pillars	PLUP process		After PLUP	
Participation	Visualization	Learning	Networking	Extension
Integration				
Monitoring	Process monitoring		Landscape Monitoring	

Pillars of Sustainable Landscape Management

What do they mean?	
PARTICIPATION	<p>Who participates - balancing:</p> <ul style="list-style-type: none"> • Gender (women and men). • Socio-economic status (poor, medium and rich). • Function (village authorities and ordinary villagers). • Ethnicity (different ethnic groups). <p>How people participate - quality and frequency:</p> <ul style="list-style-type: none"> • Understanding of planning processes and landscape management, including rights and responsibilities. • Confidence to speak and debate. • Presence throughout meetings. <p>Capacity to influence the process:</p> <ul style="list-style-type: none"> • Power balance of participants (ability of village representatives to negotiate with district representatives). • Empowerment of land management committee members through the PLUP process.
INTEGRATION	<p>Knowledge:</p> <ul style="list-style-type: none"> • Using scientific knowledge (spatial, ecological and socio-economic) and local knowledge (participatory maps and resource use) to make more informed choices. <p>People, institutions and sectors:</p> <ul style="list-style-type: none"> • Involve people from all levels of government, in particular, village, village cluster, district and province, to make sure plans are harmonized. • Involve people from different sectors, such as Ministry of Agriculture and Forestry (MAF), National Land Management Authority (NLMA), Ministry of Planning and Investment (MPI), National Protected Area (NPA), as well as the private sector and non-government organizations in conservation and development. <p>Scales:</p> <ul style="list-style-type: none"> • Village, village cluster (kumban) and district. • Coordination of land management committees across scales (e.g. representatives of villages committees involved in village cluster committees).
MONITORING	<p>Monitoring is needed to adapt the PLUP process and landscape management to changing circumstances and unpredictable outputs of negotiations. Monitoring is about:</p> <ul style="list-style-type: none"> • Developing indicators, designing processes for measurement and systems of communication. • Measuring the indicators, analyzing the results and communicating the information to decision-makers. • Assisting decision-makers in assessing how effective plans and activities have been and where changes are needed. Critical for adapting plans and strategies to changing circumstances, new information and unforeseen challenges.

PLUP Process Instruments

What do they mean?	
VISUALIZATION	<p>Visualization tools are a fundamental part of successful land use planning and future landscape management. Visualization tools and three-dimensional maps can complement traditional two-dimensional, topographic maps. They support the participation and understanding of local communities by:</p> <ul style="list-style-type: none"> • Allowing villagers to imagine their landscapes more easily. • Representing environmental and spatial information in a more realistic and understandable way. • Providing a common basis for discussion.
LEARNING	<p>People involved in PLUP have different perspectives, experiences and expectations. A learning exercise is needed to:</p> <ul style="list-style-type: none"> • Understand the relationship between the landscape zoning process and the distribution of resources. • Appreciate the consequences of land-use changes on local livelihoods. • Understand the concepts, mechanisms, rights and responsibilities of planning and landscape management at the village and village cluster level.



Visualization instruments support interactions between people and landscapes. Participatory activities are supported by i) a simplified display of a random landscape used to train people understanding relationships between land uses and livelihoods (Photo A). ii) a three-dimensional representation of the village landscape (Photo B). The vertical dimension facilitates the comprehension and thus the participation of villagers (Photos B & C).

Learning instruments include a zoning simulation tool and role playing game developed by the project named 'PLUP Fiction.' It provides a unique way to show villagers how non-spatial socio-economic values and the landscape interact. By providing cost-benefit assessments of different land use plans, villagers are able to perceive the consequences of zoning decisions on their livelihoods. Through this learning process villagers change from being mere observers to becoming the main actors of land use planning.

PLUP Process Monitoring

Ensuring participation and integration	Indicators	
<p>PLUP process monitoring is about ensuring an adaptive process that contributes to more effective, widely understood and accepted land use plans. It is about measuring how well the pillars of PLUP are being practiced. It is about ensuring the quality of the process. Monitoring the process involves measuring the indicators of participation and integration. When activities are not working, monitoring provides the information to learn why and adapt the process to ensure that they are.</p>	<p>1. Participation</p> <ul style="list-style-type: none"> • Presence • Voice • Understanding • Balance 	<p>2. Integration</p> <ul style="list-style-type: none"> • Knowledge • Institutions • Sectors • Scales
Key lessons		
Recommendations		
<ol style="list-style-type: none"> 1. Monitoring participation and integration should involve both qualitative observations and quantitative measurements. 2. The instruments can be used during the implementation of PLUP to ensure the quality of the process. 3. Quantitative measures can provide objective baseline data for comparison and improvement of PLUP initiatives. 		
Factors affecting PLUP success in the long-term		
Data storage	Capacity building	Land Registration
<p>PLUP data, such as documents, maps and three-dimensional models need to be securely stored for future use. PLUP agreements on village boundaries, land use zones, land management plans and the formation of land management committees have to be stored both electronically and on paper after completion.</p>	<p>The skills of team members in boundary delineation and land use zoning, especially the use of new processes and instruments, need to be developed. The team members should also learn the value of recording and storing data of all types on paper and electronically.</p>	<p>The communal land registration activity should take place after land use zoning is completed. A nested system of land registration is proposed. This involves parcels of communal land being titled based on the PLUP land zoning. After this, individual registration would be implemented inside the communal land for permanently used plots.</p>

After PLUP: transforming land use plans into Sustainable Landscape Management

What do they mean?	
NETWORKING	<p>Communication networks for landscape management:</p> <ul style="list-style-type: none"> • Within and between villages (village cluster and neighbouring villages) and other institutions and people (DAFO, NPA, traders). • Between levels of government (national, provincial, district). <p>Places to negotiate :</p> <ul style="list-style-type: none"> • Forums where villagers can meet, discuss and negotiate landscape management strategies with district officials. • Quarterly village cluster agricultural and forest land management committee meetings planned and incorporated into the final PLUP agreement.
EXTENSION	<p>Financial and technical support for implementing land use plans:</p> <ul style="list-style-type: none"> • Extension support for new agricultural technologies, improved cultivation and animal husbandry, and credit for investment. • Village action plans to incorporate innovative practices and techniques. <p>Access to technical, monitoring and landscape management support via the Village Cluster Technical Service Center.</p>

After PLUP Monitoring

Landscape Monitoring		
Overview	Indicators	
<p>Landscape monitoring is about learning about the long-term changes of people, their lands and natural resources as result of land use planning, extension activities and other interventions. It provides landscape managers with the information about what is working and what is not. It is an instrument for adaptive management that contributes to sustainable landscape management. It is also used to decide when a new PLUP is necessary in rapidly changing landscapes.</p>	<ol style="list-style-type: none"> 1. Natural 2. Physical 3. Social 4. Financial 5. Human <p>Monitoring Institutions</p> <ol style="list-style-type: none"> 1. Village (village unit, village authorities, village head, village agricultural and forest land management committees) 2. Village development cluster technical service centre (TSC) 3. District (DAFO and DLMA) support for the TSC in monitoring and reporting 	
Key lessons		
Indicator Selection		
<ol style="list-style-type: none"> 1. Indicators should be selected on the basis of their relevance and importance to villagers and other people and institutions. Relevance and importance may be judged on economic, livelihood or other values. 2. Identify the most likely socio-economic, institutional and environmental factors that may affect the use of that indicator in a monitoring system prior to incorporating it. 		
Factors affecting villagers participation in landscape monitoring		
Positive impact	Negative Impact	Variable Impact
<ul style="list-style-type: none"> • High level of dependency on forest products. • Villages with smaller populations are easier to mobilize for monitoring. 	<ul style="list-style-type: none"> • Fall in prices of monitored resources. • Competition with other livelihood activities. • Low level of dependency on forest resources. • Villages with larger populations are more difficult to mobilize for monitoring. 	<ul style="list-style-type: none"> • Seasonal variations in harvesting. • Accessibility: less forest dependency but greater understanding of the costs and benefits of monitoring with the opposite situation for more remote villages. • Ethnic heterogeneity: diversity of management practices and viewpoints in discussions and conclusions. • Gender: seasonal activities may affect gender balance.
Sustainability		
<ol style="list-style-type: none"> 1. Limit the number of monitored species and indicators. 2. Regular meetings for villagers to compile and discuss the results of monitoring. 3. Include the participatory monitoring activities in other related activities, such as PLUP, which will enhance the sense of responsibility for landscape management by villagers and higher level authorities. 		

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