

Unusual partnerships

Lessons for landscapes and livelihoods from the Doi Mae Salong landscape, Thailand



LIVELIHOODS AND LANDSCAPES STRATEGY - Landscape paper n°5

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Executive summary

The Doi Mae Salong watershed in the north-west of Thailand is the headwater of the Mae Chan River, a tributary of the Mekong River. As such, it is an extremely important landscape for the economy of the region. The landscape has the particularity of being designated a Military Reserved Area and coming under the control and command of the Royal Thai Armed Forces (RTAF).

Poor and unsustainable agricultural practices, forest encroachment, and a lack of understanding of the impacts of activities on the watershed further downstream had resulted in the landscape being severely degraded. This was exacerbated by poverty among significant portions of the population and lack of certainty among communities surrounding land-use and access rights.

In response to this, to coincide with the King's 80th birthday celebrations, the RTAF decided to implement a programme of forest landscape restoration. However, this resulted in tension with the local populations – largely Hill Tribes – surrounding competing land uses. In the response, the RTAF, to its credit, rather than persisting with its efforts sought the assistance of IUCN. As a result, Doi Mae Salong became an LLS landscape.

This paper describes the interventions undertaken as part of efforts to restore the landscape and improve the livelihoods of the communities that inhabit it.

Interventions included the formation of multi-stakeholder platforms to create a space for dialogue and ensure participatory land-use planning. The platforms were not static by any means and new stakeholders were included as they were identified. Other activities included the creation of tree nurseries to provide seedlings of native forest for rehabilitation of the forest land; identifying products – crops, NTFPs and medicinal plants – for sale in local markets; and a focus on action learning. Land-tenure arrangements too proved key to these interventions. Land tenure in the landscape was based on customary law. This, coupled with competing and overlapping legislation over use and access rights, weakened incentives by local communities to intervene to protect the watershed. Project partners recognized that reforming land tenure arrangements would not be feasible. However, efforts were made to 'tweak' the arrangements through consultation in the multi-stakeholder platforms thereby offering assurances to local populations about continuing access and use rights. The impacts have been positive. Local communities working with the LLS team have been encouraged to implement efforts aimed both at protecting the landscape and providing sustainable livelihoods over the long term.

Crucially, one of the major take-aways from these interventions is that formal, legislated land tenure rights are not always a pre-condition for encouraging sustainable practices in the landscape; informally recognizing access and land-use rights can go a long way towards encouraging sustainable practices.

About LLS

The Livelihoods and Landscapes Strategy (LLS) is a global project of IUCN's Forest Conservation Programme funded by the Directorate General for International Cooperation (DGIS) of the Netherlands Ministry of Foreign Affairs. Its first phase ran from 2007-2011. Its overall goal has been "the effective implementation of national and local policies and programmes that leverage real and meaningful change in the lives of rural poor, enhance long-term and equitable conservation of biodiversity and ensure the sustainable supply of forest-related goods and services in line with nationally-defined priorities".

LLS was intended as a direct response to two of the major challenges facing sustainable development at the time of its design in 2006:

- How to find practical ways to support governments and donors in ensuring that the benefits of
 national poverty reduction strategies reach the rural poor, and in particular those who are highly
 dependent on natural resources including forests and trees.
- How to reverse the current lack of momentum in implementing international commitments on sustainable forest use and conservation and therefore address the slippage of forest-related issues within international development.

The strategy is predicated on the belief that although these two challenges are inextricably linked, natural resource management and conservation organizations have yet to make a convincing case, on a large enough geographic or institutional scale, as to how improved resource use and conservation can make a difference to the livelihood security of the rural poor. It is hardly surprising therefore that ministries responsible for finance and economic Planning have tended to be unaware that forest goods and services remain as important as ever for many poor people and could be better harnessed to contribute to rural poverty reduction, as well as the national economy.

LLS has contributed to shaping a bold new vision of forests as multifunctional assets that can make a real difference to rural poverty, economic growth, environmental quality, human well-being as well as biodiversity conservation. It has promoted this vision among both the forest sector and decision makers in other sectors whose own goals and targets impact, or are impacted by, the state and integrity of forest resources.

What is a landscape?

A landscape is a mosaic of different types of land use such as agriculture, forests, pasture and conservation areas. Managed as a whole, a landscape serves a variety of needs for various stakeholders. The LLS vision of a landscape is of multiple and complementary land uses based on negotiation rather than centralized planning. Landscapes do not exist in a vacuum, but are influenced by a wide range of external factors including policies and economic conditions generated far outside it, land use in adjacent landscapes and perhaps remote physical features such as dams. Addressing landscape management issues always requires interventions outside as well as inside the landscape.

The strategy has four key thematic components, each addressed in a mutually integrated manner:

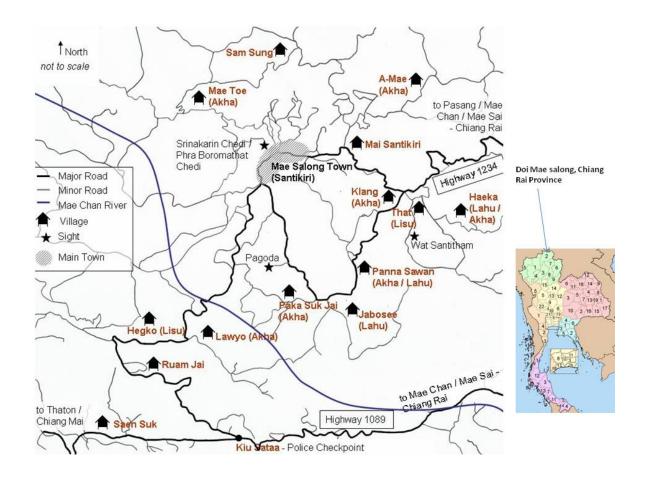
- i) forests and poverty reduction,
- ii) markets and incentives,
- iii) governance, and
- iv) transforming landscapes

Targeted geographic interventions in nearly 30 landscapes across 23 countries in Africa, Asia and Latina America looked at the linkages between the four themes thereby avoiding their treatment as stand-alone issues.

This paper is one of a series of case studies, exploring and reporting on the experiences from particular LLS landscapes, collectively contributing a host of lessons and insights. The diversity in the landscapes is reflected in the Landscape Papers themselves, whose structures, purposes and outcomes vary depending on each respective case and context in question.

The papers draw on data and information generated over the last 5 years and in most cases, at the time of publication, successes on the ground have continued into 2012, when the first phase of the project officially closes. With sustainability integral to the LLS project design, the work of LLS will in effect live on in each landscape and often much more widely than that, influencing local, regional and international practice and policy in the manner already detailed and reported in the LLS Landscape Papers, Thematic Papers, Thematic Briefs and Research Papers.

Map of the region of Doi Mae Salong



Doi Mae Salong landscape

Introduction

The place and the concept

Overview

Doi Mae Salong watershed is a rural mountainous area in northwest Thailand. It is the headwater of the Mae Chan River, a tributary of the Mekong River. Elevation ranges from 1200m to 1800 m above sea level. It is a multifunctional and highly fragmented landscape. On the hilltops there are areas of natural forest, consisting of a mix of dry forest, evergreen forest, bamboo forest and pine forest. These natural forests are frequently degraded. The slopes below are cultivated with upland rice, cash crops (e.g. corn), and coffee and fruit plantations. At lower altitudes tea plantations and rice paddies are cultivated.



Doi Mae Salong landscape, ©IUCN/Asia

The entire watershed covers an area of 335 km². The core area, which constitutes the LLS landscape, extends over 90 km² and is inhabited by 15,000 people from various ethnic backgrounds. Hill tribe people in the area include Lisu, Akha, Lahu and Lawa people. In addition, survivors of the Chinese Kuomintang 93rd division fought their way into Mynamar in the early 1950s and subsequently moved into Doi Mae Salong. Along with their descendants, they have lived in the area since then and have been granted Thai residence permits in return for supporting Thai army efforts against communist forces during the 1970s. There are also refugees and migrant workers from Myanmar. The latter generally depend on daily wage labour for their livelihoods. Table 1, below, presents a breakdown of the population by ethnic group in all of the villages in the Doi Mae Salong LLS landscape.

The LLS landscape is a National Reserve Forest; it is part of a military reserve area under the control of the Royal Thai Armed Forces (RTAF). The boundaries of the core area for the LLS project were originally proposed by the RTAF. They were subsequently modified following stakeholder consultation and in response to stakeholder input.

The area was selected as an LLS site for several reasons. The core area is the headwater of two small rivers (the Mae Chan and Mae Salong) that flow into the Mekong. As such, it is of critical importance: landscape restoration will have positive effects on downstream landscapes as well as in the target landscape. Forest resources and landscape functions in Doi Mae Salong are severely degraded due to population pressure combined with slash and burn practices. The RTAF and local communities acknowledged and expressed a strong interest in the need to restore watershed function in the area.

	Village name	Chinese	Akha	Mian	Lisu	Lahu	Shan	Thai
1	Santikiri	5,844	1,614	0	0	0	507	101
2	ArLae	0	101	0	0	0	0	0
3	Laosip	0	0	177	0	0	0	0
4	Baan Tat	0	57	0	731	0	0	0
5	Paka Sukjai	0	772	0	0	0	0	0
6	Jabusee	0	0	0	0	126	0	0
7	Baan Klang	93	122	0	0	35	0	0
8	Haeka	0	177	0	0	309	0	1
9	ArBae	0	344	0	0	0	0	0
10	Paka Samakee	34	318	0	0	29	0	2
11	Phana sawan	121	279	0	0	130	0	0
12	Mae Chan Luang	0	166	0	0	0	0	0
13	Mae Tue	0	334	0	0	0	0	0
14	Piangchasai	137	574	0	0	26	0	0
15	Mai Santi	233	118	0	0	30	15	0
16	Pang Wao	0	292	0	0	65	0	1
17	Tungjasai	118	115	0	0	0	0	2
18	Lawyo	0	259	0	0	0	0	0
19	Heko	0	0	0	264	0	0	0
20	Lo Chang Chon	0	211	0	0	0	0	0
21	Angloh Akha	0	164	0	0	0	0	0
	TOTAL	6,580	6,017	177	995	750	522	107

Table 1: Population of the target villages of the LLS project in the Doi Mae Salong

Source: Tambon Administrative Organization (TAO) Mae SalHHHHong, 2010

Land-use activities in the landscape impact on downstream water users in the lowlands. In light of this, LLS activities included discussions aimed at developing a network of water users including upland users (in Doi Mae Salong) and downstream water users.

IUCN/LLS involvement began in 2007 when the RTAF recognized that Doi Mae Salong was highly degraded and initiated a programme of forest restoration (THB 95 million over fourteen years) to coincide with the King's 80th birthday. Initial efforts to plant trees on land used for agriculture drew strong protests. Recognizing that there were obvious problems with the 'top-down' approach, the RTAF decided to seek advice from IUCN about how better to manage the restoration and conservation of Doi Mae Salong. As a result, Doi Mae Salong was selected as an LLS landscape.

There are 21 villages in the main focus area. There is no categorized breakdown of land-use types within the landscape as a whole. However, work on land-use planning has been carried out to identify

agricultural land in two pilot villages (Phana Sawan and Lawyo). This work is still ongoing and data are not yet available for publication.

More detailed discussion of activities in the landscape will be provided later in this paper, but it is useful to provide a quick overview here.

The most important intervention was the development of a multi-stakeholder platform (MSP) for land-use planning and negotiations. The MSP includes representatives of local communities, the RTAF, IUCN, government departments and NGOs. The creation of this platform has facilitated development of trust between stakeholders based on genuine participatory decision making. In particular, this has given people confidence about continued access to land and natural resources. The institutional innovation has allowed natural resources to become genuine assets for community livelihoods.

Land-use planning has been carried out in the two pilot villages. It was intended to demonstrate to the government the potential for communal land management by communities. This strategy has already borne fruit. Through the Hill Area Development Foundation (HADF – one of the LLS partners) Doi Mae Salong was proposed as a case study to the government by the NGO Coordination Network. The case was discussed with the Prime Minister's Office. The government announced in June 2010 a new policy on communal land-use rights, *Chanot Chom Chon* (Community Land Title). This new policy will be tested in villages where there are conflicts between community and government land. The two pilot villages have now become part of a national movement. More than 80 communities are now being considered as pilots to be tested under this new policy. The objective is to show that land can be managed by communities in a sustainable way.

Other activities in the Doi Mae Salong landscape include forest landscape restoration using both forest species and mixed agroforestry, support for NTFP development, promotion of improved agriculture (including introduction of fast growing and improved fruit tree varieties), paddy rice expansion, soil conservation and ecotourism.

It is important to understand that Doi Mae Salong is no longer a remote area. It is quite close to Chiang Rai, the provincial capital, and enjoys good road access to the main town The most important intervention was the development of a multistakeholder platform for landuse planning and negotiations.

(Santikiri). All villagers have reasonable access to roads. There is an active local market and a strong tourist industry, including several large resorts. The tourism sector includes a combination of domestic tourism and tourism from Yunnan (where the 93rd Division came from) and Taiwan. Some elements of the population (especially the Chinese) are quite prosperous. However, there are quite significant differences in economic status. In particular, there are obvious spatial differences: the areas closer to the main town and to main roads are relatively prosperous compared to the more remote villages.

Landscape issues

The main landscape problems at the beginning of LLS included:

- The severely degraded condition of the watershed;
- Poverty among significant portions of the population, associated with a lack of opportunities;
- Forest encroachment;
- Unsustainable agricultural practices such as the use of spray pesticides and extensive burning;
- The top-down approach of the RTAF in its efforts to plant trees.

Stakeholders

At the start of the LLS intervention perceived stakeholders included the RTAF, local people and IUCN. Additional stakeholders were subsequently identified. Other stakeholders were later invited to join as they formally became LLS partners. These included FORRU (Forest Restoration Research Unit) from Chiang Mai University, the Hill Development Area Foundation (HDAF) and the Royal Project.

The first step in the LLS intervention was to hold consultations in every village, in order to hear the views of villagers. This was followed by a landscape-level public consultation. The consultation process formed the basis of all subsequent action.

The consultation process was followed by the constitution of the multi-stakeholder platform. As a result of the consultations, several relevant line agencies were also identified as important potential stakeholders. These were the Department of Agricultural Extension (regional and district offices), the Department of Agriculture, the Land Development Department, the Irrigation Department, the Water Resource Department and the Tambon Administrative Organization (TAO).

The different stakeholders and their interests included:

 RTAF: The RTAF's main interest was the restoration of watershed forest on land under their responsibility. The RTAF had been criticized in parliament in 2006 for poor management in military reserved areas throughout the country. This motivated the forest restoration project in 2007, in honour of the King's birthday.

(The role of the RTAF¹ in military reserved areas was historically related to security concerns during the period of communist insurgency in Thailand. However, the RTAF has a long history of involvement in development activities in these areas. There is a Joint Development Command within the Civil Affairs Department of the RTAF. Thus there was already a 'home' for LLS when the intervention started.)

- The various **government departments** whose interests are dictated by their individual functional responsibilities.
- IUCN, which was keen to showcase LLS concepts.
- At the community level interests were varied, but essentially related to improved livelihoods and secure access to resources. People have interests in particular activities such as agriculture and tourism. These interests often overlap, so it is not easy to classify separate interest groups within the community.
- The Hill Development Area Foundation (HADF), which has had a long-term interest in rural development and community rights in hill areas. It was already involved in education activities in Doi Mae Salong when LLS started. (HADF now has a contract with LLS to carry out activities.)
- The Royal Project and FORRU, who were invited to become partners and to implement various activities in line with their core missions. These are sustainable rural development in the case of the Royal Project and the restoration of tropical forest ecosystems in the case of FORRU.
- The Plant a Tree Today Foundation (PATT), which provided funding to establish the framework species demonstration plot, training, and creation of school nurseries for the production of indigenous forest species seedlings.

When dealing with stakeholder groups, interventions sought to identify common interests, rather than simply meet individual interests.

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¹ The RTAF coordinates the separate military commands – Army, Air Force and Navy.

Developing the landscape concept

It is not entirely clear whether the different stakeholders truly understood the concept of 'landscape' in the sense that it is applied in LLS, although the RTAF commander, Major General Chaluay, certainly showed a sound understanding. Before the LLS intervention the RTAF essentially saw the Doi Mae Salong landscape as simply as a military reserved area. It was a space on a map rather than a mosaic of interdependent land uses. The fuller concept of the 'landscape' became truly clear following IUCN intervention.

Among other stakeholders there seemed to be good understanding of the concept of integration of conservation and livelihoods. While IUCN's approach linking livelihoods to forest restoration was articulated during every stakeholder workshop, the concept of 'landscape' was not articulated. Among communities, there has been little emphasis on explaining the concept of 'landscape'. Instead, the emphasis has been on the need to improve watershed function. This goal has been simplified and articulated as 'good forest, good water, good income, good life'. The concept of community forestry was well accepted in all target villages. The other government agencies indicated that they were happy with the integrated approach, although they may not necessarily have been aware of the concept of 'landscape' per se.

For LLS activities, the key is to understand the notion of an integrated and holistic approach. Highlighting the concept of landscape is not really necessary. What is important in the landscape approach is bringing stakeholders together to make decisions about land use.

This raises a potentially important issue for LLS generally: is the concept of landscape too difficult to explain, or too difficult to translate? Is an understanding of the concept really necessary for all stakeholders?

Goal of the landscape activity

The overall goal of the project was articulated as: 'good forest, good water, good food, good income, good life'. It was to be achieved through participatory multi-stakeholder land-use planning. This goal was not expressly written in any MOU, but it has been presented and repeated in meetings and presentations. It was developed through a multi-stakeholder process and refined as more stakeholders became actively involved. The process was adaptive and evolutionary; there was no grand 'roadmap' for the landscape at the outset.

Original discussions were initiated during consultations between IUCN and the RTAF and eventually <u>evolved</u> into institutional arrangements. The multi-stakeholder platform was the first institutional step. Members of the multi-stakeholder platform went to each village to explain the idea. It was not difficult to create such a forum because people could see the benefits. With the exception of TAO representatives, individual villagers were not involved initially, but joined later. No one was excluded. The forum began informally and evolved.

An important function of the multi-stakeholder platform was to enable negotiations about land use. An example of this was illustrated by farming activities on sites highly subject to erosion, such as slopes and hill tops. Here, negotiations focused on efforts to provide alternative land for farming in valleys. Such trade-offs seemed to offer genuine choice. For example, the RTAF sought to plant trees on agricultural land located on a ridge. Following negotiations, alternative farming land was provided to affected farmers whose activities were being displaced.

Biodiversity and landscape components

Baseline

While there were no comprehensive baseline data available for the landscape at the start of the project, there were nonetheless several useful sources of baseline indicators.

- The Forest Restoration Research Unit (FORRU) carried out biodiversity surveys within the remaining community forests some years ago, these served as baselines for these areas.
- No biodiversity surveys were carried out in the degraded watershed forests. But a biodiversity survey
 of all forests was undertaken for the whole landscape by FORRU. This covered vegetation. Data were
 made available from 30 plots. Of these, 10 were in secondary/regenerating forests, 10 in open
 habitats (rubber, tea, fallow, other agriculture), and 10 were in relatively undisturbed forests. This
 survey was completed in early 2011.
- Although there was no pre-LLS baseline of the extent of degradation, this was easily visible and
 photographs taken at the start of the LLS work were used as a baseline for comparison at the end of
 2010 (and later) to indicate the extent of restoration. (Photographs are available of almost all sites
 within the landscape, from the authors.)
- There were no baseline data for wildlife biodiversity, although it was clear that there was very little faunal biodiversity in the landscape. Community members noted that hunting was increasingly difficult.

Measures were put in place to assess landscape improvement. (Landscape restoration was the original goal of the RTAF and IUCN supported this from the outset.) The identification of invited partners (such as FORRU and the Royal Project) reflected this concern.

An important function of the multi-stakeholder platform has been to enable negotiations about land use.

- Monitoring was conducted in FORRU demonstration
 plots and data are available on growth rates, survival rates, canopy cover rate. For reforestation
 plots there was no ongoing monitoring save for records of areas planted by year.
- The number of seedlings provided was also recorded.

At the beginning of the LLS intervention (in 2007) the RTAF had a plan for forest restoration and maintenance of the core area. No separate forest management plan had been prepared at that time. For the two villages where land-use planning was carried out, community-based land-use plans included forests, but these had yet to be discussed with the government (TAO and Royal Forest Department – RFD).

The land-use plans for these two pilot villages were developed by community members coordinated by the HDAF (under LLS contract).

Evolution and outcomes

There have been a number of changes in the landscape since LLS started:

• Some 4,000 rai (640 ha)² of degraded forest area has been restored, including framework species and multi-purpose species.

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² One hectare equals 6.25 rai.

- In terms of agroforestry, 120 rai (about 20 ha) of coffee and macadamia were established on farming land integrated with contour lines in 2008-09.
- Coffee is also being grown in the shade of mixed species forest. People are being trained to grow coffee from seed. Approximately 60,000 seedlings (roughly equal to 200 rai 30 ha) were produced and planted in 2010. LLS provided the seed for these seedlings. In future people will be able to produce seedlings themselves without LLS support.

Several activities have been set up to enable continued improvement of the landscape:

- An area of 34 rai (about 5.5 ha) of new paddy was established as a pilot in 2009. This involved 18 farmers. The farmers were able to grow vegetables and cash crops between rice crops. This activity contributed towards agrobiodiversity and, by shifting farming towards permanent land use, reduced pressure for expansion into forests. It also led to reduced burning in the dry season.
- Indigenous trees are being collected for planting in nurseries including a school nursery.
- People are being trained to produce their own seedlings, both of forest species and fruit trees. This reduces the cost to farmers of tree planting.
- A medicinal plant plot has been established. This acts as a demonstration plot for farmers to learn about medicinal plants. Because of forest degradation most medicinal plants have become rare. Visits to medicinal plant specialists in other areas have identified plants that would originally have been in Doi Mae Salong and there is considerable interest in restoring these to the environment.

Not all of the changes described above can be quantified. However, the elements are in place and trends towards improvement can be clearly identified. It is clear that the attitude of people towards planting crops and trees as a contribution to greater diversity has changed. People now see greater value in forest land.

All of the biodiversity changes observed were in some way attributable (often very directly) to LLS (IUCN and partners). One external factor which has also in all likelihood contributed to changes in land management is increasing 'green' awareness among farmers and communities. There is a strong national trend against burning and destructive land use as green agriculture is now being encouraged from many different quarters.







Close up of plot one and a half years after planting

There now is good understanding of the underlying causes of degradation in the past. Essentially these included bad land-use practices and poor location of agricultural activities. These were largely the result of the absence of any system of land-use planning or clear processes for allocating land for agriculture and other purposes. Institutional arrangements for improved land-use planning are now in place and

seem to have strong support within the community and among all stakeholders. (Assessment of institutional arrangements will be discussed below.) These arrangements seem likely to be sustainable, particularly if the new *Chanot Chom Chon* programme is successful.

Long-term management thus seems likely to continue through the multi-stakeholder platform which continues to facilitate land-use decisions. There will be continued investment in restoration from the RTAF budget until 2020.

The main incentives for sustainable management include increased confidence that trees people plant will become an asset for the future. This is closely related to confidence about negotiated land allocation processes under the multi-stakeholder platform. A second factor is increasing confidence that environmentally friendly agroforestry practices will be recognized by government agencies.

Socio-economic components

Baseline

There was a good general understanding of livelihood diversity at the beginning of LLS work. The LLS coordinator had worked extensively in similar landscapes in the northern region. In particular he understood the significance of issues such as migration. However, some issues specific to Doi Mae Salong were not fully appreciated, such as the importance of tourism.

Baseline socio-economic data are available from the TAO and updated on an annual basis. However, these data refer to average household incomes in Tambon and are thus of very limited value for measuring changes in specific LLS villages.

A separate socio-economic study was carried out for the Poverty Reduction Project. This is a three-year project leveraged through LLS and intended to complement LLS activities. It started in May 2010 and will continue for three years, at the end of which income will again be measured for comparison purposes. The survey covered seven villages. For each village, households were classified according to categories of annual income. In one village the income range was from THB 9,000 to THB 200,000 per year. The survey also recorded land 'ownership' (access) per household. While this is good baseline data, it post-dates the start of LLS.

The lack of baseline data on poverty/income levels from the beginning of the LLS intervention is not a major concern as poverty reduction interventions so far implemented are not expected to have effected measurable change as yet. Rather, interventions have focused on setting up conditions for change over a longer period.

The intervention with possibly the greatest potential for contributing to increased incomes is support for coffee and macadamia planting in agroforestry plots. These activities will not yield immediate results as coffee can only be harvested in the third year of growth and macadamia from the sixth year. Projected earnings have been calculated (using current prices) for these crops, but these are not built on a baseline of current earnings. However, they do indicate potential increases in income for farmers that have invested in these crops.

Based on a mixture of 400 coffee trees and 16 macadamia trees per rai, projected average annual income per rai over 15 years has been calculated as THB 22,393. These calculations are based on current prices and do not include production costs. They assume that coffee will produce income from year three and macadamia from year six.

Evolution and outcomes

Changes in the livelihoods of people living in the LLS landscape are identified through regular field visits and regular stakeholder meetings. At present, it is still too early to identify any improvements in livelihoods or poverty reduction. However, the elements are in place that will effect change in the future. The planting of agroforestry species (chosen so that there is a distribution of income and labour throughout the year – depending on harvest season) is very likely to contribute to incomes in a few years time. Medicinal plants also have the potential to contribute to improved livelihoods.

As part of the Poverty Reduction Project, a monitoring system will be set up to measure changes in income.

Addressing livelihoods and poverty reduction requires addressing institutional barriers and implementing new production activities to create a situation where livelihoods can be improved in the medium term. Considerable progress has already been made in this direction.

Although there was no specific plan for improving livelihood resilience, it was very much a part of people's thinking in the landscape. From discussions with community members it was clear that people viewed food security and self-sufficiency as the key elements of resilience. People discussed the global food crisis, the energy crisis and the environmental crisis (including climate change) and felt that the actions they were implementing were helping to prepare for and adapt to these crises. LLS interventions will contribute to readiness. These issues were mainly discussed in training fora, study tours, etc. and represented the views of a cross-section of the population.



Discussion with community members

There is no measurable impact of the devolution of natural resources management and its impact on poverty at this stage. It is clear, however, that the multi-stakeholder process has made people more confident about future income and livelihoods.

So far, no negative impacts from the intervention have been recorded. Regular informal monitoring visits and the multi-stakeholder platform will likely identify unintended consequences and impacts as they emerge. This requires conscious awareness on the part of LLS staff of the need to look for such impacts. There is a need for more systematic exploration of possible negative impacts, especially in terms of equity.

There is some potential for negative consequences in the future. One possibility is that as the landscape becomes a more attractive destination, land may become more expensive thereby disadvantaging local people. (While land cannot be legally sold, in practice, it is informally sold, but without land title.) It is possible that people who sell land may encroach on forest land. This has happened in other areas; including during the 1997 Asian Financial crisis. It is possible that it may happen in Doi Mae Salong.

Market analysis

Baseline

Before the LLS intervention, the main existing products for non-local markets were tea and some coffee. Tea was especially important and some was exported. Tea is a very important product for visitors to the local market and there are many tea and coffee shops in Doi Mae Salong (around 30 in the main town). Owners and merchants are mostly local Chinese. The sale of tea and coffee also benefits merchants, mostly Chinese (local). These products also benefit the people who provide labour – in the fields, in factories and in shops.

The local market is quite developed and deals with agricultural products and a great variety of other products – clothing, household goods, etc.

A rapid survey of available agricultural and off-farm products was conducted by the LLS Coordinator and a consultant for the Royal Project in August 2008. This included a survey of market demand for products in seven villages in the landscape. The survey was accompanied by a market analysis on NTFPs, agricultural products and handicraft items in two more villages (JaBoSee and Lawyo).

The rapid survey revealed that tourism, good infrastructure and a strong local market offered the best opportunities for economic development. It also noted the importance of existing fruit crops in the landscape. Factors limiting utilization of market potential included limited willingness of villagers to work together in groups. Limited knowledge of post-harvest activities, especially food crops, was also identified as a constraint. Another issue was poor quality of products. The survey identified actions to address these issues.

It was also suggested that there is potential for organic tea, the promotion of high quality Arabica coffee, development of improved fruit trees through grafting, raising of black chickens in fruit orchards and the production and use of bio-fertiliser.

It has become clear that there is little need to develop markets and market chains in Doi Mae Salong. Marketing facilities for diverse products are readily available and the entrepreneurial skills are also readily available. Skills, market access and policy do not represent barriers to marketing. Rather, barriers to income generation from agricultural and forest products are the result of poor product quality and the need to focus on interventions that could specifically benefit the poor.

Evolution and outcomes

The range of products sold in local markets has not increased since LLS was initiated, with the exception of the sale of flower pots and some vegetables and chickens/eggs to resorts. Trees produced in the school nursery have been sold to LLS to be planted in FLR plots, but have not been sold on the market. Purchase by LLS is an incentive to support the school nursery.

There has been no impact on more distant markets resulting from LLS activities. The market is already there and people are selling every day – vegetables, tea, coffee, etc.

New products promoted by LLS are not yet ready to be marketed. However, the market is there. In particular, there is now a very large domestic market for coffee in Thailand.

While major work on developing markets is not a focus of LLS at Doi Mae Salong, there are some small initiatives which provide additional opportunities to market local produce:

- LLS has identified a location on the roadside near Lawyo village where people may be able to sell
 products to travellers. LLS and the TAO will use Poverty Reduction Project money to support
 this.
- Every year LLS contributes support for a local festival to sell products. This is jointly organized with Chiang Rai Province, the TAO and the Tourism Authority Office.
- Three interest groups have been formed to market flower pots. They have 20 members each (30% of members are women). These are all poorer people as everyone in the villages selected for this activity is essentially poor.

For income generation activities the main principle of LLS at Doi Mae Salong is to focus on people with a lack of opportunities.

Improved forest and ecosystem governance

Baseline

Before LLS started, the RTAF had the authority to control Doi Mae Salong, but it was not physically present. The RTAF had moved out and came back in 2007 when it tried to implement reforestation activities, leading to conflict over land use.

At the beginning of LLS only IUCN and RTAF were involved in the work. The increase in the number of institutional actors is clearly demonstrated by increased membership of the multi-stakeholder working group. This increased as a result of the consultation process.

An institutional assessment of the effectiveness of institutionalization of the multi-stakeholder process was carried out in July/August 2009 as part of a Forest Landscape Restoration survey.

The essential focus of the LLS intervention has been the development of new participatory multistakeholder governance arrangements for landuse planning and management. It is clear that all of the subsequent activities and innovations have arisen out of these new institutional arrangements.

No details are available on local/informal land-use decision making prior to the return of the RTAF. However, it is almost certain, consistent with the situation throughout the hill areas of northern Thailand, that local processes involving village leaders would have existed. This is normal in ethnic communities in the north. While such arrangements would have governed access to farming land, it is doubtful that there was much concern with forest management as such.

The main legal/policy issue prior to LLS was the absence of any officially recognized land tenure or land title. All land use was technically illegal and all forest was classified as Conservation Forest under the Forest Conservation Act. This is technically still the situation and access to land in Doi Mae Salong remains outside formal tenure. This is the norm throughout much of northern Thailand where farming in forests is common and in effect tolerated, if not strictly legal.

The unusual status of Doi Mae Salong as a military reserved area has created some room for flexibility thanks to the authority granted to the RTAF by the Royal Forest Department (RFD).

Even though the Thai Constitution clearly states that local people should have management rights over natural resources, the effect of these rights is constrained by specific laws, regulations and bureaucratic practice. There is also a problem with duplication of authority. Various agencies have separate authorities and regulations. For example, the TAO's authority is constrained by the need to operate within forestry

law. Despite its natural resource management mandate and authority, it cannot make forestry decisions in isolation.

LLS at Doi Mae Salong is trying to work at local level, experimenting with a 'bottom-up' approach to land use and natural resource management planning. The idea is to try to address the duplication of authority through a joint decision-making process.

Evolution and outcomes

The essential focus of the LLS intervention has been on the development of new participatory multistakeholder governance arrangements for land-use planning and management in the core landscape. It is clear that all subsequent activities and innovations have arisen out of the new institutional arrangements.

The changes were the specific outcome of collaboration between RTAF and IUCN at the beginning and increased involvement of other stakeholders and partners in LLS as the intervention proceeded.

As evidence that things are done differently, informal interviews with local people indicate a high level of trust in the RTAF and confidence that access to land and resources will not be arbitrarily removed. A small survey undertaken in 2009 found very positive indications of awareness of decision-making processes and general satisfaction among communities about the way it worked. There was also a strong feeling of confidence about resource access in future. Although formal changes to land tenure (provision of land certificates) are not likely in the Thai political context in the foreseeable future, informal arrangements in place contribute to a form of secure tenure.

Confidence and trust encourage investment of labour and other inputs. This is a very important point and contradicts the view of some tenure theorists that secure legal tenure is a necessary precondition for people's willingness to invest time and resources to secure long-term benefits from agriculture and other land uses. The experience of Doi Mae Salong supports the alternative view that confidence about continuity of access to land and resources is often as important as firm legal tenure. It is an excellent example of the way informal and

What we see at Doi Mae Salong can be likened to 'tiptoeing towards tenure' in the absence of the likelihood of formal tenure reform.

incremental changes to tenure can benefit natural resource management and livelihoods.

The 2009 survey is not at all definitive, but supports anecdotal data obtained through informal discussions. Interviewees in the survey included nine community members, eight implementers (extension officers and village heads) and four decision makers (TAO, RTAF, members of stakeholder group). The sample was very small and interviewees came mainly from two villages where there has been a high level of activity (Phana Savan and Lawyo). There is a need to expand the survey to look at other villages, focusing on 'community members' not leaders. The expanded survey should focus on three issues: (1) awareness of LLS processes, (2) trust in the processes and (3) confidence about access.

While it seems clear that most people are pretty aware of the deliberations of the multi-stakeholder platform, the exact processes by which this happens remain unclear. It seems that village leaders involved in the platform inform other people at the village level, probably through an informal process. It is not known how much the leaders take concerns raised by villagers back to the multi-stakeholder platform, although evidence so far suggests that people are satisfied with the process. More needs to be done to investigate what happens inside this 'black box' at the village level.

Thus, although there have been no changes to formal/legal tenure arrangements in Doi Mae Salong, there has been considerable change in local working arrangements. In addition, it is important to recognize that the multi-stakeholder process and the 'tweaking' of tenure have contributed to the development of the government's new *Chanot Chom Chon* policy. As a policy experiment this may

contribute to long-term changes in tenure. What we see at Doi Mae Salong can be likened to 'tiptoeing towards tenure'.

In Thailand decentralization has been an important trend in governance generally and in natural resource management in particular. LLS has worked with the TAO and the province to build on the potential offered by decentralized governance.

Institutions

Baseline

At the village level there are two parallel systems of leadership. Both of these existed before LLS started and continue to exist. The official system consists of an official village headman and two TAO representatives per village. It applies if a village is officially established; and it applies to a 'key' village, not to a satellite village. There are eight key villages in the Doi Mae Salong core area. The unofficial system involves traditional leaders. The official leader could also be the traditional leader. On the other hand, the traditional leader could be a spiritual leader.

LLS implementation at Doi Mae Salong recognizes both systems and tries to reach out to both levels of leadership. Leaders of both systems are invited to stakeholder meetings.

The official village system is concerned with land ownership and the leaders are gatekeepers for every issue in a village. The official leader reports to the District Chief and is responsible for reporting births, deaths and house registration.

In Doi Mae Salong people's access to land is tolerated, but no official titles exist³. Local access rights depend on customary law. Local rights of older residents (including earlier hill tribe residents and the Chinese residents) are more strongly recognized than the claims of more recent migrants and refugees.

Other institutional actors at Doi Mae Salong are described under the list of stakeholders.

Some NGOs were working at Doi Mae Salong before LLS. One of these was HADF which was working in two villages, mainly on education. In other words, HADF was already engaged at Doi Mae Salong, but was working on different issues.

Evolution and outcomes

This landscape intervention was specifically concerned with drawing together partners into a multi-stakeholder institution. This became a new institution. Many of the partners (especially government agencies) were invited on the basis of their roles. Most were not active at Doi Mae Salong and some were not present all. All have legitimate roles. The village leaders were actively targeted for involvement in the consultation and multi-stakeholder platform.

There is now considerable discussion about the possible mainstreaming of the multi-stakeholder platform in the provincial system. In fact, landscape activities are already being carried out in the provincial planning system. Doi Mae Salong has been selected as a provincial project (to honour the King). Plans from different agencies are linked to the provincial plan. This will lead to LLS activities becoming part of the normal government process after LLS ends.

It is important to recognize that no new tasks for local government have been imposed by LLS, but official tasks and roles have been activated. Agencies are now becoming active where they had previously left their roles to the RTAF.

³ People who register house plots with local officials have certificates for these plots, but no certificates exist for agricultural land.

The Land Development Authority and Tourism Authority of Thailand became active in 2009. They have been invited to participate in the Poverty Reduction Project. This is another example of the progressive inclusion of partners through an adaptive process. LLS is also starting to work with a newly formed organization responsible for highland agriculture and issues such as social problems of hill tribes and border issues. This is the Highland Research and Development Institute (Public Organization).

The overall LLS approach is intended as a learning approach. At Doi Mae Salong a crucial aspect of this is the application of action learning to test new techniques and products. Key elements of this include:

- Exploration of different techniques and opportunities (such as for intensified agriculture) through workshops, exchange visits, etc.
- On-the-ground testing of these techniques by local people.
- Establishment of learning sites/plots which can allow for continued experiments and provide learning opportunities/demonstrations for other villagers.
- Once people have seen activities 'on the ground' they can evaluate their potential and chose for themselves whether they want to adopt the ideas in turn.

Medicinal plants

The potential for medicinal plants to contribute to livelihoods and income generation at Doi Mae Salong has been inhibited by three major factors:

- The degraded environment has meant that some species of medicinal plants have been lost in the area.
- Few members of the population have knowledge of medicinal plants or experience in marketing them.
- Mae Salong is the use of action learning which involves actively trying new approaches (to farming, reforestation, etc.) and then providing opportunities for people to observe and learn from the action learning sites. The underlying philosophy is to test new ideas in practice, to provide opportunities for people to learn new techniques and then to let people decide what new ideas to adopt. The learning sites can be regarded as models of practice.

An important aspect of the LLS approach at Doi

• There is little awareness of the market potential of medicinal plants.

At Doi Mae Salong, LLS has made two interventions related to medicinal plants:

- A workshop was held in Doi Mae Salong at which invited 'traditional experts' from Doi Mae Salong and nearby parts of northern Thailand (Chiang Mai and Lamphun) shared their knowledge of available medicinal plants and identified species from samples of medicinal plants from upland forests. This helped to build awareness of medicinal plants, including knowledge of plants that had disappeared or become scarce locally. The aim was to create awareness among local people about the potential richness of Doi Mae Salong forests if species could be restored.
- Several study tours were organized in 2008. Although these were multi-purpose and not specifically focused on medicinal plants, they provided useful experiences for those interested in medicinal plants.

As a result of these activities four 'nurseries' have been established where medicinal plants are being grown in Doi Mae Salong. One of these is managed by a man who is regarded as local 'expert' on medicinal plants. Another is in the Phana Sawan school nursery. Apart from the local expert (who was already interested in medicinal plants), the people involved learned about medicinal plants directly as a result of the workshop and study tour.

The 'expert' has over 200 species in his nursery. He can make some money from selling seedlings in the future. He also assists other people to learn about medicinal plants, their uses and how to grow them. His 'nursery' is a learning site. So far all the investment has been at his expense. He is now looking for a small amount of outside support to establish a small irrigation system (in the order of THB 20-30,000). As this is a learning site the proposal will be discussed with the multi-stakeholder working group and the TAO.

So far the intervention has cost very little – just the costs of the training workshop and the study tour plus some IUCN staff time (for visits, etc.). The intervention has been based on a learning process, whereby local experts shared knowledge with others and people have become aware of the market potential for medicinal plants.

The nature of the LLS input was to create the opportunity for local people to share knowledge and experiences and to identify possibilities. Once this process started further learning and sharing took place without further intervention.

The purpose of the workshop and study tour was merely to provide the opportunity for learning and recognition of possibilities. The investment has planted a seed. It will take time for the message to take root and for there to be wider uptake. However, it seems likely that the idea will take hold as more people visit the nursery and discuss it.

There have been two levels of lessons learned from this activity. First, at the community level, lessons have been learned about the potential of medicinal plants. Second, at the LLS level, the main lesson is that action learning takes time and community members need time to observe activities and evaluate their relevance. Thus, the benefits of activities like workshops and study tours need to be given time to mature.

Landscape restoration and learning activities

Landscape restoration activities include planting of perennial crops such as fruit trees and coffee, thereby meeting both erosion control and livelihood objectives. Some trial and demonstration activities have been supported which show considerable promise for income generation. These activities focus on providing learning sites. The two major activities include a medicinal plant nursery and a trial in intensified agricultural practices supported by the Hill Area Development Foundation. Combined with training workshops and study tours these trials provided important learning opportunities.

The Livelihoods and Landscape Strategy (LLS) works on the assumption that small strategic interventions can lead to changes in thinking or institutional changes which enable natural resources to become assets for livelihoods. Often the interventions can be small and incur little cost. LLS acts as a catalyst: people will decide what activities to pursue once they are given the opportunity to see how they work and assess their usefulness.

Training workshops, study tours and exchange for aare effective (and cost effective) ways to encourage learning by farmers. It is important to recognize this value, as the activities are not high cost. However, implementing such activities requires flexible budgeting.

Intensified farming

IUCN has invested in a trial/demonstration plot at Lawyo village. This activity has been carried out with the assistance of HADF. Activities on this site include pig and chicken farming, irrigation and mixed crops. The activity involves one family.



Action learning

The idea of a 'model' farm makes sense in light of the learning approach. However there is an issue of equity and precedent here – one family benefits from the (admittedly rather small) LLS investment. Is this a problem for a 'community development' project? The 'demonstration' effect needs to be weighed against equity. At the time of writing, the LLS team was fully aware of this dilemma and is looking at opportunities to spread the benefits by setting up a revolving fund and savings group.

Given the previously mentioned approach by which LLS provides the demonstration and opportunities for people to decide what to take up, this approach seems to be quite sound.

Other activities

There are some other examples of learning activities related to landscape:

- Experts at (Mae Fah Luang University) has been experimenting with ways to produce 'vermicompost' (worm manure). The process is apparently very simple and the benefits in terms of increased productivity of using the vermicompost seem very significant. The LLS team is involving the university in on-site demonstrations of the technique. Again, farmers will be left to assess the benefit and decide whether or not to adopt them.
- The school nursery at Phana Sawan village has produced some quality seedlings and contributed to the school budget (seedlings are sold to the RTAF). The enthusiasm of students and the teacher in charge of the activity are impressive.

Scaling-up landscape experience

The landscape boundaries

The landscape area has not formally changed. However, LLS is now looking at two downstream Tambons in Chaeng Saen District. In addition, one village outside the core area (but inside Doi Mae Salong) has been included in activities because it is upstream of the core area and villagers have a strong interest and history of achievement in conserving watershed forest.

Much of the discussion on institutional arrangements at Doi Mae Salong has focused on multistakeholder processes and access to resources. Expansion of participation to examine a wider landscape is another institutional development, although it is in preliminary stages.

As the headwater of a major catchment, what happens at Doi Mae Salong in terms of erosion and water quality has impacts downstream. The landscape team has been developing contacts with water user groups downstream as a step towards developing institutional arrangements for cooperation between upstream and downstream users.

This is important. The boundaries of a landscape are always somewhat arbitrary, representing a useful unit for planning and negotiating. However reality is never so neatly contained and what happens within a landscape is both affected by and affects what happens beyond the boundaries. This is an important conceptual step, highly relevant to the success of LLS. This activity needs to be continued and documented.

The people downstream will benefit from better land use in Doi Mae Salong. They are willing to contribute and LLS has already organized a watershed rehabilitation planting day and a water ceremony to bring downstream stakeholders together with communities in the landscape.

Doi Mae Salong as a model

The approach at Doi Mae Salong has not yet been copied, but it has attracted extensive interest and opportunities for replication are in place.

One way this has been done is through the *Chanot Chom Chon* policy. The pilot villages have been recognized and have become official pilots in what is an important national-level policy experiment in communal management.

A second major opportunity for replication is in the eleven other Military Reserved Areas. Considerable interest has been shown by the RTAF Supreme Commander's Office. About ten study tour groups have been sent from Headquarters to Doi Mae Salong since the beginning of 2009. Potential expansion to other Military Reserved Areas has been discussed.

There have been several other examples of the international influence of Doi Mae Salong. LLS hosted a training workshop on landscape planning by RECOFTC (The Regional Community Forestry Training Centre for Asia and the Pacific). A study tour from the Nature and Poverty Alliance was also hosted (July 2009).

Influencing government

There have been many discussions with government authorities at TAO, district and provincial levels. A National FLR Workshop was held on 21 December 2009. The outcome of this was a book on Experiences of FLR in Thailand including Doi Mae Salong (IUCN, RECOFTC, GSEI, Department of National Parks, TEI and Seub Foundation, 2009). This workshop was held in collaboration with IUCN member organizations. There were 120 participants from government agencies and communities. The Doi Mae Salong case study was presented to the workshop.

LLS has been influential in terms of reinforcing the community forestry concept, FLR, and Community-Based Natural Resource Management and has contributed to increasing dialogue on more people-centred government policies. While LLS cannot claim that it has so far influenced major changes in policy, such developments as the inclusion of Doi Mae Salong among the *Chanot Chom Chon* pilots is evidence that it is being listened to and recognized by government. LLS is contributing to dialogue and experimentation with new (LLS-like) models. It is part of a broader movement, so it is hard to attribute changes directly to LLS.

On 23 March 2010 the LLS work was presented at the Thailand Water Week (a conference on watershed rehabilitation organized by the Water Resource Department). The presentation on watershed rehabilitation management was made by Major-General Chaluay and the LLS coordinator.

The extent to which the LLS approach has garnered broader interest in the RTAF has already been mentioned. In addition to the potential direct impact of this on the landscapes under RTAF responsibility, it is important to note that the military forces have great influence in Thailand and provide another conduit to influence the government.

Influencing global thinking

LLS at Doi Mae Salong has made several steps towards influencing global thinking:

- The experiences of LLS at Doi Mae Salong were presented at the World Conservation Congress in Barcelona in 2008 by Colonel Wittaya from the RTAF Joint Development Command and IUCN staff.
- IUCN Bangkok has been contacted by the IUCN Sri Lanka Office to discuss hosting a Sri Lankan Army visit to Doi Mae Salong. At the time of writing, while funds had not yet been identified, there were ongoing discussions on this.
- Some publications in international newsletters have communicated Doi Mae Salong experiences.

Major lessons learned overall

One major lesson learned from LLS in Doi Mae Salong is the importance of bringing stakeholders together to make decisions about land use. In one respect this is not new – it is central to the LLS approach. However, the experiences at Doi Mae Salong clearly demonstrate that this works in terms of creating fundamental changes in land management and confirms the value of multi-stakeholder processes as vehicles for land-use planning and decision making.

One way of thinking about LLS is that it is based on removing constraints working against landscape conservation and improved livelihoods by introducing new arrangements that directly address these constraints. Sometimes the constraints involve access to resources (tenure), sometimes they involve markets and sometimes they involve policy constraints. Often all that is required to turn natural resources into livelihood assets is the development of new institutional or governance arrangements. Sometimes

simple tweaking of existing arrangements is enough. In Doi Mae Salong the new institutional/governance arrangements added to people's confidence about access to resources and allowed negotiations and trade-offs about land uses on particular sites. Key to all the changes has been the institutional innovation that removes barriers and turns potential resources into assets.

There is something paradoxical about the Doi Mae Salong landscape. The involvement of a partner naturally seen as authoritarian and non-participatory (the military) is counter-intuitive. When Doi Mae Salong was first being considered it was often pointed out that the partnership was very risky. In practice, the partnership has been remarkably successful and the RTAF has been highly flexible and open to learning. There are perhaps two lessons here. One is that it is unwise to rule out unexpected partners without exploring possibilities.



Working by building partnerships

The other lesson from the unexpected partnership with the RTAF is that success often depends on individual leadership. If the RTAF commander at Doi Mae Salong had not stopped to reflect over the protests about the first planting exercise and had he not been open to radical rethinking of his approach and taking risks, the LLS approach would never have been attempted. The same would have applied had the then Supreme Commander not been open to working with IUCN.

Other lessons learned include:

- Small strategic investments, especially in learning (training, study tours, etc.) can be very valuable
 in creating interest and stimulating action. This is clear from innovations in farming practice in the
 landscape. Using an action learning approach, ideas were introduced, then farmers trialled and
 assessed them. Farmers then chose to apply the new ideas or not, depending on their own
 assessments.
- Small investments can often achieve a great deal. It is not necessary to invest large amounts.
- The landscape approach can apply even where there are existing markets. In such cases it is not necessary to think about markets, but rather to think about products and about networks.
- FLR can restore ecosystem function with productive agroforestry species, not just traditional forest species.
- Enthusiasm is infectious. The success of the multi-stakeholder process built enthusiasm among the partners.

Valuable tools and conceptual approaches

Three tools found to be valuable at Doi Mae Salong included:

- The idea of multi-stakeholder platforms and dialogues
- Participatory land-use planning
- Action learning.

The application of all of these has been discussed earlier in this report.

Threats

Perhaps the main threat to the future of the LLS approach at Doi Mae Salong is the possibility (a probability in the longer term) that the area will be returned to the RFD in the future. Generally in Thailand the RFD has shown very little interest in genuine participatory management or devolved decision making. On the positive side, there are several elements in place that may allow the approach to continue under the RFD:

- Government policy on community-based management may change if the *Chanot Chom Chon* pilot is successful.
- Many of the activities at Doi Mae Salong have been incorporated into routine provincial planning.
- Various institutional stakeholders (including local RFD officers) have demonstrated real commitment to the LLS approach and enthusiasm for the activities.
- The Poverty Reduction Project. This is a three year programme funded by the PPTEP (PTT Exploration and Production Public Company, a petroleum company) and TOTAL. It will enable continuation of the income generation and poverty reduction elements of LLS from May 2010 until April 2013.

A further threat is the looming end of the LLS programme. Balanced against this is the fact that significant funding has been leveraged during LLS that will allow the major activities to continue for several years. The funded projects are listed in Table 2.

Donor/Partner	Main funding	Direct co- funding	Indirect co- funding	In-kind contrib ution	Parallel funding	Total
Confirmed	EURO	EURO	EURO	EURO	EURO	EURO
BMZ /IUCN PATT Foundation			250,452 50,359			250,452 50,359
Royal Thai Armed Forces Doi Mae Salong Reforestation Project					2,126,707	2,126,707
NADEL, Swiss Federal Institute of Technology (10- month GIS expert to support LLS)				15,000		15,000
BMZ/IUCN 87003- 002 (2 small grants to implement activities at project sites)			15,000			15,000
Poverty reduction in the Doi Mae Salong landscape: Improving local economic conditions through income generation opportunities			148,980			148,980
GRAND TOTAL	0	0	449,791	15,000	2,126,707	2,591,498

Major challenges and difficulties

Threats and challenges

Although LLS at Doi Mae Salong has been very successful in addressing most issues, there are a number of areas where work still needs to be done. Some of these include:

- The preliminary survey of villages to ascertain how aware people are of the new decision-making processes and how much they trust the process needs to be extended to other villages. In this context it would be useful to pry open the village-level 'black box' in order to understand more about how decisions are communicated at the village level and how village-level concerns are fed into the multi-stakeholder platform.
- While there has been no obvious sign of negative unintended consequences, more systematic exploration of the impacts of the interventions in terms of equity is desirable.

- There is a need for more spatial information (such as GIS data) to assist in working with communities for land-use planning. (Military spatial data is not available to the public.)
- Given that the impacts of LLS on livelihoods and poverty reduction are unlikely to be felt within the lifetime of LLS, efforts should be made to plan for a follow-up impact assessment post-LLS. This could be based on the approach to the follow-up livelihoods assessment carried out for the Lao NTFP project and described in Morris et al. (2008).

These issues could be addressed as part of the action learning and monitoring process.

Learning approach

Activities in the Doi Mae Salong landscape were strongly based on a learning or adaptive management approach. This operated both at the macro-level and at the level of specific activities. At the macro-level, institutional arrangements and specific activities evolved in an organic way based on reflection and discussion. There was no grand roadmap from the beginning, apart from a good understanding of and commitment to the idea of participatory decision-making and planning and to the goal of holistic management of the landscape to meet both livelihood and conservation needs.

At the level of specific activities, many activities were based on providing learning opportunities to community members so that they could test and assess potential livelihood activities for themselves.

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