

field learning: on the road through MMSEA

Transecting Xishuangbanna, Luang Prabang, and Chiang Mai provided the mobile workshop participants with a representative cross-section of the MMSEA region, which is home to a wide range of ethnically diverse people. Common characteristics of the region include the region's history, settlement patterns, biodiversity and ecological landscapes, political economy, and livelihood systems. The distinctive regional identity also includes transboundary indigenous peoples with common problems, challenges, and opportunities. This cross-section of the middle mountains embraces a continuum from remote villages with a traditional subsistence economy to areas substantially influenced and transformed by the rapidly growing market economy.

The workshop participants travelled overland from the Xishuangbanna Tropical Botanical Garden in Yunnan Province to Luang Prabang, a World Heritage Town, in



Field visit in Thailand

northern Laos. The group traversed through vast expanses of rubber plantations in Mengla, Yunnan, crossed the Lao border at Boten, and visited field sites in Oudomxay and Luang Prabang Provinces. From Luang Prabang, the participants flew to Chiang Mai for the final leg of field visits and group synthesis work (see Figure 5).

This travel through MMSEA enabled the participants to examine firsthand the range of land use conditions, drivers, and responses in the areas visited. Starting from the intensive rubber-based systems in southern Yunnan, the group proceeded to the extensive subsistence-based upland farming systems in northern Laos, and finally to the intensive, market-based systems in the Chiang Mai area.

Land Use Transformation in Xishuangbanna

In Xishuangbanna, land use has largely been driven by the economic and ideological policies of the Chinese government. Since the early 1950s, large rubber plantations have been established and managed on state farms, initially by an influx of workers from central provinces. In the 1970s and 1980s, small-scale rubber plantations were established on upland swidden fallow fields by shifting cultivator households. In the late 1990s, the expansion of rubber production went transboundary, into Myanmar and Laos.

On 18 January workshop participants broke into three field groups – each with members from all three thematic working groups – to visit a state rubber farm, a lowland Dai village and an upland Yao village, all in Mengla. Synopses of the three sites visited are provided below. For more detailed notes and observations, particularly on resource governance, see Annex 4.

The Mengxing State Rubber Farm

During the early 1950s, the Chinese government began to establish large-scale rubber plantations in Xishuangbanna by resettling Han Chinese from central China to this area. In 1959, the Mengxing State Rubber Farm was established on a total land area of almost 6,700 ha. Approximately 5,800 ha of rubber have been planted, of which more than 3,300 ha are tapped for latex, at present producing some 5,600t of dry rubber annually.

The farm has a population of approximately 7,000 people, including 2,800 contracted staff and 1,500 retired staff. It is adjacent to the Jinghong-Mengla road leading to the Lao border. Mengxing is one of 18 rubber plantation bases for the Yunnan Natural Rubber Company (formally called Yunnan Land Reclamation Bureau). It has also been actively involved in investment in a hydro-electric plant (capacity 4,700 kW) and cement factory (producing 80,000t/year).

Dai village of Nan Yang

The hamlet of Nan Yang is a small Dai settlement adjacent to the Jinghong-Mengla road leading to the Lao border. It is a typical lowland village whose landscape has two major features: an irrigated lowland area used for wet-rice cultivation and other crops; and a surrounding upland space of sloping and forested lands, used for cultivation as well as various natural forest products.

Administratively, Nan Yang is part of a larger six-hamlet administrative village, which includes two upland Han settlements. The village comprises 69 families with a total



Village meeting in Laos

population of 323 members. The rubber plantation in the Dai village was initiated in the 1970s and at present rubber is the main source of income for the villagers. On average, each household owns 2.6 ha of rubber plantation and annual income from rubber is between US\$181.50 and US\$217.91 per household.

Yao village of Paozhuqing

Today, the Yao village of Paozhuqing has better access to roads, markets, and most government services. Since 1995, Yao households have gradually adopted new technologies for farming rubber, while continuing to cultivate their swidden rice, corn, and beans. The area planted with rubber is 66.66 ha, one-third of which is tapped. In this upland village, water and wet-rice areas are obviously limited. Only some families own paddy fields. The major sources of income for the 36 households residing in the village are bamboo shoots, rubber, livestock, and maize.

Upland Development in Laos

During the 1960s and 1970s, war in Laos caused a significant movement of upland ethnic people, and particularly Hmong people. Highland development schemes were promoted in Laos through land allocation and the promotion of permanent land use instead of shifting cultivation. Voluntary resettlement from upland to lowland areas, with nearby roads and government promises of social services such as schools and clinics, has also been encouraged.

In northern Laos, workshop participants again broke into field groups to visit Nahom and Nampheng villages in Oudomxay Province and Pakchiek village in Luang Prabang Province. Some salient information about these villages is given below. Annex 5 provides more details about these villages and their respective resource governance arrangements.

Nahom and Nampheng villages

The villages of Nahom and Nampheng are located about 2.5 km north of the Namo district centre in Oudomxay Province. The villages are located at the provincial border between Luang Namtha and Oudomxay. Nampheng village was established around 1975. Nahom village was established in 1991 by people who moved from Nampheng and Phoutong villages in Namo district.

The ethnic composition of Nampheng village is predominantly Khmu, which is more commonly known as highland Lao or Lao Theung. The Nahom village consists of both Khmu and Hmong (the Hmong-Mien ethno-linguistic group is more commonly known as upland Lao or Lao Soung). Their main sources of household production and cash income are derived from the collection of non-timber forest products. Forest and land areas were classified by the state in both Nahom and Nampheng villages in 2000.

Large areas in these two villages are covered by protection forests. The main development problems expressed by the villagers are insufficiency of rice and lack of water supply. In Nampheng village, they also mentioned the difficulty in accessing public services and information.

Pakchiek Village

Pakchiek village is located in Pak Ou district, Luang Prabang Province. The village was established in 1921, when Lue people migrated from Boum Gneum Leue village in Xishuangbanna.

Prior to their settlements in Pakchiek village, villagers had moved and settled in different locations. In 1953, villagers sought refuge in forest areas but returned to their village the following year. In 1962, once again, villagers sought refuge in the forest due to the civil war. After the civil war, in 1968, the villagers moved to Luang Prabang district. In 1974, the people returned once again to Pakchiek village.

The village consists of 122 households with a total population of 618 people. The villagers belong to the Lue ethnic group (a subgroup of Lao Loum or lowland Lao) and are Buddhists. The existing problems in the village are decreased rice yields, increased imperata grass infestations, short fallow periods, and livestock disease.

Market-Economy Transition in Northern Thailand

In northern Thailand, an opium eradication campaign was promoted through a development strategy of crop replacement. A wide range of cash crops (both annuals and perennials) were introduced together with infrastructure and road development. Traditional shifting cultivation has declined due to opium substitution in the past and watershed protection at present.

The field visits in northern Thailand were carried out over two days in two areas. On 23 January, the participants were exposed to the land use mosaic in the highland zone of the Mae Chaem watershed in Chiang Mai Province, with field groups going to

- Mae Kongkha sub-watershed, where shifting cultivation and forest fallow systems have been transformed to permanent fields;
- Mae Suk sub-watershed, where there are impacts and issues associated with the substitution of opium by intensive crops like vegetable and tropical fruit; and

- Mae Tum sub-watershed, where there is active shifting cultivation by Karen and Lua people.

On 24 January, field groups travelled to lowland areas in Chiang Mai valley to see

- the Longan Grower's Association, Lumphun Province;
- high-tech intensive agricultural production in San Sai district, Chiang Mai Province; and
- eco-tourism in Mae Wang district, Chiang Mai Province.

The following sections briefly describe the land use dynamics in the sub-watersheds and sites visited. Additional details about Mae Kongkha, Mae Suk and Mae Tum – including the governance history, arrangements, and strengths and limitations – are provided in Annex 6.

Mae Khongkha sub-watershed

The Mae Khongkha sub-watershed is located in the lower area of the Mae Chaem watershed, approximately 12 km from the district town. The upper area of the sub-watershed is located on the same ridge as Doi Inthanon, the highest mountain in Thailand, and oriented towards the west. The total area of the sub-watershed is 100 sq. km. There are six administrative villages with some 2,500 residents in the sub-watershed.

The sub-watershed is inhabited by two ethnic groups: Karen and Northern Thai. In the past, opium poppy was cultivated in the upper areas of the sub-watershed. Locals were encouraged to stop opium cultivation by the forestry officials, the Mae Chaem Watershed Development Project and the local police. At the time the villagers practiced only shifting cultivation. Approximately 20 years ago, with the decrease in opium cultivation, areas under shifting cultivation changed into permanent fields.

The communities of the Mae Kongkha sub-watershed have diverse land use practices, which are a product of the livelihood strategies, cultural beliefs, and local needs of each cultural group. Land use categories include grassland, birth spirit forest, community rehabilitation forest, and utilitarian forest. The main commercial crops in this area are feed maize, seed maize, soybeans, and cabbage. Currently, maize is the most broadly planted crop and the area under seed maize is growing.

Mae Suk sub-watershed

The Mae Suk sub-watershed comprises six administrative villages with a total population of about 3,000 people. Until the 1980s, the upper Mae Suk sub-watershed was an area of opium cultivation. Forest fallow shifting cultivation persists with 5 to 9 year cycles. Opium was grown primarily by the Hmong, with similar scale cultivation by Karen and Northern Thai. The government then identified the upper area of the sub-watershed as a priority area for development, and encouraged the adoption of cash crops such as coffee and kidney beans. These crops did not catch on, but the effort did bring a shift in the awareness of new market opportunities for cash crops. The completion of an all-weather road and the establishment of a large market in Mae Chaem stimulated a rapid and broad based shift in agriculture. Cabbage was planted, followed by carrots, potatoes, and shallots as crops of choice. The transition was driven by the Hmong, and new agricultural technology continues to spread from Hmong to the Karen. This upland economy is characterised by

multiple layers of integration. There is tension over water and land between neighbouring villages, and more broadly within the sub-watershed between upstream and downstream communities.

Mae Tum sub-watershed

The Mae Tum sub-watershed is a tributary catchment of the Mae Chaem watershed. It has 10 administrative villages and 3,600 people. It is located approximately 20 km from Mae Chaem district, with a total area of 148 sq.km.

Most agricultural lands are on steep slopes, and most villagers practice rotational shifting cultivation. There are also permanent fields in some areas under constant cultivation throughout the year. The main crop in most areas is upland rice, with some intercropping. Agricultural production is primarily for subsistence, rather than for commercial purposes, although recently a shift has begun towards market-oriented production. Farmers have introduced crops such as shallots, maize, cabbage, and lettuce.

Currently, there is still considerable pressure on communities to establish permanent fields. This is largely due to the establishment of Mae Tho National Park which includes some areas of Mae Tum sub-watershed. The result is a reduction of land under rotational shifting cultivation and an increase in cropping on permanent fields.

Lao Yao Sub-district, Ban Hong District, Lamphun Province

The sub-district of Tam Bon Lao Yao, Ban Hong district, Lamphun, is located on the banks of the Lee River, 7 km north of Ban Hong. Ban Hong is the site of a 1,400-year-old community dating back to the Hariphunchal Kingdom. It is located 40 km north of Lamphun and 26 km south of Chiang Mai. There are 11 villages in Tam Bon Lao Yao with a total population of more than 11,300. The Thai Yai people form the largest ethnic group in the area.

The main source of income is agricultural produce, with the main crops being rice, shallots, garlic, and longan. Longan orchard cultivation is the main occupation; Lamphun is the most famous longan-growing area in Thailand; about 40% of Thai longans are grown here. Longans are regarded as the most economically important fruit in Thailand; some 100,000 metric tons of fresh longan are exported annually – worth US\$400 million per year.

Mae Win Sub-district, Mae Wang District, Chiang Mai

The Mae Win sub-district covers approximately 480 sq.km and is located 52 km to the south of Chiang Mai. There are 19 villages including 11 Karen villages, 3 Hmong villages and 5 local Thai villages, with a total population of approximately 12,700. There are three ethnic groups in the area: local Thai, Karen, and Hmong. The local Thai live mainly in the lowland areas, while the Karen and the Hmong live in the higher mountain areas. Commercial agriculture is onion, maize, soybeans, and longan, grown for sale in local and regional markets.

Mae Faek Sub-district, San Sai District, Chiang Mai Province

The sub-district of Mae Faek is located on some 90 sq.km of lowland along the Ping river in the San Sai district of Chiang Mai. Mae Faek is approximately 15 km north of Chiang Mai city centre. There are 12 villages of local Thai people with a population of nearly 10,000. The main source of income is agriculture. The main crops grown are

maize, potato, rice, tobacco, and longan orchards. Women's groups in this village have begun to increase their income by making and selling herb products such as lemongrass juice and corn milk.

After completing the field visits in Chiang Mai, the workshop facilitator stressed that any learning process requires reflection as well as action. He requested the three thematic groups to discuss and synthesise their key findings and field learning from the three countries visited. He also suggested to the groups that they compare and analyse the important dimensions of their themes across the sites visited, as well as draw out overall perspectives related to the key questions and issues for each theme. The key field findings for each thematic group are summarised in the following.

Land Use Change Group – Key Findings

Southern Yunnan

The cultivation pattern in southern Yunnan has witnessed a major change. In most cases, farmers have replaced shifting cultivation, largely with rubber plantations and sometimes with timber. This transformation from other crops to rubber plantations is expected to grow in the future. While government policies and market conditions are primarily responsible for the change, technological innovation for producing cold tolerant rubber has also contributed to some extent. Because markets are so dynamically driven by demand, they are different from place to place. It can be said fairly that open markets influence decisions such as pricing and migration of labour. Migration of labour is high and there is fear that continuing out-migration could lead to severe labour shortages. However, not all markets are open markets. Markets such as the one in Mengxing State Farm are somewhat immune markets, which act as buffers to cushion producers from any major price shocks.

Northern Laos

Laos is increasing its forest cover. It was earlier dominated by swidden crops and to some extent opium. Land allocation policy is the governing factor driving this change, although education and technological developments have also contributed. NGOs and GOs are operating actively to build awareness and capacity among the upland communities. Rubber plantations are seen as a viable income-generating activity for the near future, and rubber plantations are expected to increase because rubber commands better prices and the demand from China is high and growing. In general, markets are liberal, with the state and the communities taking leads for marketing different products.

Northern Thailand

Thailand has seen diverse changes in its land use, depending on the location of settlements. Overall there is a general movement towards replacing shifting cultivation with other forms of permanent agriculture. Again, depending on the location, some regions have moved away from agriculture. Government policy against shifting cultivation has led the movement toward sedentary forms of agriculture. Market dynamics are the most influential factor driving land use change. For example, lifestyle change and population increase in the more urban areas has resulted in some communities abandoning agriculture altogether, while the growth of tourism in other areas has encouraged fruit cultivation. Similarly, the increasing prices of typical crops have also influenced cultivation practices. Markets too have changed in the process. In and near urban areas less and less cultivation is taking place, and

farmers' access to markets has disintegrated. Private companies and central cooperatives have taken over from farmers' cooperatives in other areas. Such market-driven conditions, combined with changes in lifestyle and education, are expected to govern and bring about similar developments in the near future.

Synthesis

Land use change is inevitable, and all three countries under consideration have had major changes in the recent past. More often than not, government policies have dictated the pattern of change in land use. The interests of the state can force desired changes. Therefore it is important to utilise research findings to guide policy interventions. The other major driver of land use change is the market factor. Demand-driven markets determine the products and prices in different places and strongly influence land use changes.

Livelihoods, Markets and Trade Group – Key Findings

Southern Yunnan

Rubber plantations and paddy cultivation form the main source of livelihood in Xishuangbanna. Other livelihood activities include land renting, off-farm employment, and income from conservation programmes.

The market system is typically individual based – in other words, there is no integration. Markets are fairly competitive and there are opportunities to exploit markets from neighbouring countries. Market conditions determine different scales for different commodities with support services from the private sector. These markets are generally unregulated markets.



Rubber plantation in Xishuangbanna

China has relatively more experience in rubber plantations than Laos and Thailand. More and more rubber is being planted each year. Significant improvements in the standard of living and access to basic infrastructure, such as roads and electricity, have made it possible to achieve better access to markets, information, and labour. As a result, markets are gradually changing from the traditional centrally-planned economies to market-based ones. Strong policies are ensuring that natural resources are conserved.

Northern Laos

Traditional subsistence activities such as swidden production and natural resource utilisation are still practiced in northern Laos. While policy interventions have influenced an increase in the production of cash crops as opposed to shifting cultivation and opium production, the lack of adequate market support systems has led to an increased dependence on natural resources.

Unlike China's individual-based market system, there is an integrated market development for commercialising agricultural products such as rubber and maize, as well as natural resources such as bamboo shoots, cardamom, and other NTFPs. These community-based market information systems lead to new market opportunities.

Northern Thailand

The northern part of Thailand is diverse in terms of livelihood practices and markets. Depending upon the location of settlements, various combinations of livelihood options are available. The more prominent ones are shifting cultivation, cash-crop cultivation, livestock, small-scale industries and tourism, as earlier noted by the land use group.

Basically, all livelihood activities are market-driven, and a great deal of adaptability can be seen. Labour has great mobility and upland-lowland labour exchange is common. Improved road networks have resulted in the strengthening of markets. Market conditions have determined and brought up agro-based industries, which add value to farmers' production. Tourism is considered as an important economic activity, one that has great potential for generating more local livelihoods and income.

Synthesis

Livelihood practices are basically driven by market demands. People are easily influenced to replace traditional cultivation with modern cultivation and with crops that command better prices in the market. Private and state support systems emerge as a result of changes in livelihood. Such change has also led to a great mobility in labour. Policy intervention should be seen as a controlling agent for prevention of over-use or misuse of natural resources and to prevent their depletion. Access to better infrastructure normally results in the expansion of markets and marketing opportunities.

Resource Governance Group – Key Findings

Southern Yunnan

Resource governance in China has a long history of political struggle and shifting power between the state and local communities, and between the political centre and the periphery. Three main phases can be distinguished: the period preceding the

1949 Revolution; the era of 'collectivisation' extending from 1950 to 1978; and the post-1978 period of economic reform and decentralisation.

Before 1949, the Dai ethnic minority played a long and important role in organising social institutions to govern natural resources – both in the uplands and in the lowland valley – in Xishuangbanna. The state greatly influenced land use through resettlement for rubber plantation and central planning for food production during the collective period. The market economy became an important factor in household decision-making and community resource management after the 'household responsibility system' was instituted. In 1998, an important change was implemented – the local election of administrative village and hamlet leaders. In 1992, decentralisation even took place in the state rubber farm through structural reform.

The allocation of farmland to households and forestland to communities – together with the increasing decentralisation of government functions to the local village committee – created new opportunities for local actors to shape and control external land-use pressures from either the state or the market.

Northern Laos

Local autonomy and customary institutions played important roles in resource governance for centuries in northern Laos. In the past, there was little involvement of the state in land-use arrangements. Customary governance institutions were weakened during the war period in the 1960s and early 1970s. However, with the establishment of the Lao PDR in 1975, the state has become increasingly involved in village land-use arrangements as part of its policy to encourage the discontinuation of shifting cultivation, eliminate the growing of opium, and mobilise resettlement from upland to lowland.

The present resource governance arrangements in the uplands of northern Laos are an amalgamation of old and new governance institutions. The traditional user groups, such as those for water management, still functioned until relatively recently. Villages now have an elected headman and deputy who are charged with assisting the district administration in conducting a variety of activities. Recently, land allocation (or land titling) and land-use planning were conducted by the district agriculture office in collaboration with village leaders, with the aim to fix shifting cultivation. With improving access to roads and other infrastructure, farmers are in a position to make land use changes in response to market opportunities – if they can obtain access to needed capital and technology.

Northern Thailand

Due to in-migration as well as the diversity and complexity of hill tribes in northern Thailand, local people have exercised more autonomy than in China and Laos. Since the 1960s, the state has paid more attention to highland people, and promoted an integration policy to address citizenship and upland development through the substitution of opium cultivation. Between 1985 and 1995, the government classified critical watersheds and created national parks.

Although highland people have better access to market and other infrastructure, most farmers – particularly those located in conservation areas – have not yet received official land titles. Co-existing customary institutions, religious leaders, and elected state and local governing bodies are a common phenomenon in northern Thailand,



contributing to a diversity of institutional arrangements in response to the growing market economy.

Synthesis

Resource governance in MMSEA is characterised by the decentralisation of the state decision-making process, a growing democratic process, and adaptive customary institutions at the village level. However, this decentralisation has so far failed to give local communities adequate control over their resources. There is increased public exclusion through the establishment of conservation areas for the protection of biodiversity and watersheds, as well as the privatisation of public resources such as forests and land to individuals, corporations, and companies.

This exclusion is also reflected in the double standards that require complex management plans from local communities, while allowing large-scale commercial interests to enter and use resources with little planning and even less monitoring. On the other hand, both local government and people have been able to demonstrate their capacity and ability to take initiative in resource management, as well as benefit from local upland resources in response to the market economy and cross-border trade liberalisation.



The mobile workshop participants in Laos