# The Relevance of Tenure and Forest Governance for Incentive Based Mechanisms:

## Implementing Payments for Ecosystem Services in Doi Mae Salong

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View of Doi Mae Salong © Eliana Fischman K.

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## Background

The Livelihoods and Landscapes Strategy (LLS) was one of IUCN's responses to the alarming loss and degradation of the world's tropical forests and woodlands, and the fact that forest resources "constitute a readily available and valuable asset that could be deployed in the fight against rural poverty." The overall goal was to catalyse the sustainable use and conservation of forest biodiversity and ecosystem services for the benefit of the rural poor (IUCN, n.d.).

Between 2007 and 2011, LLS worked in two landscapes in Thailand: the coastal ecosystem of the North Andaman coast, and Doi Mae Salong (DMS) in the mountainous north of the country (Mae Chan and Mae Fah Luang districts, Chiang Rai province).

DMS is a multifaceted landscape. It is ecologically sensitive, a National Reserved Forest (mostly Class 1 watershed in the headwaters of the Mae Chan River, a tributary of the Mekong River) that has experienced severe deforestation. It is also culturally sensitive, a home to approximately 35,000 people in 33 villages belonging to seven ethnic groups: Akha, Lisu, Yao, Thai Yai, Lawa, Lahu Chinese and Northern Thai. And it is strategically sensitive, spreading across 335 sq. km along the Thailand–Myanmar border.

Due to its sensitive location, DMS is partly under the control of the Royal Thai Armed Forces (RTAF). To commemorate His Majesty the King's 80$^{th}$ birthday in 2007, the RTAF – under pressure from the government for its perceived poor environmental management of military reserve areas – sought to implement a reforestation program and was met with candid opposition by the local villages that used some of the same land for agriculture. The RTAF then turned to IUCN for advice. IUCN, LLS and the Supreme Commander's Office of the RTAF decided to focus on the most critical area covering 90 sq. km and 15,000 inhabitants in 13 communities, where a successful forest landscape restoration project was implemented. Forest rehabilitation was conducted within a negotiated framework (through a multi-stakeholder platform) supporting the development of alternative income generation opportunities (e.g. agroforestry and reforestation in erosion-sensitive areas, based on negotiations with local people).

Building on the achievements of LLS, in April 2010 a project on Poverty Reduction in DMS (PRDMS) was launched, recognizing that the population in the area is living in significant poverty and is extremely reliant on the health and productivity of the landscape, thus being highly susceptible to unpredictable risks such as economic shocks and climate variations.[1] The goal of the project is to address poverty reduction through livelihood improvement in seven of the villages targeted by LLS, and to contribute to the improvement of watershed functions in northern Thailand. Although poverty is a multidimensional concept, the objective is to alleviate poverty amongst the poor in the DMS landscape by improving the

[1] National figures indicate that the people of Doi Mae Salong are earning an average income of 60,000 THB per year per household (average income of the country per household per year is 247,352 THB). However, income distribution is unbalanced, and informal discussions suggest that 80% of the population is living below the poverty line. Source: Poverty Reduction in the Doi Mae Salong Landscape project proposal.

economic situation at the village and household level through the promotion of income generation and household expenditure reduction options.

## Objective

The objective of this paper is to explore forest governance and the existing tenure framework in DMS in order to offer preliminary recommendations for implementing a PES scheme. The aim is to contribute to the establishment of a PES scheme that promotes sound environmental management, contributes to poverty reduction and tenure security, and taps into payments for carbon sequestration.

## Introduction

Incentive-based policy instruments are employed to safeguard and increase the provision of public goods found in forests (such as carbon, water and biodiversity) by valuing the goods and the services they provide, and paying people to protect them (Bruce *et al*., 2010). The main "rationale behind the use of these mechanisms is that they can help achieve conservation and livelihood objectives jointly" (Huberman, 2008).

The Food and Agriculture Organization (FAO) Global Forest Resource Assessment states that 80% percent of the world's forests are publicly owned (FAO, 2011). In developing countries, land title often is not legally vested in local users, and land use arrangements are poorly defined and recorded (Costenbader, 2009). Land tenure and forest rights are pivotal to the new wave of incentive-based policy instruments.

## Structure of paper

First the notion and types of PES schemes are introduced. Next, the concepts of tenure and tenure security are examined, followed by a discussion of the relevance of tenure security in the establishment of incentive-based mechanisms. Then, the existing tenure situation in DMS is explored and conclusions are drawn from the relevant findings. Finally, recommendations for implementing a PES scheme in DMS are set out, and relevant knowledge gaps identified.

## PES and REDD+

Reduced Emissions from Deforestation and Forest Degradation (REDD+) aims to reduce the contribution of deforestation and degradation to global atmospheric greenhouse gas levels by using international funds and/or market-based mechanisms to pay developing countries to keep their forests standing and manage them sustainably instead of cutting them down. REDD+ also seeks to incentivize actions that already contribute to forest carbon sequestration

(e.g. conservation and sustainable management) as well as actions that will enhance sequestration (e.g. reforestation). The plus (+) sign stands for the inclusion of mechanisms that extend beyond strict conservation efforts to embrace "the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries" (Knox *et al*., 2011).

Although conceptually REDD+ can be conceived as a form of PES, there are relevant differences arising from the local scale of PES versus the global scale of REDD+. In a way, REDD+ is a multilevel international form of PES (Boyle, 2009). For example, buyers in PES are usually local, whereas in REDD+ they are usually United Nations Framework Convention for Climate Change (UNFCCC) Annex I countries (and financing through market-based mechanisms). REDD+ requires national accounting and reporting, and monitoring procedures are determined by international agreements.[2]

## Potential synergies

Although this paper is framed within the PRDMS project, a scheme of payments for carbon sequestration through reforestation and sustainable forest management offers potential synergies with REDD+ initiatives, and a scheme of payment for forest regulating services (e.g. flood control, disease prevention) and provisioning services (e.g. fuelwood, medicine, food) offers potential synergies with climate change initiatives such as the World Bank Forest Carbon Partnership Facility (FCPF) and the UN-REDD Programme. Readiness funds provided by the FCPF may be used "to address underlying conditions that will need to be in place to ensure the sustainable use of forest resources, including the foundations of good forest governance", which may include "the ability to provide secure tenure over forest and land resources" (Davis *et al*., 2009).

## Methodology

The following preliminary review of tenure in DMS is based on the analysis of available English translations of national laws, interviews with relevant stakeholders[3], and a literature review.

## Limitations

1. Available English translations of national laws and regulations are limited and may not be entirely accurate or up-to-date.
2. Findings are indicative, they are not based on exhaustive due diligence.

[2] Although private REDD agreements may have different requirements.

[3] Villagers and representatives of the RTAF, the Royal Forest Department (RFD), the Land Development Department (LDD), and the Agricultural Land Reform Office (ALRO).

3. Like any other policy tools, PES and especially REDD+ do not operate in a vacuum. There is a formal regulatory framework and customary arrangements that can allow, support, obstruct or prohibit their implementation. In this review, however, only the core national legal framework relevant to forests has been considered.

## Notion and Types of PES

Payments for ecosystem services are usually defined as "voluntary transactions in which a well defined environmental service or land use likely to secure that service is being bought by at least one buyer from at least one ecosystem service provider if and only if the provider secures the provision of the service*"* (Wunder, 2006).

In this paper, the term *Payment for Ecosystem Services* (PES) is used rather than the term *Payment for Environmental Services*. Ecosystem services can be conceived as "the benefits to nature and human welfare provided by ecosystems" whereas environmental services can be conceived as those "related to sanitation and waste management which are provided by humans" (Greiber, 2009). Ultimately, however, the use of either term must be consistent with Thai policy and legislation.

Those who make the payment – the word *payment* is used here in a broad sense to include incentives, rewards and compensation, both in cash and in kind – are "aware that they are paying for an ecosystem service that is valuable to them or to their constituencies – and those who receive the payments engage in meaningful and measurable activities to secure the sustainable supply of the ecosystem services in question" (Greiber, 2009).

Normally, ecosystem services are classified into provisioning (e.g. food, freshwater, wood, fuel), regulating (e.g. flood control, water purification, disease control, climate regulation), supporting services (e.g. nutrient cycle, soil formation), and cultural services (e.g. aesthetic, spiritual, educational, recreational) (Huberman, 2008).

Forest ecosystem services concentrate on four fields: 1) carbon sequestration, 2) watershed protection, 3) biodiversity benefits and 4) landscape beauty. Payments can also be made for a bundle of ecosystem services (Landell-Mills and Porras, 2002).

In general, PES can stem from three types of markets: a) *Public payment schemes:* A government agency or public institution makes direct payments to private landowners for maintaining or enhancing ecosystem services (e.g. as in Costa Rica and Mexico); b) *Formal markets or Cap and Trade Schemes:* A regulatory cap and trade scheme in which defined users trade with others, usually those who enable them to meet their target at a lower cost (e.g. Emission Trading Schemes); and c) *Private or Voluntary Schemes:* An interested buyer directly enters into a deal with the provider of the service (e.g. to position a brand). (Forest Trends and The Katoomba Group, 2008). Naturally, these can be linked (e.g. public payments coupled with voluntary payments) (Greiber, 2009).

**What is Secure Tenure?**

The term *tenure* is often misleadingly equated with ownership or land title. "Tenure is a generic term referring to a variety of arrangements that allocate rights to, and often set conditions on, those who hold land [and other resources]. 'Ownership' is a particular type of tenure in which strong rights are allocated to the landholder" (FAO, 2011), usually comprising permanent rights to use, control and transfer the land. Tenure is often described as a "bundle of rights" (Colchester, 2007), where different tenure arrangements allocate different combinations of rights, e.g. use, manage, transfer and inherit, and varying duties or responsibilities e.g. caring for natural resources and the environment. In many cases, an individual or group will enjoy some rights and not others, e.g. local people may have access to some forest products (e.g. non-timber forest products) but not others (e.g. timber) (FAO, 2011).

Formal tenure is normally explicitly recognized by the State and can be protected using legal means. Informal tenure normally refers to locally recognized rights without State recognition and protection (even if they are formally recognized and secure in a local context). Informal tenure can be illegal (against the law) or extralegal (neither against nor recognized by the law) (FAO, 2002).

Security of tenure is the certainty that a person or a group's bundle of rights to land and other resources will be recognized by others and protected in cases of specific challenges (FAO, 2002). "It is the assurance that land-held property rights will be upheld by society" (Naughton-Treves and Day, 2012). People with insecure tenure face the risk that their rights to land will be threatened by competing claims, or even lost as a result of eviction. "Without security of tenure, households are significantly impaired in their ability to secure sufficient food and to enjoy sustainable rural livelihoods" (FAO, 2002).

Perceptions on what constitutes secure tenure vary. Some argue that only full private ownership (e.g. freehold) provides secure tenure (FAO, 2011). In Thailand, secure tenure is typically associated with the *chanod* (or *chanote*) certificate, also known as *Nor Sor* 4, which grants the owner the right to sell, transfer and legally mortgage the land. What matters, however, is how landholders perceive tenure security and their confidence about access to resources. In many community-based tenure systems, the right to transfer is inherently restricted (FAO, 2002). For instance, in Ban Lawyo village in DMS, the traditional leader of the village said that he would feel ashamed if someone in the community transferred his or her land to an outsider. For him, secure tenure meant the village secured the trees, the crops and the households.[4]

The sources of secure tenure can also vary from context to context. When neighbours recognize a person or a group's rights, that person's or group's tenure security increases. The same happens if a government provides political recognition of certain rights, for example, tolerating the illegal encroachment of a community on a state forest. A greater measure of tenure security is provided when the legal system affirms the rights that people hold and

[4] Interview with traditional leader of the Ban Lawyo village, 17 January 2012.

endows protection on those rights. Often this comes in the form of land registration. "Total" tenure security is the cumulative security provided by all sources (FAO, 2002). However, even total tenure security can be threatened (e.g. as a result of armed conflict or natural disasters).

**Why is Secure Tenure Relevant to Incentive-Based Policy Instruments?**

Ideally, payment in a PES is based on the value of service units or outputs delivered (e.g. number of certified emission reductions). In practice, however, sellers' contractual obligations in PES schemes tend to be based on inputs, particularly specific land activities (e.g. reforestation) (Greiber, 2009). "In their most common form, direct payments are made to landholders for undertaking specific land-use practices expected to result in increased ecosystem services, including carbon sequestration" (Jack *et al*., 2008). In other words, PES schemes are performance based. The assumption is that the activity in question will result in the desired service outputs.

If the object of a PES contract is an ecosystem service, it is necessary to determine who owns that service – or who can derive income from it. If the object of a PES contract is a land management practice, it will take place on a piece of land to which the seller must have appropriate property rights in order to fulfil the obligations of the contract (Greiber, 2009).

*Insecure tenure may discourage buyers from participating in a PES scheme.* PES schemes appeal to those who own and control land. Landholders with insecure tenure are unreliable service providers (Grieg-Gran *et al*., 2005). "This predicament is particularly relevant to forests. By its very nature, forestry needs medium to long-term investments to produce sustainable returns" (Costenbader, 2009). Buyers of ecosystem services are unlikely to make significant investments if tenure is not secure.

*Insecure tenure may exclude service providers from PES schemes.* Insecure tenure may also act against service providers or sellers participating in PES schemes. For example, most government-led PES schemes establish eligibility criteria for participants which are critical in determining who gets access to the scheme (e.g. in Costa Rica the government-led PES scheme excludes informal tenure) (Grieg-Gran *et al*., 2005).

*Insecure tenure can become a source of inequality, conflict and even threaten the viability of a PES deal.* Often, particularly in the case of forests, multiple resource users have access to the same resource (Knox *et al*., 2011). All claims must be understood to identify if there are other users – parties and non-parties to the PES deal – whose rights might be affected, such as downstream users or seasonal users (Forest Trends and The Katoomba Group, 2008). If land use rights are unclear, the distribution of payments or benefit sharing among users can become a source of inequality and conflict if one service provider (or a group of service providers) benefits to the detriment of other users.

On the other hand, insecure land tenure plays a large part in creating an uneven playing field for contracting parties in a PES deal, curtailing the community's ability to negotiate freely,

independently and on an equal footing. For example, Griffiths (2007) reports that some communities "are actually worse off and have become indebted in order to pay contract penalties for failure to meet obligations" (e.g. as a result of accidental fires).

"*Insecure tenure is often directly related to overexploitation of natural resources and subsequent degradation of environmental services*" (Smith *et al*., 2006). Tenure security influences forest use by residents. "It is futile to debate whether villagers have the capacity to manage or conserve a forest once they have been deprived of their incentive to do so" (Sato, 2003). For example, in DMS, the main incentives for sustainable management are in the form of an increased confidence that the trees people plant will become an asset for the future. This is related to confidence about the negotiated land-allocation processes under the multi-stakeholder platform. Additionally, clear property rights can be used to exclude others, and so serve as a defence against illegal resource exploitation (Greiber, 2009). Finally, without strong forest governance "it will be difficult, if not unfeasible, to reduce rates of deforestation and degradation at the national level and deal with risks of leakage (Davis *et al*., 2000). "Secure forest and land rights are an indispensable precondition to ensure the long-term permanence of forests and the carbon rights sequestered therein" (Costenbader, 2009). Potential drivers of deforestation and forest degradation are often symptoms of weak forest governance (Williams and Davis, 2011).

*Insecure tenure poses a risk of poor landholders being bought out or displaced.* Market incentives for forest ecosystem services can increase competition for land. Stimulating a market interest in marginal land previously left for the poor for lack of economic value generation may prompt land grabs and displacement. In Bolivia, a qualitative study showed that poor landholders saw environmentally motivated contractual caps on land use as a first step towards land appropriation (Grieg-Gran *et al*., 2005).

## Existing Tenure Framework in DMS

The landscape of Doi Mae Salong is part of a National Reserved Forest (NRF) covering 353,750 *rai*.[5] The area where the LLS and PRDMS projects have focused their interventions covers 56,250 *rai*[6] and is the object of the following analysis.[7]

*National Reserved Forest*

The main regulatory framework applicable to DMS is the *National Reserved Forest Act B.E. 2507* (1964) (hereafter referred to as the NRF Act), two Cabinet resolutions from 1985 and 1992, and the *Agricultural Land Reform Act B.E. 2518* (1975).

The NRF Act defines 'forests' in section 4 as "*land, including mountains, creeks, swamps, canals, marshes, basins, waterways, lakes, islands and seashore, that has not been legally*

[5] 566 sq. km (1 *rai* = 0.0016 sq. km).
[6] 90 sq. km.
[7] Report on Land Use within Mae Salong Forest Reserve by the Forest Land Division Office, Regional Forestry Office No. 2, Chiang Rai.

*acquired by any individual*", and 'National Reserved Forests' as those so determined under the provisions of the same Act.[8] It is a formal rather than a substantive definition. As a result, forest reserves represent almost twice the area covered by actual forest (Sato, 2003).

*General Rule*

The NRF Act sets out a general prohibition against occupying, possessing, exploiting, inhabiting, developing, clearing, burning, collecting forest products, or causing any damage in or to a NRF (s.14). Anyone who contravenes this prohibition is liable to imprisonment and a fine (s.31).

Consequently, the competent authority may order any person be evicted from the NRF, or refrain from any act that would result in a violation of the Act, as well as dealing with any object that has caused damage to the NRF, including seizing and demolishing it (s.25).

*Community Forestry*

Exceptionally, permission for use – logging and collection of forest products – may be requested from the competent officer in respect to any specified area in the NRF (s.15).

In practice, the implementation of section 15 has adopted the form of community forestry.[9] Community forestry is a generic term referring to a variety of participatory or collaborative approaches. The degree to which use and management rights are devolved to communities varies widely (FAO, 2011). In Thailand, community forestry involves a discretionary right to use (log and collect forest products) and manage a designated community forest according to the rules and regulations set up under existing laws and regulations, for a limited time (generally 5 years), after formal permission has been obtained from the relevant authority. Commercial use is excluded (although in some areas informal arrangements allow certain uses, e.g. collecting broom grass). The designation of community forest (*Jat Tam Krong Pa Chum Chon*) applies only to the forest area, not to the village settlement. The Royal Forest Department (RFD) has a budget for implementing activities in community forestry projects, e.g. reforestation, agroforestry, enrichment planting, training, signage, trails and ceremonial buildings.

The regulations describe a detailed procedure for villages to obtain the relevant permit. The head of the village submits a proposal form that should be supported by at least half of the villagers aged 18 or older. Once approved by the District Forest Office, it is submitted to the Provincial Forest Office and the Regional Forest Office. Competent officials of RFD and the head of the village survey the proposed community forest area and fill out a report. Supported

[8] The determination of a 'forest' as a 'National Reserved Forest' is made by a notification in the ministerial regulations. A map showing its boundary lines should be annexed, boundary posts and signs or other marks should be made visible on the ground for the public to know the boundaries of the reserve, and copies of the regulations and maps should be posted at the district or sub-district offices and at open places in the villages of the respective localities.

[9] In addition to section 15, section 19 of the NRF Act empowers the Director General of RFD to order the competent forest officer to carry out activities within the NRF for the purpose of controlling, supervising, maintaining or improving the area.

by the Forest Offices, the village representatives prepare a community forest draft proposal which is submitted to the Tambon Administrative Organization[10] for consideration and comments. The final draft and supporting documentation is submitted by the Provincial Forest Office to the central RFD. The Community Forest Division then submits all documents to the Director of RFD. If approved, the Director will issue a letter of acceptance or permission of grant. The project activities are implemented under the supervision of forest officers. Activities are monitored and evaluated, and are ultimately reviewed by the Director to assess if they have damaged the forest, in which case the project must cease. To renew the permit, the community must re-apply following the same process (Sharp and Nakagoshi, 2006).

At the time of writing, 8,342 community forest projects have been designated in Thailand, covering a total area of 3,196,927 *rai*.[11] In DMS, two[12] of the villages involved in the project have designated community forests: Ban Panasawan (193 *rai*[13]) and Ban Jabusee/Pakasukjai (2,000 *rai*[14]). Outside the framework of the project, but within the 90 sq. km target area, other designated community forests include Santikiri (25 *rai*) Ban Arbae (1,750 *rai*[15]) and Ban Alae (1,300 *rai*[16]). Additionally, 13 plots have been registered as community forests by monasteries, in which case, according to information provided by the Regional Director of the Community Forest Division, the permit does not expire and the designation may include the temple settlement area.

*Utilization*

Under Section 16 of the NRF Act, the Director General of RFD, with the approval of the Minister, is empowered to grant permission to live in and use an area within National Reserved Forest for a term of no less than five and not more than 30 years (s.16). In the core area of DMS, such consent has been given only to government or public agencies, e.g. the RTAF. At the time of writing, 14 public agencies have been granted permission under section 16, covering an area of 37,048 *rai*.[17] Currently 47 new applications for the core area of a mixed public and private nature are under evaluation. Mining licences can be obtained under the same section.

[10] At the sub-district level, municipalities in urban areas and Tambon (local government) Administrative Organizations are responsible for managing local land-use issues and settlements, including forest resources management.
[11] 5,115 sq. km. Data provided by the Regional Director of the Community Forest Division, Chiang Rai province, on 16 January 2012.
[12] The community forest of Ban Jabusee is also managed by Ban Pakasukjai, so although formally two villages have designated community forests, community forestry applies to three villages in the project area.
[13] 0.31 sq. km
[14] 3.2 sq. km
[15] 2.8 sq. km
[16] 2.08 sq. km
[17] 59.3 sq. km

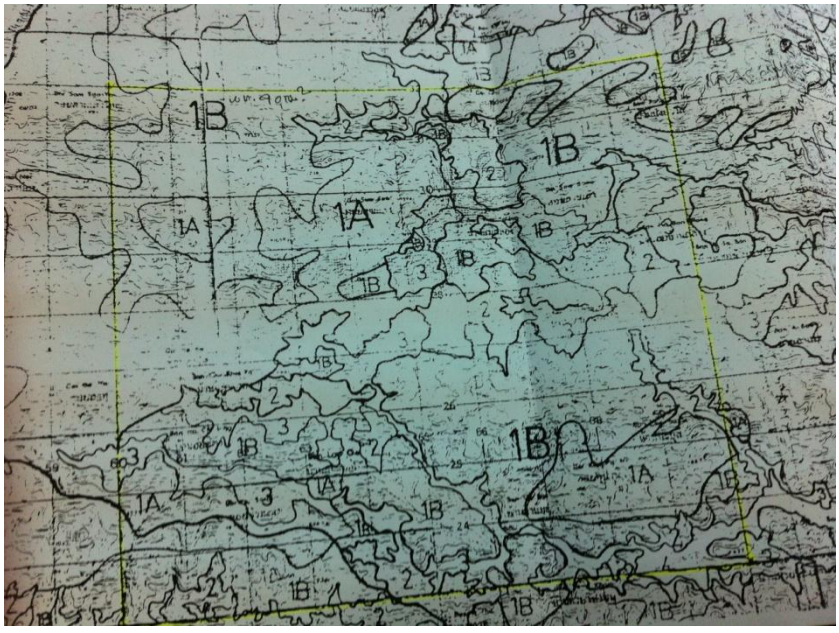
*Degraded Forests*

Broadly, degraded forests are areas that were formerly covered by forest. They are regulated under section 16 *bis* of the NRF Act. When a NRF, in whole or in part, has become so degraded (i.e. only few valuable timber trees remain) that it cannot be naturally rehabilitated, the RFD may declare the area a degraded forest.

Degraded forests are targeted both by RFD as sites for reforestation and by the Agricultural Land Reform Office (ALRO) for allocation to landless farmers within the framework of the *Agricultural Land Reform Act 1975*. "The status of this land is therefore ambiguous and controversial in many ways" (Sato, 2003).

To reconcile competing objectives and prevent further forest encroachment (Sato, 2003), in 1992 the Thai Cabinet issued a resolution zoning NRF areas into three categories: (1) *Conservation Zone (Zone C)*: land covered with healthy forest suitable for preservation (about 88 million *rai*); (2) *Economic Zone (Zone E)*: degraded forests, land suitable for tree crops particularly tree plantation crops (about 52 million *rai*), and (3) *Agriculture Zone/Land Reform Zone (Zone A)*: deforested areas occupied by permanent settlement, suitable for agriculture (about 7 million *rai*). Zone C consisted mainly of protected forest areas according to acts or cabinet resolutions, such as wildlife sanctuaries, national parks, and Class 1 watersheds.

Watersheds were classified into five classes by a Cabinet resolution in 1985. DMS was categorized mostly as a Watershed Class 1 (WSC1), a headwater source. WSC1 are divided into two sub-classes, both present in DMS. *WSC1A* is usually land at high elevations with very steep slopes requiring permanent forest cover; *WSC1B* areas have similar physical and environmental features to WSC1A, but have been partly cleared for agriculture and require special soil conservation measures (Tangtham, 1996) to prevent soil erosion.




Watershed classes in the 90 sq. km core area at DMS. Source: Community Forest Division, Chiang Rai

The DMS landscape is mostly classed as WSC1 (see map above). So, according to the 1992 Cabinet resolution it should have been zoned mostly as a Conservation Forest or Zone C. However, an inspection of the zoning maps[18] reveals that the entire 90 sq. km core area has in fact been zoned as Economic Zone, or Zone E. At a meeting on land tenure organised by the Royal Project Committee[19] in January 2012, RFD admitted that the area had been transferred to ALRO in 1994 to be included in the land reform scheme. The representative of RFD attributed the "erroneous" zoning and subsequent transfer to a mistaken desktop assessment by a forest officer who had assumed that the core area of DMS was degraded forest. It is also possible that the transfer of this area was part of a larger national transfer of land from RFD to ALRO in 1993, following tragic floods, landslides and a logging ban, to alleviate suffering caused by a lack of cultivable land. The RFD handed over 70,800 sq. km of degraded forest reserves, amounting to about 30% of the forest reserve area (all of Zone A and part of Zone E) to ALRO for agricultural purposes (FAO, 2000; Sato 2003). The representative of RFD explained that RFD had tried unsuccessfully to recover the land from ALRO, despite an agreement between RFD and ALRO under which, according to Sato (2003), ALRO was to return to RFD (1) land covered with forest, (2) land unsuitable for agricultural production, (3) ecologically vulnerable areas, (4) areas to be protected as communal forests, (5) land with an average slope of more than 35 degrees, (6) watershed areas, (7) land under the supervision of RFD according to the law and regulations, (8) mangrove forests, and (9) degraded forests that have not yet been cultivated by farmers.

Although the NRF Act provides for allocation of land by RFD in degraded forests through *Sithi Tham Kin* or *Sor To Kor* (STK), meaning 'right to farm', the allocation of land in degraded forests is now handled by ALRO, and the STK has been replaced by the *Sor Por Kor* 4-01 (SPK), a non-transferable usufruct certificate. SPK does not transfer or recognize ownership of the land. The land remains under state ownership. The right to use the land to farm is simultaneously a duty to farm, since the land must be used for – and only for – agriculture. The SPK cannot be bought or sold, it can only be transferred through inheritance. SPK cannot be pledged as collateral for a loan, but it can be mortgaged with the Bank for Agriculture and Agriculture Cooperatives. Generally, the allotted plot cannot exceed 50 *rai*[20] per family. During the Royal Project Committee's land tenure meeting at DMS, the SPK representatives disclosed that 47,850 *rai*[21] of the core area have been surveyed for the allocation of SPK.

During the same meeting it became apparent that some of the agencies (e.g. RTAF) are unaware of the transfer of land to the ALRO and that each agency has its own mapping of the area. However, in a remarkable outcome, the Royal Project Committee not only discussed the issue of land tenure for the first time, but also agreed to share information on land tenure. The

[18] Inspection carried out by the author and Mr Tawatchai Rattanasorn at the Community Forest Division, Chiang Rai province, on 16 January 2012.

[19] The informal multi-stakeholder committee established during LLS evolved into an official Royal Project Committee that operates at the provincial and site level. At the provincial level it is chaired by the Provincial Governor; at the site level it is chaired by the RTAF.

[20] 0.08 sq. km

[21] 76.6 sq. km

RFD, RTAF and the Land Development Department (LDD) representatives are uneasy about implementation of SPK in the area. They see it as a threat to the conservation of soil and forests in DMS, and an opportunity for "outsiders" to intrude on the landscape. "A significant amount of land allocated under the land reform scheme ended up being acquired by well-to-do speculators. Efforts to address these problems have been only partially successful" (ICEM, 2003).

*Community Forests under Land Reform*

The ALRO has a policy of maintaining 20% forest cover in land reform areas. "In 1956, as an appendix to the 1954 land code, the Ministry of the Interior issued an informal agreement among the land-related departments regarding the procedures that all land allotment projects should follow. The agreement made explicit that when the government redistributed part of the state land to the people, approximately 20% of the land should be kept as forest to be used by the local people. *Forests* in the agreement included trees along the roads, those serving as a windbreak, and those located near residential areas to be used for construction and firewood." Although this guideline has never been strictly implemented, and its operation remains extremely vague, it is considered the first official recognition of community forests (Sato, 2003).

*Community Title Deeds (Chanod Chum Chon)*

In 2010 the Cabinet passed a Regulation of the Prime Minister's Office on the Issuance of Community Land Title Deeds, intended to allow communities to manage and use state-owned land collectively, caring for the natural resources and the environment and meeting the conditions set out by law. In practice, the community title deeds are not deeds *per se*, but rather a land-use permit. If communities fail to meet the requirements, the title may be revoked. Communities must set up a legal person (or juristic person) to hold the title. Land may not be sold, except within the community. Communities must periodically renew their "title deed".

The pilot community title project originally covered 30 communities. The first community title deed was presented to the village cooperative of Ban Khlong Yong in Nakhon Pathom, covering 1,803 *rai*, or 20 *rai* per household (Bangkok Post, 2011). So far, 435 communities nationwide have applied for *chanod chum chon*, covering an area of 3,520 sq. km with 62,625 households and 241,223 people. In northern Thailand alone, 293 communities have applied for an area covering 2,560 sq. km and 36,297 households with 139,439 people (Prime Minister's Office, 2011). However, only two title deeds have been granted so far, possibly because the policy was launched by the former government, and has not been a priority for the present one (in power since July 2011). Two villages in DMS are in the pipeline for *chanod chum chon*: Ban Panasawan and Ban Lawyo.

## Conclusions

1. Research has found that the core area targeted by the PRDMS project, covering 90 sq. km of National Reserved Forest, mostly a Class 1A and 1B watershed, should have been zoned as a Zone C conservation area, but was instead zoned as a Zone E degraded forest and handed to ALRO in 1994 to be included in the land reform scheme. This area is being surveyed by ALRO but no land has been allocated yet. As a result, there is an intricate interplay of the government agencies involved in DMS. The RTAF is phasing out its involvement, having signed a Memorandum of Understanding to return the area to RFD. In turn, RFD formally handed the area to the ALRO but continues to act as the responsible agency, pending the implementation of a delayed land reform scheme that is perceived as a threat to forests.

2. Implementation of tenure policies in Thailand has been exceedingly controversial, and is rarely consistent locally or nationally. The system used to allocate land is easily corrupted and competition amongst agencies leads to a lack of coordination and inefficiency. A significant unexpected outcome, however, is the decision adopted by the Royal Project Committee at DMS whereby the relevant agencies agreed to share land tenure information. It remains to be seen if and to what extent this decision will be upheld, and whether it contributes to positive outcomes in terms of land and forest governance.

3. The RFD, RTAF, and LDD agree that land and forest rights need to be clarified. The general perception is that the solution is to separate forest areas (for preservation) from living areas (for farming). The underlying assumption is that forests can and should be isolated from other land uses, revealing that the landscape approach has not been entirely understood or adopted. Fisher (2011) suggests that forest agriculture is de-emphasized even in the community forestry movement (perhaps as a need to counter the narrative portraying forest-dependent people as forest destroyers), even though agriculture is a principal source of subsistence and income for forest dwellers. The fact that monasteries are granted stronger rights in community forestry (i.e. for longer or unrestricted terms) suggests that RFD trusts the ability of monks to manage forests, but does not have enough confidence in local villagers. By contrast, government agencies have expressed genuine satisfaction with the experience of community forestry in DMS. The large community forest of Ban Jabusee and Ban Pakasukjai is probably the best example of this.

4. Tenure in DMS is a reflection of the array of tenure arrangements in Thailand, particularly in relation to public or state-owned land such as forest reserves. Cabinet regulations can suspend, revoke, amend or create a tenure arrangement. Consequently, tenure policies are highly contingent on the political state of affairs and may change dramatically from one government to the next. A preliminary review of tenure arrangements in DMS villages reveals that three (half) are formally participating in community forestry and two have applied for community title deeds (see Table 1).

Table 1. Existing village tenure arrangements at DMS

| Village | SPK | Community forest | Community title deed |
|---|---|---|---|
| Ban Panasawan | Yes | Yes | Applied |
| Ban Lochangchon | No | | |
| Ban Anglow Akkha | No | | |
| Ban Jabusee/ Ban Pakasukjai* | Yes | Yes | |
| Ban Lawyo | No but applied | | Applied |
| Ban Heko | No | | |

*the same forest is managed by both villages

5. Available or potentially available formal tenure arrangements (community forestry, community title deeds and SPK) are similar in that 1) they do not transfer ownership of the land from the state to the community or to individuals within the community; 2) they are "soft rights", i.e. they can be withdrawn at the discretion of the granting authority (FAO, 2011) and 3) they are governed by highly bureaucratic procedures. However, there are significant differences (see Table 2). For one, the community forest and community title deed programmes recognize communal, rather than individual rights, whereas the SPK focuses on individual rather than communal rights (though not exclusively). Secondly, the community forest programme grants permission for using forests, but the designation omits village settlements and agricultural plots. The community title deed includes village settlements and agricultural plots, but whether it can include forests or forest rights is unclear. The definition seems broad enough, however, and there is a specific reference to caring for natural resources and the environment in the regulation. SPK includes individual households and agricultural plots, and may include common areas. Finally, even if the process to apply for a community forest is not particularly straightforward, it is the only formal tenure arrangement currently available, though it is not a rights-based approach but rather a discretionary permit. The RFD promotes community forestry and has allocated a budget to develop projects. The community title deed programme seems to have halted, and the delayed implementation of SPK in DMS is uncertain and not especially welcomed by RTAF, LDD or RFD.

6. Nevertheless, community forests are not exclusive to RFD. Even if the implementation of SPK in degraded forests obeys an agricultural rationale, ALRO is subject to a policy of maintaining 20% of forest cover for the community in land reform areas. It is unclear if this has been considered in DMS, how it would play out, or if RFD is planning to reclaim forested areas within the land reform area. What is clear is that SPK – though far from resolving tenure arrangements – is the only arrangement that could potentially improve tenure security of the village settlement, the farmland and the forests.

Table 2 Comparison of existing tenure arrangements

| Feature | Community forest | SPK | Community title deed |
|---|---|---|---|
| Transfer of ownership | No | No | No |
| Permanent | No | No (?) | No |
| Transferable (other than by inheritance) | No | No | No |
| Can be pledged as a collateral | No | Yes, only with the Bank of Agriculture and Cooperatives | No (?) |
| Forest rights | Yes | Unclear | Unclear |
| Farming rights | No | Yes | Yes |
| Settlement/Household rights | No | Yes, individual | Yes, communal |

**Preliminary Recommendations for Implementing PES in DMS**

1. It is often assumed that secure tenure is a prerequisite for the establishment of incentive-based mechanisms. However, insecure land tenure may not be an insurmountable obstacle to the organisation of compensation for users providing the desired environmental services (FAO, 2004). Rather, **tenure improvements need to be seen as an integral part of establishing incentive-based mechanisms (**Naughton-Treves and Day, 2012).

2. DMS offers the opportunity to **build on the existing negotiated framework**, developed under LLS, **to implement PES and realize its potential for improving tenure security.**

3. **The community forest scheme could be used to introduce a pilot PES arrangement** (which could then be scaled up if successful) in which RFD participates as a buyer (or one of the buyers), using its allocated budget for promoting and developing community forest projects. Insecure tenure will not represent a risk to RFD since it exercises formal control over the land. In exchange for securing pre-established forest ecosystem services through reforestation, sustainable forest management and sustainable agricultural practices, participating villages would be entitled to cash or in-kind payments as agreed, such as trees, infrastructure (e.g. for sanitation or ecotourism) and training. More importantly, including RFD offers the opportunity of exploring payments that improve tenure security.[22]

[22] For example, in the Noel Kempff Mercado National Park in Bolivia, communities are not remunerated ecosystem service providers but they have received land titles under the PES scheme (Grieg-Gran *et al.*, 2005).

4. The simplest tenure-related compensation could be **extending the term of the community forest permit from five years to 10, 20 or more**. Tenure security improves if rights are granted for a longer period of time (ideally in perpetuity). As a consequence, the costs of reapplying for the permit every five years would be reduced (or avoided), and more significantly, communities may be willing to invest more time and resources in the forest in line with long-term PES deals (and possibly REDD+ implementation). Evidence that RFD is empowered to extend the permit duration is provided by the fact that permits for monasteries can be issued free of time limits.

5. Similarly, **village settlements could be included in the community forest designation,** provided this does not impose rigid conditions on communities. Including settlements in the designation will improve tenure security by extending the formal recognition of the right to use and manage – normally reserved for forests – to the village area. Again, in the case of monasteries, the temple area (which includes a living area) can be part of the designation.

6. Exploring stronger forms of shared governance or collaborative management in DMS requires **challenging the dominant idea that forests need to be separated from wider land-use practices, particularly when considering sustainable forest management and livelihood objectives jointly**. Conveying the landscape approach is essential, as is supporting the ongoing process of building trust (e.g. workshops to make compellingly clear the achievements of DMS, and sharing experiences of strong community forest initiatives in other countries).

7. **Where community forest arrangements are not in place**, as is the case with half of the villages in the PRDMS project, **the reasons should be identified and shared with RFD**.

8. If the reasons are related to access to the scheme (e.g. high costs) rather than objections to the scheme itself, **villages not currently participating could be assisted in adopting community forest management through a PES deal.**

9. The presence of **community forest arrangements that provide formal recognition of the right of a village to use and manage a forest can encourage private buyers.** However, villages that participate in community forestry are constrained by their project proposal and should avoid non-compliance to prevent exclusion.

10. If no arrangements are in place, **recognizing *de facto*, rather than *de jure*, ownership or control of the land can help overcome unclear land and forest rights** (e.g. if neighbouring landholders regard the occupation of a person or a community as secure) (Greiber, 2009).

11. Similarly, **making payments contingent on activities (e.g. land management activities) rather than outputs (e.g. service units)** can temporarily help overcome uncertainty about who has the right to benefit from a resource (e.g. carbon rights).

12. **Inviting the RFD as a facilitator or neutral party can offer buyers a certain measure of security that tenure will not be challenged.** The role of facilitator can help RFD adapt to a new role of facilitating devolved management by others rather than managing forests directly (FAO, 2011), in line with Constitution of the Kingdom of Thailand B.E. 2550 (2007), especially article 66[23]. If existing laws allow, RFD may also be entitled to receive an incentive for participating in the scheme. However, if villagers are uncomfortable with RFD playing the role of a facilitator or neutral party, a third party such as an NGO could participate instead.

13. Start-up transaction costs are less when negotiating with large landowners than when negotiating with small informal landholders. **If the community, rather than individual landholders, enters into the PES deal**, it may become more competitive. Monitoring and enforcement costs may also be reduced. In Nepal, for example, members of the Kafley Community User Group in Lamatar have been trained in mapping and conducting a forest carbon stock assessment themselves (Singh Karky, 2006).

14. It may be also be easier and more cost effective for the community as a whole to access assistance before entering into a PES deal. Insecure tenure usually implies that local communities cannot negotiate at arm's length with PES buyers. **Communities should be assisted before subscribing to a PES deal**, particularly with clarifying issues such as who bears start-up costs and how[24], ensuring there is enough flexibility to enable livelihood responses to short-term shocks (e.g. fires) and to learn by doing (e.g. use of adaptive language), allocating risks properly (e.g. for non compliance) and foreseeing complementary activities needed to provide the service (e.g. training)[25] (Forest Trends and The Katoomba Group, 2008).

15. **All users – whether parties or not – whose rights may be affected by the PES deal should be identified to avoid negative impacts that engender inequality and conflict.**

16. In any event, **the process of allocation of SPK must be monitored, and ideally land reform should be agreed in a participatory manner**, building on the decision adopted by the Royal Project Committee whereby agencies have committed themselves to sharing information on land tenure. Particular attention should be given, *inter alia*, to:

    a) Respecting customary tenure arrangements.

[23] Article 66 "People assembling as a community shall have the right to conserve or restore their local customs, and participate in the management, maintenance and exploitation of natural resources, environment and biological diversity in a sustainable manner".

[24] For example, in a carbon sequestration through reforestation initiative in Ecuador, FACE, a Dutch consortium of electricity companies, financed 70% of start-up plantation costs, and 30% in the third year, on the condition that tree survival rate of 80% was achieved (Grieg-Gran *et al.*, 2005).

[25] In the Pimpampiro PES programme in Ecuador, complimentary activities are conducted such as technical assistance, organic agriculture and forest management (Grieg-Gran *et al.*, 2005).

b) Avoiding the distortion of informal arrangements often made amongst villagers to accommodate the landless poor (Sato, 2003).

c) Neglecting the claims of women or other vulnerable groups who hold partial or common rights (FAO, 2002).

d) Discriminating against upland minority groups that lack Thai citizenship (and are therefore denied land rights).

e) The deterioration of community organizations derived from a change from communal to individual titles (Grieg-Gran *et al*., 2005).

17. The agreement should at least:

    a) Evaluate and flesh out the obligation of ALRO to keep 20% of the land reform area as forest for community use.

    b) Determine the situation of existing designated community forests currently under RFD supervision.

    c) Define a responsible authority or establish a management platform.

18. If the SPK is properly implemented, it could provide a unique opportunity for improving the tenure security of forests, crops and villages, as envisioned by the traditional leader of Ban Lawyo village. In this scenario, **ALRO may represent an ideal buyer because it is required to allocate or maintain at least 20% of the forest in land reform areas.**

**Relevant Knowledge Needs**

1. Voluntary or private PES schemes may not require a specific legal framework (Greiber, 2009), but **contradictory laws and regulations that represent an obstacle or deterrent should be identified and dealt with.** For example, the process of acquiring land under the Land Code (*Land Code Promulgating Act B.E. 2497 (1954) as amended*) involves obtaining a Certificate of Use or a Confirmed Certificate of Use, also known as Exploitation Testimonial (*Nor Sor* 3 or *Nor Sor* 3 *Kor/Gor*). It demonstrates that the bearer has "made use" of the land, usually by cultivating it, for a prescribed period of time.[26] If land is set aside for conservation, it may fail to meet the requirement for a Certificate of Use and consequently the option of legally acquiring it would be cancelled.

2. Scaling up a PES scheme through a nested approach and tapping into payments for carbon sequestration requires an **institutional, policy and legal framework assessment**, because formal frameworks (and customary arrangements) can allow,

[26] http://www.unhcr.org/refworld/topic,4565c2252c,4565c25f3ad,47d6547cc,0,,,THA.html

support, obstruct or prohibit its implementation. The assessment should include the Constitution, specific legislation, environmental legislation, indirectly relevant laws, customary arrangements, and involve national, regional and local contexts. For example, is the public entity participating in the deal or contract authorized by law to invest public funds or use public goods for a PES scheme?

3. To implement ecosystem service policies it is crucial to **determine who has the right to benefit from a resource** (e.g. compensation for PES). The intangible nature of actually or potentially sequestered carbon poses particular challenges to traditional property law. The right to the benefits derived from actions leading either to reduced emissions or increased sequestration is normally referred to as a carbon right. The intuitive assumption is that these rights accrue to the owner of land on which they exist (Costenbader, 2009). However, carbon rights may be assigned independently of land rights. Consequently, clarification of carbon rights tenure is essential.

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