

A11

POLICIES THAT TRANSFORM SHIFTING CULTIVATION

And encourage community-based forest management in Lampung province, Indonesia

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Introduction

Deforestation and forest degradation resulting from population growth, agricultural expansion, increasing demand for wood products and rapid economic growth are problems in Indonesia, as they are in many other parts of the world. Indeed, the Food and Agriculture Organization of the United Nations acknowledged in 2005 that there were many causes of deforestation (FAO, 2005). However, it said there was increasing recognition that diversifying tenure arrangements, by transferring secure tenure rights to local stakeholders, was an important mechanism for improving accountability and control of forestry operations at a local level, thus creating better conditions for sustainable forest management.

Land-tenure issues are often cited as a root cause of communal conflict and even separatist violence. More generally, land and natural-resources issues are widely believed to be the main causes of conflict. Herrera and Da Passano (2006) placed the causes of land-tenure conflicts into three categories: the first was political influence, a factor present in almost every land-tenure conflict; second was legal factors arising when actors were unaware of their legal rights or the different legal frameworks that regulated access to areas and the use of natural resources in different or opposing ways; and the third major cause was economic factors.

Most poor people in rural areas remain poor because their rights to land are weak and their tenure is insecure (Bruce, 2004). They could benefit from forests and forestry reform, but an effective rights-based approach to forestry reform that ensures justice and poverty alleviation requires that attention be paid to more than

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just property rights. Colchester (2007) said that if forest peoples were to benefit from forests and forestry reform, forest governance systems needed to secure a broad spectrum of rights (e.g. to markets, to commercialize forest products, and to give or withhold prior and informed consent for activities affecting people's land). There is much potential for solving forest degradation and destruction by implementing effective tenure arrangements. If this potential is to be realized, emphasis should be given to designing and adopting more effective and diversified tenure systems that support local users, particularly disadvantaged groups, and to providing the necessary supportive legislation.

Diversification of tenure systems through mechanisms that increase and guarantee access to natural resources for the poor are also vital to poverty reduction and the realization of human rights (FAO, 2004; SIDA, 2009). In these cases, land tenure may be defined as a relationship, whether legal or customary, among people, as individuals or groups, with respect to land. Therefore, assessment of tenure would be needed to determine whether a programme might reduce other people's rights to resources, livelihood and security. Scientists and policy-makers must also acknowledge the importance of property rights issues in the context of climate change (Griffiths, 2007; RRI, 2008).

Freudenberger (1994) gave three reasons why it is vitally important to study tenure in natural-resources management programmes: first, it affects who has access to resources; second, it affects whether people are willing to participate in project activities; and third, it affects the distribution of a programme's benefits. There is a need to examine aspects of land tenure that affect long-term management of forest land, range land and farmland, as well as tree resources and sources of other minor forest products (Otsuka and Place, 2001).

Based on these three reasons, it can be seen that an understanding of tenure is important in its relevance to a community's sustainable livelihood. This condition also applies to communities living at the edge of the forest. Those communities that use their land for shifting cultivation must understand local land-tenure policies because of their long-term effect and their relationship to security in managing the land (Wulandari and Cahyaningsih, 2010). Also, as stated by Herrera and Da Passano (2006) and Colchester (2007), the legal aspects of regulating access to specific areas (tenure rights systems) are important to securing a broad spectrum of community rights. An example of the importance of understanding tenure exists in Lampung province, where shifting cultivators are allowed access only to protected or conservation forests. This means that the land they are allowed to cultivate exists only in specific blocks or zones. According to the Ministry of Forestry (2000) in decree no. 256/Kpts-II/2000, Lampung has 1,004,735ha of forest, and this is divided into conservation forest, 462,030ha; protection forest, 317,615ha; limited production forest, 33,358ha; and production forest, 191,732ha (Figure A11-1). With the forest categories to which they may gain access occupying little more than three-quarters of the total forest area, it is vital for shifting cultivators to know where the boundaries lie. The term 'shifting cultivation' describes a land-use system involving a

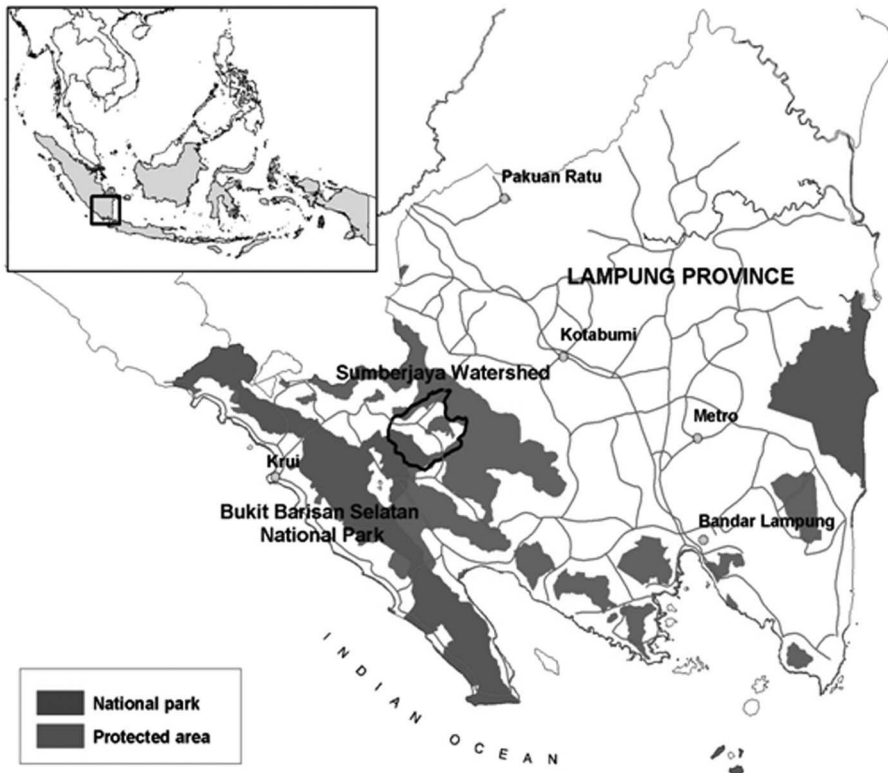


FIGURE A11-1: National Park (conservation forest) and protected areas in Lampung province.

Source: Konsorsium Unila-Pili (2013).

planting, cropping or production phase and a fallow phase (Mulyoutami et al., 2010). Shifting cultivation is usually practised on forest land that is cleared of vegetation for production of crops. The crops sometimes combine with seasonal plants, perennials or agroforests, either growing at the same time or alternately. The products are either for the home consumption of the farming family, or for sale. In the fallow phase, the land is abandoned and the forest, including existing trees, is left to regrow. According to Mulyoutami et al. (2010), more conventional farming systems in the fields and forests of Asia evolved from shifting cultivation systems. And according to Mertz et al. (2012), there is increasing evidence of the demise of shifting cultivation as a farming system in many parts of the tropics. It is possible that this demise of shifting cultivation is occurring on those landscapes that are considered to be in the final stages of land degradation, with an irreversible loss of forest cover and a permanent loss of productive capacity and agricultural income (Lojka et al., 2011).

Definition of forests and policies relevant to shifting cultivation

In Act number 41 of 1999, the Government of Indonesia provided three functions for its forests: protected forests, production forests and conservation forests. This has impacted on the tenure status in each of these forest areas, since each of the different functions has implications for the legal provisions that apply to communities living in or around them. The main livelihood of communities living around the forests is farming, and some do it by shifting cultivation. If they encroach into the forests, this is because they do not have enough cultivated land outside the forest.

Indonesia's problems of deforestation and forest degradation are the consequence of encroachment, either by local communities, outsiders, or indigenous people. In the 20 years from 1990 to 2010 there were 1065 forest conflicts involving communities and indigenous people in 27 provinces (Purba et al., 2014). On this basis alone, the government should implement programmes of community-based forest management in an attempt to reduce the incidence of encroachment while at the same time increasing community incomes. This chapter attempts to assess relevant policies with an impact on land tenure as they affect shifting cultivation communities that live around protected forests and conservation areas in Lampung province. The discussion is limited to protected and conservation forests because while these two major forest functions have almost the same protection provisions, in practice they have different management policies.

In 1986, Linda Christanty stated that shifting cultivation could refer not only to actual changes that occurred on a cropping site (or swidden), but also to the system of land tenure that applied to the site. This is appropriate to conditions in Lampung, because when scrutinized closely, shifting cultivation systems there are seen to be linked to the status of land tenure on a community's cultivated land. In terms of Christanty's description, shifting cultivation in Lampung is not occurring in an orthodox manner: the cultivation activities remain, in their sequential stages of clearing, burning, cropping and fallowing, but all of them are performed illegally, so it can be said that these activities are performed by squatters. Moreover, shifting cultivation performed in Lampung's protection and conservation forests can be categorized as high forest fallow because trees are the predominant type of vegetation. Although the government has imposed a zero burning programme, the burning of slashed vegetation for land clearing is still widely practised by farmers (Wulandari and Zakaria, 2010). The research of Ketterings et al. (2002) in Sumatra found that farmers still burned slashed swiddens to clear the land for the following reasons:

1. it is the fastest and most effective method of clearing the land;
2. it can suppress the growth of weeds and other wild vegetation such as *Imperata cylindrica*, an invasive species that dominates a large area of land and forest in Sumatra;
3. it turns biomass into natural fertilizer that is beneficial to both plants and soil;
4. it loosens the soil so that seeds grow more rapidly; and
5. it is an effective way to kill pests and pathogens.

In fact, the burning process is incapable of killing the invasive grass species *Imperata cylindrica* because it has the ability to regenerate from rhizomes in the soil and re-emerge on the surface before other plants can grow. Planting of seasonal crops, along with annual crops, in the few years after swidden land is opened will increase revenue from the crops as well as suppressing the growth of *Imperata cylindrica*. Thus, the government's policy on sustainable management of protection and conservation forests in Lampung province should take field conditions into account. This is important because of the common practices of shifting cultivation communities surrounding protected and conservation forests in Lampung.

Act 41/99, referring to forestry, says that the protection function of protected and conservation forest prohibits the taking of non-timber forest products (NTFPs) from these areas unless it complies with applicable policies. Thus, shifting cultivation activities by communities are prohibited in protected and conservation forests. Yet the dependence of these communities on the forest is very high, so policies were required that supported the establishment of community-based forest management (CBFM), so that communities could benefit from NTFPs in a sustainable manner. Act 41/99 created several government programmes that provide for the establishment of CBFM, which may be used to address issues in protected and production forests. Two of these are *Hutan kemasyarakatan* (HKm) or community forestry, and *Hutan desa* (HD) or village forestry. NTFP plants that commonly grow in HKm areas in Lampung province include *aren* (*Arenga pinnata*), *pinang* (*Areca catechu*), durian (*Durio zibethinus*), *duku* or *langsats* (*Lansium domesticum* Corrêa), *manggis* or mangosteen (*Garcinia mangostana* L), rambutan (*Nephelium lappaceum* L), *alpukat* or avocado (*Persea americana* Mill.).

HKm is defined as state forest that is primarily intended to empower a community, and HD is state forest that is managed by a village and used for the village's welfare. As well as these two schemes there is also what is known as 'the partnership' – a cooperative



Durio zibethinus L. [Malvaceae]

Durian is a common non-timber forest product in community or village forests.

arrangement between local communities and the holder of a forest utilization licence or forest manager; the holder of a business licence in which forest products are the primary industry; or a forest management unit concerned with capacity building and provision of forest access. In all cases, these arrangements are made according to a principle of equality and mutual profits. The two CBFM schemes (HKm and HD) and ‘the partnership’ have been operating in conjunction with one another in Lampung province, with development of highly specific programmes. Specifications have also been formulated for shifting cultivation systems practised by communities managing cultivated land within protected and conservation forests. Shifting cultivation that is part of a CBFM programme in conservation areas is generally collaborative and cultivation activities are governed by a variety of policies, with special arrangements for protected forests.

Up to August 2014, a total of 149 PAK (*Penunjukkan Areal Kerja* or working area designation) permits had been issued by the Ministry of Forestry in Lampung province, covering a total area of 96,072.61 hectares in eight districts (Lampung Provincial Forestry Office, 2014). The permits involved 470 HKm groups with overall membership of 49,620 persons operating in Lampung. Table A11-1 shows the development of HKm in Lampung province up to August 2014.

Village forest (HD) programmes can be implemented in either production forests or protected forests. In Lampung province, the only HD permits have been issued in the South Lampung district. Permits were issued as recently as April 2014 for 22 village-forest groups, granting them management rights over a total area of 2197 hectares of forest in four subdistricts: Penengahan, Rajabasa, Kalianda and Bakauheni. Table A11-2 has further details.

TABLE A11-1: Development of HKm programme in Lampung up to August 2014.

<i>District</i>	<i>PAK HKm (Ha)</i>	<i>IUPHKm (Ha)</i>	<i>No. of members</i>	<i>Farmer groups</i>
Pringsewu	3642		1951	470
Lampung Timur	920		623	8
Lampung Selatan	3132		1643	29
Way Kanan	7411	5647	4782	37
Lampung Tengah	13,088	5792	5635	71
Lampung Utara	6155	5875	2673	70
Tanggamus	35,328.52	14,606.64	18,729	62
Lampung Barat	26,396.09	8287.15	13,584	193
Entire province	96,072.61	40,207.79	49,620	470

Notes: PAK HKm = *Penunjukan Areal Kerja* (working area designation); IUPHKm = *Izin Usaha Pemanfaatan Hutan Kemasyarakatan* (Permission to manage a community forestry area).

Source: Lampung Provincial Forestry Office (2014).

TABLE A11-2: *Hutan desa* or village forests in Lampung province up to August 2014.

No.	Name of village forest	Area of PAK-HD (ha)	Permit no. and date of PAK-HD	Village address
1	Hutan Desa Tanjung Heran, Desa Pisang, Desa Sukabaru dan Desa Sukajaya.	104	No. 396/Menhut-II/2014	Tanjung Heran, Pisang, Sukabaru, Sukajaya, Kec. Penengahan.
2	Hutan Desa Penengahan, Desa Gayam, Desa Tetaan, Desa Gedung Harta, Ds Banjarmasin dan Desa Kampung Baru.	156	No. 397/Menhut-II/2014	Penengahan, Gayam, Tetaan, Gedung Harta, Banjarmasin, Kampung Baru, Kec. Penengahan.
3	Hutan Desa Way Kalam, Desa Pasuruan, Desa Ruang Tengah, Desa Kelau and Desa Taman Baru.	115	No. 398/Menhut-II/2014	Way Kalam, Pasuruan, Ruang Tengah, Kelau, Taman Baru, Kec. Penengahan.
4	Hutan Desa Padan, Ds Kuripan, Ds Rawi, Desa Belambangan and Desa Kekiling.	170	No. 399/Menhut-II/2014	Padan, Kuripan, Rawi, Belambangan, Kekiling, Kec. Penengahan.
5	Hutan Desa Babulang and Ds Palembang	92	No. 400/Menhut-II/2014	Babulang, Palembang, Kec. Kalianda.
6	Hutan Desa Kecapi and Desa Negeri Padan.	120	No. 401/Menhut-II/2014	Kecapi, Negeri Padan, Kec. Kalianda.
7	Hutan Desa Pematang, Desa Sukaratu, Desa Tajimalela, Desa Canggü, Ds Hara Banjar Manis and Desa Kedaton.	143	No. 402/Menhut-II/2014 24 April 2014	Pematang, Sukaratu, Tajimalela, Canggü, Hara Banjar Manis, Kedaton, Kec. Kalianda.
8	Hutan Desa Sumur Kumbang, Desa Kesugihan, Desa Buah Berak and Desa Bumi Agung.	217	No. 403/Menhut-II/2014 24 April 2014	Sumur Kumbang, Kesugihan, Buah Berak, Bumi Agung, Kec. Kalianda.
9	Hutan Desa Tengkujuh, Desa Way Urang and Desa Kalianda.	25	No. 404/Menhut-II/2014 24 April 2014	Tengkujuh, Way Urang, Kalianda.
10	Hutan Desa Jondong, Desa Maja and Desa Pauh Tanjung Iman.	181	No. 405/Menhut-II/2014 24 April 2014	Jondong, Maja, Pauh Tanjung Iman, Kec. Kalianda.
11	Hutan Desa Kota Guring.	32	No. 406/Menhut-II/2014 24 April 2014	Kota Guring, Kec. Rajabasa.
12	Hutan Desa Tanjung Gading.	16	No. 407/Menhut-II/2014 24 April 2014	Tanjung Gading, Kec. Rajabasa.

TABLE A11-2 (cont.): *Hutan desa* or village forests in Lampung province up to August 2014.

No.	Name of village forest	Area of PAK-HD (ha)	Permit no. and date of PAK-HD	Village address
13	Hutan Desa Betung.	12	No. 408/Menhut-II/2014 24 April 2014	Betung, Kec. Rajabasa.
14	Hutan Desa Canggung.	14	No. 409/Menhut-II/2014 24 April 2014	Canggung, Kec. Rajabasa.
15	Hutan Desa Canti.	70	No. 410/Menhut-II/2014 24 April 2014	Canti, Kec. Rajabasa.
16	Hutan Desa Banding.	100	No. 411/Menhut-II/2014 24 April 2014	Banding, Kec. Rajabasa.
17	Hutan Desa Rajabasa.	122	No. 412/Menhut-II/2014 24 April 2014	Rajabasa, Kec. Rajabasa.
18	Hutan Desa Sukaraja.	153	No. 413/Menhut-II/2014 24 April 2014	Sukaraja, Kec. Rajabasa.
19	Hutan Desa Way Muli and Desa Way Muli Timur.	52	No. 414/Menhut-II/2014 24 April 2014	Way Muli, Way Muli Timur, Kec. Rajabasa.
20	Hutan Desa Cugung, Desa Kunjir and Desa Batu Balak.	127	No. 415/Menhut-II/2014 24 April 2014	Cugung, Kunjir, Batu Balak, Kec. Rajabasa.
21	Hutan Desa Toto Harjo, Desa Kerinjing and Desa Hargo Pancuran.	144	No. 416/Menhut-II/2014 24 April 2014	Toto Harjo, Kerinjing, Hargo Pancuran, Bakauheni.
22	Hutan Desa Semanak, Desa Kelawi, desa Hatta and Desa Bakauheni.	32	No. 417/Menhut-II/2014 24 April 2014	Semanak, Kelawi, Hatta, Kec. Bakauheni.

Notes: *Hutan desa* = village forest; PAK = working area designation.

Source: Lampung Provincial Forestry Office (2014).

Based on the research of Mulyoutami et al.(2010), cultivation systems in Indonesia are undergoing a transformation. Specifically for Lampung, the change has involved switching from rotational rice farming to coffee, cacao, rubber and other plantation crops, including *kayu Africa* (*Maesopsis eminii* Engl.), *kayu bambang* (*Madhuca aspera* H. J. Lam), *pohon cempaka* (*Magnolia champaca* (L.) Baill. ex Pierre), *dadap serep* (*Erythrina variegata* L.) and *pohon kapur* (*Dryobalanops sumatrensis*

(J. F. Gmel.) Kosterm) in protected forests and such as *damar asam* (*Shorea hopeifolia*), *damar batu* (*Shorea ovalis*), *kruing-kruingan* (*Dipterocarpus lamellatus* Hook. f.), *hatta* (*Shorea ova*), *lana* (*Dehaasia microcephala*) and many species of Lauraceae in conservation forests. Changes in cultivation systems have also occurred in Lampung because of transmigrants from Java (Lampung is the first destination in the national transmigration programme) and migration from other districts in Lampung, since the province has a mixture of Javanese, Sundanese, Komering, Semendo and Lampung peoples (Wulandari, 2007).

Policies for management of protected and conservation forests in Indonesia that are relevant to shifting cultivation

In principle, sustainable forest management in Indonesia is based on Act no. 41 of 1999 (Government of Indonesia, 1999) which covers the management of all types of forests, i.e. production, protected and conservation forests (Figure A11-2). Protected forests are defined in article 1 of Act 41/99 as forest areas whose principal function is the protection of life-support systems by managing water, preventing flooding, controlling erosion, preventing the intrusion of sea water and maintaining soil fertility.

Conservation forests are defined as forest areas with particular characteristics. Their principal function is preserving the diversity of flora and fauna and their ecosystems. According to Act no. 5 of 1990, the conservation forests category includes nature preservation areas (NPA), nature reserves areas (NRA) and hunting parks (Government of Indonesia, 1990). Within the nature preservation areas category are national park areas, which are described as forests with certain characteristics whose main function is the preservation of biodiversity of flora and fauna and protection of ecosystems that serve as life-support systems for the whole region. Nature reserves areas are forests with certain characteristics whose main function is to protect the region's life-support systems by preserving the biodiversity of flora and fauna and supporting the sustainable use of natural resources and ecosystems. So-called hunting parks are forest areas set aside to generate hunting tourism.

Section 5 of Act 41/99 provides for the protection of forests and conservation of nature. Its Article 46 states that implementation of protection and conservation measures aims at optimal and sustainable preservation of forests, forest areas, their environment and their production functions. Article 47 states that protection of forests and forest areas is an attempt to prevent or limit damage to both forests and forest products from human activities, livestock, fires, natural forces and pests and diseases while maintaining and preserving the rights of the state, communities and individuals over the forest, forest areas, forest products, investments and devices related to forest management.

Furthermore, Article 48 states that:

1. The government will regulate to protect forests, both inside and outside forest areas.

2. Protection of state forests will be conducted by the government.
3. Holders of licences to use forest areas (permitted by Articles 27 and 29) and parties who receive authority to manage forests (permitted by Article 34) are required to protect the forests in their working areas.
4. Protection of private forests is the responsibility of the rights holder.
5. To ensure the thorough implementation of forest protection measures, communities will be involved in forest-protection efforts.
6. Further provisions in the case of all these matters will be subject to government regulation.

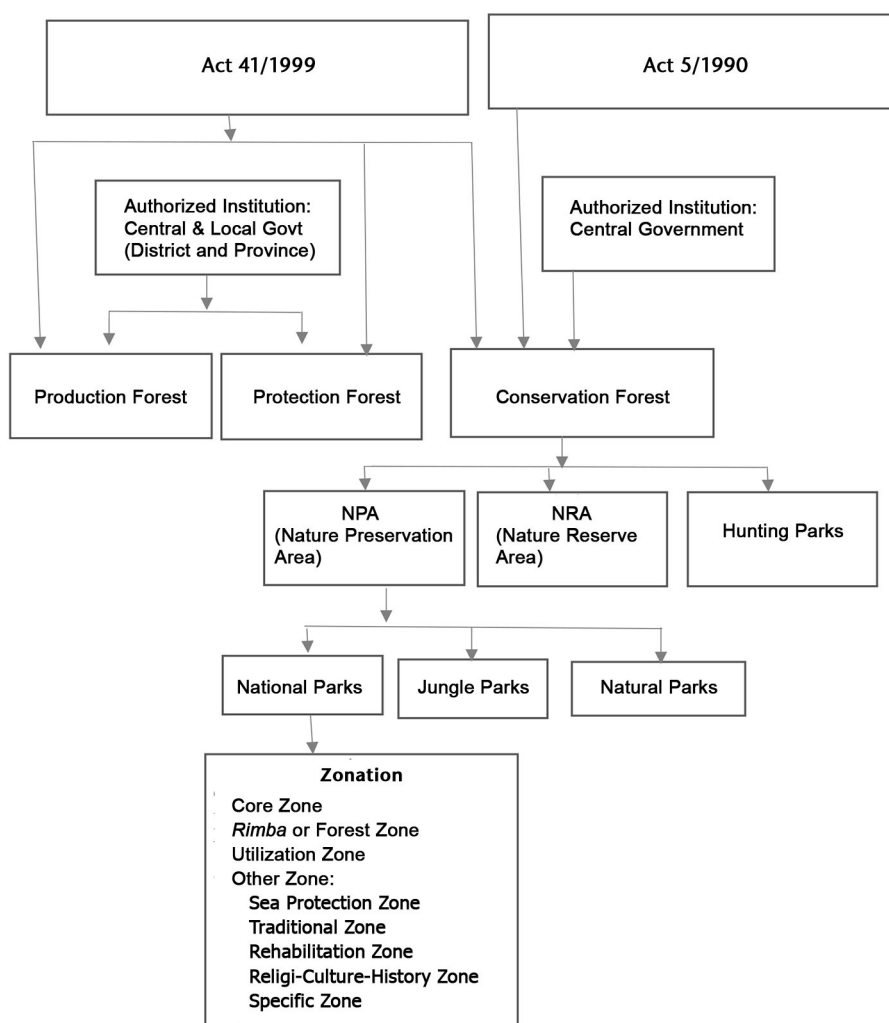


FIGURE A11-2: Forest management structure in Indonesia.

Articles 47 and 48 refer explicitly to the rights of communities, not only to manage forests, but also to prevent and limit damage and to take part in forest protection efforts. Any further arrangements will be governed by government regulation.

With regard to the activities of shifting cultivators, Article 49 of the Act states that holders of rights or licences to use forest areas are responsible for the occurrence of forest fires in their working area. Article 50 spells out further legal restrictions covering unauthorized forest-land uses. This Article prohibits:

1. working in, using or occupying forest areas illegally;
2. encroaching on forest areas;
3. cutting trees in forest areas at distances up to 500 metres from a reservoir or lake; 200 metres from the edge of a spring or from either side of a river in a swamp area; 100 metres from either side of a river; 50 metres from either side of creeks; twice the height of a cliff from the cliff edge; and 130 times the difference between high and low tide from seashores;
4. burning the forest;
5. cutting trees or harvesting or collecting forest products without rights or a licence granted by an authorized officer;
6. receiving, buying or selling, trading, accepting deposits, storing, or having forest products that are known or reasonably suspected to have been taken or collected illegally;
7. conducting a general inquiry, exploring for or exploiting mineral deposits in forest areas without a licence;
8. transporting, controlling or having forest products without legal documentation;
9. grazing livestock in forest areas that are not specifically designated for that purpose;
10. carrying heavy equipment or tools that are suspected of being used to transport forest products in the forest areas, without a licence to do so;
11. carrying tools that are commonly used to slash, cut or split trees in a forest area without a licence to do so;
12. discarding objects that can cause fire or damage or endanger the existence or continuance of forest functions; and
13. taking out, carrying or transporting plants and wildlife from forest areas without a licence to do so.

In effect, this means that if shifting cultivators are working in Indonesia's protected and conservation forests, their common activities, such as burning vegetation, encroaching on forest areas and cutting trees, are prohibited. The various rules or policies of forest management were formulated to force shifting cultivation to transform. So the agricultural system no longer resembles traditional shifting cultivation.

Transformation of shifting cultivation due to external factors

External influences, mainly government policies and fluctuations in prices for agricultural and agroforestry products, have brought about fundamental changes to traditional systems of shifting cultivation in Indonesia (Dr Carol Colfer, cited by Mulyoutami et al., 2010). The basic patterns of shifting cultivation in Indonesia are now no longer recognizable. As well as government policies, the transition of shifting cultivation was driven by the increasing market integration of NTFPs and agroforestry crops such as coffee, rubber and cacao, which mature after the annual swidden crops and ensure that the land still provides income in the fallow period. In Lampung, the changes to shifting cultivation systems were also due to migration by various ethnic groups who brought horticulture with them (Wulandari, 2007).

The growth of agroforestry in forest areas, with various types of plants showing the remaining influence of swidden farming, should be maintained and its sustainability supported. Indeed, the condition of forest areas that have been used to develop agroforests should be a factor taken into consideration when the government formulates policies aimed at replacing shifting cultivation. In fact, conditions in the field suggest that the farming practices of communities in Lampung should no longer be categorized as shifting cultivation. Nowadays, they plant different species and use different technologies. However, there are still a number of farmers who use fire to clear land and fallow their land after crops are harvested. Meanwhile, it is known that the number of swidden farmers is decreasing (Mulyoutami et al., 2010). In the 1980s around 20% of the community made a living from farming, but a quarter of a century later only 5 to 10 million people, from a total population of about 220 million, are farmers.

Before the external factor of market-price fluctuations brought pressure to bear on shifting cultivators, market integration had long been achieved by farming communities in Lampung. At first, some commercial crops such as rubber, coffee and

cacao were grown in swidden fields. These plants were used as a source of cash income, and if they were successful, then the shifting cultivation system would be reformed towards settled agriculture. According to Mulyoutami et al. (2010), shifting cultivation systems in Indonesia have transformed into three models:



Magnolia champaca (L.) Baill. ex Pierre
[Magnoliaceae]

Grown for its fragrant flowers in Lampung's protected forests.

1. agroforests, where woody plants have the same or a slightly higher value than food crops;

2. pasture systems or meadow grazing, where fallow land is used for grazing domesticated livestock; and
3. settled, intensified agriculture.

The majority of such swidden transformations in the protected and conservation forests of Lampung province involve the first and third systems (above), in order to meet the major daily needs of farming communities living around the forest.

Forest-management authority in Indonesia and the ability to implement CBFM programmes

Changes and reforms to the practice of shifting cultivation differ according to the category of forest, i.e. protected forest or conservation forest. The authority for management of protected forest is local government. Where it comes to conservation forest, the only location in Lampung province is national park, and the management authority remains with the central government, in this case the Ministry of Environment and Forestry (formerly the Ministry of Forestry). In almost all of its clauses related to the management of conservation forest, Act 41/99 states that information or management details are governed by particular regulations. However, in various articles, it also states that use of forest should aim to optimize welfare benefits for the entire community in an equitable manner while maintaining sustainability. It further states that such use of forest areas applies to all areas except those designated as nature reserves, core zones and jungle zones within national parks.

Specific to conservation forests, Article 25 of the Act states that uses of forest areas demarcated as nature preservation areas, nature reserves and hunting parks are limited by legislation. National parks, as one of the forest categories included in nature preservation areas, are defined as nature-conservation areas that have original ecosystems and are managed by zoning-system scattering for research, science, education, agriculture support, tourism and recreation. The details of natural-resource conservation requirements applying to nature preservation areas, nature reserves and hunting parks, all of them within conservation forests, are found in Act no. 5/1990, on 'Conservation of Biodiversity and its Ecosystems'. There is a small difference between this Act and Act 41/99 in the terminology used when referring to conservation forests. The earlier Act calls them 'conservation areas', while the latter legislation refers to 'conservation forests'.

Article 1 of Act 5/90 defines natural resources as biological elements in nature consisting of plant natural resources (flora) and animal natural resources (fauna), which, together with the surrounding non-biological elements, form the overall ecosystem. It says that conservation of natural resources involves their management in a manner which ensures wise use by maintaining and improving quality, value and diversity, to ensure continuance of supply. Article 30 of Act 5/90 says that nature preservation areas have the function of protecting life-support systems and plant and

animal biodiversity, and any use of natural resources and the ecosystem within these areas must be sustainable.

Article 33 of Act 5/90 goes further, in stating that:

1. activities that cause changes to the completeness, or any aspect, of national park core zones are prohibited;
2. changes to the completeness of national park core zones including reducing or eliminating their functions or adding exotic plant and animal species are prohibited;
3. activities that are not appropriate to the functions of utilization and other zones within national parks, jungle parks and natural parks are prohibited.

Article 34 states explicitly that the management of natural preservation areas, including national parks, is a matter for the central government. Therefore, government policies determine what practices are regarded as sustainable, and this makes government policies one of the external factors forcing change upon shifting cultivation because its practitioners must comply with existing policies.

The difference between the institutions that are empowered by law to manage protected forests, on one hand, and conservation forests, on the other, results in different policies and different methods of their implementation. The application of policy in protected forests depends on the competence, performance and willingness of local government officials, while that for conservation forests depends on the competence, performance and willingness of the Technical Executor Unit of the Ministry of Environment and Forestry in the province. The application of policy in conservation forests usually requires particular strategies because of the need to

synchronize any activities with local, regional policy applications, and Lampung is an area profuse with political issues and alliances that weigh heavily in these strategies. The differences in the application of policies in the management of protected and conservation forests have an impact in determining programmes of community empowerment both inside and around the forest.

Government community-empowerment programmes aim to improve community welfare around the forest and, at the same time, enlist community help in conserving forest resources. One such programme is associated with the practice of



Shorea ovalis Blume
[Dipterocarpaceae]

This lofty resin-producing tree can grow to 60 metres tall, and is a valued part of Lampung's conservation forests.

agroforestry. It incorporates elements of shifting cultivation that have undergone changes due to external factors of policies and fluctuations in commodity prices for forest products.

Act 41/99 states that community empowerment projects can be conducted through the community forestry, village-forest and partnership programmes. In a section of the Act entitled Community Participation, Article 68 states that communities are entitled to enjoy the quality environment that is produced by forests. Moreover, communities both inside and around the forests are entitled to compensation for loss of access to surrounding forests as a place to earn their livelihoods when special forest areas are created that deny them access. The same Article provides that land owners should be compensated for the loss of their land rights as a result of the creation of an area to which access is denied.

Community empowerment in national parks can be implemented in a process of community participation, but details must be arranged according to government regulations. And although Act 5 was published in 1990, these government regulations on community participation have yet to be published. As a result, the level of community empowerment in national parks remains minimal. Most such empowerment currently exists under Ministry of Forestry decree no. P.85/2014, on partnership in NPA and NRA (Ministry of Forestry, 2014).

The difference between the two Acts therefore exists mainly in terms of who has the authority to approve the implementation of community-empowerment programmes. In protected forests, community-empowerment authority is held by both central and local governments, while in the case of national parks or conservation areas, authority exists solely with the central government. There is another difference, in the matter of awarding compensation when rights to use the forest are lost. This compensation is payable only when protected forests are declared. There is no such provision in the case of conservation forests. Thus, permission for the practice of shifting cultivation in a community's farming area can only be granted by local government authorities within protected forests. Act 41/99 states that a community that is prohibited from burning or encroaching on the forest can claim compensation for the loss of their ability to farm their swiddens. Shifting cultivation may only be approved in conservation forests according to the policies of the central government or the Ministry of Environment and Forestry. Burning can only be undertaken in utilization zones of conservation forests, and must always be oriented towards the preservation of protected wildlife and plants and maintenance of the zone's ecological functions.

Shifting cultivation in protected forests

Shifting cultivation, as it is practised in the protected forests of Lampung province, commonly involves the planting of various forest-tree species, such as rubber or fruit trees, which grow to maturity in the fallow vegetation, after cropping has finished. Therefore, the fallow period can be as long as the productive age of rubber trees,

which is about 20 years (Penot, 2007). The latex production of rubber trees is usually lower in the first 1.7 years and in the last 10.4 years of their lives (Mulyoutami et al., 2010). During the fallow period, when the young rubber trees are growing to maturity, farmers can plant two crops of upland rice before the trees cast too much shade. In local tradition, planting trees clarifies the status of a family's cultivated land because the trees act as a natural border with the neighbour's fields.

Based on existing policies, logging, encroachment and use of fire to open or clear the land are prohibited in protected forest. The ban on burning arose from more than its negative impact on the forest: according to Tomich et al. (1998), there were parties who, in 1997 and 1998, used fire as a weapon in land-tenure conflicts. Similarly, the need for government policies arose from conditions in the forest. Until recently, many communities practised shifting cultivation in state forests and there are still shifting cultivators living and farming in protected forest; hence, the bans on burning and encroaching. Then, around 1995, the government decided that communities should be involved in forest management and issued the *Hutan Kemasyarakatan* (HKm) or community forest policy. In 2008, it followed with the *Hutan Desa* (HD) or village-forest policy.

In implementing the community forest policy, people are allowed to remain in the forest and cultivate swiddens. However, they must comply with strict regulations:

1. the status and function of forest areas must not be changed;
2. timber may only be harvested from planted trees;
3. the biodiversity and cultural diversity of the area must be considered;
4. a diversity of commodities and services must be fostered;
5. sustainable community welfare must be improved;
6. members of the community must be portrayed as the main actors;
7. occupation of the land must be based on legal certainty;
8. there must always be transparency and public accountability; and
9. all members of the community must participate in decision-making.

The community forest licensing process begins with the granting of a PAK (*Penunjukan areal kerja*) or PWA (provision of working area) certificate by the central government and then, within two years, the community forest group should receive a 'Utilization of Community Forest' licence. This permit is not an award of property rights and must not be transferred, pledged or used beyond the forest-management plan. Permissible activities include use of the area and its environmental services and collection of non-timber forest products. 'Use of the area' means that community members are allowed to cultivate herbal or ornamental plants, mushrooms, bees, multipurpose trees or swallows, breed wild animals and cultivate forage fodder. Thus, shifting cultivation can still be practised in protected forests even though the traditional system of clearing the forest by slashing and burning is prohibited (Figure A11-3).



FIGURE A11-3: Border between paddy fields and a community forest within an area of protected forest in West Lampung district.

Source: Christine Wulandari (2014)

The changes that have occurred in shifting cultivation systems within protected forests have also involved the types of plants or trees that are grown by farmers, because of changes in market demand and fluctuations in commodity prices for forest products. These adaptations to changing circumstances have supported the community forest programme as a solution to the major forest encroachment problem in Lampung province. For example, the Bina Wana Community Forest Group in Sumberjaya, West Lampung district, is a strong group with high competence and social capital. They have practised agroforestry in managing their cultivated land and became the First National Champion of the Community Forest programme in 2013.

Shifting cultivation in conservation areas

National parks exist in conservation forests within nature preservation areas. They are the last fortress in saving biodiversity and other ecological functions in a landscape, especially from encroachment by illegal loggers who seek high-quality timber. Although national parks are commonly in remote areas, they are nevertheless surrounded by local communities and indigenous peoples whose lives depend on the forest. Many social and economic issues occur in and around national parks, especially related to their boundaries. According to regulation no. P.76/2015, issued by the Minister of Environment and Forestry, national parks are divided into four zones: core, *rimba* or forest, culture, and utilization and other zones. The other zones category is further subdivided into five zones: sea protection, traditional, rehabilitation,

religi-culture-history and specific zones (Ministry of Environment and Forestry, 2015). Core zones are protected and closed – or at least heavily restricted – so that there should be no human activities, including research. Thus, activities in these areas need a special licence. In traditional zones, communities are still allowed to cultivate the land as long as they comply with regulations regarding the protection of animals and plants.

The Bukit Barisan Selatan National Park in Lampung province has an area of 356,800 hectares (Konsorsium Unila Pili, 2013). It has been the source of many social issues, particularly since local government policy enabled the existence of nearby timber concessions. Other issues affecting the park include the use of fire by shifting cultivators to clear land. Similar conditions prevail in almost all of Indonesia's national parks. One example is Kutai National Park in East Kalimantan, where 40% of the park's area of 198,629 hectares has been destroyed by the illegal activities of immigrants (PHKA, 2011). Thus it can be said that although a forest may be declared a national park, this does not guarantee its sustainable management. In its General Directorate Decrees numbered SK.69/IV-Set/HO/2006 and SK.128/IV-Set/HO/2006, the government provided 21 models of National Parks in anticipation of moves towards independent national park management (Government of Indonesia, 2006). However, these efforts haven't been able to prove the effectiveness of independent management.

The Bukit Barisan Selatan National Park continues to be challenged by encroachers. In 2013 the Park's head office launched a primary programme aimed at reducing encroachment, but its success has yet to be proven and areas of the Park are yet to be declared free of encroachment (Figure A11-4). Conditions in the field are difficult to control because it is very possible that encroachers who have been ejected will simply return. The difficulty of ridding national parks of encroachers may be due in part to the lack of local participation or community empowerment in national park management. Community empowerment programmes are simply not applicable in conservation forest areas. Community involvement must be an essential part of efforts to reduce forest encroachment, so that community members feel disinclined to undertake illegal activities in the forests. When encroachers are driven out of the forest, communities should be empowered to guide them into livelihood activities outside the forest, in keeping with community interests. In this respect, community groups should also be able to assist reformed encroachers to adopt some of the practices of traditional shifting cultivation by growing various plants in national park utilization zones.

Shifting cultivation activities in national parks are limited by existing regulations that prohibit the clearing of land by burning. However, some aspects of traditional shifting cultivation remain relevant to current activities, such as tree planting in forest-restoration programmes. Shifting cultivation, as it is practised in both national parks and protected forests in Indonesia, is significantly different to the forest-based agriculture of the past because of the imposition of official policies, not the least of which is the ban on burning. The other major external influence forcing changes



FIGURE A11-4: Kubu Perahu village or enclave in Bukit Barisan Selatan National Park, Lampung province.

Source: Christine Wulandari (2014)

in swidden farming – fluctuations in product prices – is less relevant in national parks because in principle, crops grown in national parks should not be harvested for commercial profit, except those that come from utilization zones.

Summary

Shifting cultivation is a traditional system of agriculture practised by communities living in and around forests, with rotational stages of clearing, burning, cropping and fallowing. External factors, mainly official policies and fluctuations in prices for agricultural or agroforestry products, have forced changes in the practice of shifting cultivation so that it no longer resembles the farming system of the past. Changes to shifting cultivation have also resulted from transmigration and the migration of communities from one district to another, particularly in Lampung province, where there are various ethnic groups such as Javanese, Sundanese, Komering, Semendo and Lampung.

Changes because of official policy are associated with land tenure at district and provincial level, and will impact on communities' sense of security in managing their cultivated land, particularly when their lives are also dependent on the forest. In Lampung, shifting cultivation is practised mainly in protected and conservation forest, so all government policies related to farming systems, including shifting cultivation, should closely consider the functions of these two forest types. The inability to manage protected and conservation forests intensively has brought its

consequences: in order to meet the daily needs of communities, the government has had to introduce the community-based forest management programme. Under this programme, communities must use shifting cultivation even though the system itself has changed because of the factors described above. In protected forests, the Indonesian government has introduced its *Hutan kemasyarakatan* and *Hutan desa* programmes, while in conservation forests it has implemented a partnership programme. The HKm or community forest programme has seen rapid growth in Lampung, covering a total area of 96,072.61ha and involving 470 farmer groups up to August 2014. The new village-forest programme began in 2014 and reached a total area of 2197ha, with 22 farmer groups in South Lampung district up to 2016. Some partnership programmes in national parks, both in Bukit Barisan Selatan and Way Kambas, commenced in Lampung in 2016.

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Acts of the Indonesian Government

The following Acts were referred to in this chapter as the main sources of government policy:

- Act Number 5/1990 on Conservation of Biodiversity and Ecosystems;
- Act Number 41/1999 on Forestry.