



State of Land

in the Mekong Region



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The Mekong Region at the Crossroads

The Mekong region at the crossroads

Introduction

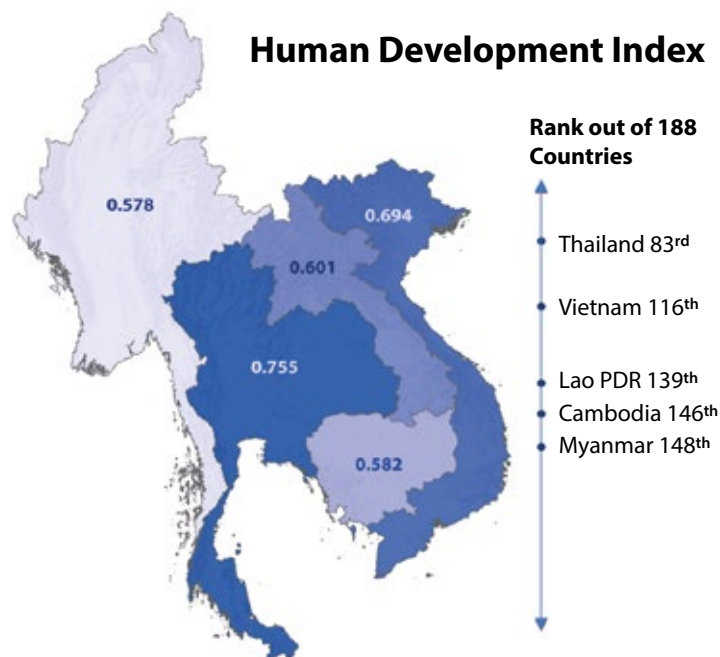
Despite important differences between the countries of the Mekong, there is a number of shared features and dynamics of change that provide a fabric of coherence, allowing us to speak of this as a region. As the regional designation suggests, the countries share portions of the Mekong River Basin, of which the countries' territories comprise the largest share. Each of the countries also shares some topographic similarities, having large lowland areas with fertile soils along the floodplains of the Mekong and other rivers. Historically, the productivity of these lowland areas has played a key role in shaping the distribution of wealth and power. Large ethnic groups like the Tai, Kinh, Khmer and Burmese dominate lowland areas along the Mekong and its major tributaries with strong economic- and trade-linkages. Growing urban populations have enabled these groups to secure a disproportionate amount of wealth and political and military power. Upland areas are typically dominated by ethnic minorities, many of whom are generally poorer, less politically powerful, and engage in subsistence and traditional forms of agricultural production. In the main, these peripheries have remained on the margins of the central polities, receiving fewer benefits from the region's economic and agricultural transformations, but arguably bearing more of its costs.

The political history of the region points to key commonalities between the Mekong countries, though each diverges in terms of engagement with European colonisation⁴ and state-making pathways. Each of the Mekong countries also shares important similarities with regard to agricultural production, dominated historically by rice but in contemporary times grappling with the emergence of large areas of land under non-rice commodity crops that are increasingly integrated into the global market economy.

However, there are stark differences between the Mekong countries. The Human Development Index (HDI) scores reflect these general variations. Thailand and Vietnam stand out with regard to overall higher levels of development, whereas Laos, Cambodia and Myanmar fall behind (Map 1). The HDI takes into consideration aggregate levels of development across a number of key development domains at the national level. What is perhaps more significant is that differences between the Mekong countries with regard to development are less pronounced than sub-national differences *within* each. At the sub-national level, development disparities between the economically vibrant urban centres and the rural peripheries are substantial.

Map 1: Human Development Index in the Mekong region

Data source: HDR-UNDP⁵



⁴ Except Thailand, which was never formally colonised.

⁵ Human Development Index Reports, available online at: <http://hdr.undp.org/>

The land and the people: Agrarian transitions and unevenly shared growth

Economic transformations and the role of agriculture

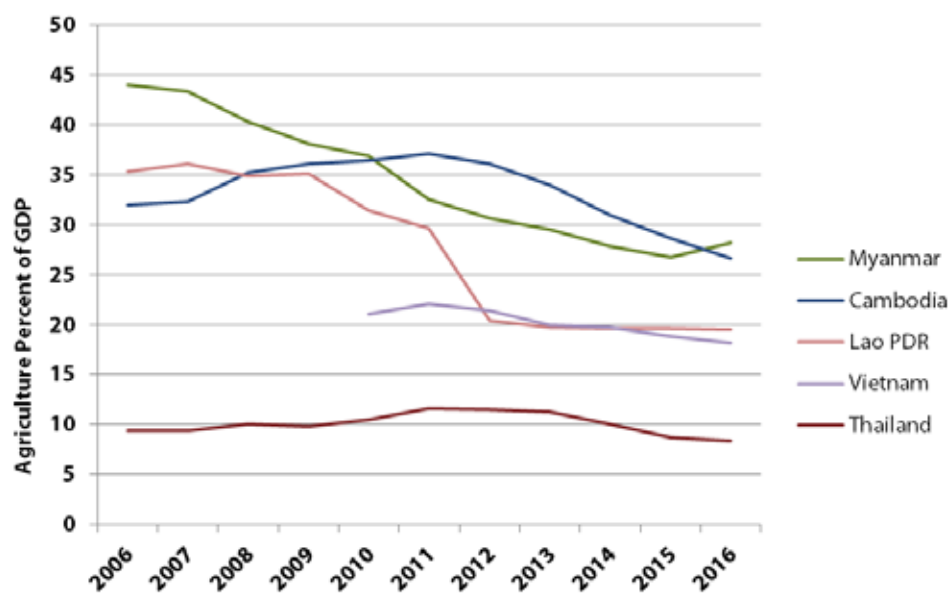
The Mekong countries are in the midst of agrarian transition—characterized by a decreasing reliance on primary sectors and a growing shift toward service- and industry-sectors. However, the position of each of the countries along this trajectory of change varies greatly (Figure 2). Despite this transition, agriculture remains foundational to national development and food security, especially for the rural majority.

In each country, agricultural production has grown considerably over the last decade, but at a much slower pace than other sectors. As a result, the contribution of the agricultural sector to overall GDP has contracted. In Myanmar and Lao PDR, agriculture's share in GDP has declined sharply (by 16 percent) between 2006 and 2016. Cambodia saw an increase in the share of agriculture in overall GDP during some of these years, but a final decrease of 5 percent relative to 2006. Thailand remained fairly stable, albeit with a small (1 percent) decline between 2006 and 2016⁷.

Amid rapidly growing national economies and a retracting share of agriculture in this growth, the persistence of large agricultural populations is significant. In Lao PDR, for example, while nearly 80 percent of the workforce is in agriculture, the sector's

Figure 2: Change in the share of agriculture in the GDP of the Mekong countries (2006-2016)

Data source: FAOSTAT⁶



Interpreting the data: *The challenge of measuring employment in agriculture*

The rate of employment in agriculture is a national-level estimate value given by the International Labour Organisation (ILO) Statistics (ILOSTAT) for each country. It is considered as the number of people (expressed as a percentage of total labor force) that are engaged during the year in any activity in agriculture, hunting, forestry and fishing. It is not always clear whether this implies that these comprise the primary source of income. The data is also not consistent with national datasets. In Cambodia, for instance, employment in agriculture was 27.4 percent whereas the commune database updated annually by local authorities indicates that in 2016, 68.8 percent of people older than 18 years old were engaged in agriculture, fishing and NTFP collection as their primary or secondary form of livelihood.

contribution to overall GDP is below 20 percent. This is perhaps the most striking case of a wider dynamic of the Mekong region: the rural and agricultural population is falling behind, generally failing to reap the benefits of the region's economic growth. In 2016, the agricultural population in Vietnam has a similar, if lower, majority, at nearly 54 percent. This stands in stark contrast to Thailand, the Mekong country in the most advanced stage of its agrarian transition, where less than 30 percent of its population is employed in agriculture (down from 65 percent in 1990). However, these national averages mask important sub-national differentiation (discussed in the country chapters that follow).

⁶ FAO Statistics Division, available at: www.fao.org/faostat

⁷ The data of the contribution of agriculture is taken from the World Bank's global databank that aggregates data from national sources. The values are comparable among the five countries. However, it is important to bear in mind that the real contribution of agriculture is usually underestimated in macro-economic measures of GDP. The part of the production that is directly consumed within the household is not fully taken into account, nor are the many subsistence activities associated with common pool resources. The multiple contributions made by women are particularly under-estimated (Charmes 2000).

Despite sustained declines in the share of agriculture's contribution to GDP, the rates of agricultural employment in Cambodia, Laos, and Myanmar remain high, indicating that the agrarian transition is far from complete, as the transfer of labor away from agriculture to industries and service sectors is not keeping pace with the growing labor force in rural areas. In these countries, the challenges of increasing agricultural productivity and ensuring access to land thus remain at the core of sustainable rural development.

A growing and mobile population

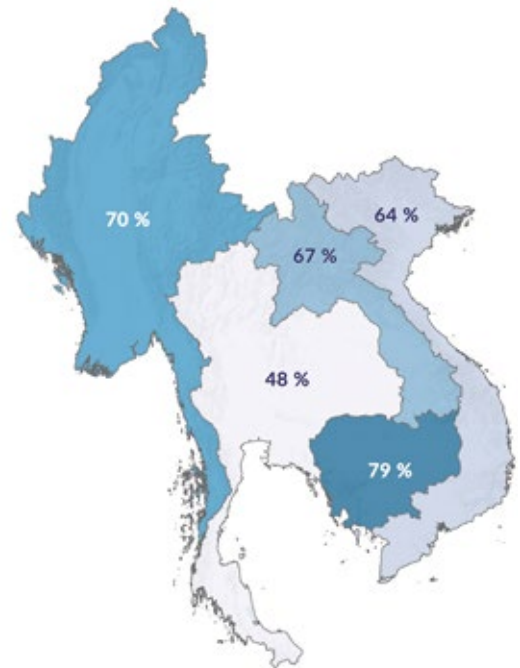
The Mekong region as a whole is in the midst of a demographic transition as education, changing social norms, economic opportunities, and urbanization have led to declining fertility and mortality rates and an ageing population base. Yet, each country is at a very different stage along this transition. While Thailand and Vietnam are beginning to face an increasingly older population that is shifting out of economically-active life stages, Lao PDR, Cambodia and, to some extent Myanmar, are benefitting from the so-called "demographic dividend," as recent declines in fertility rates have led to a large proportion of the population in the work force, most of whom depend primarily on agriculture.

The total population of 237 million people in the Mekong region has a highly uneven distribution. Vietnam, the most populous country in the Mekong, is home to more people than Lao PDR, Cambodia and Myanmar combined, while urban centres like Bangkok, Hanoi and Ho Chi Minh each have a population greater than the total population of Lao PDR, the least populous country in the region. Despite these differences and the existence of large urban metropolises, the Mekong remains predominantly rural with only Thailand having less—but only slightly less—than half of its population in rural areas (Map 2 and text box).

While predominantly rural, there are important—though generally modest, at around 1 percent per year—urbanization trends across the region (see country chapters), due both to the upgrading of rural villages to urban towns and the migration of rural populations to urban centres as they seek to benefit from the economic growth of these areas and the employment opportunities they provide. While these rural-urban migrations have received significant attention, they pale in comparison to larger trends in rural-rural migration across the region. In Cambodia, Laos and Myanmar, especially, the number of people moving from one rural area to another is significantly more important than the number of those moving to urban areas. Even in Thailand, where the draw of urban centres is comparatively strong, rural-rural migrations still outsize those to cities. In the main, this rural-to-rural migration stream is autonomous and driven primarily by the search for agricultural land and rural employment opportunities. It can be seen as a strategy by agricultural households to escape poverty and improve their means of subsistence.

Map 2: Proportion of the rural population in the Mekong region

Data sources:
see country chapters



Interpreting the data: *Measuring rural population*

The proportion of the population living in rural areas directly depends on the degree of urbanization given by the percentage of population living in urban areas. The definition of an urban area is based on specific criteria established by each country according to their context. The extent of urbanization also depends on the geographic scale at which it is measured. Different, country-specific criteria for measuring urbanization make it difficult to compare the situation of one country with another, and thus these comparisons may be partially misleading.

Alongside these internal migrations, international migrations are also significant. Thailand absorbs a substantial number of migrants from neighboring countries, possibly as high as 5 million people, the majority of whom are young and from rural and agricultural communities from Cambodia, Laos and Myanmar (IOM 2016). While many migrate to large cities, others also seek agricultural employment, taking advantage of Thailand's seasonal agricultural labor shortages or work in Thailand's marine fisheries industry. These movements are significant for several reasons, not least because the majority of these international migrants are drawn from rural areas in their countries of origin where agricultural employment opportunities have lagged behind those of other sectors, failing to retain the young or provide



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sufficient livelihood options. This has important but insufficiently understood implications for rural agricultural production in sending countries, though some inferences can be made. One study by the International Office of Migration (2016), for example, found that 42 percent of Lao immigrants in Thailand owned farms back home. While the centripetal draw of Thailand predominates, Laos and Cambodia also attract wage laborers and other immigrants from China and Vietnam, many of whom go to work on FDI-related projects in agriculture and other sectors.

A growth unequally shared

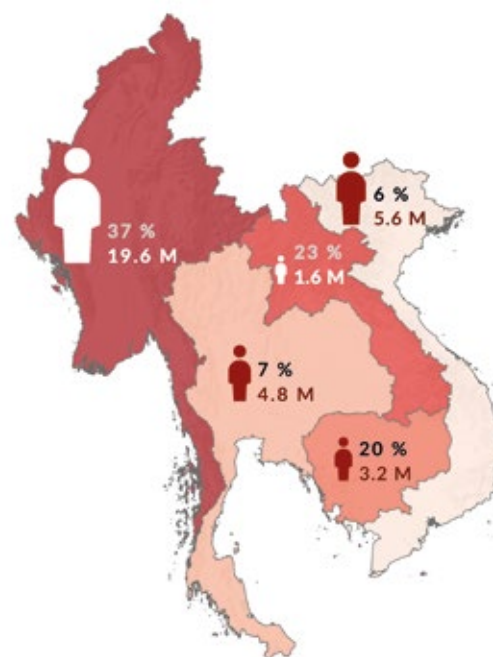
This dynamic of social differentiation concomitant with the agrarian transition is manifest in the distribution of wealth, and the patterning of food security across the region. The Gini Index of income distribution⁸ provides a proximate guide to income inequality at the national level. Gini Index scores for the Mekong countries are similar to those of a number of developed market economies such as the United States and the UK, ranging from a low of 30.76 (Cambodia) to a high of 39.3 (Thailand). By way of comparison, these are similar to the Mekong's neighbours Bangladesh (32.1) and India (35.1), but considerably lower than China (42.2) and Malaysia (46.3), where income inequality is high. The Gini Index takes urban and rural incomes into account so it is difficult to weigh the disparity of income between and within urban and rural areas.

Across the Mekong region, aggregate poverty⁹ has been steadily declining. National poverty rates vary from a low of 6 percent in Vietnam, to a high of 37 percent in Myanmar (Map 3). What is perhaps more significant, however, is the range of poverty rates within the countries, which is greater by far. The pace of decline in poverty also varies significantly between rural and urban areas, leading to a widening gap between urban centres and its rural peripheries. In Lao PDR, for example, poverty rates vary from less than 10 percent in the capital of Vientiane to more

than 50 percent in some remote provinces. In Thailand, poverty rates range from less than 5 percent to nearly 40 percent in the far northeast and south, similar to those of Vietnam (less than 5 percent to nearly 30 percent). Further, it is important to make a distinction between poverty rates and the actual number of poor individuals or households. In each of the countries, poverty is primarily a rural phenomenon that affects agricultural households directly. Eighty percent of Thailand's poor individuals are rural, while in Cambodia rural poor comprise 90 percent of all poor in the country, a consistent pattern across the region.

Map 3: Incidence of poverty in the Mekong region

Data sources: see country chapters



⁸ The Gini Index provides a score ranging from 0 (completely even distribution of income) to 1 (completely uneven distribution), based on World Bank estimates: <https://data.worldbank.org/indicator/SI.POV.GINI>

⁹ See text box for a working definition of poverty.

Interpreting the data: *The meaning of poverty rates*

The poverty rate is the percentage of population living under a specific poverty line. There are several poverty baselines in use but they usually refer to an average level of consumption per person. These equate a minimal income under which people do not have resources sufficient to cover their basic needs for food, clothing and shelter. Each country has a specific national poverty baseline (e.g. 4.081 KHR/day in Cambodia in 2012) but for global comparison, the World Bank uses three different baselines: \$5.5, \$3.2 and \$1.9 US\$/day/person (PPP 2011). The \$1.9/day international poverty line is used to measure progress globally. While the poverty line helps measure poverty, it does not explain the structural determinants of poverty (ownership of assets including land, housing conditions, dependency ratio), nor does it take debt into consideration directly. In addition, the income per capita estimated to measure poverty is based on monetary income and does not fully account for subsistence activities.

As mentioned, poverty rates do not directly show us the number of poor. For example, Vietnam has the lowest poverty rate in the region, but because of its large population it is home to 5.6 million poor persons—more than are found in Laos, Cambodia or Thailand. Myanmar, however, has both the highest rate of poverty and the largest share of the Mekong’s poor; with nearly 20 million poor people, Myanmar is home to more people living in poverty than all other Mekong countries combined.

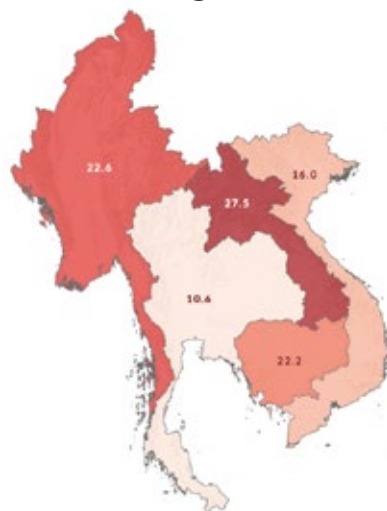
While agricultural production in the Mekong—especially of export commodities—has risen considerably over the past decade, food insecurity and undernourishment remain high due to a variety of factors including inadequate access to food of sufficient nutritional value. While Lao PDR has the highest rate of undernourishment and occupies the lowest rank among the Mekong countries in the

Global Hunger Index (Map 4), its relatively low population means the absolute number of undernourished persons is lower than all of its neighbors. Vietnam, by contrast, though having the lowest poverty rate in the region, is home to more undernourished people than Laos, Cambodia and Thailand combined. As with poverty, undernourishment remains predominantly rural. Thirty-four percent of Laos’s rural children are stunted due to chronic malnutrition (LSIS 2018), down from 44 percent in less than a decade (LSIS 2012). These issues reveal that, more than any others, rural and agricultural populations are vulnerable because their food security is directly influenced by fluctuations of climate and markets and by policies that produce the unequal distribution of resources.

Map 4: Global Hunger Index and undernourishment in the Mekong region

Data Source: UN Food Security Measures Database¹⁰

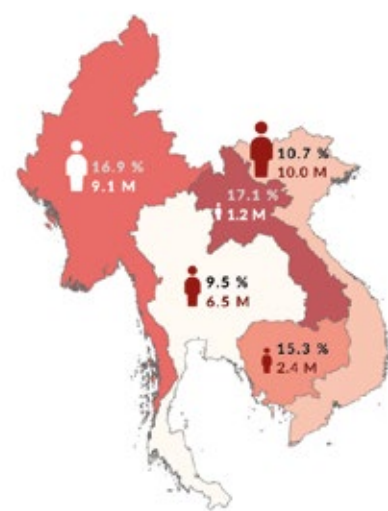
Global Hunger Index



Rank out of 119 Countries

- Thailand 46th
- Vietnam 64th
- Cambodia 75th
- Myanmar 77th
- Lao PDR 91st

Undernourishment



¹⁰ Available online: www.fao.org/economic/ess/ess-fs/ess-fadata

Poverty and food security: *The Global Situation*

- Sabine Bieri, Centre for Development and Environment, University of Bern

While significant strides have been made to reduce poverty across the world, it remains endemic to many areas. Globally, poverty and food insecurity were halved between 2000 and 2015, a substantial achievement of the Millennium Campaign. However, a more detailed analysis of the figures puts the success narrative of these accomplishments into perspective, revealing that poverty and food insecurity remain critical issues, particularly when we come to consider the number of poor, and the differential successes that have been had across the world. This holds true in the Mekong region.

Halving the *proportion* of the poor and the hungry – an adjustment made by the Millennium Campaign after it came into being – glosses over the absolute number of the poor. While population growth between 1990 and 2015 helped to achieve and even surpass this goal in relative terms, the number of poor persons in 2015 was still high, at around 750 million. The reduction from a supposed 1.85 billion (according to the World Bank), however, is largely attributable to poverty and food insecurity reductions in China, which accounted for over 50 percent of these global gains. Sub-Saharan Africa, by contrast, showed an increasing number of poor during this period. New analyses of the global distribution of poverty have exposed some surprising results. For example, the major share of the world's poor in absolute terms is not found in the poorest countries; over 70 percent of them are found in middle-income nations (Sumner 2016).

At the global-level, poverty rates are commonly determined according to the World Bank's monetary poverty line which is currently set at US\$ 1.90 PPP, a strongly-contested threshold based on the poverty line of the world's 15 poorest countries, making it an insufficient indicator for poverty for the rest of the world, including many of the Mekong countries. Raising this threshold to a more realistic level would mean that a realistic assessment of poverty would give us much higher numbers. For example, a so-called "ethical" poverty threshold of US\$ 7.40 would more closely represent national poverty lines, bringing the global poverty headcount closer to 4.2 billion people. To the degree that this revised threshold is applicable in the Mekong region, this would significantly impact poverty rates.

The situation regarding the global number of food-insecure persons (versus proportion) is even more critical. Despite decades of effort, roughly 1 billion people remain food insecure—no different from 1970. Whatever progress was made during the Millennium Campaign was almost entirely wiped out by the financial crisis of 2008. Here again, definitions of food security and undernutrition matter: the 1800kcal daily intake used to designate hunger is a conservative measure that does not reflect the actual caloric needs of physically active persons. For active farmers or agricultural laborers, such as in the Mekong, the threshold should be closer to 3000kcal/day. For both hunger and nutrition, the UN measurements have been highly conservative. Neither the monetary indicator, nor the strictly calorie-based assessment account for the many dimensions of hunger and poverty – such as lack of vitamins or inadequate access to health facilities – reflected in the world's poorest regions. This may be especially problematic in the Mekong. Recent advances in agriculture have done well to emphasize rice production, but they have done less-well with regard to the production of foods high in the nutrients that rice cannot provide. In addition, agricultural lands are increasingly given over to export commodities—commodities that do not contribute substantially to the food security of the rural poor.

SDGs 1 and 2 of Agenda 2030 propose to cut poverty and hunger to zero. Recent evidence¹¹ suggests this is very unlikely, due primarily to inadequate and inequitable policies that favor urban development and aggregate growth in GDP over the well being of the poor.

¹¹ <http://www.fao.org/state-of-food-security-nutrition/en/>

Interpreting the data: *The challenge of assessing the agricultural land area*

FAO is updating an open access global database describing the evolution of the land area under land cover categories in a two-level classification system. The dataset presents several advantages as it provides time-series information that is comparable between countries in the world. Yet, reliability depends on the data provider, which are usually national governments.

Agricultural censuses allow for a clearer picture of land use at the household level but they do not include agricultural land area under concession, which limits considerably the scope of the analysis. Further, they do not accurately reflect the area involved in shifting cultivation, a major land use in Lao PDR, Myanmar and, to a lesser degree, Thailand and Cambodia. National land use datasets produced through censuses are only partially comparable across the region due to differences in timing and classifications.

In order to address the limitations noted above, the SERVIR-Mekong portal has developed a system that produces open-access high-resolution regional land cover maps in the Lower Mekong. The system has developed a unified regional (satellite-based) land cover classification based on 21 distinct categories that allows comparison between countries. It also produces regular (annual) land cover maps and spatial data for the Lower Mekong countries from 2000 to the present, allowing for land cover change analysis. While the SERVIR-based system is still under development, it provides a promising new resource for consistent, comparable analyses.



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The land resource base: Regional transitions and local impacts

The socio-economic dynamics explored above—demographic transitions, the restructuring of the Mekong’s national economies, and the social differentiation of wealth and food security—are closely related to the biophysical foundation of the Mekong and the profound changes observed over the past decades. The pace and magnitude of these transformations have perhaps never been seen before. The rural, agricultural majority is likely the most directly linked to these changes, given their reliance on natural resources.

Changes in agriculture and forest cover

While the land area of the Mekong is dominated by forests and agriculture, the past two decades have witnessed a profound transition in the relative proportion of each, showing a trend toward the conversion of forests to agricultural land, and both forests and agricultural land to development, infrastructural expansion and urbanization. Generally, the Mekong countries have seen substantial growth in the proportion of land area under agriculture, which in the aggregate has grown by 9.3 million ha, or 21 percent, over the past two decades according to standardized FAO data (Table 1 and Figure 3).

An important exception to this is Thailand, where agricultural development was early and agricultural land has expanded only marginally during recent years. Among the Mekong countries, Vietnam has seen the most significant growth, with a 65 percent increase in agricultural land over the last two decades, accounting for 45 percent of new agricultural land in the Mekong during these years. The distribution of agricultural land across the Mekong is highly uneven. More than 40 percent of all the Mekong’s agricultural land is in Thailand, totalling around 22 million ha. Agricultural land in Laos, by contrast, comprises only 4 percent of the Mekong total. The expansion of agricultural land is due to a number of factors, including population growth and national strategies to expand food production area, but arguably the largest contributing factors have been the rise in agricultural investment in response to the acceleration of global trade in agricultural commodities.

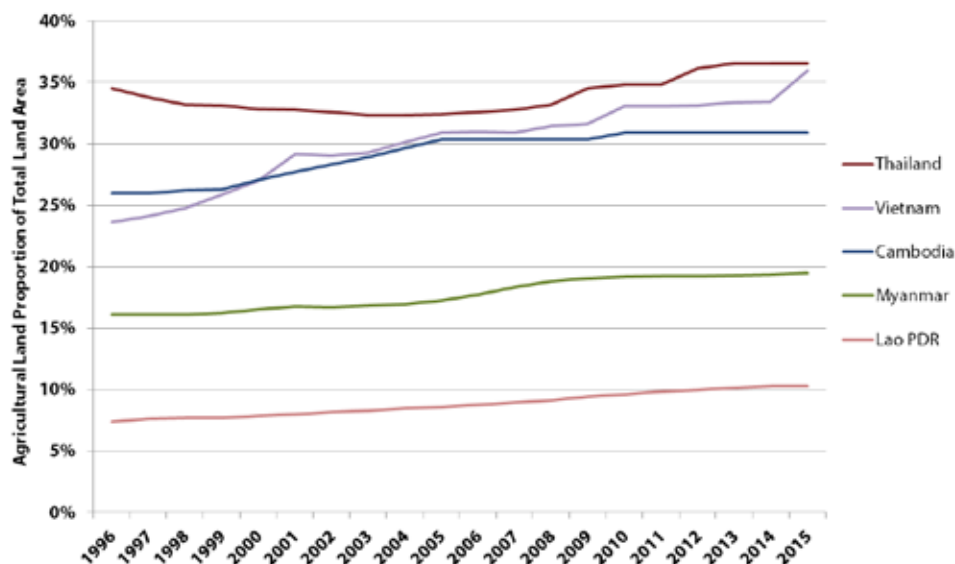
Table 1: Change in agricultural land area in the Mekong region, in millions of hectares

Data source: FAOSTAT

	Cambodia	Laos	Myanmar	Thailand	Vietnam	Mekong
1995	4.6	1.7	10.5	21.2	7.1	45.0
2015	5.5	2.4	12.7	22.1	11.7	54.4
Percentage increase	19.6%	41.2%	21.0%	4.2%	64.8%	20.9%

Figure 3: Cumulated annual change in agricultural land area in the Mekong region

Data source: FAOSTAT



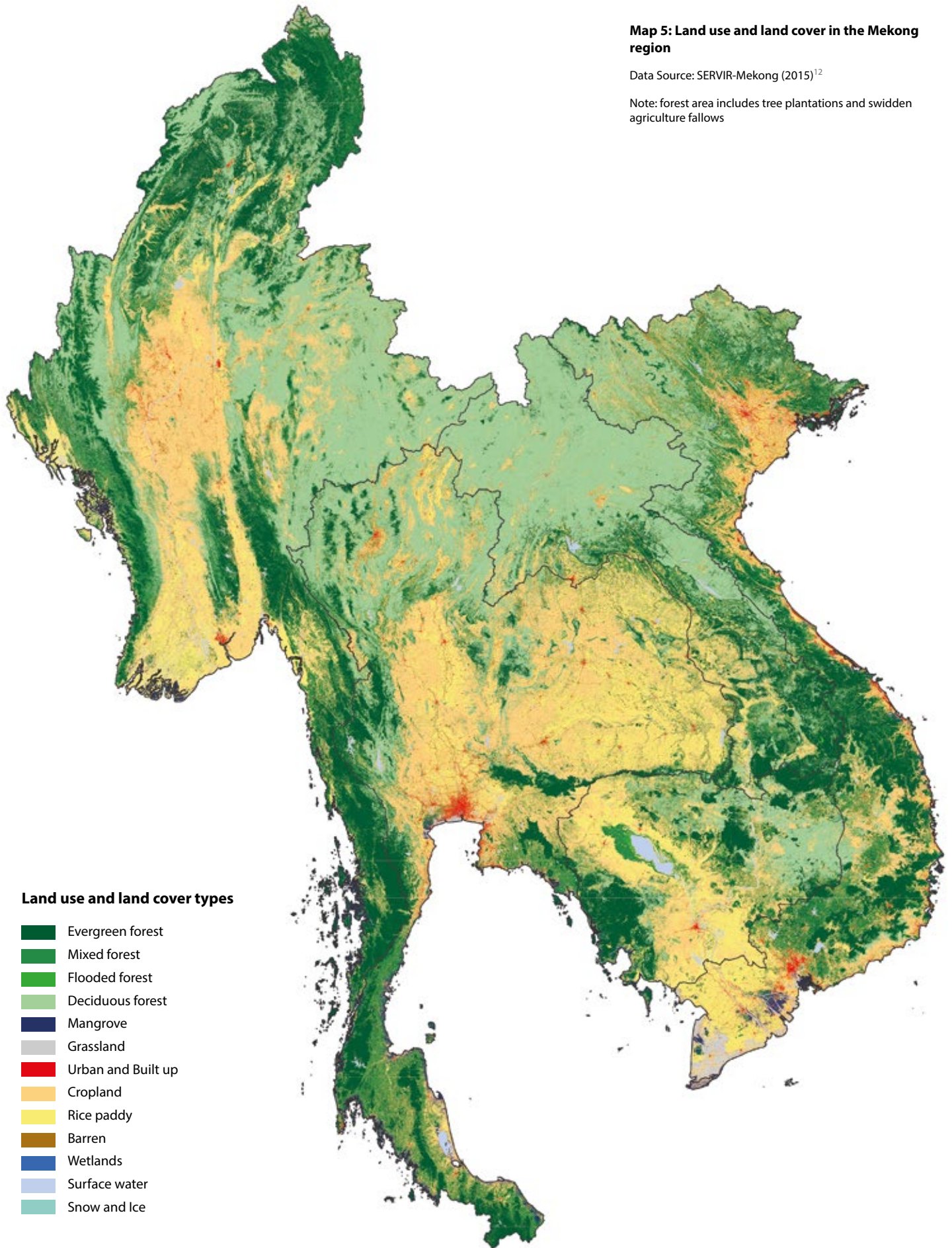
Map 5 presents the land cover in the Mekong region as of 2015, based on SERVIR-Mekong data. The spatial patterns of agricultural and forest land are of course specific to the geography of each country but large and low-lying areas are generally under agriculture.

These are most obvious in the large, central region of Thailand, the Tonle Sap plain of Cambodia, lowlands along the Mekong mainstream and its lowland delta in Cambodia and Vietnam, as well as the Irrawaddy (or Ayeyarwady) plains in Myanmar.

Map 5: Land use and land cover in the Mekong region

Data Source: SERVIR-Mekong (2015)¹²

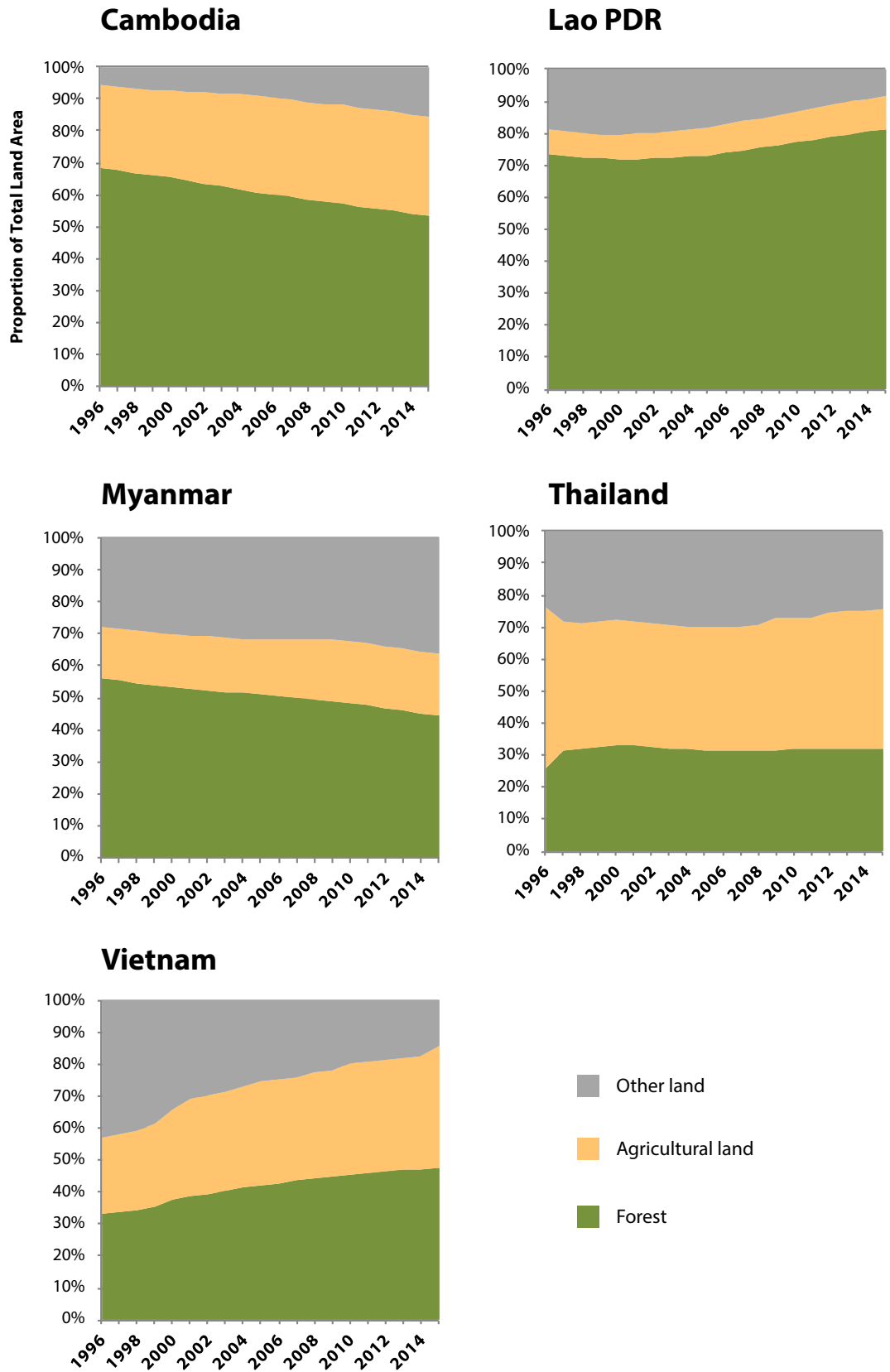
Note: forest area includes tree plantations and swidden agriculture fallows



¹² Available online at: <http://servir-rlcms.appspot.com/>

Figure 4: Change in area of main land use types in the Mekong countries (1996-2015)¹³

Data source: FAOSTAT



¹³ The area graphs of land use land cover presented here derive from standardized FAO data; they are less precise and do not correspond directly to categories used by SERVIR. The trends of change over time are, however, illustrative.

The expansion of agricultural land—whatever the benefits received with regard to food security and national development—has come at the expense of the Mekong region's forests, wetlands, and other natural habitats. Forests in the Mekong have generally been in decline (Figure 4). Because of this, in the latter years of the 20th century, global and regional concerns regarding the fate of the natural environment became a key policy concern, formulated in (among others) the 1985 Tropical Forestry Action Plan, supported by the FAO and others. Protected Area networks and forest-protection legislation began to emerge in earnest across the Mekong countries in the late-1980s and 1990s as state agencies began to recognise the value of forest areas, in part for purposes of

conservation and national heritage, but also due to the rapid growth in regional and global timber markets and the potential to leverage these for financing state treasuries. The rolling out of these forest-protection measures has been irregular, with countries like Thailand and Vietnam taking the lead, followed by Laos. In Cambodia and Myanmar—both of which have continued to experience rapid deforestation—it remains to be seen whether similar, recent protection efforts will be effective. At present, according to FAO data, forests cover approximately 88.4 million hectares, or 44 percent of the land area of the Mekong, down from 92.3 million hectares in 1996 (Table 2).

Table 2: Forest areas and change in the Mekong region (1996-2015)

Data source: FAOSTAT

	Forest area 1996 (million ha)	Forest area 2015 (million ha)	Percent Change 1996-2015	Percent of total Mekong forest
Cambodia	12.11	9.46	-21.9	10.7
Lao PDR	16.97	18.76	10.5	21.2
Myanmar	36.61	29.04	-20.7	32.8
Thailand	15.81	16.40	3.7	18.5
Vietnam	10.78	14.77	37.0	16.7
Total	92.28	88.43	-4.2	100

Generally speaking, forest cover in the Mekong is highest in upland and peripheral areas, while lowland areas in the floodplain of the Mekong and its tributaries are primarily devoted to agriculture. The largest share of these forests lie within Myanmar, with 29 million ha of forests (almost 33 percent of all forest area in the Mekong), followed by Thailand (16 million ha) and Vietnam (15 million ha). Laos, where forest cover appears to be modestly increasing, has the highest proportion of its land area under forests (Map 5). Forest change in the Mekong countries varies considerably. Cambodia and Myanmar had the highest rates of deforestation over this period. This picture of forests in the Mekong is confounded,

however, by the rapid growth in tree plantations, which have obscured forest cover figures. In the Mekong, as elsewhere, tree plantations—including monocultures of non-native species such as rubber and eucalypts—are classified as forests (see text box below for a brief discussion and methodology annex for further details). This is significant, given the low biodiversity and other environmental values of non-native monocultures, and the fact that these arguably account for the majority of reforestation seen in recent years. The conservation of natural forests has in large part been achieved through the establishment of protected areas, a topic revisited below.

Interpreting the data: *What does the forest cover actually represent?*

The forest cover data presented here is derived from the FAO annual reporting, which uses a standardized global definition of forest and, while evaluated by FAO, generally relies on national-level reporting. While this provides a comparable, annual set of data from which to estimate aggregate change, there are important limitations. The FAO definition of forest includes monoculture plantations of non-native species, such as rubber, which are very different than natural forests with regard to environmental and social benefits. Also, national definitions vary greatly. Lao PDR, for example, currently has around 43.5% forest cover according to national data based on its forest definition approximately half the forest cover level reported in the global FAO data.

Crops

Across all the Mekong countries rice dominates total agricultural area, produced both for consumption (the staple starch of dominant Mekong societies) and for export, and has generally expanded over the last ten years. The proportion of agricultural land devoted to rice is highest in Cambodia and Laos, where it accounts for 74 percent and 71 percent of total agricultural land, respectively. Due to their relatively limited areas of agricultural land, however, these two countries account for the lowest absolute areas of rice production land in the region. Thailand, with around 12 million hectares, leads total rice area and production, followed by Vietnam and Myanmar (both with around 8 million ha).

While rice production area is dominated by lowland paddy cultivation, large areas of the Mekong's uplands produce rice through shifting cultivation. Shifting cultivation, a traditional agricultural practice adapted to sloping upland areas where other forms of agriculture are often impractical, involves clearing vegetation and trees, burning these, and cultivating rice and other crops for one or more seasons before the land is left fallow to naturally regenerate. National policies aimed at reducing shifting cultivation—such as the resettlement of upland people, the establishment of protected areas, outright cultivation bans and, most recently, climate change mitigation interventions associated with Reduced Emissions from Deforestation and Forest Degradation (REDD+)—have put increasing pressure on shifting cultivators who tend to be ethnic minorities, poorer and less empowered. Despite these pressures, shifting cultivation remains prevalent in many upland areas, constituting the principal source of rice for many communities. In Lao PDR, for example, shifting cultivation cropped area accounts for 17

percent (or 212,000 ha) of the national rice producing area, supporting around 240,000 households. Because fallows are an integral part of shifting cultivation and may comprise areas as much as 9 times larger than the actively cropped land (Messerli et al. 2009), total shifting cultivation area is much larger than official statistics capture. While systematic data across the region is lacking, a recent assessment estimated that shifting cultivation systems involve around 7.2 million ha in Lao PDR (seven times larger than total paddy rice production area), 5.6 million ha in Myanmar, and 0.5 million ha in Thailand.

Total rice production land in the Mekong has been steadily increasing over the past decades, though recent years have seen a decline in production area in some locations as rice production areas are replaced by commercial crops (particularly, so-called “boom crops” as discussed below), infrastructure, residential structures due to urban expansion, or, in some cases, abandoned due to low productivity of the land due to soil degradation or salinization. In Vietnam, for example, while total rice production area at the national-level has increased in recent years, half of Vietnam's provinces have seen an overall reduction in cultivation area. Localized declines in rice production land have sparked concerns relating to national rice sufficiency in some areas.

Across all the Mekong countries, the share of agricultural land devoted to annual crops far outweighs land under perennials. In Cambodia and Myanmar, where annual crops comprise around 92 percent of agricultural land, this is perhaps most pronounced, while in Thailand annual crops remain dominant but to a lesser degree (65 percent of agricultural area).

Map 6: Stylized view of dominant non-rice crops in the Mekong, at provincial-level

Sources: see country chapters



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Shifting cultivation in the Mekong region

-Andreas Heinemann, Centre for Development and Environment

Shifting (or swidden) cultivation is a traditional smallholder land use system in the uplands of the Mekong region. By definition it includes a natural or improved fallow phase sufficiently long to be dominated by woody vegetation, which is then cleared and burned to permit a shorter cultivation phase of annual crops. Over the last decades shifting cultivation in the Mekong has transformed substantially, with a shortening of fallow periods in many regions due to limited access to land (generally limitations induced by policy) and the recent expansion of commodity tree crops (Ziegler et al. 2009).

Exact figures on the current extent of crop areas involved in shifting cultivation are not available, largely because this dynamic land use system cannot be detected by classical land cover assessments. Initial results from ongoing mapping efforts indicate, however, that shifting cultivation remains widespread in the uplands of Laos, Myanmar¹⁴ and, to a lesser degree, Thailand.

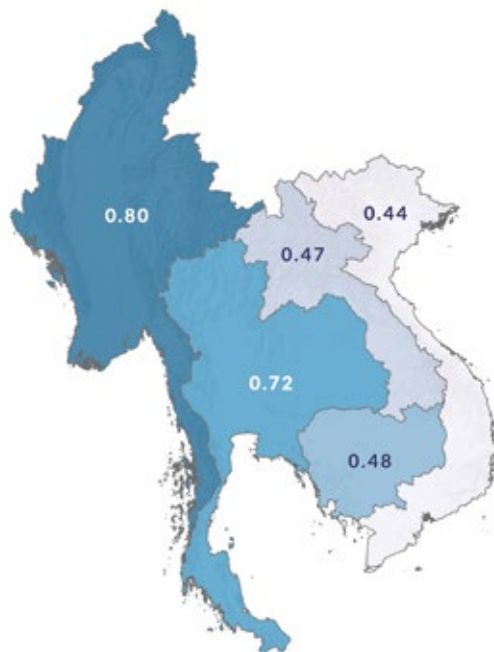
The main trends shaping the transformation of shifting cultivation systems include: the expansion of markets, infrastructure, and the promotion of industrial agriculture; the expansion of forestry and conservation programmes promoting land-sparing; and the privatization and commoditization of agriculture (Fox et al. 2009, van Vliet et al. 2012). The main drivers underlying these trends are policies and legislation in all countries of the Mekong Region that criminalize or limit shifting cultivation (Van Vliet et al. 2012, Mertz and Bruun 2017). Most of these regulations are based on the flawed and oversimplified assumption that shifting cultivation is a cause of environmental degradation and represents a poverty trap for upland communities (Ducourtieux 2006, Fox 2000, Heinemann et al. 2017, Mertz et al. 2009, Thongmanivong et al. 2009). Many studies have in fact highlighted that longer fallow shifting cultivation systems are neutral or even positive in terms of carbon when compared to commercial tree crop plantations (Bruun et al. 2018, 2009), support efficient nutrient cycling (Bruun et al. 2006) maintain positive hydrological priorities across the landscape (Ziegler et al. 2009), and include and promote a high-degree of (agro)biodiversity (Labrière et al. 2015). It may be concluded that the sum of all Nature Benefits to People (NBPs) of the mosaic of diverse land covers in shifting cultivation landscapes is likely to be larger than that of landscapes resulting from land-sparing policies (e.g. intensive agriculture and conservation areas). A recent review of almost 100 studies in Southeast Asia (Dressler et al. 2017) came to the conclusion that while transition from shifting cultivation to intensified cropping systems tended to increase (formal) household incomes, it came at very significant costs such as reductions of customary practice, socio-economic wellbeing, livelihood options, and stable yields.

Based on the available overwhelming evidence and in line with Mertz and Bruun (2017), there is an urgent need for the governments of the Mekong Region to reconsider their direct or indirect prohibitive legislation against shifting cultivation, as policy measures that criminalize it will neither help to alleviate environmental degradation nor improve the livelihoods of the rural poor. Concretely, an initial step forward could include the recognition of the land rights of shifting cultivation communities over their landscapes, granting them the legal potential to strive for their development visions and aspirations.

¹⁴ First tentative result of the presence of shifting cultivation based on a spatial-temporal pattern analysis of land cover change data from 2000-2015 is visualized here (publication forthcoming): <http://storymaps.onemapmyanmar.info/shiftcult/index.html>

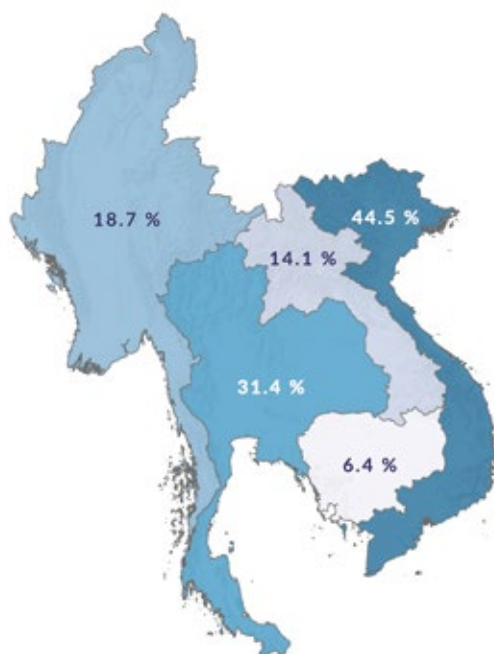
Map 7: Crop Diversity Index for the Mekong region

Sources: see country chapters



Map 8: Proportion of agricultural land irrigated in the Mekong region

Source: FAO AQUASTAT ¹⁵



Interpreting the data: Strengths and limits of Crop Diversity Indices at national and sub-national levels

The Crop Diversity Index (CDI) synthesizes the level of crop diversification in a single value ranging between 0 and 1. As used here, CDI scores derive from data provided by agricultural censuses in the respective countries. At the farm level however, rice cultivation often exists alongside other small-scale agricultural activities that are part of complex diversification strategies used by agricultural households (gardening, collecting common pool resources, raising livestock, and fishing) but are not necessarily included in production statistics, thus not captured in the CDI. Additionally, the CDI does not capture the diversity of cultivars and genetic strains below the species level.

Crop diversity

Crop and cultivar diversity is foundational to the resilience of agricultural systems to market- and price-shocks, climate change and pest outbreaks. Crop diversity also plays a significant role in nutrition-sensitive food security, a major concern for a large proportion of rural poor across the Mekong. Changes in agricultural diversity in the Mekong may be principally due to commercialization (especially through the rise of boom crops), which has prompted a shift away from complex, multifunctional agricultural systems and landscapes toward increasing simplification under monocultural production. This trend toward simplification involves not only agricultural systems, but also natural ecosystems, as cropped areas increasingly replace natural vegetation, wetlands and forests. This may be the case in some upland areas of Laos, Myanmar and Thailand where commercial crops have expanded at the expense of shifting cultivation landscapes, well known for their diverse assemblages of cropland, fallows and early successional forests.

While this may be generally true, the historic prevalence of rice as the dominant crop in the Mekong countries means that the rise of commercial crops that require large areas of land has led, in some cases, to greater crop diversity at aggregate levels (see text box below for a discussion).

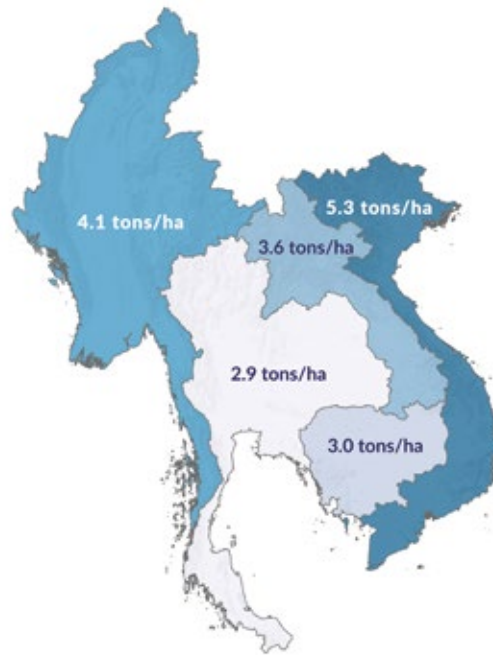
The Crop Diversity Index (CDI) is a function of the diversity of crop types that takes into account both the number of crops and their proportional share of agricultural land to produce a value ranging from 0 (low) to 1 (high). Map 7 shows the composite scores for the Mekong, ranging from 0.44 (Vietnam) to 0.80 (Myanmar). Variation at the sub-national level is, however, greater than that between countries. Generally, lowland areas where rice has played a dominant role in local agricultural production show an overall lower diversity, such as in Ayeyarwady in Myanmar or the Savannakhet lowlands of Lao PDR. In general, upland areas around the peripheries of the Mekong countries show higher levels of crop diversity.

Crop diversity indicators here reflect diversity at the species level but do not capture the diversity of cultivars and genetic strains. The adoption of improved crop varieties, especially lowland rice cultivars, is one driver of genetic simplification that may be significant across the region. This is especially true in rice production areas in Thailand and Vietnam where modern, improved rice cultivars dominate, but is also becoming increasingly prevalent in Laos, Cambodia and Myanmar. The Mekong region is a centre of origin for cultivated rice species and has thus been a global hotspot of rice diversity, suggesting that the loss of local and traditional rice cultivars may have global implications.

¹⁵ FAO's Global Water Information System, available online: <http://www.fao.org/nr/water/aquastat/main/index.stm>

Map 9: Average wet season paddy rice yield in the Mekong region

Sources: see country chapters



Irrigation and intensification of land use

While, in general, agriculture in the Mekong has expanded rapidly and become increasingly intensive, not all potential agricultural land is in use due to, among other factors, labour shortages and lack of investment capital. This is also due to other local contextual factors. For example, while Laos faces significant limitations on agricultural land due to its topography, some areas of potential agricultural land remain unused. In some cases, this is due to a lack of investment capital and labour, while in other areas this is due to the large number of unexploded ordnances (UXOs) that remain from the Indochinese conflicts in the 1960s and 70s. In some northeastern areas of Lao PDR, for example, the equivalent of 90 percent of potential agricultural land is contaminated with UXOs, presenting a risk for farmers and limiting options for agricultural expansion.

Of agricultural land currently in use in the Mekong countries, production rates and efficiency vary significantly, due to issues related to management regimes, fertilizer use and irrigation coverage and efficiency. Irrigation coverage and the quality of irrigation infrastructure remain key issues in many areas of the Mekong (Map 8). Toward the bottom, only 6.4 percent of total agricultural land in Cambodia is irrigated (though for paddy land this is higher, at around 28 percent), while in Laos only 14 percent of agricultural land is irrigated. In Vietnam, where agriculture is perhaps most intensive across the region, this number is much higher (at 44.5 percent), allowing for up to three rice harvests per year on the same plots in many areas. Production rates thus vary with intensification (Map 9), with the highest yield seen in Vietnam (5.3 tons per hectare per crop), and the lowest in Thailand (2.9 tons per hectare).



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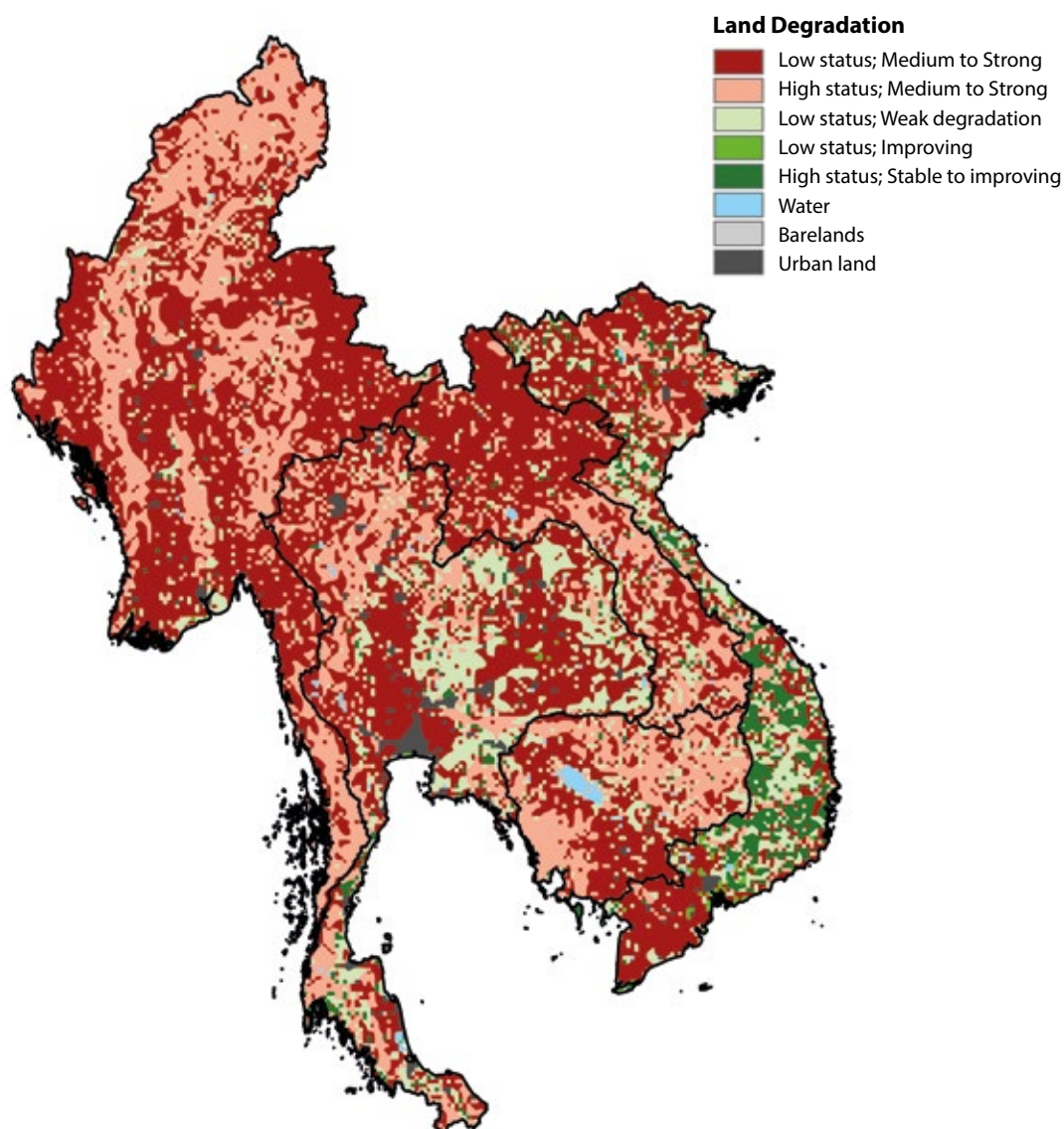
Land degradation

Land degradation is a growing concern across the world, particularly in areas experiencing rapid land use change associated with agricultural expansion and intensification of agricultural production on land. Key drivers of land degradation are primarily anthropogenic, including the intensification of agriculture, its expansion into marginal areas (particularly on steeply-sloping land and areas with fragile soils), and unsustainable agricultural practices including poor soil conservation techniques. In recent years, exponential growth in the amount of land under commodity crops has presented a unique challenge, as farmers and agricultural companies have expanded into forests, wetlands and other natural areas to take advantage of the immediate, but ultimately exhaustible, fertility of these previously-uncultivated soils. Underlying drivers include global commodity markets, changing dietary preferences (toward meat

and other land-intensive foods), and population growth—both locally and globally—that have incentivized agricultural expansion and intensification. Despite its significance, standard measures for assessing degradation are limited and hotly-contested, in part because of the multivariate nature of degradation, high degrees of variation at local levels, and a lack of consistent and comparable data on which to base assessments. One approach, supported by the FAO Land Degradation in Drylands Project, produced a global assessment of land productivity and trends of change, including degradation (the Global Land Degradation Information System, or GLADIS). The GLADIS assessment indicates that the majority of land in the Mekong is moderately to strongly degraded (Map 10). Other estimates put this somewhat lower, though similarly indicate that degradation is a major concern. For example, Shrestha and Roy (2008) estimate that about one quarter of the Mekong is highly degraded, and another quarter moderately degraded.

Map 10: Land degradation classes in the Mekong

Source: GLADIS-FAO¹⁶



¹⁶ FAO's Global Land Degradation Information System, available online: <http://www.fao.org/nr/lada/gladis>. The GLADIS classes show two different sets of information: 'Status' refers to the quality of ecosystem service at the time of assessment, while the degree of degradation (change) is indicated as Strong, Medium, Weak, Stable and Improving.

While the GLADIS assessment is based on global models with insufficient resolution at local levels to provide reliable site-specific assessment, it defines the broad parameters of risk and change, and is generally consistent with known risks and patterns of degradation on, for example, steeply sloping terrain, areas subject to regular disturbance, and intensive cropping. Myanmar is facing the most significant degradation pressures, with nearly 95 percent of its total land area facing significant degradation pressures, or at risk of degradation; this is highest in the semi-arid central dry zone and upland areas. Laos ranks second following Myanmar due to the large amount of steeply sloping land with 89 percent of its land area under significant pressures of degradation. Conversely, GLADIS data for Vietnam suggests that more than 16 percent of its area is stable or improving, particularly within the Central Highlands region where less than 60 percent faces significant degradation pressures.

This intersects problematically with poverty in the region. In general, there is a positive relationship between poverty and land degradation, as poorer farmers—who are either unable to compete in an increasingly commercialized agricultural sector or have been displaced by large-scale land acquisitions and other state-sponsored expropriations of land—have been increasingly pushed onto marginal agricultural land where risks of soil degradation are greater. The impacts of land degradation are also felt most acutely by the rural poor, both because of their reliance on agricultural and forest resources, and because their capacities for dealing with the impacts of change are more limited.

The impacts of land degradation across the Mekong affect not only the poor, however. For all the Mekong countries, the erosion of the natural capital basis upon which agricultural production is founded is an immediate and pressing concern that has yet to receive sufficient attention or be addressed through appropriate incentives. The degradation of terrestrial systems has further consequences for aquatic systems, as fragile and easily eroded soils are transported into streams and river systems, leading to a loss of water quality. This has significant negative impacts on freshwater fisheries, a principal source of protein for millions of people in the Mekong.

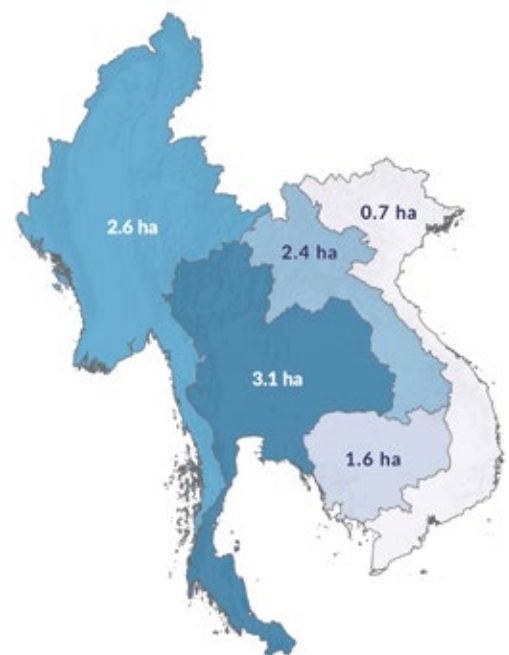
Distribution of the land resource: Persistence of smallholders amid growing inequality

Given the central importance of agriculture and other primary sectors in the Mekong, the natural resource base—its land uses and land covers, crops, and the land itself—is foundational to society. This resource base is distributed unevenly across the Mekong, not only between countries but also between and within agricultural communities, public institutions, and corporate entities. The following section details the broad patterns of agricultural land distribution and their implication for farmers and rural communities.

Agricultural land distribution

The post-colonial character of the Mekong region—even in Thailand where no formal colonization occurred—plays a formative role in the distribution of agricultural land. While the colonial period itself entailed significant changes in rural land relations and the restructuring of centre-periphery dynamics, the ways in which Mekong societies have responded to this colonial legacy are arguably more important. Socialist liberation movements in Cambodia, Laos, Myanmar, and Vietnam produced particular forms of social land relations and distribution patterns, as well as the symbolic and pragmatic centralization of the rural peasant farmer in the national consciousness. These movements also produced particular kinds of state-society relations involving questions of ownership and control over land resources where, in the main, land resources are dominated by the state. In sharp contrast, rural land relations and the distribution of agricultural land in Thailand have become largely privatized under the management of agricultural households, in some measure a response to the threat of rural unrest and communist subversion that loomed large in the political fears of the Thai state. Redistribution of land to smallholders thus became a strategic focus, with far-reaching political reforms engineered for the purpose of mitigating the threat of rural revolt.

Though agricultural households have become threatened in recent years by the rapid expansion of large-scale land expropriations by the state (see below), this past focus on the smallholder still weighs heavily upon the present. Small parcels held or managed by agricultural households comprise the vast majority of agricultural land across the Mekong. Average farm size, however, varies significantly by country (Map 11), with the smallest average farm size (0.7 ha) found in Vietnam where intensification is



Map 11: Average size of agricultural landholding per agricultural household in the Mekong region

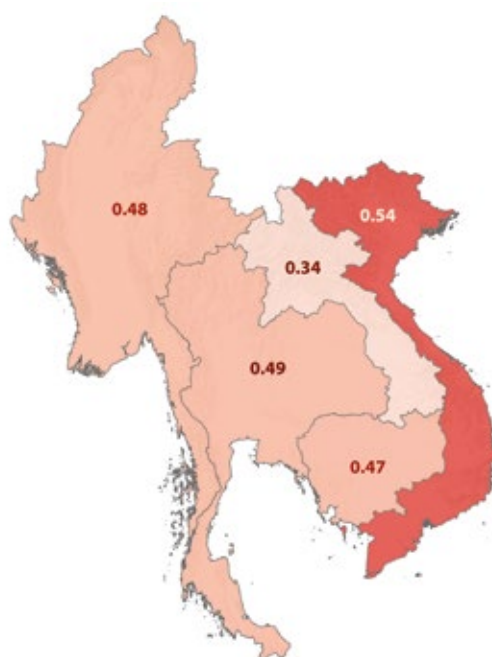
Sources: see country chapters



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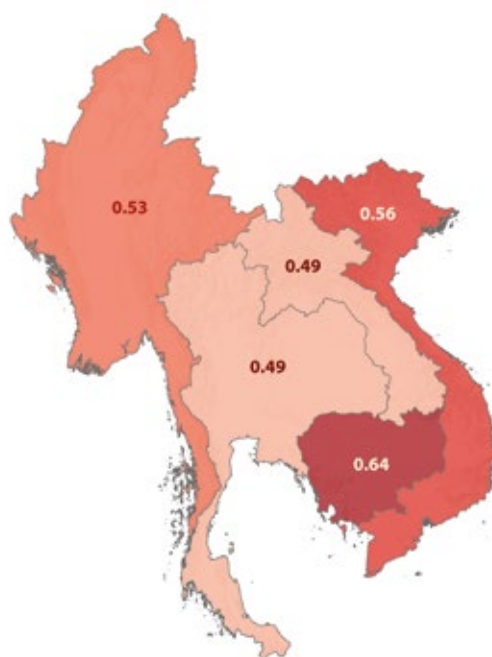
Map 12: Land Gini Index for the Mekong countries (excluding concessions)

Sources: see country chapters



Map 13: Land Gini Index for the Mekong countries (including concessions)

Sources: see country chapters



arguably most advanced¹⁷, while Thailand has the largest, with average farm sizes more than four times the size of those in Vietnam. Laos, falling between these, is the only country in the Mekong where average farm size increased between the last two census periods (1999 and 2011), by approximately 50 percent. Cambodia, by contrast, has seen a general decrease in the average size of agricultural landholdings.

Calculation of the Gini coefficient of agricultural land distribution, ranging from 0 (absolute equality of distribution) to 1 (absolute inequality, see Methods annex) provides a clearer understanding of the ways in which household agricultural land is distributed in the Mekong countries (Map 12). Laos has the most equal distribution of agricultural land among the farming population in the Mekong region, with a Gini coefficient of 0.34 (meaning, for example, that 10 percent of households with the largest landholdings own 25 percent of the total agricultural land area). The other Mekong countries have higher (less equal) coefficients of distribution, ranging from 0.47 in Cambodia (top 10 percent own 32.5 percent of all land) to 0.54 in Vietnam (top 10 percent own 37.5 percent of all land).

The land Gini Indices here are calculated based on agricultural land holdings at the household level, which does not take into account the landless population amongst agricultural households (though difficult to estimate) nor the area granted to companies as large-scale agricultural concessions. The inclusion of agriculture and tree crop concessions in the Gini calculation indicates that land distribution is actually more uneven. In Laos, for example, the Gini coefficient jumps to 0.49 (meaning the top 10 percent of landholders own 35 percent of the land). Cambodia's coefficient similarly increases to 0.64, indicating the most uneven land distribution in the Mekong (where the top 10 percent of landholders own nearly 60 percent of the total land). Myanmar and Vietnam's coefficients increased to 0.53 and 0.56, respectively (Map 13). In Thailand, where corporate commercial investment has generally not been through land acquisition, the expropriation of land for investment by state authorities has only recently begun to gain traction following the ouster of the democratic government. The impacts of this are not yet apparent.

¹⁷ Note, for example, that average rice yields are nearly double those of Thailand

Landlessness

Across the Mekong, there are a large number of households for whom agriculture is the primary source of income but who do not have agricultural land holdings, though data is only partially available. Landlessness in Laos is relatively low, with fewer than 7,000 families officially reported to be landless. However, this has increased rapidly in recent years and more than seven percent of agricultural households have holdings less than 0.5 ha, suggesting that functional landlessness is a concern. Incidence of landlessness is considerably higher in Cambodia, where 29 percent of agricultural households are landless. In addition, a large number of people have very small land holdings and high debt-burdens, suggesting high vulnerability to future landlessness. Landlessness may be even higher in Myanmar, though no systematic data is available. While conservative estimates suggest that about one-quarter of all agricultural households do not have any landholdings, a detailed case study in Myanmar's Dry Zone found that as many as 60 percent of agricultural households were landless (Boutry et al, 2017). In Myanmar, conflict related to the seizure of

traditional agricultural lands by state authorities during the period of the military regime that have not been returned to communities is an important causal factor of landlessness.

Ethnic minorities are particularly at risk of landlessness in Myanmar, Laos, Thailand, and Vietnam where economic and political institutions as well as unclear or prejudicial legal and administrative structures place them at a disadvantage. While Vietnam officially recognises customary tenure rights of ethnic minorities, in practice protection is low and critical land shortages are rife, involving at least 200,000 minority households. In Thailand, many ethnic minorities depend upon agricultural production within state lands, such as protected areas and other state forests, making them particularly vulnerable to dispossession. In 2017, for example, hundreds of forest-dependent communities were evicted from forest lands by military-led National Council for Peace and Order (NCPO), ostensibly in an effort to enhance forest conservation. Similar patterns are seen in Myanmar where, for example, traditional claims to shifting cultivation lands are proscribed by law¹⁸.

Land disparities

-Philip Hirsch, Chiang Mai University

Inequality in access to land is a key issue that reflects more general questions about justice and equity in the process of development. The structure of landholding varies from one country to another. In Latin America, for example, much agricultural land is held in very large estates, known as *latifundia*. In contrast, the historical pattern of agricultural land holding in Southeast Asia has been more smallholder-based.

Just as important as historical patterns are trends in landholding disparities. These can move in different directions. In some cases, land reform projects have sought to redress landlessness and land shortage by allocating land to the rural poor. The Philippines' Comprehensive Agrarian Reform Program (CARP) has addressed land disparity in this way since the early 1970s, but overall with relatively little effect on land disparity. In Thailand, the Agricultural Land Reform Office has allocated mainly public land to smallholders, with some local effect but without addressing mainstream disparities in landholding.

There are also processes that exacerbate disparities in landholding. Some of these involve allocation of large-scale land leases to domestic and foreign investors, for example the land concessions granted in Laos and Cambodia to investors for plantations of rubber, sugar, and other cash crops. Other processes are more micro-scale but are nevertheless important contributors toward land disparity. Sometimes these processes involve voluntary sales of land, while in other cases distress sales caused by debt, urgent need for medical expenses and so on may cause farmers to lose their land.

Land disparity is difficult to measure meaningfully. The most common measure of inequality is the Gini coefficient. However, Gini coefficients of disparity in land holding are limited because they do not measure differences in land quality and other determinants of land value.

In the Mekong Region, historical trajectories have seen programmes that sought to redress land disparity, either through revolutionary agendas of land expropriation from landlords, as happened in northern Vietnam during the 1950s, or as pre-emptive "land to the tiller" measures to dispel rural unrest. But post-socialist land policy has tended to see a reversal of land distribution programmes, as large areas of land that are deemed underutilised—though typically used by local communities—or are categorised as state property have been leased to large-scale investors.

Elsewhere, market mechanisms have enabled the concentration of land in the hands of those able to buy it. Land titling programmes that facilitate the buying and selling of land can also result in disparities, as land is concentrated in the hands of those who acquire it as a speculative asset.

¹⁸ However, shifting cultivation is recognised in principle in the National Land Use Policy

Protected areas

Natural protected areas play an important role in the conservation of the Mekong's natural capital, and provide a number of direct benefits to local communities by ensuring key ecosystem service functions and other livelihood values and, in some places, provide a measure of protection against large-scale land conversions. However, the conservation status of these areas entails particular restrictions on resource access and land uses, with important implications for the livelihoods of the (typically indigenous) communities that inhabit them. Conservation advocates and state forest agencies have commonly characterized forest-dwelling communities—whose residence typically pre-date gazettelement—as encroachers, while protected area legislation often prohibits traditional agricultural practices in these areas, placing communities in legal jeopardy.

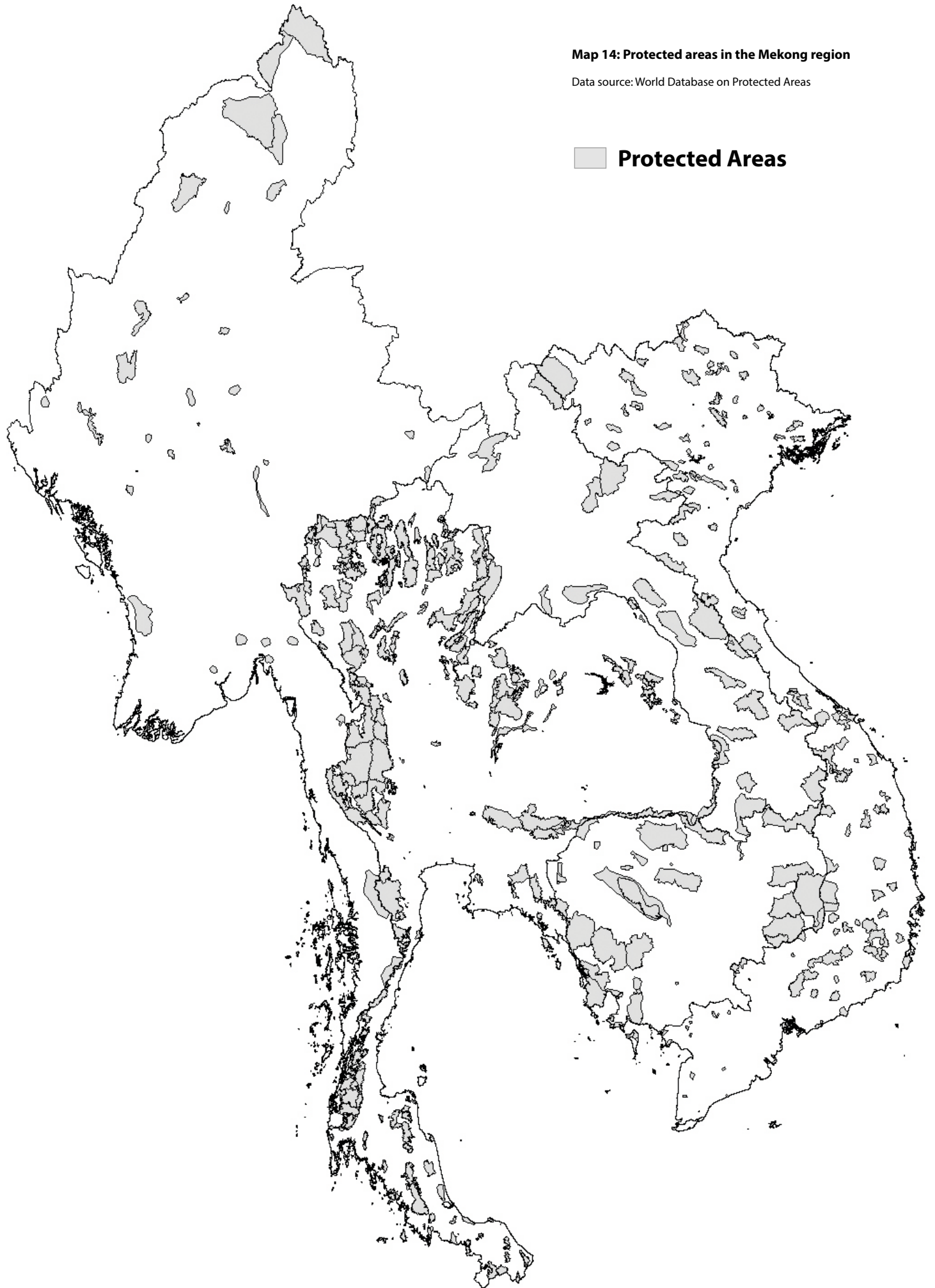
Conservatively, protected areas cover around 20 million hectares of land in the Mekong (Map 14). In Cambodia, protected areas cover 7.5 million ha (including biodiversity conservation corridors), or 41 percent of total land area. In Lao PDR, National Protected Areas (the most strictly-managed state forest category) involve around 3.8 million ha (or 14 percent of total land area), with a further 10.7 million ha incorporated into other state forest categories with varying degrees of legal restrictions. Thailand's state-owned forest lands cover 40 percent of the country, incorporated into National Reserve Forests and Protected Forests. Protected Areas in Myanmar are on the rise, currently involving only around 3.9 million ha, or 5 percent of total land area.



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Map 14: Protected areas in the Mekong region

Data source: World Database on Protected Areas



Land leases and concessions

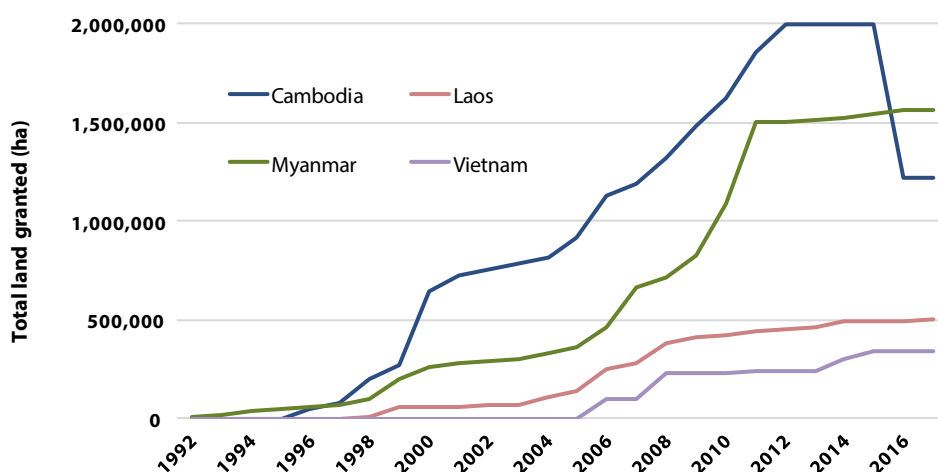
In order to attract foreign investment for the purpose of achieving socio-economic goals and national development, some of the countries of the Mekong region have promoted a model of agricultural modernization based on large-scale land development. The model is operationalized through the granting of land concessions by state authorities to investor companies, allowing the company to access a large tract of land for a long period of time and develop it. Principally, these have been for export-oriented commodity production. The model has been a central theme in recent agricultural development policies in the Mekong, with the notable exception of Thailand where the development of smallholder agriculture has been a long-enduring pattern of its agrarian history.

The rationale for large-scale land development is presented by national government and their advisors as self-evident: the granting of land to investors—particularly foreign investors—and well-financed companies is expected to stimulate agro-industrial activities requiring large capital investments that the

states in the region do not have. These investments are needed to leverage the latent productive potential of lands deemed wasted or under-utilized. They would turn these untapped resources into new production schemes, which would in turn offer new labour opportunities in the countryside and encourage local economic diversification upstream and downstream of the land concession itself. A trickle-down effect would also incentivize the development of entrepreneurial and efficient middle farmers who could benefit from the introduction of new agricultural technologies and processing facilities as well as from the access to new markets. Also, land concessions are promoted to generate state revenue at national and sub-national levels and serve to finance public infrastructures and services (Deininger et al. 2011).

Starting in the early 2000s, the governments of Cambodia and Laos developed legislation to allow representatives of the state to grant agricultural land concessions. This began earlier in Myanmar with the 1991 Wasteland Instruction that was released under the military government. These processes were in full swing especially between 2006 and 2011 (Figure 5).

Figure 5: Change in the area under agriculture and tree-crop concessions in the Mekong region (1992-2017)



An important reason for this sharp increase is the effect of the 2007-2008 food crisis that led investors to realize that land and agriculture could be (re)considered as a key asset to generate profit.

As a result, the agrarian structure of the countries in the Mekong has been considerably transformed. In Cambodia, Laos and Myanmar, the total area of land concessions represents, respectively, 37, 30 and 16 percent of the area cultivated by smallholder farmers (Table 3). This is proportionally high considering that agricultural households make up the majority of the population in these countries. Due to a much higher population density than in the other countries of the

region, land availability in Vietnam to grant concession is far more limited and the area is modest in comparison of smallholder farmers' land area (Table 3). Even if its space for manoeuvre is more limited, Vietnam has passed legislation allowing expropriation not only for public purposes but also for 'economic development' creating a loophole that has allowed for dispossession of smallholder land for large commercial enterprises. Further, the promotion of large-scale development also follows indirect pathways. In the rubber sector, Nga Dao (2015) describes collaborative mechanisms involving multi-level state authorities and large corporations that allow for large-scale land acquisition and production, even if these do not occur through formal concession agreements.

The concession landscape is not limited to the production of agricultural commodities and (fast growing) trees. Concession agreements between government and investors are also mobilized in the mining sector (stone, minerals and precious stones extraction), usually consisting of exploration and then exploitation licenses. With the notable exception of Laos, mining concessions are not examined and monitored in the same way as their agricultural and tree crop counterparts. As a result, it is difficult to accurately estimate the area under exploration and effective exploitation. Nonetheless, figures show they

are significant and represent a threat to smallholder farmers, particularly when exploration activities pave the way for effective exploitation (Table 3).

The geography of agricultural, tree plantation, and mining concessions share similar patterns in the different countries of the Mekong. They are typically located in forested uplands that are peripheral to the main lowland rice plains. In Laos and Myanmar however, a number of them are located in the central lowland, particularly in the delta region of Myanmar (Map 15 and Map 16).

Table 3: Agricultural, tree crop and mining concessions in the Mekong region (number and area)

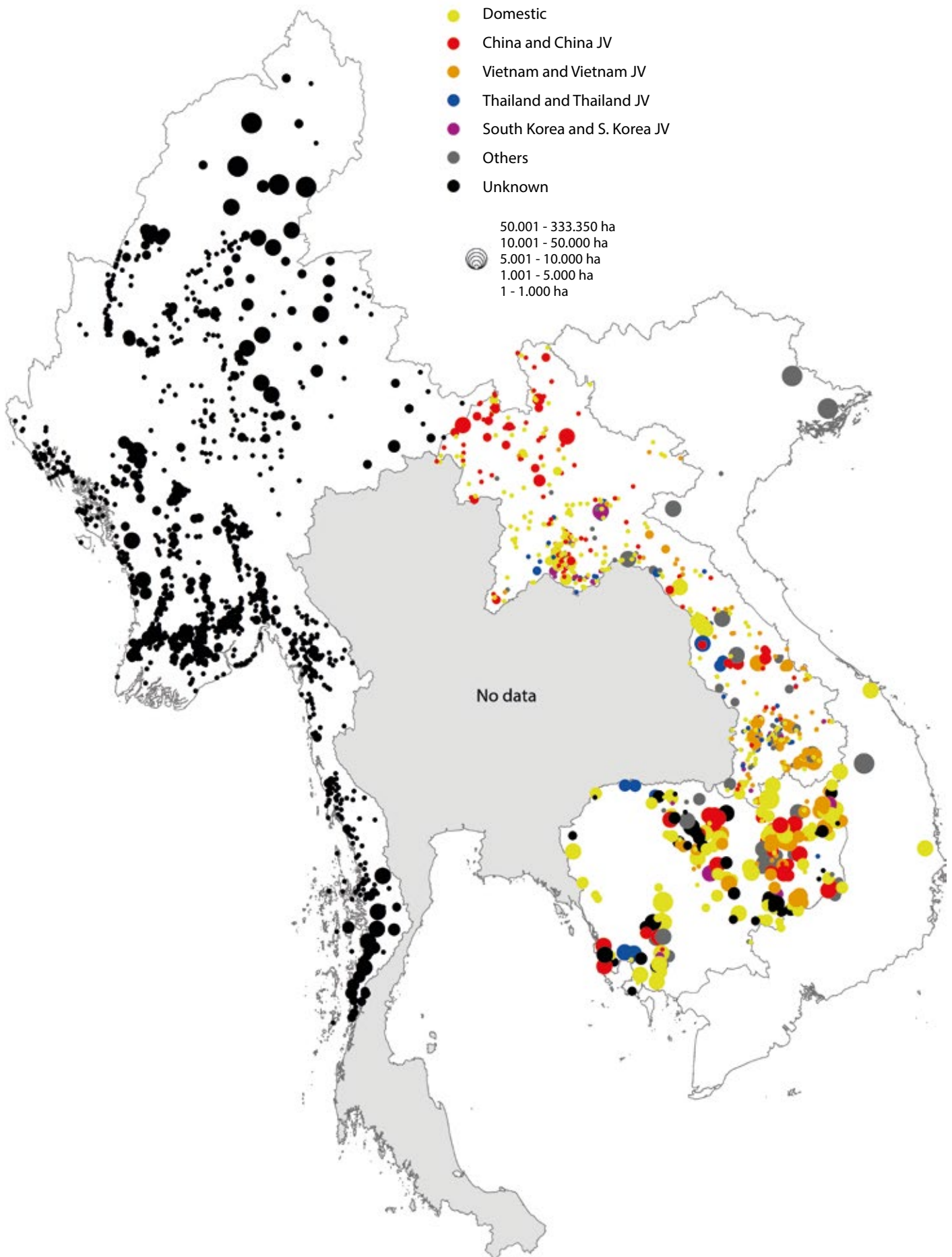
Data source: see Methods annex.

Country	Smallholder farmers cultivated area (ha)	Agriculture and Tree Plantation Concessions		Mining Concessions ¹⁹	
		Number	Area (ha)	Number	Area (ha)
Cambodia	3,304,738	227	1,225,254	366	819,452
Laos	1,666,822	496	500,091	595	11,115,527
Myanmar	12,794,187	4,425	2,086,892	No data	
Vietnam	7,772,045	7	344,289	No data	
Thailand	No data				



¹⁹ Mining concession data here includes both exploration concessions and active mining projects. Exploration concessions are much larger and do not necessarily imply the size of mining projects themselves. While Cambodian data does not allow for disaggregation, Lao concession data gives an indication of the ration between these. In Laos, there are 415,527 ha under active mining, with a further 10.7 million ha under exploration concession.

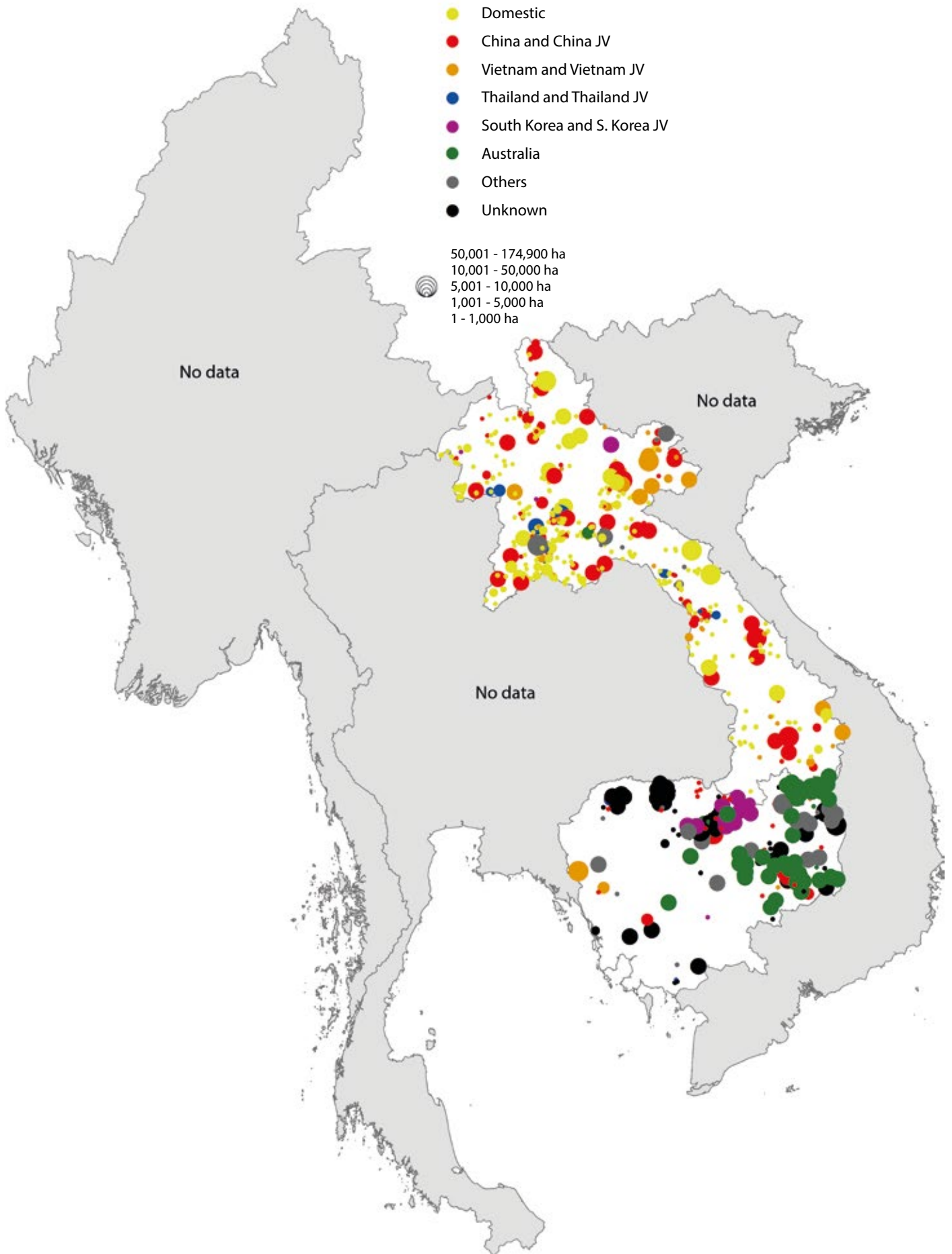
Map 15: Known agriculture and tree plantation concessions in the Mekong region, by investor and area





© Phuong Nguyen

Map 16: Known mining concessions in the Mekong region, by investor country and area



Hydropower and land use change in the Mekong River Basin

-Kim Geheb, Water, Land and Ecosystems (WLE) Mekong Programme

There is a growing global recognition of the inextricable linkages between water resources, energy and food production—what has come to be referred to as the “water, energy and food nexus”. Global demands on all three sectors are large, increasing, and closely related. Seventy percent of all global water withdrawals are for the agricultural sector²⁰, while fully 30 percent of total energy is consumed by this sector and the supply chains that bring agricultural produce to consumers (WWAP 2012). Ninety percent of this energy production is itself water-intensive (WWAP 2014), and in some cases in direct competition with agriculture for scarce water resources. Population and economic growth, urbanization, changing global consumption patterns, and climate change are all placing increasing demands on these inter-related sectors, perhaps especially in the Mekong region which has a high degree of dam intensity (Map 17).

There are very few studies addressing the impact of hydropower development on land use. Nevertheless, dam development generates significant land use change. Perhaps the most obvious way in which this happens is through inundation. Laos has 30 commissioned dams with installed capacity of 15 MW and above. The 24 dams for which data is available have a combined maximum reservoir area of 1,450.4 km². The largest of these, the Nam Theun 2, has a maximum reservoir area of 450 km². With irrigation reservoirs, it can be argued that this land loss is justifiable because of increased agricultural productivity through year-round irrigation. This is not the case for hydropower dams, however. Dams inundate low-lying areas upstream, typically the most productive agricultural land. Even where compensation occurs, replacement land is not always comparable in terms of land quality or fertility.

The physical presence of dams and associated reservoirs can rapidly accelerate land use change in the vicinity. Two studies from China (from the Manwan (1,670 MW) and Jinghong (1,750 MW) hydropower dams) both show significantly accelerated land use change around the reservoir area, with the highest intensity of change closest to the reservoir. Much of this change was associated with infrastructure associated with dam construction. Both of these dams are large, and construction infrastructure is commensurate (Zhao et al. 2010).

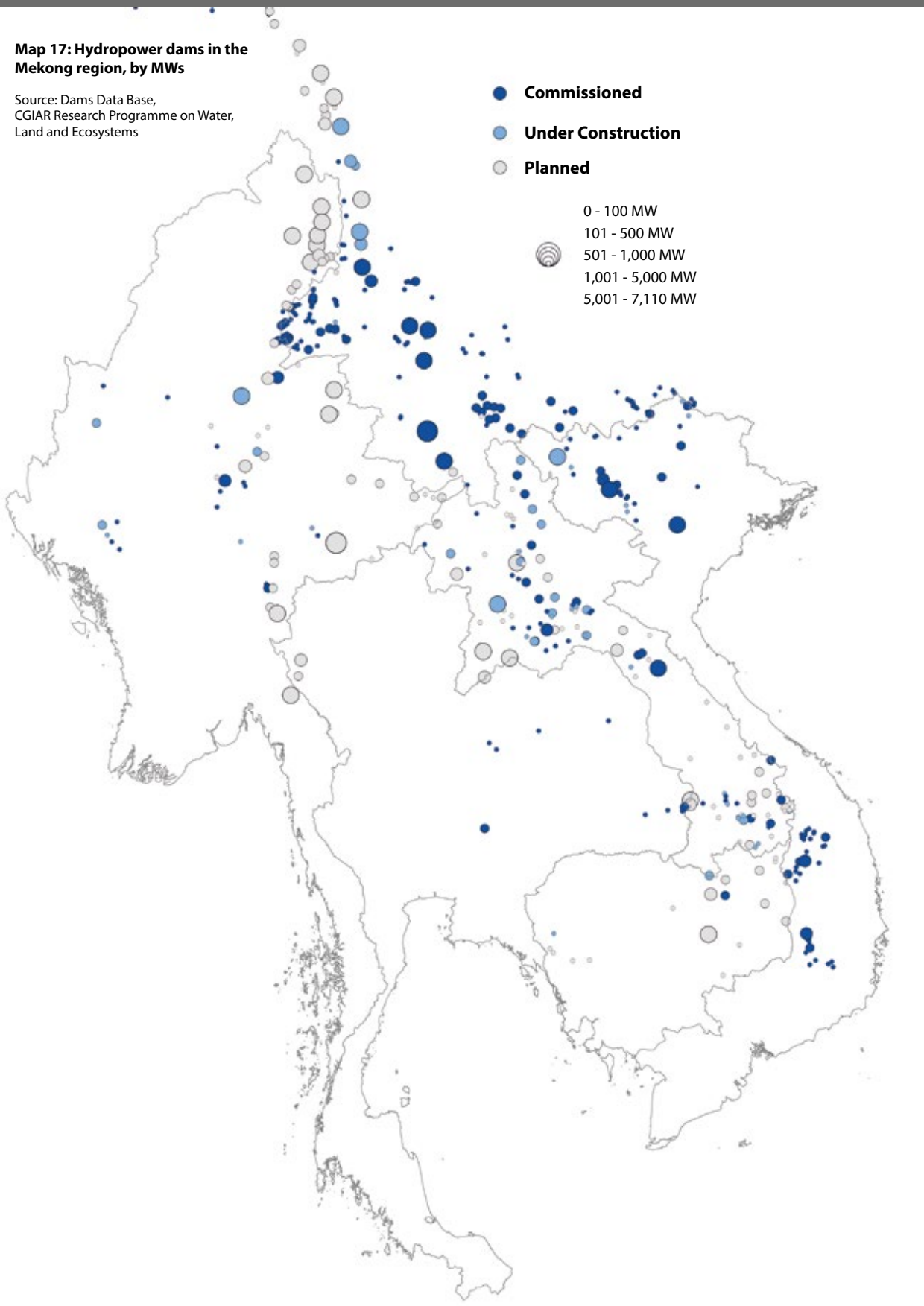
Hydropower dam development typically involves the creation of access roads, which are commonly associated with deforestation, opening up regions to logging and agricultural expansion. In Laos's Ca River Basin, there is clear evidence of significant land use change along roads and rivers (Thongmanivong 1999). Further changes, including deforestation, associated with hydropower dams are the development of transmission lines and the service roads created to support these. The transmission line corridor associated with the Nam Ngum 3 dam in Lao PDR, for example, will affect 500 ha of land, about 60 percent of which falls within state forest areas (NN3PC 2011).

A final consideration with regard to the relationship between hydropower development and land use change relates to resettlement. Resettlement opens up new lands to exploitation and, in cases where resettled communities merge with existing ones, often prompts competition for land and other natural resources, resulting in over-exploitation and conflict. In many of the Mekong countries, no explicit provision is made for resettled people to take advantage of non-agricultural or forest opportunities. Rather, agricultural activities remain central to resettlement planning while forest use, access and impacts typically remain only implicit concerns (see, for example, Nguyen et al. 2007; Lestrelin et al. 2005).

²⁰ AQUASTAT: http://www.fao.org/nr/water/aquastat/water_use/index.stm

Map 17: Hydropower dams in the Mekong region, by MWs

Source: Dams Data Base, CGIAR Research Programme on Water, Land and Ecosystems



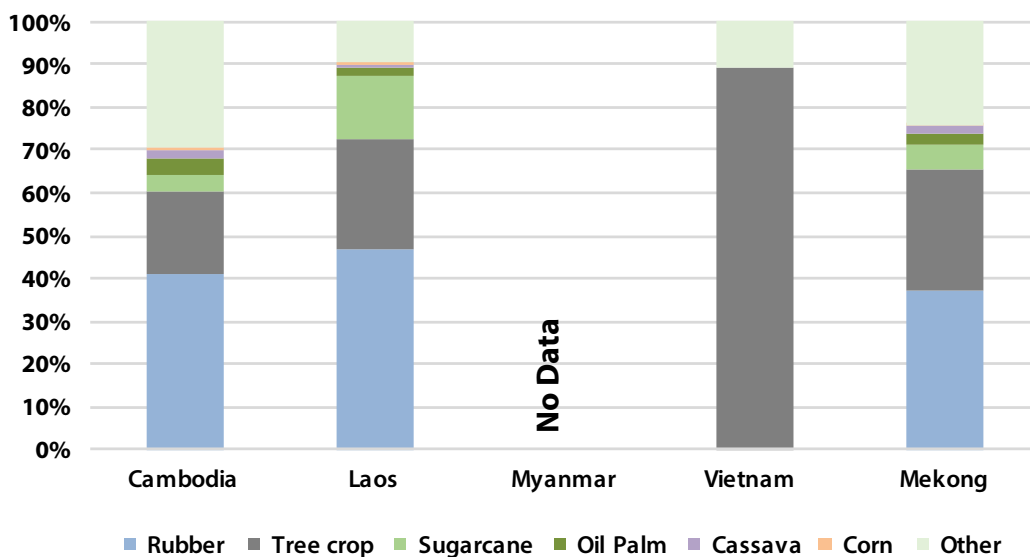


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As far as land use is concerned, 76 percent of the total area under concession²¹ is devoted to so-called boom crops, crops that have benefited from attractive markets over the last two decades such as rubber, tree

plantation (acacia and eucalyptus), and sugar cane (Figure 6). Annual crops such as cassava and corn (or maize) lag behind because they are essentially smallholder crops (see section below for more details).

Figure 6: Distribution of area under concession by crop in the Mekong region



While land investments have in some cases contributed to national development targets (potentially playing a role in raising national GDP), in general adverse impacts to local communities and the environment have outweighed these benefits, producing a number of critical problems for communities and risks for investors and the government such as market vulnerabilities, land conflicts and environmental degradation. A fundamental problem is that most of the land granted for concessions was in fact occupied or used by communities under customary tenure arrangements (individual and collective). Because the process of recognition and registration of land rights has been slow, the overlap of land claims between smallholders and companies has resulted in numerous conflicts and, often, the forced dispossession of local communities. Concessions have also functioned as vehicles for illegal timber trade. In Cambodia and Laos, the granting of concessions has been used as a mechanism to circumvent the timber logging ban, resulting in massive deforestation inside and outside the limits of the concession (Davis et al. 2015, Ingalls et al. 2018). The lack of transparency surrounding these land deals combined with clear non-compliance with environmental and social impact requirements is pervasive across the Mekong region.

Further, while large areas of land have been granted in concessions, the implementation of these has remained low in practice, limiting potential benefits for state revenue and labour opportunities for local

communities. In Cambodia and Myanmar for instance, the area of concession effectively planted is respectively 20 percent (Fella et al. 2017) and 23 percent (Woods 2015) of the total area granted.

These negative environmental and social outcomes, and the limited benefits received from royalties and taxes, have prompted a number of political responses in the Mekong. The governments of Cambodia and Laos each issued limited moratoria on new concessions in 2012²², pending the review of existing investments. The effectiveness of these moratoria has been mixed. In Myanmar, where there was no similar political response to concerns surrounding concessions, the area granted between 2011 and 2013 was null, but increased since 2014.

The future of concessions is uncertain in the Mekong. A particular point of concern in Cambodia, Laos, and Myanmar involves the cancellation of under-performing concessions and those found to be non-compliant with existing legal provisions. While these cancellations may indicate positive movement toward the rectification of the problems associated with the uncontrolled and often illicit grab for land in the Mekong, this should be viewed with some caution. In particular, the intention behind these cancellations is unclear: whether the land will be returned to dispossessed communities, or whether it will instead be re-issued as new concessions or retained as state land. These tensions are clearly palpable in current discussions in the three countries, and tensions surrounding land deals remain high.

²¹ With the exception of Myanmar where the dataset does not allow for differentiation between different crops
²² In Laos, Prime Minister Order No. 13 was a limited moratorium on some minerals and tree plantation species. In Cambodia, Order 01 was a more general moratorium, accompanied by efforts to extend the coverage of household land titles and evaluate Economic Land Concessions across the country

Contract farming

While there is some evidence to suggest that large-scale land concessions in the Mekong may have reached, or passed, their zenith, there are indications that private sector investments in land-based commodities will increasingly turn toward contract farming as a way to secure agricultural production. Contract farming is already well established in Thailand, a context wherein privatization and more secure tenure regimes have generally precluded large-scale concessions of land. Contract farming is becoming increasingly common in parts of Cambodia, Laos and Myanmar. In Laos, for example, while only 14 percent of agricultural households nationally were engaged in contract farming arrangements as early as 2011, in some areas this was much higher, involving more than half the agricultural population (Epprecht et al. 2018).

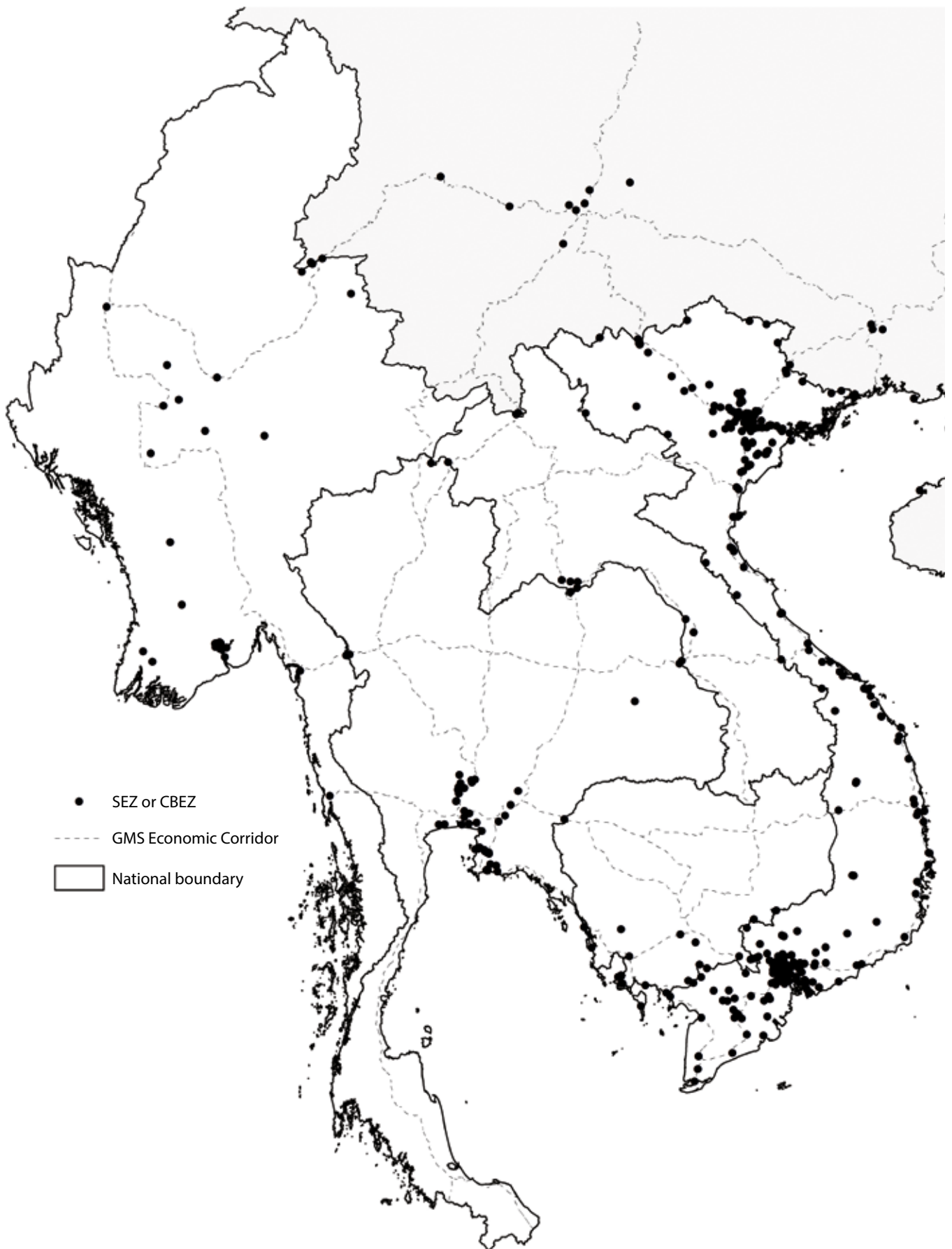
Special economic zones

Other forms of land expropriation appear to be on the rise across the Mekong, principal among which are Special Economic Zones (SEZs) and Cross-Border Economic Zones (CBEZs). Lack of available data and clarity regarding the status of these make quantification difficult, but a reasonable estimation suggests that there are more than 400 SEZs and CBEZs across the Mekong region, largely concentrated along the Greater Mekong Subregion's economic corridors (Map 18). These economic zones are geographic areas wherein normal legal and regulatory regimes—such as those pertaining to taxation, labor or land administration—are suspended for the purpose of attracting foreign investment and economic activities. In Laos, a number of SEZs and CBEZs have been declared in recent years, most notably a 526,000 ha concession on the Bolaven Plateau to Chinese investors. In Thailand, the military-led NCPO issued Order 17 in 2015, extending the powers of government to expropriate land for the creation of SEZs. While implementation is in its early stages, existing and planned SEZs in Thailand cover at least 358,000 ha. In Myanmar, there are no clear regulatory mechanisms for dealing with compensation for displaced persons, prompting a number of social conflicts surrounding the large SEZs and CBEZs, such as in Rakhine State and Kyauk Phyu. Dawei and Thilawa are also large SEZs which are currently resuming operations.



Map 18: SEZs, CBEZs and economic corridors in the Mekong region

Source: Environmental Operations Center, Asian Development Bank and Open Development Mekong



Large-Scale Land Acquisitions (LSLAs) in the Global South

-Markus Giger, Global Land Matrix and CDE, University of Bern

While large-scale land acquisitions (LSLAs) are not new, the rapid rise of such land transfers in recent years has far outstripped historical precedent in both scale and the pace at which these changes have occurred (Cotula 2012, McMichael 2013), particularly since the financial crisis of 2008, which is seen as a key (though not the only) driver. Soaring food and fuel prices and the instability of global financial markets prompted agribusiness companies, investment banks and food- and energy-hungry nations to increasingly look abroad to secure resources in countries where land was available—or, more precisely, made available—for investment (Zoomers 2010). Conservatively, the amount of land involved in land deals between 2008 and 2009 were 15-fold higher than average annual transactions over the previous 40 years (Keene et al. 2015). As of 2015, it is estimated that more than 200 million hectares of land, primarily in the Global South, have been acquired through these processes (Nally 2015). These land-based investments have broadly involved food, fiber, and fuel sectors (Cotula and Vermeulen 2009). The global impacts of LSLAs are substantial and apparently accelerating. While potentially positive impacts are relevant, including increased investment in developing economies and some revenue generated for public institutions through royalties, the negative impacts are serious, and generally impact the poor most directly. These include large-scale displacement of rural people and dispossession of land and other resources (Daniel 2012), biodiversity decline, forest loss (Meyfroidt et al. 2013, Ingalls et al. 2018), and major transformation of rural land relations as local farmers are increasingly marginalized in land and commodity-markets (Keene et al. 2015).

The Mekong region lies at the centre of these processes, serving as both a major site for these investments and also as a global hub of production and export. Understanding regional processes and patterns of LSLAs in the Mekong benefits from a global perspective with regard to how these regional dynamics intersect with global patterns of investment.

The Land Matrix provides a globally-comprehensive set of data on recent LSLAs in the Global South. This data provides an overview on the extent, regional patterns, and implementation of such land deals²³. The Land Matrix Analytical Report (Nolte et al. 2016) provides an analysis based on 1004 concluded deals for agricultural purposes, covering 26.7 million ha. Africa is the most targeted region (10 million ha) but Eastern Europe, Latin America, and Asia (with each approximately 5 million ha) are also key investment destinations. A global heat map shows sub-regional hotspots, for instance in Southeast Asia (especially the Mekong), Indonesia and Papua New Guinea (Map 19). More detailed analysis of Land Matrix data has shown that the availability of land and water resources are key determinants of the locational choice of land acquisitions (Lay and Nolte 2018), and that land which is accessible, is of relatively good potential, and often already used for farming and supporting substantial local population densities is often targeted (Messerli et al 2014, Oberlack et al. 2016).

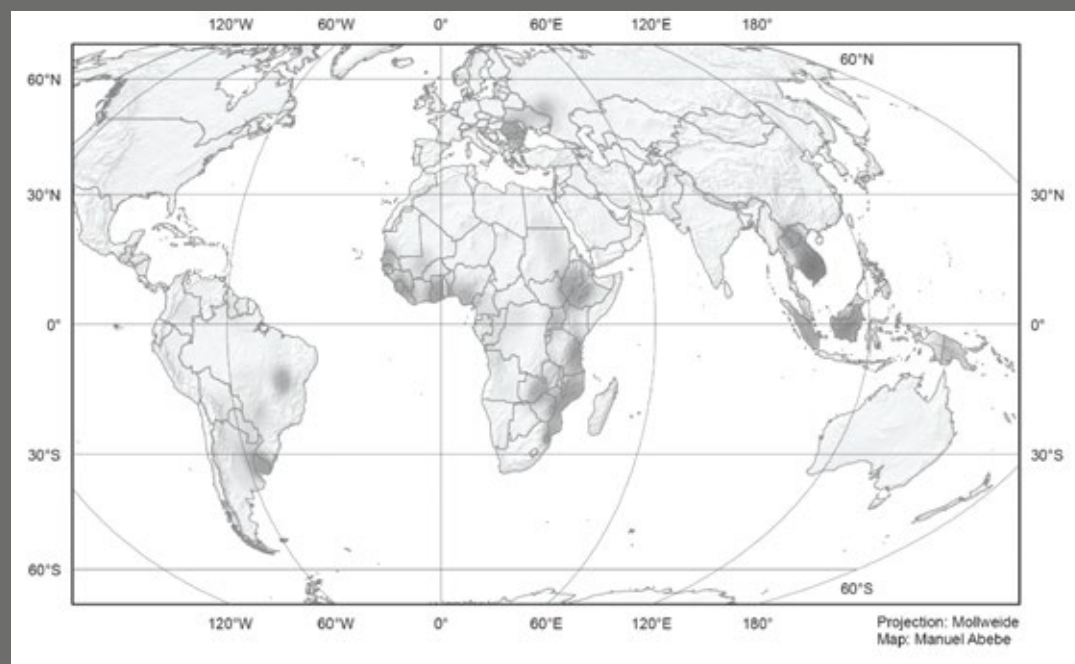
Globally, the largest portion of the area of agricultural deals is intended for food crops (38 percent of the area). According to Nolte et al. (2016) unspecified agricultural products (23 percent) and agrofuels (21 percent), are also important, but take a smaller share. However, in Asia, non-food agricultural commodities (29 percent) and unspecified agricultural products (33 percent) together account for 62 percent of the area, while agrofuels account for a smaller share of only 16 percent. In Latin America food crops (50 percent) dominate. In Africa, agrofuels are more important (32 percent) than in other regions, but food crops nevertheless occupy the largest share of the area (39 percent).

²³ The LMI is an international partnership of research organizations and regionally operating land-focused organizations, that collects data on international LSLAs in low and middle-income countries. Through providing open access to this data, the LMI aims to contribute towards increased transparency about land acquisitions and to contribute towards more balanced and equitable decision making over land. The database can be accessed at: www.landmatrix.org

Investors come from all regions of the world. However, Western European investors comprise the largest investors, involved in 31 percent of concluded deals. The second most important investor region is South-East Asia. Amongst the top 20 individual investor countries, five Asian countries are listed (Malaysia, Singapore, India, Hong Kong and China). Globally, private (non-listed) companies are the most important investor category and are involved in over 40 percent of all concluded deals. Stock exchange-listed firms account for a further 30 percent of deals. In Asia, however, stock exchange-listed firms are by far the most important investor category in terms of area acquired.

Findings of the land matrix thus nuance and contradict widely held perceptions that state investors from emerging countries (e.g. the Gulf and China) are the main actors in the new land rush. On the contrary, the private sector from developed countries in the North, more specifically the US and Europe, are also key players at the global level, and especially in Africa and Latin America. However, strong regional patterns also emerge, as for instance the strong presence of investors from Asia in Southeast Asia in general and the Mekong countries in particular. This pattern was also confirmed in a recent statistical analysis of LMI data, where geographical proximity, common official language, and former colonial relationship were all positively correlated with land acquisition and the amount of land acquired. This material is based to a large extent on the Land Matrix Analytical Report II (Nolte et al., 2016)

Map 19: Global heat map of land deals (Nolte et al., 2016)²⁴



²⁴ The figure above shows a global heat map of land deals in the Land Matrix indicating the target regions of land acquisitions. The higher the density, the darker the grey tones.

Regional dynamics of trade and investment

Trans-boundary land-based investment flows in the Mekong region

While rapid growth in large-scale land investments, SEZs and contract farming in the Mekong region are related to global patterns of investment and trade, intra-regional economic relations and the influence of China dominate these phenomena. Foreign direct investment (FDI) in the Mekong has increased exponentially over the last 10 years. While in 2015 FDI was highest in Vietnam (US\$ 11.8 billion) and Thailand (US\$ 5.7 billion), foreign investment in the peripheral countries of Myanmar, Cambodia, and Laos was still substantial and growing, at around US\$ 2.8, \$1.7, and \$1.1 billion, respectively. In general, FDI has focused on manufactures, infrastructure, and service sectors, with agricultural investments lagging behind, particularly for more advanced economies like Thailand and Vietnam. In Cambodia and Laos, FDI in the agricultural sector comprised 10.3 and 4.2 percent of all investments (ASEAN Secretariat, 2016). Another important recent trend has been the surge of domestic

investments, which have risen across all countries since 2008 and reflect increases in domestic capital as a result of development and growing national economies. Both FDI and domestic investments in land have taken a variety of forms, including agro-industrial processing facilities and large-scale land investments.

While FDI in the Mekong originates from all areas of the world, including the USA, Europe, Australia, and other parts of Asia, regional investors and China dominate concession-based FDI in the Mekong countries (Figure 7, Figure 8 and Map 20, also refer back to Map 15 and Map 16). Cambodia, Laos, and Myanmar²⁵ are key destinations of concession-based investments, while Vietnam is both a recipient of investment capital and an important investor in other countries of the Mekong. Thailand, by contrast, is principally an investor country. Apart from China, which is the largest single source of concession-based FDI in Cambodia and Laos (commanding 17 percent and 44 percent of total concession area, respectively), South Korea is the only other significant investor country outside of the Mekong region.

Figure 7: Concessions in Cambodia by investor origin, by area²⁶

Source: see Cambodia country chapter

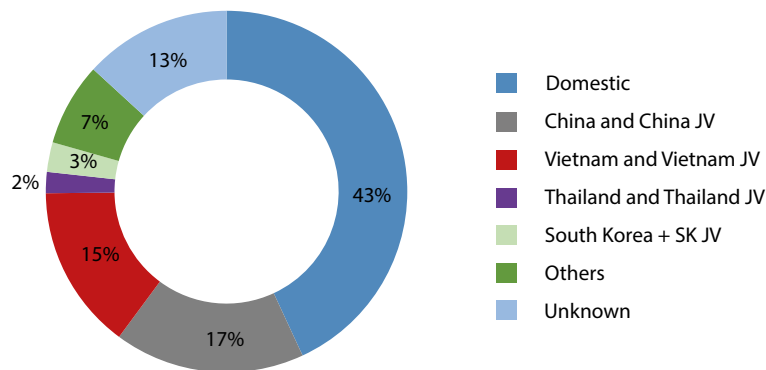
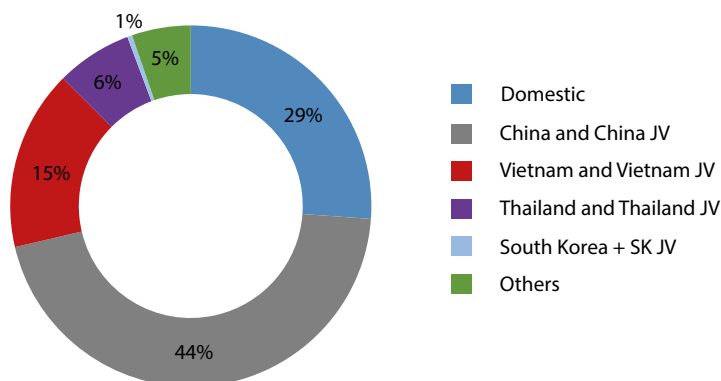


Figure 8: Concessions in Laos by investor origin, by area²⁷

Source: Hett et al., forthcoming



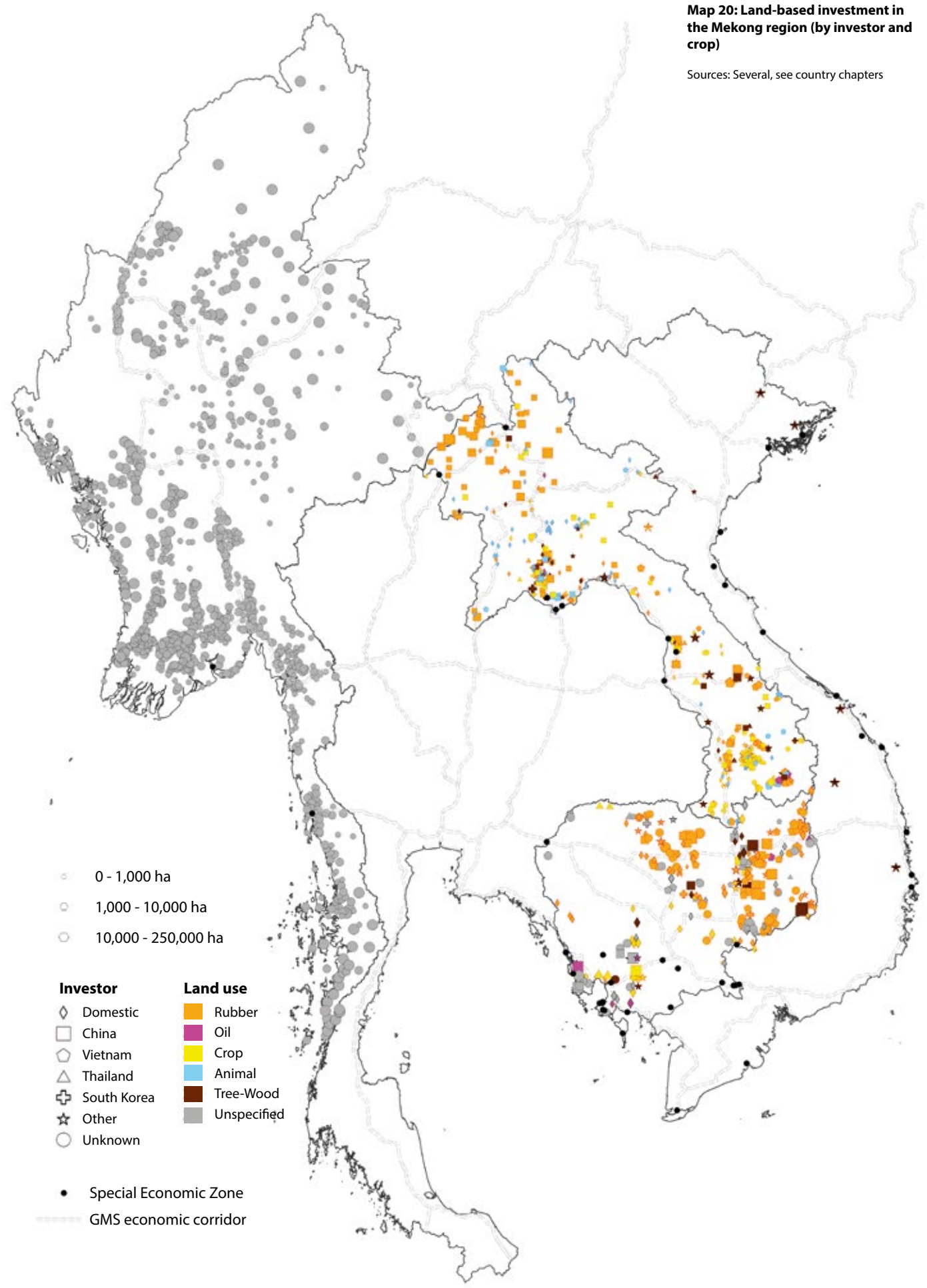
²⁵ Systematic data on concession ownership in the Mekong is available only in Cambodia and Laos. Data in Myanmar is only available for agriculture and tree plantation concessions (see San Thein et al. 2018), but does not include investor data. Evidence and case reports indicate that China, Vietnam, and Thailand invest in concessions in Myanmar (see for example Woods, 2015).

²⁶ Excluding mining sector, as operational and exploration concessions cannot be disaggregated in Cambodian data. Exploration concessions take in large areas of land and do not directly imply mining activities, thus have been excluded for Cambodia. In total, mining concessions (active mining and exploration) involve 0.82 million ha in Cambodia.

²⁷ Concession data in Laos allows for disaggregation between active mining concessions and concessions for mineral prospecting and exploration. This figure includes active mining concession only. In addition to these, mineral prospecting and exploration concessions involve a further 10.7 million ha, or roughly 45 percent of Laos's total land area.

Map 20: Land-based investment in the Mekong region (by investor and crop)

Sources: Several, see country chapters



Regional trade of land-intensive commodities

The pace and scale of land investments in commodity sectors and the regional and transboundary nature of these investments are reflected closely in the rapid growth of land-intensive commodity exports such as wood and pulp, natural rubber, metals and minerals, crops, and animals (including livestock). These trade flows indicate the ways in which land and production labour is mobilized through commercial relations between the Mekong countries and from the Mekong to key export partners, particularly China, but also South Korea and others. The rapid acceleration of trade in land-intensive commodities over this period is significant not only in terms of the implications for land use and changing patterns of production within the countries, but also with respect to the role of regional and global integration as a dominant causal pathway of change.

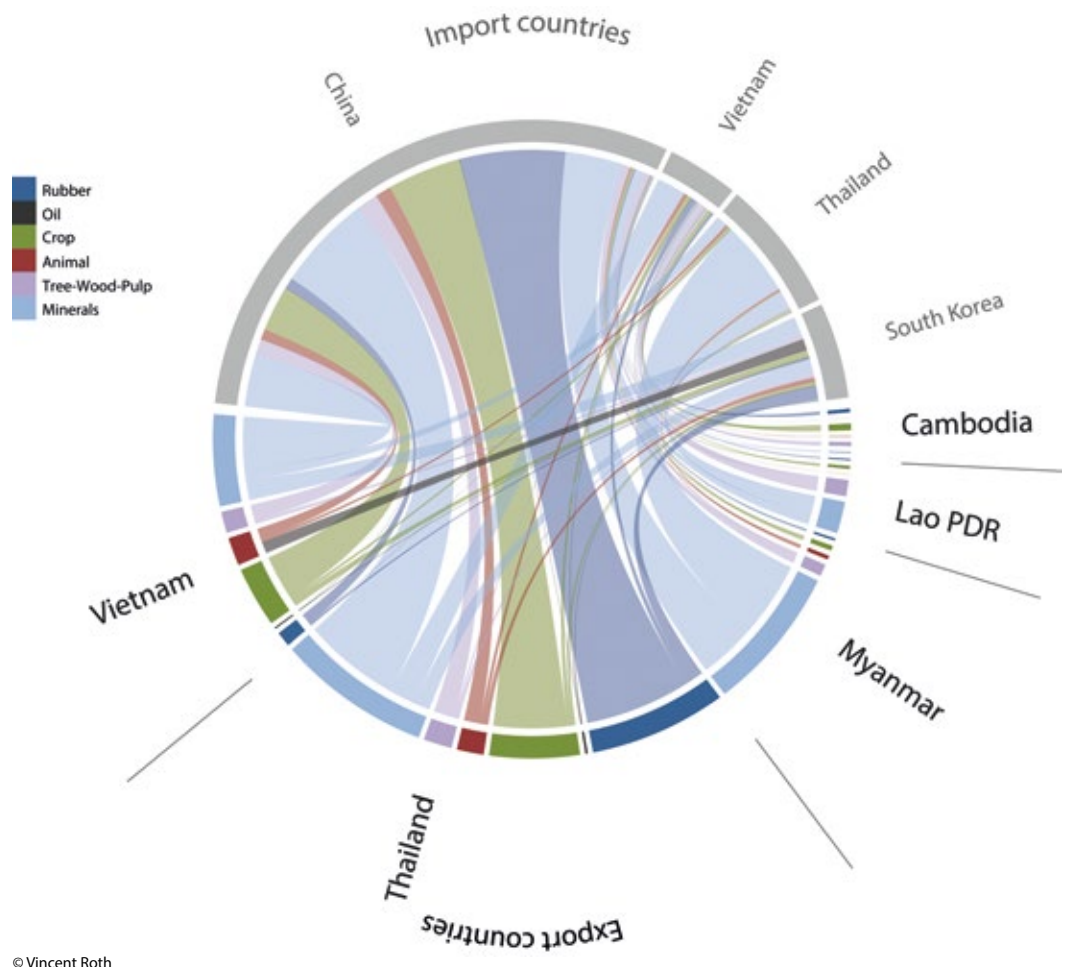
Analysis of trade flows of selected land-intensive commodities over the key period of rapid growth in land investments—from 2006 to 2015—demonstrates these dynamics (Figure 9). In this analysis, data²⁸ from importing countries are preferred to those of exporting countries such as Cambodia, Laos or Myanmar, which are considered to be less reliable due to weaker consistency in reporting and their tendency not to report cross-border illegal trade.

The export of land-intensive commodities tripled during this period, from around US\$ 13.2 billion in 2006 to over US\$ 39 billion in 2015, with a total trade volume of more than US\$ 292 billion over the ten-year period. While Thailand dominated total exports (US\$ 143 billion), followed by Vietnam (US\$ 61.9 billion), the fastest growth in these exports was from Cambodia (with more than five-fold growth), followed by Laos (more than three-fold), though all country exports in the Mekong region at least doubled. While metals and minerals comprised the largest single export sector (48 percent of total), growth in this sector was comparatively weak, with export values in 2015 around 140 percent of those in 2006. Growth in the export of crops significantly outpaced all other sectors, with a total increase in value of 411 percent to a total value of US\$ 56.6 billion. Growth in the export of wood products, including pulp, was also strong, nearly tripling by 2015.

Throughout this period, China dominated as the largest consumer of land-intensive commodities from the Mekong region. Over ten years, exports of these products to China totalled US\$ 217.9 billion, or 75 percent of all trade in the region, due primarily to the large volume of Thailand's exports destined for China (Figure 9), but also those from Vietnam and other Mekong countries.

Figure 9: Cumulated regional trade flows of land-based commodities from the Mekong region (2006-2015)²⁹

Sources: UN Comtrade database³⁰



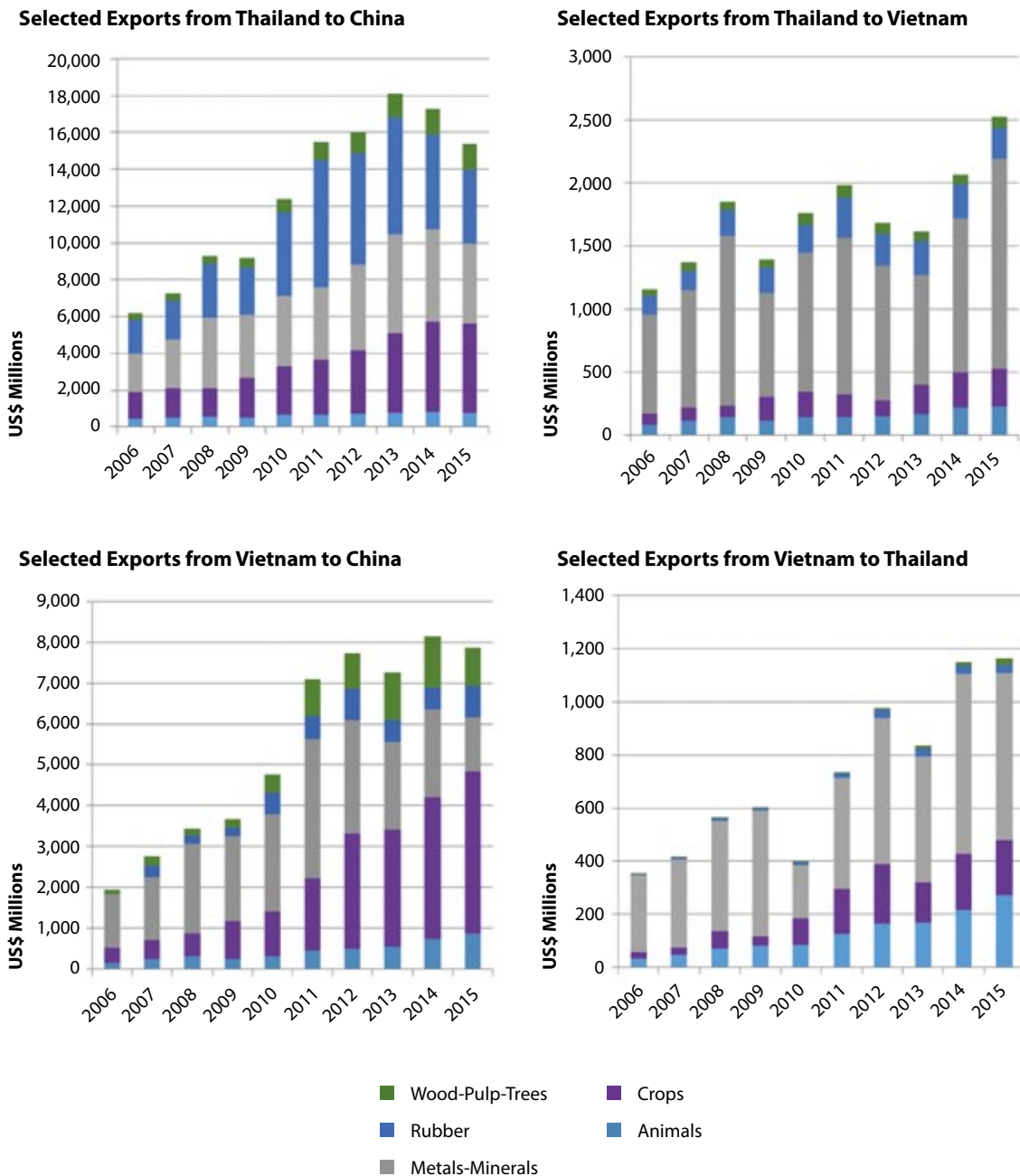
²⁸ Trade data was derived from UN Comtrade, available at: <https://comtrade.un.org/>

²⁹ The width of the bands indicate proportion of trade

³⁰ <https://comtrade.un.org/>

Figure 10: Exports of land-intensive commodities from Thailand and Vietnam (2006-2015)

Source: UN Comtrade data



The value of Vietnam’s exports to China and Thailand (US\$ 61.9 billion) was less than half of that of Thailand (US\$ 61.9 billion) was less than half of that of Thailand, but grew faster, with an export value in 2015 that was more than 240 percent that of 2006 (Figure 10). Similar to Thailand, exports were primarily destined for China, with trade growth showing the largest increase of any of Vietnam’s trade partners. The most impressive growth in Vietnam’s export sectors was rubber, which grew more than 90-fold during this period.

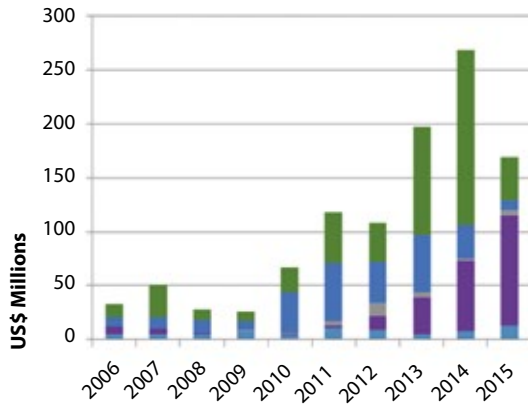
The most impressive growth in the export of land-intensive commodities was seen in the less mature economies of Cambodia, Laos and Myanmar where export values started from a relatively low-level in 2006.

While China and Thailand dominate the region as the largest importers of these commodities, Vietnam was the largest consumer of Cambodian exports, consuming over 60 percent of total (Figure 11). This may be changing. While comparatively small, Cambodian exports to Thailand grew most rapidly over this period, with export value in 2015 roughly nine times the value of trade in 2006. Agricultural crops comprised the largest share of total exports and showed strong growth—an 18-fold increase—over this period. The most startling change, however, was a more than 100-fold increase in the value of metals and mineral exports to China.

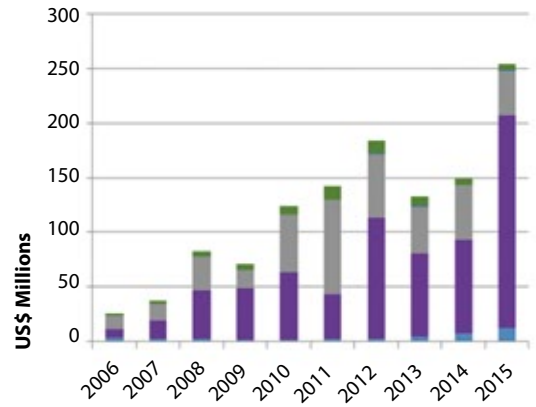
Figure 11: Exports of land-intensive commodities from Cambodia (2006-2015)

Source: UN Comtrade data

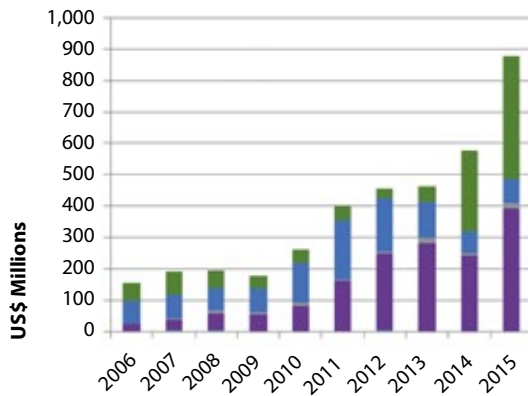
Selected Exports from Cambodia to China



Selected Exports from Cambodia to Thailand



Selected Exports from Cambodia to Vietnam

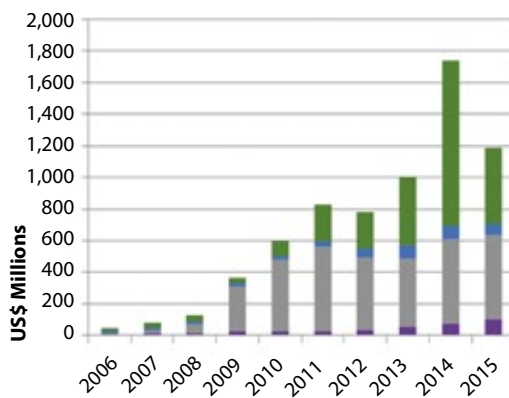


- Wood-Pulp-Trees
- Rubber
- Metals-Minerals
- Crops
- Animals

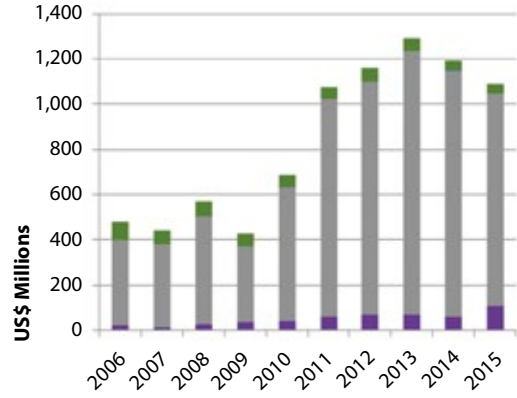
Figure 12: Exports of land-intensive commodities from Laos (2006-2015)

Source: UN Comtrade data

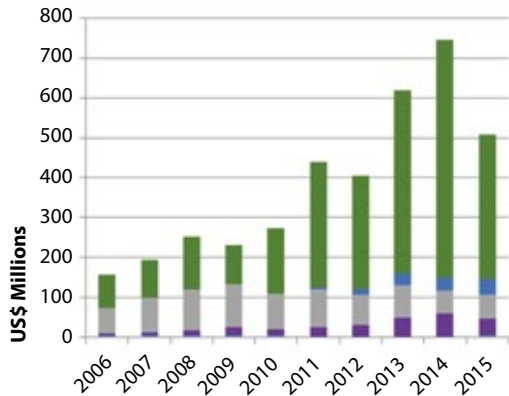
Selected Exports from Laos to China



Selected Exports from Laos to Thailand



Selected Exports from Laos to Vietnam



- Wood-Pulp-Trees
- Rubber
- Metals-Minerals
- Crops
- Animals

The largest share (by value) of Laos's land-intensive commodity exports were destined for Thailand, though growth in this trade was comparatively modest (127 percent) compared with the rapid expansion of exports to China that grew more than 23-fold during the period (Figure 12). While metals and minerals were dominant and had increased by 7,639 percent, even more impressive was the growth in rubber exports to Vietnam (more than 150-fold).

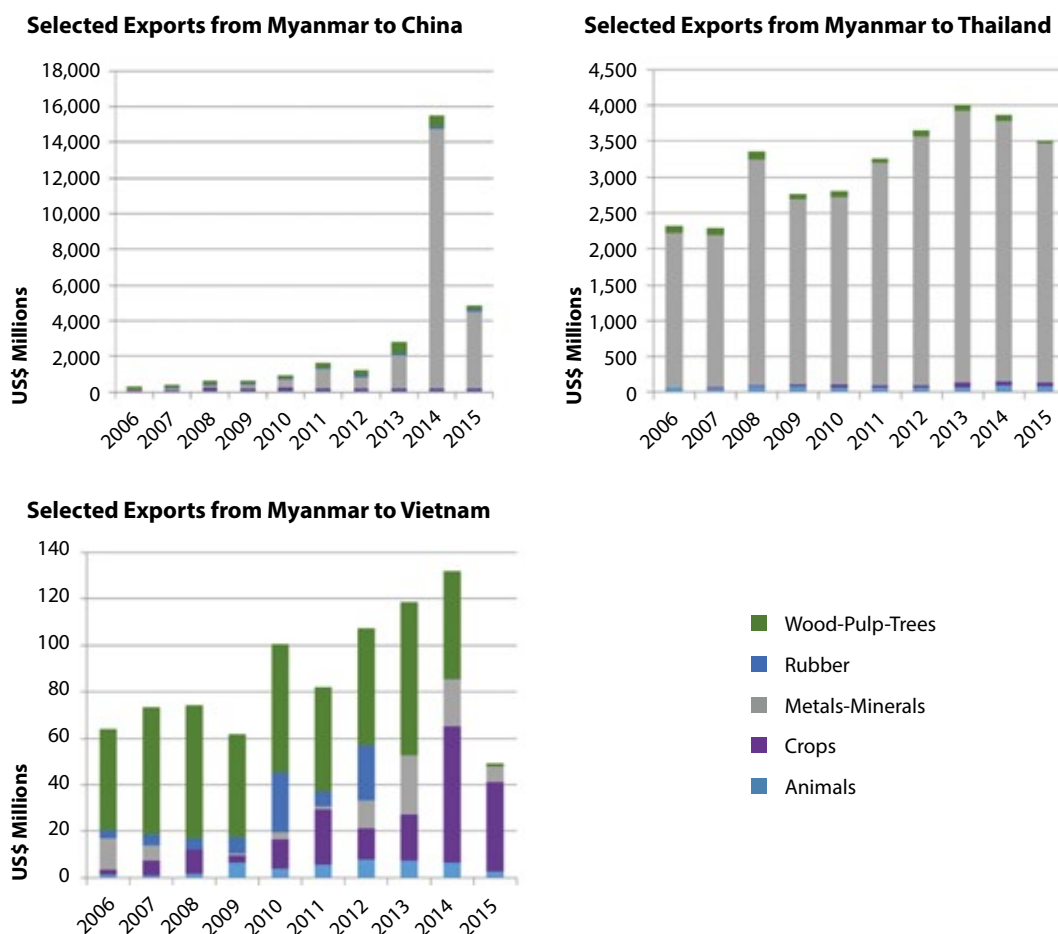
Thailand is also the largest consumer of exports from Myanmar (US\$ 31.8 billion in total trade during the period), followed closely by exports to China (US\$ 28.9 billion) (Figure 13). However, this appears to be quickly changing as Myanmar's exports have taken a sharp turn toward China, increasing more than 15-fold since 2006, led by a substantial growth in metal and mineral exports (6,993 percent). During this same period, Thailand's import of Myanmar's exports grew a meagre 50 percent and exports to Vietnam contracted by 23 percent. The drawdown in Vietnam's imports of Burmese products affected all sectors except rubber latex, which increased 15-fold.

The Mekong region and its relationship to China is in some sense a microcosm of the larger global system, with China functioning as the core (a major source of investment capital and the largest regional consumer of exported land-intensive commodities), Thailand and Vietnam as semi-peripheries (both as producers and processors of imported products that are destined for export to China and elsewhere), with Laos, Cambodia and Myanmar at the periphery (functioning primarily as destination sites for investment and exporters of raw and semi-processed materials).

While here we focus on land-intensive commodities (those most directly impacting land use, land use change, and land-relations) it is important to see this trade in light of overall exports from the Mekong region, many of which exhibit spill-over effects and have an indirect relationship to land. Three quarters of all exports from the Mekong region are destined primarily for the USA, Europe, and Australia, while many products exported from the Mekong countries to China, including the land-intensive commodities analysed above, are processed and exported to these countries as well.

Figure 13: Exports of land-intensive commodities from Myanmar (2006-2015)

Source: UN Comtrade data



Globalisation, trade flow and land use change

-Patrick Meyfroidt, Earth and Life Institute, Université catholique de Louvain, Belgium

The production and trade of land-intensive commodities in the Mekong region is large and accelerating, and mirrors similar growth in such commodities globally. Understanding the ways in which the production and trade of commodities from the Mekong influences patterns of land use and land cover depends on understanding broader, global dynamics. In an increasingly globalized world many of the most powerful indirect drivers of land and resource use in a given region may have their origins on the other side of the planet. Globalisation processes can both amplify and attenuate the direct drivers of land use changes by breaking down regional barriers and strengthening global connections and influences, such as trade tariffs and restrictions, global prices, legal conventions and access to information, local market dynamics, extension services and governance regimes (Lambin and Meyfroidt, 2011). Lifestyle changes and rising consumption patterns of high-income and emerging economies—particularly shifts towards diets rich in meat and dairy products—drive land degradation in regions that are often unseen by local consumers (Kastner et al., 2012). In particular, the export of agricultural and forest-based commodities exacerbated by the propensity of weak institutions and environmental governance in many producer nations has played a critical role in deforestation and forest degradation.

One manifestation of how globalisation has disproportionately impacted developing countries has been through large-scale land acquisitions or “land grabbing” to provide agricultural products for export. Such acquisitions may have profoundly negative impacts on the livelihoods of the rural poor, especially smallholder farmers (Zoomers et al., 2010). Forest transitions—shifts, usually assessed at the national scale, from net forest loss to net forest gain through natural recovery and planted forests—such as in Mekong region, Bhutan, and Costa Rica, are partly facilitated by international trade in land-based products which allows displacing pressure on environments elsewhere (Meyfroidt and Lambin, 2009; Jadin et al., 2015; 2016a; Ingalls et al., 2018).

Globalisation also increases the unpredictability of the drivers of land use change and their indirect effects. Political instability, fluctuations of exchange rates between currencies of trading nations, reactions to the outbreak of infectious diseases, or interactions between forestry and agricultural developments (Jadin et al. 2016b) all present large areas of risk and uncertainty that are passed on to producer countries through trade flows. Interventions to alleviate poverty and enhance the conservation of native ecosystems increasingly risk creating unwanted feedback effects in other places. Agricultural intensification, for example, may lead to improved efficiency and profitability, thus incentivizing further expansion of production areas and encroachment into forests and other natural vegetation, a so-called ‘rebound effect’. Such rebound effects may be avoided, at least locally, if improvements in the efficiency of agricultural production systems are coupled with effective environmental protection measures.

Finally, the increasing importance of international trade in land-based commodities has dramatically raised the profile of private sector actors and market processes (over state-orientated governance processes) in shaping degradation and restoration outcomes. Transformative solutions thus increasingly build on multi-sectoral and hybrid governance arrangements, with coalitions of public and private actors having access to an increasingly rich toolbox of regulatory and voluntary measures to improve the sustainability of natural resource governance (Lambin et al., 2014). These include, for example, the European Union’s FLEGT license scheme, the USA’s Lacey Act for legal timber, the EU’s Renewable Energy Road Map and the US Renewable Fuel Standard. Some 190 companies, governments and civil society organizations have signed up to the New York Declaration on Forests that commits signatories to end natural forest loss by 2030, and reduce deforestation by 50 percent by 2020 (Climate Focus, 2016).

Boom crops and agricultural commercialization

Seen above, increasing global connectivity and the acceleration of trade have resulted in the exponential growth of global agricultural commodities. The Mekong region lies at the centre of this global commodity system; four of the five Mekong countries figure within the top ten global producers or exporters of rice, rubber, cassava, sugarcane, and palm oil. Among the Mekong countries, Thailand figures prominently as a major exporting country of these commodities, being the largest global producer and exporter of natural rubber, the second largest producer or exporter of rice, cassava and sugarcane, and the third largest producer of palm oil. Laos, though not a major global exporter of these commodities, is nevertheless a key source of raw commodities for Thailand and Vietnam, some part of which is processed and exported from these countries. In its own right, Laos is the 11th largest global exporter of natural rubber.

The Mekong region's pivotal role in the production and trade of these commodities is significant in two directions. First, global trade dynamics have direct and immediate impacts on land use and production in the region. Second, processes and changes that occur in the region—including land degradation, social unrest and conflict related to land, or the impacts of unsustainable agricultural systems—may have global knock-on effects.

At present, the key boom crops—cassava, maize, sugarcane, rubber, and oil palm—together comprise more than 30 percent of the total cultivated area of the Mekong, covering a 17.1 million ha, roughly equivalent to 60 percent of total rice production land. Among these, rubber holds the largest share, with 7.6 million ha. The land area devoted to these crops is distributed unevenly across the Mekong, relating to trade and transport dynamics, land suitability and local socio-political conditions (Map 21). For all crops, except maize (where Vietnam leads with a slightly higher share), Thailand leads by a sizeable margin. In all of this, China figures prominently as a major global consumer of all of these products, and thus a leading (though not only) explanatory factor in the rise of the boom crops in the Mekong region.

The rise of these export-oriented commodities is closely related to the continued re-orientation of Mekong agriculture toward commercial markets. The commercialization of agriculture has been well-advanced for many years in Thailand, Vietnam and, to an extent, in Myanmar. In recent years commercialization has significantly accelerated in Laos and Cambodia, as well as the large rural and upland areas through the Mekong, which are rapidly (but unevenly) transitioning away from subsistence agriculture. In Laos, for example, fewer than 6 percent of agricultural households were producing primarily for markets in 1999. By 2011, this number had increased five-fold to 33 percent nationally, with some areas of the country significantly higher (Epprecht et al. 2018). While the rapid rise of export commodity crop production and increasing connectedness to markets has benefited some communities and has played an important role in national economic growth, the outcomes have been mixed, including rising rural indebtedness (as farmers borrow money to invest in commodity crop production), the loss of forests and natural vegetation due to commodity crop expansion, and the conversion of crop land formerly used for local food production. The rapid and extensive growth of boom crops across the region thus also has important implications for the simplification of agriculture and agricultural landscapes: including rice cultivation areas³¹ alongside that of the five boom crops identified above—these six crops constitute more than 80 percent of all agricultural land in the Mekong.

The differential ways in which the costs and benefits of agricultural commercialization and market integration have played out across the Mekong raise important questions regarding the nature of rural poverty. Conventional understanding holds that lack of market access is a key obstacle to poverty eradication. However, increasing market integration has also triggered a number of negative outcomes. These include the rise of large-scale land acquisitions, rising rural indebtedness and, in some cases, the dispossession of non-competitive farmers—all of which have produced new forms of poverty. The ways in which the rural poor gain access to markets and commercial systems, and the governing conditions surrounding that access, are particularly important.

³¹ Including the production area under smallholders and that under concession-based plantations

Map 21: Distribution and areas of key boom crops in the Mekong region

Sources: several, see country chapters

Cassava



Rubber



Oil palm



Maize



Sugarcane



Crop area in ha

- 0 - 1,000
- 1,000 - 5,000
- 5,000 - 10,000
- 10,000 - 50,000
- 50,000 - 100,000
- 100,000 - 200,000
- 200,000 - 400,000
- 400,000 - 600,000
- 600,000 - 741,000

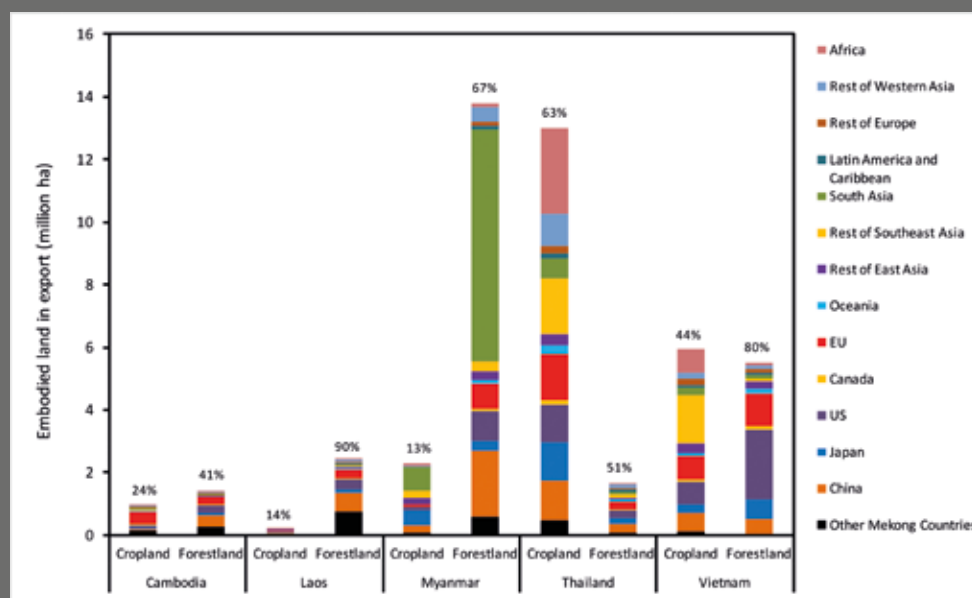
Embodied land and forest resources in global trade flows

-Klaus Hubaceck and Kuishuang Feng, University of Maryland

Trade connects people and places around the world in that goods and services consumed in one country are increasingly produced in other countries and exchanged along global supply chains. This global division of labor is driven by trade agreements and cheap transportation costs (Menon and Melendex, 2011). These often involve large geographical distances and lead to global environmental change. In other words, land use change is not only triggered by needs of the local populations but also by demand for food and fiber elsewhere. For example, one third of the U.S. land use for consumption purposes is displaced from other countries. This share is even larger for the EU (more than 50 percent) and Japan (92 percent). On the flipside, 47 percent of Brazilian and 88 percent of Argentinean cropland is used for consumption purposes outside their territories (Yu et al., 2010).

The Greater Mekong countries have been seen as one of the success stories of economic transition and integration over the last two decades. This transition has led to fast rates of economic growth driven by trade and foreign investment, accompanied by improved living standards, decline in poverty, and other improvements to human development indicators (Menon and Melendex, 2011). The increase in trade flows within countries in the greater Mekong region and with other countries has important implications for land use, deforestation, and the environment. Between 30 percent and 60 percent of total land use in Cambodia and Thailand, respectively, are used for production of exports to other countries. A large proportion of these areas are the result of forest conversion for agriculture, and thus it is possible to speak of forestland being embodied in these resource flows. The figure below shows forestland area embodied in export in 2011. Forestland for exports ranged between 41 percent in Cambodia and 90 percent in Laos, of total designated forest production area. This land is used to fulfill demand mainly for final consumers in the United States (16 percent), China (15 percent), and EU countries (11 percent). A similar picture is shown for cropland, which ranges from 14 percent of cropland used for export production in Laos to 63 percent in Thailand. This land is used for consumers in countries such as the United States (10 percent), China (10 percent), EU countries (12 percent), and Japan (9 percent).

Figure 14: Land embodied in exports, Mekong region³²



China has been a major driver of land use in the region, accounting for about 15 percent of exported forestland, and appropriating 10 percent of export-driven cropland in the Mekong region. While a large share of these imported products is for the consumption of China's population, an even larger share is used for the production of China's exports destined to consumers elsewhere. China is a global hub and leading manufacturer in the global supply chains but, similar to the Mekong countries, is also a net exporter of land-based resources to rich consumer countries (Yu et al., 2013).

³² Cropland was collected from FAOSTAT (<http://www.fao.org/faostat/en/#data>) and forestland was collected from FAO Global Forest Resources Assessments (<http://www.fao.org/forest-resources-assessment/current-assessment/country-reports/en/>) and the result was based on global MRIO analysis using GTAP 9 database (<https://www.gtap.agecon.purdue.edu/databases/v9/default.asp>).

Land securitization and the formalization of smallholder land tenure

The well-being of smallholders and their ability to leverage the productive potential of their agricultural land to achieve development outcomes depends to a large degree on the security of their tenure. Tenure security is complex, involving not only the status of individual documents that formalize rights to land holdings, but also social norms and traditional modes of resource management, the broader culture of land administration, and the strength of those bundles of

rights that enable and ensure access to, use of and control over resources. Tenure security regimes in each of the Mekong countries have changed considerably within the last two decades, and struggle to keep up with the pace of change associated with globalisation. Despite some positive developments, smallholder land tenure security continues to be undermined by overlapping and contradictory legislation pertaining to land administration, persistent gaps between legal frameworks and practice, and large domains of non-transparency and corruption. Patterns within and across these tenure regimes suggest some important points of comparison.

Land and the SDGs

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Collectively referred to as Agenda 2030, the Sustainable Development Goals (SDGs) are more comprehensive and universal than their predecessors, the Millennium Development Goals (MDGs), which expired in 2015. The SDGs include 17 integrated Goals, 169 specific Targets, and 230 proposed Indicators. The inclusion of several land-related Targets and Indicators in the SDGs marks a significant step towards the recognition of land as fundamental to, and indivisible from, the overarching principles of development outlined in Agenda 2030. There are 6 Targets and 7 Indicators that explicitly focus on land rights and land use, and an estimated 59 Targets and 65 Indicators that depend on the fulfilment of land-related indicators. Among these, three indicators have become a priority due to their transformative potential. Indicators 1.4.2, 5.a.1, and 5.a.2 address two elements that are prerequisite to the fulfilment of other land-related indicators: access to land and tenure security.

Indicator 1.4.2—to achieve No Poverty—measures two elements, disaggregated by gender and type of tenure: (1) The proportion of total adult population with secure tenure rights to land, with legally recognised documentation and (2) The proportion of total adult population who perceive their rights to land as secure. Indicator 5.a.1—to achieve Gender Equality—measures: (1) The proportion of total agricultural population with ownership or secure rights over agricultural land, by sex and (2) The share of women among owners or rights-bearers of agricultural land, by type of tenure.

Unlike the MDGs, the SDGs include a clear call for monitoring, evaluation, and accountability with the goal of increasing the availability of “high-quality, timely and reliable data,” disaggregated to reflect the characteristics of local context. This creates both an entry-point and a demand for greater civil society involvement in monitoring the SDGs. This is only possible to the degree to which governments and international agencies enable their effective involvement, and the degree to which reliable data is openly available. In the Mekong region, there are substantial concerns in this regard. While important strides have been made to improve the reliability and disclosure of key data and information, critical limitations remain. These limitations potentially undermine the achievement of the SDGs themselves by restricting public involvement and monitoring, which might help to improve development programming and outcomes, and also ensure that these outcomes are distributed equitably across society. There are also concerns about the degree to which civil society organizations are free to operate in the fulfilment of their purpose, both with regard to the SDGs and more broadly. Efforts to improve the openness and transparency of public data and enable civil society to support the SDGs may have a profound and transformative effect on land and land relations in the Mekong.

Land titling and land use certificates

Land titling—the formalization of tenure over particular land parcels in the form of a legally-recognised certificate—is commonly thought of as the strongest form of tenure security, in many cases sufficient to serve as collateral for loans and enable the transfer of land holding rights through sale or inheritance. Multilateral institutions such as the World Bank have pushed for the issuance of land titles as a necessary precondition for the establishment of land markets, seen as the basis of agricultural and rural development. In Mekong countries where land is regarded as the property of the state³³, land holding rights are formalized through the issuance of Land Titles or Land Use Certificates which have similar, though lower, status than titles³⁴. Land tenure formalization through titling and land use certificates is most advanced in Thailand, Vietnam, and Myanmar (Figure 15). In Thailand official figures indicate that 93 percent of agricultural parcels have been titled or certified to individual households. Similarly, Land Use Rights Certificates (or “red books”) cover 90.1 percent of agricultural production land in Vietnam. Similarly, in Myanmar, official figures indicate that land-titling coverage is robust, with 90 percent of eligible agricultural land under title. Land titling in Cambodia is lower, covering approximately 66 percent of

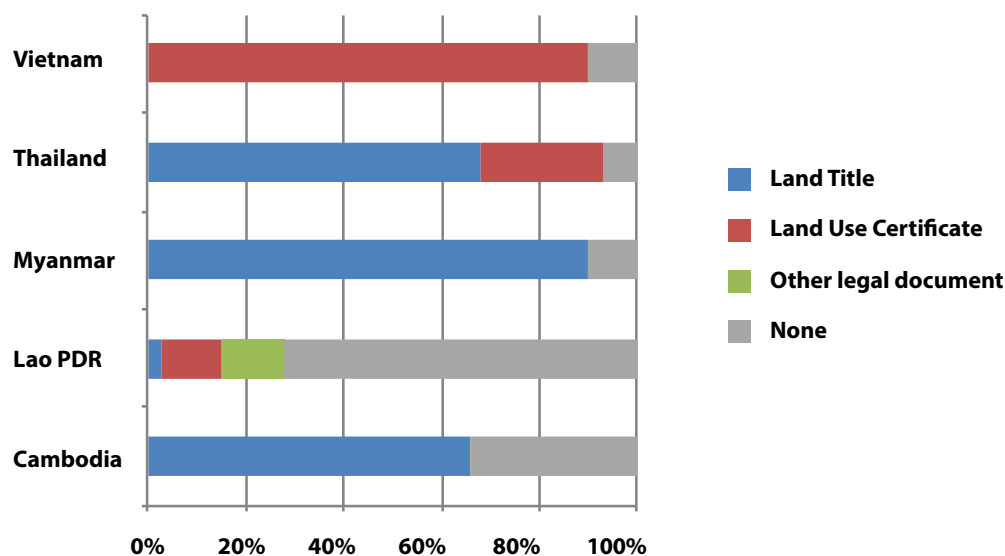
agricultural land holdings. Laos has, by far, the lowest coverage of agricultural land titles (less than 3 percent), though these are largely restricted to peri-urban areas.

There are a number of complicating factors associated with land-titling coverage. Principal among these is the way in which land eligibility for titling is constrained. In Myanmar, for instance, only agricultural lands as defined by the 2012 Farmland Law are eligible for titling, a definition which excludes all lands within state-identified Vacant, Fallow and Virgin (VFV) lands (which comprise the majority of land holdings by forest-dwelling communities). Similarly, in Lao PDR where coverage is already very limited, land holdings within forest lands are arguably ineligible for titling.

Myanmar also presents a unique case in the Mekong due to recent and ongoing conflict. Officially, administrative areas currently under conflict (so-called “black areas”) are ineligible for titling. However, the political institutions of the armed groups administering these areas have established separate mechanisms for tenure security that run parallel to the central State. The Karen National Union (KNU), for example, has issued more than 40,000 land titles within its areas of control.

Figure 15: Distribution of agricultural land with titles, land use certificates, or other legal documents in the Mekong region³⁵

Sources: see country chapters



While land titles and land use certificates function to formalize land claims, in all countries of the Mekong these have not been sufficient to preclude state expropriation of land, though they may influence the terms of expropriation and place landholders in a better position with regard to compensation. Secondary forms of documentation have also been

used to demonstrate land claims, including land tax receipts and temporary use certificates, though these are generally weaker, particularly where land claims are disputed or in areas where competition for land is high due to rising land prices or the presence of valuable resources.

³³ Or managed by the state on behalf of the people.

³⁴ Land use certificates are by their nature time-bound and contingent on renewal by state authorities.

³⁵ Land use planning has also been carried out extensively in Laos, though the effectiveness of this as a legal basis for tenure security is unclear and debated.

Recognition of customary tenure and other forms of tenure recognition

Across the Mekong, there is a general recognition that land claims are often founded on traditional or customary use and that titling programmes at the household level may not be sufficient to cover all legitimate claims. In each of the Mekong countries, this is recognised in principle within existing legislation or policy. Despite this, the application of such policies is unclear and, often, arbitrary and inequitable. This is particularly true in Myanmar, where customary tenure claims are recognised in the National Land Use Policy but have not been recognised or operationalized in existing legal frameworks. This presents particular risks for communities living on VFV lands where land claims are not recognised by the state. Thailand presents a similar case, where customary land uses within the nation's forest estate are regarded with some ambivalence by state authorities.

In Cambodia, communal land claims of indigenous groups based on customary use have been formalized through communal land titling programmes established by the 2001 Land Law. However, of the 166 communities that have applied for communal titling, only 19 have been issued a title thus far and the ethnic Khmer majority is ineligible. Lao PDR piloted a similar programme for communal land titling on a limited basis, but has not progressed beyond pilot areas in large part because of technical concerns regarding how these will be implemented, as well as

political concerns that communal titling may present an obstacle to national development efforts through land concessions. In Vietnam, customary tenure as practiced by ethnic minorities is protected by law, allowing ethnic minority communities to receive Land Use Rights Certificates. However, the implementation of this legal provision has been irregular and generally weak.

In Thailand where the privatization of land is more advanced, the need for formal recognition of customary tenure is limited to marginal areas in the country's far north and peripheries, particularly among forest-dwelling communities whose tenure security is precarious. In 2007, the Community Forest Bill was passed, recognizing customary land claims. While these provisions have since lapsed, community forest areas established through this process remain, covering more than 750,000 ha. Tenure security within forest areas nevertheless remains fragile, particularly in light of Order 17³⁶.

Co-management agreements have also been used as a mechanism to support local land claims. In Cambodia, for example, Community Forestry schemes and Community Protected Areas have been established on a limited basis, while Community Fisheries cover around 0.5 million ha. In Lao PDR, Land and Forest Allocation and land use planning programmes have been established as a way to identify community lands and thus, in some measure, demonstrate land claims.

³⁶ See country chapter for details.



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Land governance in the Mekong region

The governance of land resources in the Mekong region plays a determining role in the ways in which the resource base is distributed, and land claims are evaluated, negotiated, and contested. Governance is commonly seen as something inseparable from the apparatus of the state and the institutions of government. While these are key elements, land governance is much broader, involving society-state relationships, the formal and informal influence of the private sector, and the norms, customs and values that shape power relations between these. In the Mekong, the central role of the land-related sectors in national economies and development pathways places particular importance on the governance of land.

Legal frameworks pertaining to tenure security and resource access

There is a wide degree of variance in legal frameworks guiding the administration of land across the Mekong, and the degree to which these incorporate and defend the needs and interests of the rural and agricultural majority. The pace and scale of changes resulting from globalized networks of trade and investment have in some ways threatened to overwhelm the relatively slow process of legislative reform that is needed to grapple with the new opportunities and risks presented by ongoing regional and global integration. This gap between rapidly changing global drivers and local legal structures required to address them has provided unprecedented opportunities for elite capture, even as the equally-rapid changes in information flows (such as through social media) have made this elite capture increasingly visible in the public sphere.

A number of legal reforms have been proposed, and in part adopted, in recent years that provide some measure of optimism. In Cambodia, Order 1 in 2012 put a moratorium on concessions and initiated a broad-scale titling programme. That same year, Prime Minister's Order 13 in Lao PDR placed a selective moratorium on concessions and, in the years following, the Government of Lao PDR issued a new Politburo resolution on land, reactivating the long-planned revision of the Land Law and the closely related Forest Law. In Myanmar, the National Land Use Policy is widely regarded as a positive movement in the direction of rectifying decades-long inequities in the administration of land.

Despite these important advances, there remain a number of insufficiencies in existing legislation. There are indications that progress with respect to the principles of good governance, in some cases, is losing ground. While Thailand has enjoyed perhaps the most stable legal environment surrounding land, new policies of the military-led NCPO have extended the legal reach of government in the expropriation of land for SEZs. At the same time this forces the eviction of forest-dependent communities in many areas of the

country and limiting the freedom of civil society to operate. Particularly in Laos, Cambodia, and Myanmar, irregularities in the development of national legislation, formal policies and the issuance of decrees and resolutions outside of the normal operations of legislative processes have led to legal pluralism, wherein legal frameworks overlap and are partly duplicative, undermining legal clarity and the ability to effectively address land disputes. This is perhaps most striking in Myanmar's 73 different laws related to the ownership and management of land, some of which have remained in effect since the colonial period. Further, while the NLUP was widely debated and informed through public consultation and addresses a number of concerns of resource-dependent peoples, the draft Farm Law has generally been elaborated behind closed doors.

There are also a number of overlaps between public institutions involved in the administration of land and a lack of clarity regarding their respective mandates. This is most clear perhaps in Cambodia, where agencies actively compete for control of land and, with it, opportunities for rent seeking through the brokerage of land deals and timber rights. In Laos, rapid changes in key line-agencies and their mandates relating to land have also led to confusion and have partly undermined land governance reform. Myanmar again presents an unusual case, where the legacy of the as-yet-unresolved armed conflict has led to the emergence of two separate systems of government, those operating in state-controlled areas and those administered by armed groups, respectively.

Tenure security and resource access in practice

Whatever the current status of legal frameworks, a key issue across the region is the large gap between policy and practice in the administration of land. Development agencies and the donor community have in large part focused attention on supporting legislative reform and the practice of land administration within central government agencies. Yet, they have had limited traction in addressing the sub-national practice of land governance, entrenched corruption, and related conflict between the administration of public duties and private interests.

Land conflicts remain high, and publicly visible in Myanmar and Cambodia, while such conflicts are relatively moderate (though still present) in Lao PDR, Vietnam and, increasingly, in Thailand. Land conflicts in Myanmar largely stem from unresolved seizures of land that occurred during the rule of the military junta, wherein thousands of agricultural households were dispossessed through large-scale land seizures, particularly within ethnic minority areas such as Shan State and the Karen-dominated territories of Thanitharyia. To address these disputes, the Central Re-Investigation Committee for Confiscated Farmlands and Other Lands has been established, but procedures and rulings often lack transparency and are limited in their effectiveness.

In all countries, compensation for land expropriated by the state for investment projects and other purposes is either not given or, when given, is often inadequate and below market rates. This is particularly true where landholders do not have sufficient formal tenure recognition, such as in communal- and customarily-managed areas, in state lands or in areas where high resource values heighten the risk of conflicts of interest between formal legal procedures and the private interests of authorities. Smallholders and affected communities have limited access to transparent, adequate, and affordable legal channels for disputing lost land or negotiating better compensation, particularly in Cambodia and Myanmar, but also Laos.

Cutting across all of these issues is the persistent problem of public corruption, an issue that is becoming increasingly apparent within state institutions that have struggled to enact reforms. While Transparency International's Perception of Corruption Index ranks the Mekong region poorly³⁷, there are some reasons for encouragement. The Mekong countries received higher scores in 2017 (Map 22) compared with 2016, with the exception of Lao PDR (which achieved a lower ranking in 2017), and Cambodia (which remained the same). It is important to note, however, that these scores are based on the perception of corruption, versus corruption per se. In Lao PDR, for example, the government has initiated a number of reform mechanisms over the past two years, including the removal of two provincial

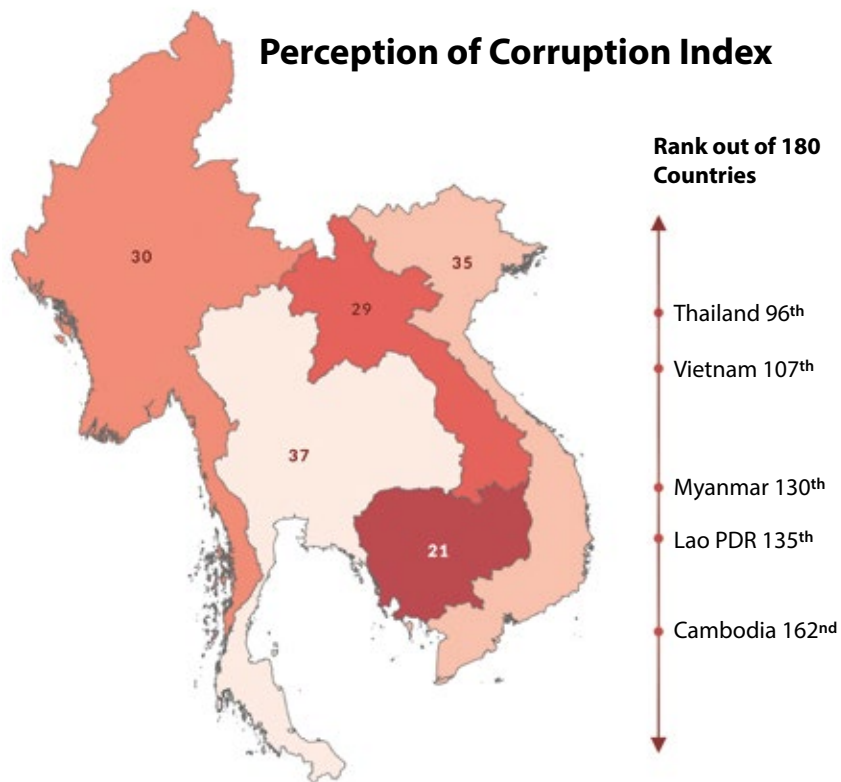
governors, and has publicly released information through state media on a number of corruption cases involving public officials. This may have influenced public perceptions regarding incidence of corruption.

Indigenous peoples and civil society

The Mekong region is home to more than 300 different ethnic groups. While there are significant variations across the Mekong countries, ethnic minorities are largely distributed in the uplands and peripheries of the region, tend to be poorer, and are less politically powerful than dominant ethnicities that occupy the lowland areas of the Mekong and its major tributaries. Given these socio-political disparities, the protection of the rights of minorities is a key concern in the governance of land resources. This is perhaps particularly the case where agricultural practices and customary management of land conflict with national priorities and legal frameworks that tend to reflect the interests and norms of dominant lowland groups. In Thailand, the rights of ethnic minorities have been treated with some degree of ambivalence, coming into more direct conflict with state interests where these groups occupy forest and other areas claimed by the state. That many ethnic minority people have not been granted full citizenship presents a particular problem, undermining legal protections and access to justice. Conflicts between ethnic groups is the most pronounced in Myanmar, where armed conflict has generally run along lines of ethnic identity. Indigenous agricultural practices of Naga and other minorities

Map 22: Perception of Corruption Index in the Mekong region

Sources: Transparency International³⁸



³⁷ Available online at: www.transparency.org/cpi2017

³⁸ https://www.transparency.org/news/feature/corruption_perceptions_index_2017

that involve shifting cultivation on VFV lands have been particularly restricted, while lands belonging to the ethnic Shan and Karen that were expropriated by the military-led government have yet to be restored or compensated. Despite this, the rights of indigenous communities and other ethnic minorities have received some degree of attention and limited measures of protection, such as rights to communal lands in Cambodia and Vietnam, and a degree of inclusion as ostensibly co-equal citizens in Lao society.

In a region where the state plays a dominant role in the administration of land and where civil liberties face restrictions compared to some other countries in the world, civil society organizations play a particularly important role by bridging the gap between rural communities and government agencies, serving a role as mediators and advocates for under-represented groups, including ethnic minorities. The space for civil society across the Mekong region varies and, within each country context, there have been significant changes in recent years. In Myanmar, civil society organizations began to flourish in the years following the 2010 political reforms that saw the institution of a limited democracy. The prolonged struggles of democratic reform and continued tension between armed ethnic groups and the military threaten to erode efforts toward liberalization, recently leading to a shrinking space for civil society groups engaged in land-related issues. Similarly, in Cambodia, the ruling Cambodian People's Party recently cracked down on civil society groups and other advocacy groups over fears of losing power in national elections. In Lao PDR and Vietnam, civil society groups have received some measure of political recognition and formal mechanisms to

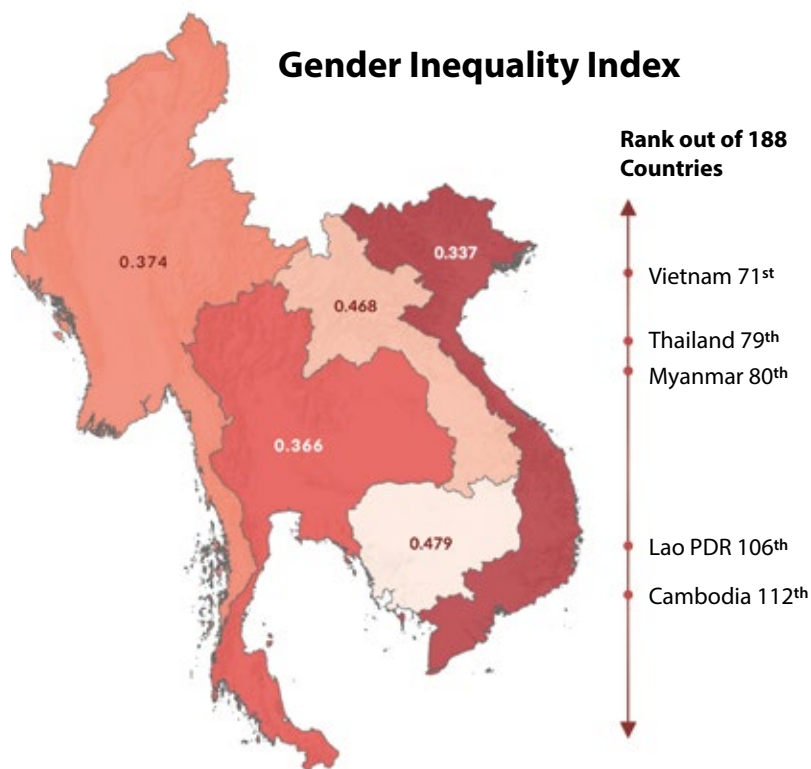
engage with government on key land issues, but continue to work in a space restricted in terms of information and freedom to express dissenting views. This is particularly true for groups focused on core government priorities, such as land-based investments or the control of resources by state owned enterprises. Thailand enjoys the most open environment within the region and a fairly vibrant civil society. There are, however, important restrictions relating to *lèse-majesté* laws that preclude critique of the royal family (the largest single landholder in the country) and, recently, the successful employment of defamation lawsuits by corporate entities to silence environment- and land-rights advocacy groups. Political suspension of some forms of public discourse and practice by the NCPO has also led to a general regression in freedoms.

Gender and land

With regard to gender equality, the Mekong countries hold a median rank as compared to the other countries of the world, as measured by the Gender Inequality Index³⁹ (Map 23). While women and female-headed households play a key role in the use and management of agricultural land, there are systematic differences with regard to the tenure security of women versus those of men. While there have been recent efforts in some of the Mekong countries to ensure the equal standing of women and men with regard to legal recognition of tenure, this has been difficult to achieve in practice. With regard to land titling specifically, all Mekong countries make legal provision for the inclusion of women, but various difficulties and a general lack of political support for ensuring the inclusion of women remain key obstacles.

Map 23: Gender Inequality Index

Source: Gender Inequality Index



³⁹ Available online: <http://hdr.undp.org/en/content/gender-inequality-index-gii>



Figure 16: Distribution of land titles by sex in the Mekong region

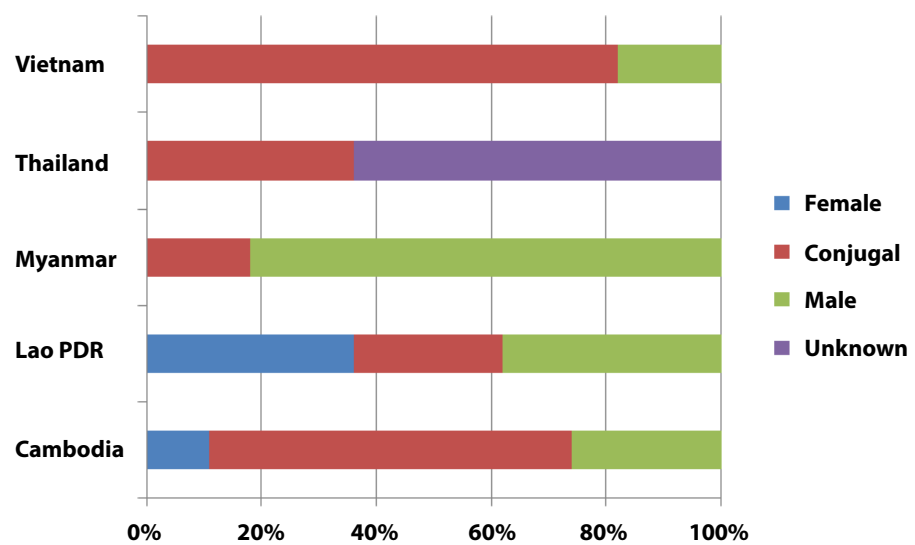


Figure 16 shows the proportion of male, female, and conjugal (joint) titles in each of the Mekong countries. With regard then to formal titles, Vietnam has the

highest proportion of women listed on land titles (red books), while Myanmar has the lowest tenure security for women as determined by the holding of a land title.

Conclusion

Over the last decade in particular, the Mekong region has been transformed by a set of key interacting phenomena. The pace and scale of large-scale land acquisitions through foreign and domestic investment have fundamentally altered rural land relations and the land resource base itself. Related to this, but also to dynamic and accelerating global market systems, explosive growth in the production and trade of commodity crops and other land-intensive products has transformed regional land systems through a process of simplification and commodification that has increasingly replaced traditional agricultural and natural systems. While these changes have led to growth in GDP and the enrichment of some societal actors, outcomes have been highly-unequal; the benefits of these transformations have largely accrued to urban elite, while costs have largely been borne by the rural poor. The Mekong region may be at a tipping-point. Growing inequality, rural unrest, and the social and environmental costs of dominant development pathways threaten to destabilize fundamental social-ecological systems across the region.

Transformation is therefore critically-needed. Foundational to such change is our basic understanding of the current status and trajectories of change in the regional land system, how the system's resources, costs and benefits are distributed across society, and the conditions of governance that shape—and could potentially transform—the state of land in the Mekong region.

Processes of agrarian transition are undeniably in motion in the Mekong Region. Economic transformations are reshaping a society that was primarily rural and agricultural into one that is urban and increasingly oriented toward industry- and service-sectors. Demographic transition characterized by decreasing fertility rates and dynamic rural-to-urban migration accompanies these unprecedented changes.

However, this so-called 'agrarian transition' is neither natural nor unfolding linearly. Judging by the growing rural and agricultural population, the limited capacity of industries and services to create jobs, and the number of people who continue to migrate in search for agricultural land, the transition appears to be a truncated process. Clearly, land and agriculture continue to play vital roles in the economic development of each country in the region.

The incomplete nature of the agrarian transition in the Mekong also results from decisions made by national governments in favour of a rural development model that promotes large-scale agricultural modernization and boom crop commodity markets. Accompanying the changes—or pre-empting them—land governance reforms are underway to provide more secure tenure regimes. Significant efforts have been put into implementing land titling, local land use planning, and natural resources co-management but these reforms have largely been shaped and limited by superordinate concerns of state planners and commercial interests with regard to profit maximisation and facilitation of investment. The recognition of customary tenure has remained a difficult issue, particularly visible when land claims derived from State law and customary tenure overlap.

Despite formidable growth and impressive regional integration around land-based commodity trade and investments, the benefits of these transformations are not equally shared and smallholder farmers remain largely excluded. One notable consequence has been the increasingly unequal distribution of land alongside a growing gap between the rich and the poor across the region.

Building on these thematic areas, the remainder of this book presents the specific trajectories of change across the different countries of the Mekong, and shows how each country context has in turn shaped the transformations underway in the region.



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