Mekong
State of Land

Publishers:

Centre for Development and Environment (CDE), University of Bern, and Mekong Region Land Governance (MRLG). Vientiane, Laos, with Bern Open Publishing (BOP).

Hallerstrasse 10, CH-3012 Bern, Switzerland
www.cde.unibe.ch
publications@cde.unibe.ch

Citation:

Ingalls, M.L., Diepart, J.-C., Truong, N., Hayward, D., Niel, T., Sem, T., Phomphakdy, M., Bernhard, R., Fogarizzu, S., Epprecht, M., Nanthavong, V., Vo, D.H., Nguyen, D., Nguyen, P.A., Saphanthong, T., Inthavong, C., Hett, C. and Tagliarino, N. 2018. The Mekong State of Land. Centre for Development and Environment, University of Bern and Mekong Region Land Governance. Bern, Switzerland: Bern Open Publishing (BOP).

DOI: Pending
ISBN (e-print): Pending
ISBN (print): Pending

Editing and supervision:
Micah L. Ingalls and Jean-Christophe Diepart

Mekong region:
Micah L. Ingalls and Jean-Christophe Diepart

Cambodia:
Jean-Christophe Diepart and Thol Sem

Lao PDR:
Micah L. Ingalls, Thateva Saphanthong and Chanthaviphone Inthavong

Myanmar:
Tony Neil

Thailand:
Daniel Hayward

Vietnam:
Nhu Truong, Dang H. Vo and Dzung Nguyen

Mapping:
Chanthavone Phomphakdy and Rasso Bernhard

Key technical contributions:
Michael E. Epprecht, Vong Nanthavong, Cornelia Hett, Sinu Fogarizzu, Nicholas Tagliarino, and Phong A. Nguyen, Weerakan Kengkaj

Design:
Watcharapol Isarangkul Na Ayuthaya (Nong)

Printing:

Expert Review:
Celine Allaverdian, Chan Sophal, Christian Castellanet, Florian Rock, Glenn Hunt, Kate Rickersey, Michael Victor, Monica Petri, Mukdawan Sakboon, Sothath Ngo, Phillip Hirsch and U Shwe Thein.

Mekong
State of Land

Mekong
State of Land

CONTENTS

Executive Summary **12**

Introduction **18**

References 21

The Mekong Region at the Crossroads **24**

Overview 24

The Agrarian transitions in the Mekong 25

The Land Resource Base 30

Distribution of the Land Resource 42

Land securitization and the formalization of smallholder tenure 60

Land governance 63

Regional dynamics of trade and investment 65

Regional trade of land-based commodities 65

The case of boom crops and agricultural commercialization 67

Trans-boundary land-based investment flows in the Greater Mekong Sub-region 72

References 75

State of Land in Cambodia: Marginalizing or Centering Smallholder Farmers? 80

Introduction 80

The land and the people of Cambodia 80

The land resource base 82

Asymmetries in the distribution of land resources 86

Recognition and formalization of smallholder land rights 91
Land governance 92
Conclusion 95
References 96

State of Land in Lao PDR: Turning land into capital for whom? 100
Introduction 100
The Land and the People 100
The Land resource base 107
Distribution of the Land Resource Base 114
Land securitization and the formalization of smallholder tenure 120
Governance of the Land Resource 122
Conclusion 124
References 125

State of Land in Myanmar: Myanmar: Land reform or new dynamics of land alienation? 127
Introduction 128
The land and the people 128
The Land resource base 130
Land degradation 134
Distribution of the land resource 136
Conclusion 145
References 146

State of Land in Thailand: Smallholder security or structural inequality? 149
Overview 150
The Land and the People 150
The Land Resource Base 153

Distribution of the Land Resource Base 158
Land securitization and the formalization of smallholder tenure.....159
Land Governance 161
Conclusion 163
References.....164

State of Land in Vietnam: Land for livelihood or land for development?.....167
Introduction.....168
The Land and the People 168
The Land Resource Base 171
Distribution of the Land Resource Base 176
Land securitization and the formalization of smallholder tenure.....182
Land Governance 184
Conclusion 187
References.....188

Annex 1: Methods 191
Sources of Data: Steering a middle course 192
References.....195

List of Maps

Map 1: Human Development Index in the Mekong Region 24
Map 2: Proportion of the rural population in the Mekong Region 26
Map 3: Incidence of poverty in the Mekong Region 28
Map 4: Global Hunger Index and Undernourishment in the Mekong Region 28
Map 5: 2015 Land cover 32
in the Mekong region 32
Map 6: Stylized view of dominant non-rice cropsin the Mekong, at provincial-level 37
Map 7: Crop Diversification Index in the Mekong region 38
Map 8: Proportion of agricultural land irrigated in the Mekong region 39
Map 9: Average wet season paddy rice yield in the Mekong region 39
Map 10: Land degradation classes in the Mekong 40
Map 11: Average size of agricultural landholding per agricultural household in the Mekong region 42
Map 12: Land Gini Index for the Mekong countries (excluding concessions) 43
Map 13: Land Gini Index for the Mekong countries (including concessions) 43
Map 14: Hydropower dams in Mekong 49
Map 15: Known agriculture and tree plantation concessions in the Mekong, by investor and area 50
Map 16: Known mining concessions in the Mekong, by investor country and area 51
Map 17: Global heat map of land deals 55
Map 18: SEZs, CBEZs and economic corridors in the Mekong region 57
Map 19: Protected areas in the Mekong region 59
Map 20: Perception of Corruption Index 64
Map 21: Gender Inequality Index 66
Map 22: Distribution and areas of key boom crops in the Mekong region 71
Map 23: Land-based investment in the Mekong region (by investors and crop) 73
Map 24: Incidence of poverty in Cambodian provinces 81
Map 25: Prevalence of employment in agriculture in Cambodia 82
Map 26: Land Use Land Cover in Cambodia (2015) 83
Map 27: Crop Diversity Index 85
Map 28: Land degradation in Cambodia 87
Map 29: Gini Index on smallholder farmers agricultural land distribution in
Cambodian provinces (excluding large scale land concessions) 87
Map 30: ELCs, Protected Areas, mining concessions, hydropower dams and
Special Economic Zones in Cambodia 90
Map 31 Distribution of Rural Population by Province in Lao PDR 102
Map 32: Prevalence of employment in the agriculture across provinces in Lao PDR 102
Map 33: Provincial Poverty Rate 103
Map 34: Land Use Land Cover in Lao PDR (2015) 108
Map 35. Crop Diversification Index in by province in Lao PDR (2011) 110
Map 36 Proportion of shifting cultivation area to total rice production area, by province, in Lao PDR (2011) ... 111
Map 37 Land Degradation in Lao PDR 113
Map 38: Gini Index of agricultural land distribution, by province, in Lao PDR 115
Map 39 : Agriculture, forestry and mining concessions, by investor and size, in Lao PDR 118
Map 40: Prevalence of employment in the agriculture across Myanmar provinces 130
Map 41: Incidence of poverty in Myanmar provinces 130
Map 42: Land Use Land Cover in Myanmar 2015 132
Map 43: Crop Diversity Index in Myanmar 133
Map 44: Land degradation in Myanmar 134
Map 45: Gini Index on agricultural land distribution in states and regions 136
Map 46: Land concessions in Kawthawng, Tanintharyi 139
Map 47: Distribution of rural population by province in Thailand pulation (1997-2016) 151
Map 48: Incidence of poverty by province in Thailand 152
Map 49: Prevalence of employment in the agriculture across Thai provinces 152
Map 50: Land Use Land Cover in Thailand, 2015 154
Map 51: Crop Diversification Index in Thai provinces 156
Map 52: Land degradation in Thailand 157
Map 53: Gini Index on agricultural land distribution in Thai provinces 158
Map 54: Distribution of Rural Population, by Province, in Vietnam 170
Map 55: Incidence of poverty in provinces of Vietnam 170
Map 56: Prevalence of employment in the agriculture, by province, in Vietnam 171
Map 57: Land Use Land Cover in Vietnam 2015 173
Map 58: Crop Diversification Index in provinces of Vietnam 174
Map 59: Land Degradation in Vietnam 175
Map 60: Gini Index on agricultural land distribution in provinces of Vietnam (2011) 177
Map 61: Economic Zones in Vietnam, 2016 182

List of Figure

Figure 1: Organization of country chapters and key indicators....20
Figure 2: Change in the share of agriculture in GPD of Mekong countries (2006-2016) 25
Figure 3: Cumulated annual changes of agricultural land area in the Mekong region....31
Figure 4: Area under agriculture and tree-crop concessions, over time, in the Mekong....45
Figure 5: Distribution of area under concession by crop in the Mekong region....53
Figure 6: Distribution of land with titles, land use certificate or other legal document 61
Figure 7: Distribution of land titles and by sex in the Mekong 66
Figure 8: Cumulated regional trade flows of land-based commodities from the Mekong region 2006-2015....69
Figure 9: Land embodied in exports, Mekong region 74
Figure 10: Change in Land Use and Land Cover in Cambodia (1996-2015) 83
Figure 11: Distribution of main annual and perennial crop types in Cambodia Sources: NIS, 2015 85
Figure 12: Evolution of rice cultivated area in Cambodia (2002-2016) 85
Figure 13: Evolution of rice yields in Cambodia (2002-2016)....86
Figure 14 : Land governance assessment in Cambodia 93
Figure 15: Sex Ratio and Age Class Distribution in Lao PDR....101
Figure 16: Change in Urban and Rural Populations in Lao PDR (1997-2016)....101
Figure 17: GDP Structure by Sectors in Lao PDR (2006-2016)....105
Figure 18: Lao PDR's export of land intensive commodities to regional trade partners (2007-2016)....105
Figure 19: Value of Lao PDR's export of land intensive commodities to select countries (2007-2016)....105
Figure 20: Crop (including rubber) exports from Lao PDR to select countries (2007-2016) 106
Figure 21: Land Use Land Cover Change in Lao PDR (1997-2016) 107
Figure 22: Distribution of main annual and perennial crop types in Lao PDR....109
Figure 23: Number of land concessions granted in Lao PDR between 1989 and 2016 116
Figure 24: Share of land under concession, by land use, in Lao PDR....116
Figure 25: Share of land under concessions, by investor origin, in Lao PDR in 2010 and 2017....117
Figure 26: Land governance assessment for Lao PDR 123
Figure 27: Urban and rural population (1997-2016) 129
Figure 28: GDP Structure by Sector (2000-2014) 129
Figure 29: Land Use Land Cover Change in Myanmar 1996-2015 131
Figure 30: Issuance of land use permit granted on VFV land from 1991 to 2016....137
Figure 31: Myanmar Land Governance Assessment....140
Figure 32: Sex Ratio and Age Class Distribution in Thailand 151
Figure 33: Urban and Rural Population (1997-2016)....151
Figure 34: Change in GDP Structure in Thailand, by Sectors (2006-2016)....153
Figure 35: Land Use Land Cover Change in Thailand 1996-2015 153
Figure 36: Distribution of main (non-rice [66]) annual and perennial crop types in Thailand 155
Figure 37: Land Governance Assessment in Thailand 161
Figure 38: Sex Ratio and Age Class Distribution in Vietnam....169
Figure 39: Urban and Rural Population in Vietnam, 1997-2016....169
Figure 40: GDP Structure by Sectors in Vietnam, 2010-2016 171
Figure 41: Land Use Land Cover Change in Vietnam 1996-2015....172
Figure 42: Distribution of main annual and perennial crop types in 2014....172
Figure 43: Assessment of land governance in Vietnam....187

List of Table

Table 1: Change in agricultural land area in Mekong countries 30
Table 2: Forest areas and change in the Mekong,1996-2015 34
Table 3: Agricultural, tree crop and mining concession in the Mekong region (number and area) 46
Table 4: Large-scale Land-based investments in the Mekong 72
Table 5: Number of ELCs and the area they cover before and after Order 01 88
Table 6: Oil Palm concession areas allocated versus actually planted 138
Table 7: Land Managed by Agricultural and Forestry Enterprises prior to 2004 177
Table 8: Structural Reforms of State Forest Enterprises (SFEs) 179
Table 9: Number of land-use titles issued as of September 2016 183
Table 10: Percentage of Men and Women with Names on Land Use Rights Certificate, 2016 185

List of Abbreviations

ADB	**Asian Development Bank**
AEC	**ASEAN Economic Community**
ASEAN	**Association of Southeast Asian Nations**
BAAC	**Bank of Agriculture and Agricultural Cooperatives**
CDI	**Crop Diversity Index**
EdC	**Electricité du Cambodge**
EGAT	**Electricity Generating Authority of Thailand**
EITI	**Extractive Industries Transparency Initiative**
ELC	**Economic Land Concession**
FAO	**Food and Agriculture Organization**
FDI	**Foreign Direct Investments**
GDP	**Gross Domestic Product**
GLADIS	**Global Land Degradation Information System**
GMS	**Greater Mekong Sub-region**
GoL	**Government of Lao PDR**
HH	**Household**
IDP	**Internationally Displaced Persons**
IDPoor	**Identification of Poor Households**
IP	**Indigenous People**
KHR	**Khmer Riel**
KIO	**Kachin Independence Organisation**
KNPP	**Karenni National Progressive Party**
KNU	**Karen National Union**
KTC	**khana kammakarn nayobai thidin haengchat**
LCPC	**National Land Policy Committee**
LFA	**Land and Forest Allocation**
LICADHO	**Cambodian League for the Promotion and Defence of Human Rights**
LPRP	**Lao People's Revolutionary Party**
LSLA	**Large Scale Land Acquisition**
LTTP	**Lao Land Titling Programme**
LULC	**Land Use Land Cover**
LURC	**Land Use Rights Certificate**
MAFF	**Ministry of Agriculture Forestry and Fisheries**
MIME	**Ministry of Industry, Mines and Energy**
MLMUPC	**Ministry of Land Management, Urban Planning and Construction**
MoE	**Ministry of Environment**
MoNRE	**Ministry of Natural Resources and Environment**
MoP	**Ministry of Planning**
MRLG	**Mekong Region Land Governance**
NCDD	**National Committee for Sub-National Democratic Development**
NCPO	**National Council for Peace and Order**
NGO	**Non-Governmental Organization**
NIS	**National Institute of Statistics**
NMSP	**New Mon State Party**
NTFP	**Non-Timber Forest Products**
ODC	**Open Development Cambodia**
PAPI	**Vietnam Provincial Governance and Public Administration Performance Index**
SDG	**Sustainable Development Goal**
SERVIR	**Regional Visualization and Monitoring System**
SEZ	**Special Economic Zone**
SFE	**State Forest Enterprise**
SLC	**Social Land Concession**
SLR	**Systematic Land Registration**
TLIC	**Turning Land Into Capital**
TLUC	**Temporary Land Use Certificate**
UXO	**Unexploded Ordnance**
VGGT	**Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security**
VND	**Vietnam Dong**
WFP	**World Food Programme**

Executive summary

The Mekong region has undergone rapid socio-economic growth over the past two decades alongside pronounced transformations in a number of key sectors and relations between the rural majority and increasingly-affluent urban centres. Land—as both a foundation for national development and the livelihood basis for millions of rural and agricultural communities—continues to play a central role in the Mekong region. In all five countries of the Mekong region—Cambodia, Lao PDR, Myanmar, Thailand and Vietnam—smallholder farmers have occupied a central role in the development of the agricultural sector and, through it, national food security and economic growth. However, rural communities are being increasingly swept up into regional and global processes against which they are poorly-positioned to compete. Often, they are undermined by national policies that fail to ensure their rights or enable them to benefit.

In a region in rapid transition, understanding the changing role and contribution of land to development is critical to inform policy, planning and practices towards a sustainable future. The Mekong State of Land report aims to contribute to this much needed conversation between all stakeholders by bringing together key data and information to identify and describe the key issues and processes revolving around land, serving a basis for constructive dialogue and collaborative decision-making. The Mekong State of Land is structured around five domains: (1) the land-dependent people of the Mekong, including dynamics of rurality, agricultural employment and the on-going structural processes of demographic and agrarian transitions; (2) the land resource base upon which this population depends, including land use and land cover, agricultural conditions and change, and its natural capital; (3) the ways in which this land resource base is distributed across society, including smallholdings, large-scale land investments and other designations; (4) the security of land tenure security, which depends on how the land rights are recognized and formalized, and; (4) the conditions of governance and land administration that shape access to and control over land resources, including issues of transparency, equity, the rule-of-law and access to justice. The Mekong State of Land is framed by a number of key indicators within each of these domains and presents these on two levels: At the regional-level, it presents a comparative analysis of key conditions and patterns between the Mekong countries and an examination of transboundary process that shape and define the land issue, including especially regional trade and investment flows in the land and agricultural sectors. At the country-level, data and information on key indicators are disaggregated and examined to identify country-specific conditions and trajectories of change.

Given the critical role that knowledge and information play in the identification of key issues, their accurate characterization, and the structuring of decisions and policies to address these, the State of Land also provides a critical analysis of the data and information—what is available in the public domain, what is not, and why these matter—with a view toward constructively identifying ways to improve the production, management and sharing of data and information.

State of Land in the Mekong region

Each country in the Mekong region has undergone a structural transformation of its economy, generally moving away from agriculture as its dominant sector. While the agricultural sector continues to grow—in some cases impressively—its proportional share of national Gross Domestic Product has declined across all countries due to the even-more rapid growth in the industrial and service sectors. This pattern varies significantly across countries, however. In Thailand and Vietnam, urbanization and industrialization are more advanced; the share of agriculture in GDP is lower and has been more or less constant over last 25 on years. In Cambodia, Laos and Myanmar, the share of agriculture in GDP is higher but witnessed an important drop from 2010 to 2016 to 26.7, 19.5 and 25.5 percent, respectively.

The proportion of the population engaged in agriculture has also declined, but at a much slower rate and remains relatively-high (e.g. 80 percent in Laos and 70 percent in Vietnam, though 30 percent in Thailand). This and other evidence suggest that the agrarian transition—the transformation of the agriculture under the forces of urbanization and industrialization—is an uneven process that is far from complete in the Mekong region. In Cambodia, Laos, Myanmar and Vietnam, the creation of jobs in the secondary and tertiary sectors lags significantly behind growth of the active labour force in rural areas, meaning that agriculture remains a strategic job provider for the vast majority of the population of the Mekong. Thus, access to land remains a central concern in the livelihoods of rural communities. This rural and agricultural population is both dominant across the region, but also by far the most likely to be poor, for while poverty rates overall have been steadily declining across the Mekong, this is much less true for rural areas. Ninety percent of poor households in Cambodia, for example, are rural. In Thailand, the differentiation is perhaps more striking: while only one-third of households are considered rural, these comprise 80 percent of Thailand's poor.

The incomplete character of the agrarian transition is increasingly visible in the demographics of the Mekong countries—in particular in the mobility of the rural population as people seek employment and other livelihood opportunities. Rural-to-urban migration flows are important, and related to urbanization and the opportunities afforded by growing industry and service sectors. However, these rural-to-urban migrations are dwarfed by the outsized flow of people from one rural place to another in search of land and economic opportunities, a dynamic typically under-recognized. This rural-to-rural mobility has important implications for land distribution, access and tenure security. Cross-border migrations are both rising and typically associated with rural communities, as workers—especially the young—leave agricultural communities in Cambodia, Laos and Myanmar in search of employment, most commonly in Thailand. These movements reflect the inability of rural areas to provide adequate opportunities for the young.

These economic and demographic transformations have been accompanied by dramatic changes in land use and land cover in the Mekong. Agricultural land across the region increased by more than 9 million hectares, or around 21 percent, between 1996 and 2015. At the same time, forest areas have declined, as non-forest uses (especially agriculture) encroach into remaining natural forests. These changes vary considerably by country. Vietnam has seen the most impressive expansion of agricultural land (around 65 percent), similar to patterns of agricultural expansion in (in descending order by proportion) Laos, Myanmar and Cambodia. Thailand, by contrast, experienced little change. Declining forest areas have been most pronounced in Cambodia and Myanmar, which have lost 22 and 21 percent of their forests, respectively. The expansion of agricultural land has also been accompanied by a number of changes in cropping patterns. The significant increase in the cultivated area of export-oriented commercial crops has resulted in a degree of diversity at the aggregate level, where cropping has partially shifted away from the overwhelming dominance of rice in favour of commodity crops. However, the replacement of natural vegetation and local, diversified cultivation systems has also brought about a profound degree of simplification: six crops alone—rice, cassava, maize, sugarcane, rubber and oil palm—now command fully 80% of all agricultural land in the Mekong. The intensification of agricultural production is another pronounced trend and, while playing a major role in the growth of the agricultural sector, also has important implications for land degradation. Arguably, the majority of the regional land area shows medium- to high-levels of degradation, resulting from the loss of natural vegetation, mono-cropping, poor soil conservation technique and cultivation on fragile and easily-erodible soils in upland areas. The erosion of the natural capital base is a pressing concern, with both immediate and long-term effects, particularly for those whose reliance on agriculture and forest resources—the poorest segment of society—is most direct.

Agricultural land in the Mekong countries is primarily under the management of agricultural households, who thus remain the most important segment of the rural population with regard to the agricultural sector and land management, despite the increasingly-visible role played by agribusiness corporations and investor. However, agricultural land is unequally distributed among these smallholder farmers. The average landholding size per agricultural household varies widely between countries, from 0.7 ha in Viet Nam to 3.1 ha in Thailand. Except in Laos, the average area of landholding per agricultural household has declined over the last 10 years. Variations in land holdings within each country is larger than variations between countries. The Gini index relating to the distribution of landholding amongst smallholder farmers is relatively high (Cambodia: 0.47; Laos: 0.34; Myanmar: 0.48; Thailand: 0.49 and Viet Nam: 0.54) and has tended to increase in all five Mekong countries. In these figures, landlessness is not adequately captured due to a lack of available data, though appears to be increasing. Case studies indicate that the inclusion of landless households would demonstrate even higher disparities in land. Importantly, the inclusion of large-

scale agricultural and forestry concession operated by companies shows that the distribution between all landholders is even more uneven (with Gini coefficients in Cambodia of: 0.66; Laos: 0.49; Myanmar: 0.53; Thailand: 0.49 and Viet Nam: 0.56).

With the exception of Thailand, there has been a pronounced trend in all Mekong countries since the late-1990s toward an increasing number of large-scale land investments as the governments of the Mekong countries have sought to leverage land deemed under-utilized to attract financial resources for development. The rationale is presented as self-evident: granting concessions in exchange for financial investment is necessary to turn untapped land into capital, boost the production of export commodities and stimulate opportunities for local development such as wage-labour, rural infrastructure, processing facilities and access to markets.

Though some occurred earlier, large-scale land investments in the Mekong began in earnest around 2006, and were further stimulated by the global financial crisis (2008), as rising food- and fuel-costs and risks associated with financial markets prompted global investors and agribusiness companies to invest in the Mekong's emerging land market. Until 2011, the granting of land concessions was in full-swing. As a result, the agrarian structure of the Mekong countries has been considerably transformed. In total, 5.1 million hectares of land have now been granted to companies under various concession agreements in the agriculture and tree plantation sector. In Cambodia, Laos and Myanmar, land concession areas represent, respectively, 66, 30 and 16 percent of the total area cultivated by smallholder farmers. Concessions of land in the mineral sector are substantial and, including exploration concession areas, likely outsize agriculture and forestry concessions. With the exception of Laos, a lack of available data limits assessment.

Most of the area under agricultural concession is devoted to the boom crops—rubber, sugarcane, oil palm, cassava and maize—that represent 76 percent of concession areas across the region. An important dimension of the concession landscape in the Mekong is the transboundary nature of investments and associated trade-flows between the Mekong countries themselves and their near-neighbours. While a significant amount of investment in land concessions is driven by domestic investors (43 percent in Cambodia and 31 percent in Laos), the second largest group are investors from China, Vietnam, Thailand and South Korea (together accounting for 36 percent of total concessions in Cambodia and 60 percent in Laos). Vietnam and Thailand function both as investors in large-scale land deals and importers, processors and exporters of the commodities associated with them. China is, by far, the largest end-market for regional exports of agricultural commodities.

In the main, the hoped-for benefits of these land investments have not been realized. While playing a role in rising GDP in host countries, state revenue has been less than anticipated and the social and environmental costs of these developments have generally exceeded their benefits, and have largely been borne by the rural poor. Fundamental to the problem has been an under-recognition of land tenure and local uses prior to acquisition. The dispossession of rural households from land concession areas accompanied by inadequate compensation—where such has been provided at all—has had a particularly negative impact, clearly at odds with the stated purposes of land-investment based development strategies. The lack of return on these investments has prompted concerns among policy-makers across the region. In 2012, Laos and Cambodia both issued limited moratoria on new concessions. Processes of land conflict resolution have been activated but a particular point of concern in Cambodia, Laos and Myanmar revolves around the cancellation of concessions that are not performing or meeting their obligation. The underlying questions is whether these areas will be maintained as State land and given new State-managed functions or if they will be redistributed to farmers and communities. The tensions are clearly palpable and the future of concession-based development is uncertain.

The well-being of smallholders and their ability to gain benefits from their agricultural land depends to a large extent on the security of their tenure. Land titling and land use certificates are considered principal ways to provide formal legal recognition and tenure security against conflicting claims, and to serve as collateral for loans. Land tenure formalization is most advanced in Vietnam, Thailand and Myanmar, though in the latter two of these countries titling tends to exclude large parts of the forest estate, a situation found also in Laos.

Beyond the titling of individual parcels, existing legislation and policies of the Mekong countries offer various forms of recognition of customary tenure. Despite supportive legal frameworks, the practical application of granting collective-title on communal landholdings under customary tenure arrangements has been slow, weak and irregular. The situation is particularly problematic in Myanmar where legislation has been generally regressive, providing no clear legal protection for customary tenure in shifting cultivation systems. Alternatively, a variety of co-management arrangements have been used across the Mekong as mechanisms to support traditional local claims over land and natural resources.

In response to structural changes in the land and agricultural sectors and the rapid changes in investment and commodity-flows brought about by the globalization of financial- and market-systems, the governance of land resources in the Mekong is undergoing a period of transformation previously unseen. The environmental and social impacts of large-scale land acquisitions and the rapid growth of land markets have triggered social unrest, raising concerns among policy makers resulting in—in some contexts—policy responses such as moratoria (above), improved environmental and social impact assessment and compensation processes, and the prioritization of high-quality investments (those with relatively better social and environmental performance). Alongside these policy and regulatory changes, what

© Micah Ingalls

has been arguably most pronounced across all Mekong countries is the large gap between these and the practice of land administration. Corruption and a lack of public accountability remain key obstacles to addressing the critical problems surrounding the land issue. The expropriation of land by the state for the promotion of investments has continued to struggle with the ambiguous nature of specific land-deals—deals promoted for public purpose but often developed for private benefit. Closely related to these issues, the past decade especially has seen significant changes in civil society in the Mekong and the degree to which civil society organizations are able to effectively address land-related issues. These changes include both a degree of opening as well as a degree of closure, often in the same countries. In addition to a general lack of rights for civil society organizations in some of the Mekong countries, of particular concern has been the recent clamping-down on such groups, often in response to political changes and uncertainties surrounding public corruption and land-related investments.

The rights of indigenous peoples and ethnic minorities to land and other resources vary widely across the Mekong. While national legislation in each country commonly includes provisions to ensure either specific protections and rights related to minorities by dint of their ethnicity, or general provisions to safeguard equal access to rights and resources regardless of ethnic status, such provisions have generally not been sufficient to enable indigenous peoples and ethnic minorities to retain rights of their land or to protect traditional practices, such as shifting cultivation. Similarly, while the rights of women and female-headed households are typically enshrined in legal frameworks, there remains a need for significant improvements with regard to their protection in practice. A lack of gender-disaggregated data and information on tenure security for women is a key obstacle to consistent monitoring.

The Mekong is in the midst of substantial, far-reaching transformations with regard to land. The region is thus at a critical juncture wherein robust, inclusive and accountable decision-making are urgently needed. The continued dominance of regional and global financial- and commodity-markets suggests that the direction the Mekong countries take with regard to key land-related issues will be shaped in some measure by outside influences. The path forward depends on the degree to which these forces can be leveraged for the benefit of the rural and agricultural majority, rather than for the few. Whether the region is able to steer a course toward a more sustainable and inclusive future remains an open question, the answer to which will decide the future of the Mekong and its people.

© Phoung Nguyen

Introduction

Introduction

The Mekong region lies at the intersection of Southeast, East and South Asia, in-between two Asian giants: China and India. The region is named after an eponymous river that rises in the Tibetan plateau and run through China and mainland Southeast Asia. It comprises five countries that host the Mekong river watershed: Cambodia, Lao PDR, Myanmar, Thailand and Vietnam.

The Mekong region is exceptional for its social and ecological richness. Home to 237 million people, the region includes 329 ethnic groups speaking 410 distinct languages (Lewis, 2009), making the region one of the most ethnically-diverse in the world. The Mekong is also a global biodiversity hotspot (Tordoff *et al*., 2012) including a large number of species of global significance (WWF, 2014).

The countries of the Mekong also share a common agrarian structure and intertwined histories of agrarian change (Hirsch and Scurrah, 2015). After independence from European colonial rule[1] , under different political-economic modalities and various degrees of socialist experiments, the states of the region have promoted an agricultural development model based on agricultural households[2]. All of the countries of the Mekong are now undergoing similar land reforms agendas aiming to turn land into capital through large-scale land investments alongside the formalization of land tenure rights and the development of a dynamic land market.

Smallholder farmers in the Mekong region are increasingly under the influence of regional dynamics of economic development, cross-border investment, and trade flows. In fact, the region has become a global center of production and trade for agricultural and forest commodities such as rubber, rice, cassava, wood, sugar cane, oil palm. These regional dynamics are partly triggered by regional agro-food conglomerates and the expansion of trade and investment treaties and partnerships, such as the ASEAN Economic Community.

While rapidly industrializing and urbanizing, the region remains predominantly rural, with roughly 61%, or 145 million of its 236.97 million inhabitants living in rural areas, the vast majority of whom are engaged in agriculture. This rural and agricultural population continues to grow and is also disproportionately poor, heavily reliant on land and forest resources that are increasingly threatened by a variety of largely anthropogenic drivers of change including agricultural deforestation, logging and illegal timber trade, wildlife trade, overfishing, dam and road construction, and mining (WWF, 2013).

Given this reliance and these threats, understanding the status of the land and the people who depend on it is critical to effectively navigating change, proactively grappling with uncertainties, and addressing persistent problems of governance toward a more sustainable future. In order to inform policy, planning and practices, robust data and evidence is critically needed. The Mekong State of Land's first objective to address this need in some measure, by bringing together key data and information to provide an overview of key issues surrounding the broad issues related to land.

Yet, information about the status of land and natural resources—their condition, distribution, trajectories of change and the governance arrangements that shape their management—is often lacking, inconsistent, contested and difficult to access. Information that is available has been hampered by country- and sector-specific reporting, irregular production and release, and persistent issues of non-transparency at multiple levels. A second objective of the Mekong State of Land is thus to critically examine dataset available (their level of aggregation, reliability, comparability across countries, etc.), identify they gaps and limitations, and constructively identify ways for improvement.

This Mekong State of Land is a starting point along a path toward fostering more open and accessible information for the benefit of smallholder farmers, government agencies, development partners and international organizations designing and implementing programs dealing with land, and civil society groups engage in supporting people living on and from the natural resources of the Mekong.

While recognizing that diverse actors and institutions of society who have claims on the land resource base, this report explicitly focuses on the basic social unit of production, dependence and use: the agricultural household. This focus is intentional and purposive, recognizing that this group who depends most on the land resources is often the most marginalized in those decisions that affect its use and its future.

The report consists of six main chapters, plus this introduction. The first chapter provides a regional overview of the region and s comparative analysis between the Mekong countries, followed by a section dealing with patterns of regional trade and investment, focusing on how these shape land uses and relations. These regional

[1] Except Thailand, which was never formally colonised.

[2] We use the terms smallholder farmers and agricultural households interchangeably while referring to nuclear or extended families who appoint all or part of their workforce to agricultural activities in order to meet their livelihood needs. Smallholder farmers cultivate their own land or work as agricultural wage laborers. The piece of land they access and use varies in size but is relatively small in comparison with larger land schemes operated by companies and big entrepreneurs.

chapters also include a number of thematic boxes that seek to situate key conditions and phenomenon in the Mekong within the global situation. These regional chapters are followed by five country-specific chapters that provide further detail on national and sub-national information on key land-related issues in Cambodia, Laos, Myanmar, Vietnam and Thailand.

To facilitate the navigation across country chapters, the structure of each is similar (see Figure 1). First, each chapter opens with an overview of important demographic parameters and key socio-economic challenges, particularly in relation with land-based production and employment. Second, the land resource base is presented with time series and updated information on land use/land cover. The current diversity of crop cultivated is then examined at national and sub-national levels along with an evaluation of land intensification and degradation processes. Third, the distribution of land resources amongst between stakeholders is presented: land possessed by agricultural households and land granted by the State as concession, protected areas, dams etc. Fourth, each chapter examine the ways in which agricultural household tenure rights to land and natural resources are secured through, for example, titling, recognition of customary tenure, co-management agreements, land use planning, etc. The tenure security of indigenous people and women is given particular attention. Fifth, land governance is assessed at country-level using a strategic indicator framework, informed through a series of national consultations involving government authorities and representatives from civil society, development agencies and academia[3] . Finally, the book ends with concluding remarks and synthesis, and presents a ways forward to strengthen land-related data management. After bibliographic information, a methodological annex presents the source, strengths and limitations of the data used as well as more specific examination on several synthetic indexes computed and presented in the report.

© Jack Kurtz

[3] Land governance consultations were carried out in each of the five Mekong countries, involving 87 experts and representatives, see Annex 1 for more detail.

Figure 1: Organization of country chapters and key indicators

The Land and People	Demographics	Population dynamics, with a particular focus on the rural and agricultural population
	Socio-economics	GDP structure, employment, incidence of poverty, food insecurity and landlessness among rural and agricultural households
The Land Resource Base	Land use & land cover	Forest areas, annual and perennial crop area, and change over time for each (1996-2015), updated 2015 land use (FAO and SERVIR data)
	Land use diversity and efficiency	Land use efficiency, crop diversity, land intensification and irrigation
	Land degradation	Degradation indices from FAO
Distribution of the Land Resource Base	Agricultural distribution	Number of agricultural households, average size of land holdings, Gini index of land distribution
	Land Concessions	Agricultural and mining concessions (by size, crop, and investor), Gini index of land distribution with concessions
	Hydropower dams, Protected Areas, SEZ	Land allocated to Protected Areas, hydropower dams, Special Economic Zones, etc.
Tenure Security	Land titling	Areas with land titles, areas under other forms of legally-recognized tenure
	Customary tenure	Areas recognized under customary tenure or co-management
	Gender and land	Women and female-headed HHs holding titles, titles jointly held by husbands and wives, other tenure security for women
Land Governance	Land Governance Assessment Scoring	MRLG Strategic Indicator Framework assessing multiple indicators producing country-level scoring

References

1. Hirsch, P. and Scurrah, N. 2015. *The Political Economy of Land Governance in the Mekong Region*. Vientiane: Mekong Region Land G.vernance.
2. Lewis, M. P. (ed.) 2009. Ethnologue: Languages of the World. 16th ed. Dallas: SIL International. Available at: https://www.ethnologue.com/.
3. Tordoff, A. W., Bezuijen, M. R., Duckworth, J. W., Fellowes,J. R., Koenig, K., Pollard, E. H. B. and Royo, A. G. 2012. Ecosystem Profile: Indo-Burma Biodiversity Hotspot Indochina Region', Critical Ecosystem Partnership Fund, p. xxi-360.
4. WWF. 2013. 'Ecosystems in the Greater Mekong: Past trends, current status, possible futures. Bangkok, Thailand', pp. 1–76.
5. WWF. 2014 'First Contact', p. 60222. Available at: http://www.sbs.com.au/programs/video/352505923803/First-Contact-S1-Ep1.

© Jack Kurtz

The Mekong Region at the Crossroads

The Mekong Region at the Crossroads

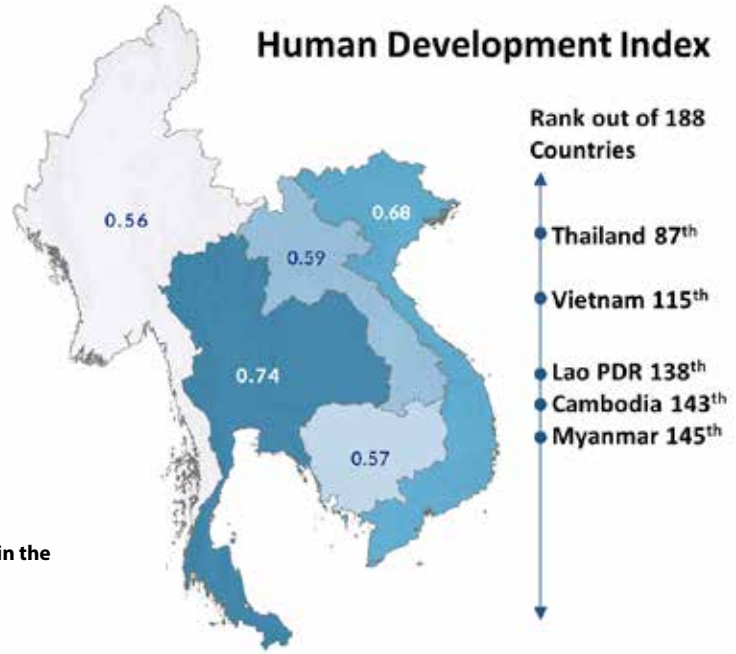
Overview

Despite important differences between the countries of the Mekong, there a number of shared features and dynamics of development and 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[4]. Each of the countries also share some similar topographic similarities, having large lowland areas with fertile soils along the floodplains of the Mekong and other rivers, the productivity of which 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, and growing urban populations have enabled these groups to secure a disproportionate amount of wealth and political and military power. Upland areas of the region are typically dominated by ethnic minorities, many of whom are generally poorer, less land-secure and engage in traditional forms of agricultural production. In the main, these peripheries have remained on the margins of the central polities, receiving fewer of the benefits of the region's economic and agricultural transformations, but arguably bearing more of its costs.

The political history of the region provides some key points of articulation between the Mekong countries, though each has had a different type of engagement with European colonisation and different pathways through which national identity was defined in relation to it. Each of the Mekong countries also share 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.

Despite these similarities, 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 are fall considerably behind (see 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 than differences between the Mekong countries with regard to development are less pronounced that differences within each. At the sub-national level the development disparities between the economically-vibrant urban centres and the rural peripheries are substantial.

This section provides a comparative analysis between the countries that comprise the Mekong with regard to the central elements that surround the land resources of the Mekong, including the conditions of the resource base, its distribution across society, and the parameters of governance that determine its regulation.



Map 1: Human Development Index in the Mekong Region
Data source: UNDP

[4] Except Thailand, which was never formally colonised.

The Agrarian transitions in the Mekong

Economic transformations and the role of agriculture

The Mekong region is a center of global production and export of key agricultural commodities. Thailand, in particular, is the leading global exporter of rubber, and the second largest global exporter of sugarcane, cassava and rice. The other Mekong countries, especially Vietnam, Cambodia and Myanmar, are among the top 10 exporters of these commodities, a point we will return to later. Only Laos lags behind in key global exports, though it plays an important role in the provision of raw materials for its near-neighbors Thailand, Vietnam and China.

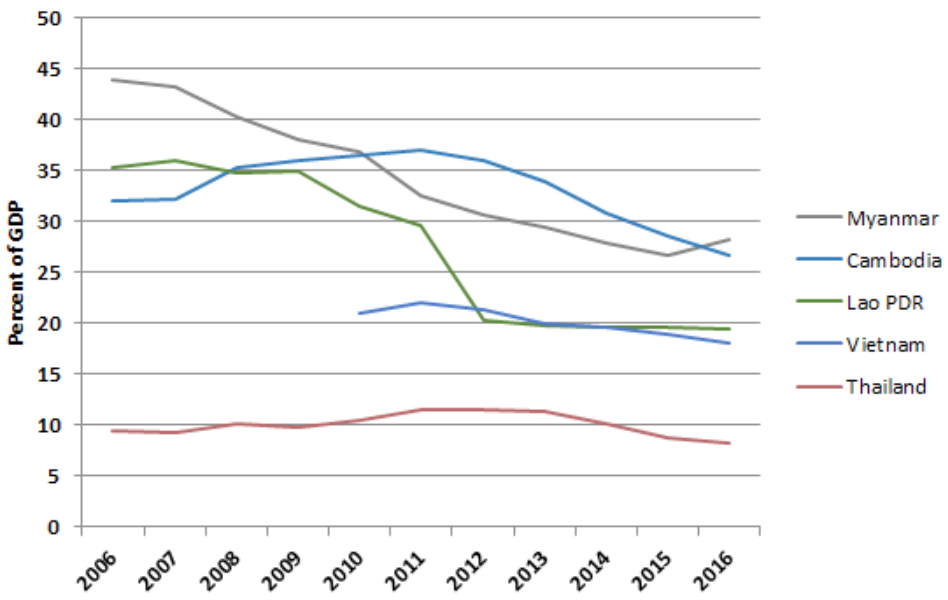
The Mekong countries are each in the midst of an agrarian transition—characterized by a decreasing reliance on primary sectors and a growing shift toward service- and industry-sectors—but the position of each of the countries along this trajectory of change varies greatly (see Figure 2). Despite this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

In each of the countries, agricultural production has grown considerably over 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 share in GDP has declined sharply by 16% 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% relative to 2006. Thailand, which is in the latter stages of its agrarian transition, remained fairly stable, albeit with small (1%) decline between 2006 and 2016 [5].

Amid rapidly growing national economies and a retracting share of agriculture in this growth, the persistence of large agricultural populations is significant. Lao PDR, for example, while nearly 80% of its workforce is in agriculture, the sector's contribution to overall GDP is below 20%, perhaps the most striking case of the wider dynamic of the Mekong region: the rural, 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, decisive majority, at nearly 70%. This stands in stark contrast to Thailand, the Mekong country in the most advanced stage of its agrarian transition, where less than 30% of its population is employed in agriculture (down from 65% in 1990). These national averages mask important sub-national differentiation (discussed in the country chapters that follow).

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 sector is not keeping pace with the increasing 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.

Figure 2: Change in the share of agriculture in GPD of Mekong countries (2006-2016)
Data source: FAOSTAT



[5] The data of the contribution of agriculture is taken from World Bank global databank which aggregate the data from national sources. The value are perfectly comparable among the 5 countries. However, it is important to bear in mind that the real contribution of agriculture is usually underestimated in conventional macro-economic measures of GDP. The part of the production that is directly consumed within the household is not fully taken into account as well as the many subsistence activities of collect revolving around common pool resources. The multiple contributions made by women are particularly under-estimated (Charmes 2000).

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) at the national level for each country. It is considered as the number of people (expressed as a percentage of total labor force) who are engaged during the year in any activity in agriculture, hunting, forestry and fishing, though it is not always clear whether this implies that these comprise the primary source of income, nor is the data consistent across countries. In Cambodia, for instance, the employment in agriculture was 27.4 % whereas the rural population represented 79% of the total population of the country whereas the commune database updated annual by local authorities indicates that in 2016, 68.8% of people older than 18 years old has agriculture, fishing and NTFP as primary or secondary occupation.

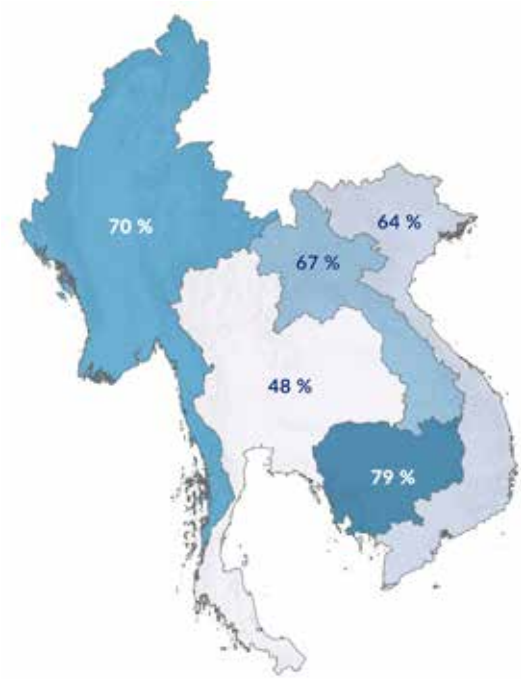
A growing and mobile population

The Mekong region as a whole is also in the midst of a demographic transition as education, changing social mores, economic opportunities and urbanization have led to declining fertility and mortality rates and an ageing population base, with important implications for rural and agricultural communities. Each of the Mekong countries is at a very different stage along this transition. While Thailand and Vietnam are beginning to face an increasingly older population 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 has a highly uneven distribution. Vietnam, the most populated country in the Mekong, is home to more people than Lao PDR, Cambodia and Myanmar combined, while urban centers like Bangkok, Hanoi and Ho Chi Minh each have a population greater than the total population of Lao PDR, the least populated 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 (see Map 2 and text box)

While predominantly rural, there are important—though generally modest, around 1% per year—urbanization trends across the region (see country chapters), due both to the upgrading of rural towns and the migration of rural populations, especially the young, to urban areas as they seek to benefit from the disproportionate economic growth of these centers and the employment opportunities they provide. While these rural-urban migrations have received significant popular 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 than the number of those moving to urban areas. Even in Thailand, where the draw of urban centers is comparatively strong, rural-rural migrations still outsize those to cities.

Map 2: Proportion of the rural population in the Mekong Region
Data source: UNDP



Interpreting the Data: Measuring rural population

The proportion of the population living in rural area 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 measured1. 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.

© Phoung Nguyen

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, a majority of whom are young and from rural and agricultural communities from Cambodia, Laos and Myanmar (IOM 2016). While a large number of these migrate to its large cities, many 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 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% 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 come 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 distribution[6] 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 values fall between income Gini values are similar to the Mekong's neighhbours 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 weight the disparity of income between and within urban and rural areas.

Across the Mekong region, at the aggregate level poverty[7] has been steadily declining, but the pace of decline varies significantly between rural and urban areas leading to a widening gap between the region's urban centers and its rural peripheries. National poverty rates vary from a low of 6% in Vietnam, to a high of 37% in Myanmar (see Map 3). What is perhaps more significant, however, is the range of poverty rates within countries, which are greater by far. In Lao PDR, for example, poverty rates vary from less than 10% in Vientiane Capital to more than 50% in some remote provinces, while Thailand's poverty rates range from <5% to nearly 40% in the far northeast and south, similar to Vietnam (<5% to nearly 30%). In each of the countries, poverty is primarily a rural phenomenon that affects agricultural households. Eighty percent of Thailand's poor are rural, while in Cambodia rural poor comprise 90% of all poor in the country, a consistent pattern across the region.

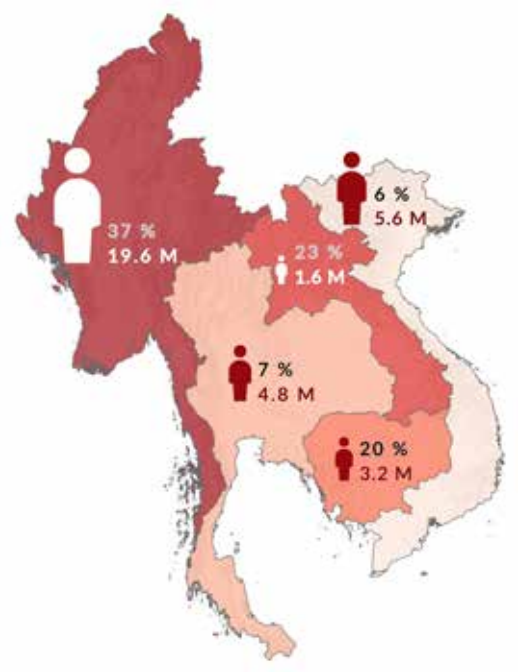
Poverty rates do not directly show us the number of poor. For example, while Vietnam has the lowest poverty rate in the Mekong region, because of its large population it is home to 5.6 million poor persons—more than are found in Laos, Cambodia or Thailand. Myanmar, however, has both the highest rate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

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

[6] 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

[7] See Annex 1 for a working definition of poverty.

Map 3: Incidence of poverty in the Mekong Region
Data source: country chapters

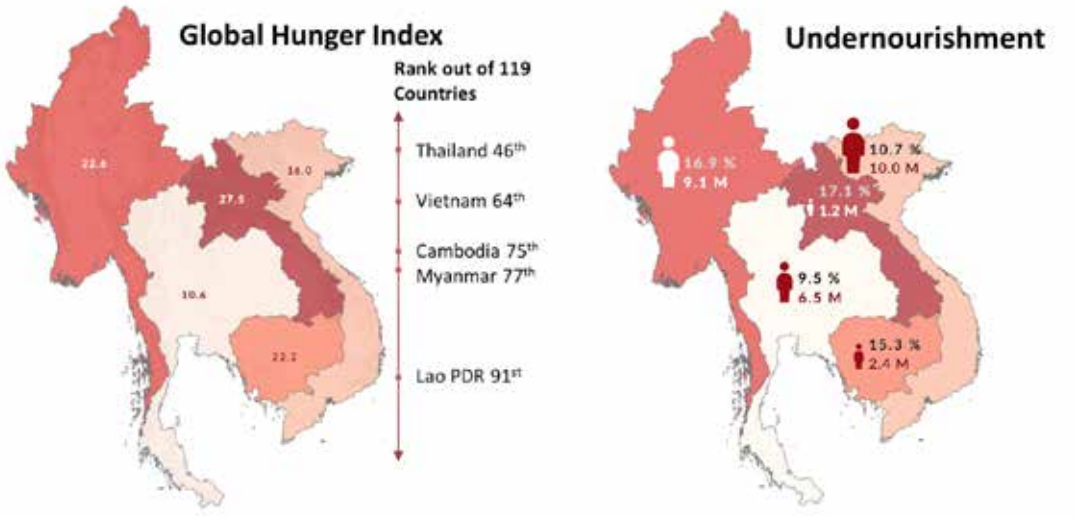


lowest rank among the Mekong countries in the Global Hunger Index (see Map 4), its relatively low population figure means the absolute number of undernourished persons is lower than all of its neighbors. Vietnam, by contrast, though having the lowest poverty rate in the region, nevertheless is home to more undernourished people than Laos, Cambodia and Thailand combined. As with poverty, undernourishment remains predominantly rural. Forty-four percent of Laos' rural children are stunted due to chronic malnutrition (LSIS 2012). These issues reveal that, more than any others, rural and agricultural population 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.

Interpreting the Data: The meaning of poverty rates

The poverty rate is the percentage of population living under a specific threshold. There are several poverty baselines in use but they usually refer to an average level of consumption per person. They equate a minimal income under which people do not have the resources to cover their basic need for food, clothing and shelter needs. 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 USD/day/person (PPP 2011). The $1.9/day international poverty line is used to measures progress globally. The poverty line helps to measure poverty but 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 mainly a monetary income and does not fully account for subsistence activities.

Map 4: Global Hunger Index and Undernourishment in the Mekong Region
Data source: UN Food Security Measures Database



Poverty and food security: The Global Situation

-Sabine Bieri, PhD, Center for Development and Environment, University of Bern

As in the Mekong, while significant strides have been made in reducing poverty across the world, poverty remains endemic to many areas. Globally, poverty and food insecurity were halved between 2000 and 2015, a substantial achievements of the Millennium Campaign. A more detailed analysis of the figures puts the success narrative on these accomplishments into perspective for, as in the Mekong, poverty and food insecurity remains a critical issue, particularly when we come to consider the number of poor, and the differential successes that have been had across the world.

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% of these gains. Sub-Saharan Africa, by contrast, showed an increasing number of poor during this period. New analyses into the distribution of poverty globally has shown some surprising results. For example, the major share of the world's poor in absolute terms are not found in the poorest countries; over 70% 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 $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.

The situation with regard to the number of world food-insecure persons (versus proportion) is even more critical. Despite decades of efforts, roughly 1 billion people remain food insecure—no different from 1970. Whatever progress was made during the Millenium Campaign was almost entirely wiped out by the financial crisis of 2008. Here again, definitions of food security and undernutrition matter: the 1800 kcal daily calorie intake to mark hunger is a conservative measure that does not reflect the actual need by physically active persons. For active farmers or agricultural labourers, such as in the Mekong, the threshold would rather be around 3000 kcal/day. For both, hunger and nutrition, the UN measurements have been on the conservative side. 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 and, further, increasing areas of agricultural land are being 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 evidence[8] suggests this is very unlikely, due primarily to inadequate and inequitable policies that favor urban developed and aggregate growth in GDP over the well-being of the poor.

[8] http://www.fao.org/state-of-food-security-nutrition/en/

Interpreting the Data: The challenge of assessing the agricultural land area

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

Agricultural censuses allow for a clearer picture of land use at household level but they do not include agricultural land area under concession, which limit considerably the scope of the analysis. Further, they do not accurately reflect area involved in shifting cultivation. 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 all the limitations noted above, the portal SERVIR 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 of 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 analysis.

© Patrick Oswald

The Land Resource Base

The socioeconomic dynamics explored above—demographic transitions, the restructuring of the Mekong's national economies, the social differentiation of wealth and food security—are closely related to the biophysical foundation of the Mekong and the profound changes that have been seen over the past decades, the pace and magnitude of which have perhaps never been seen before in this region. The rural, agricultural majority is perhaps most directly linked to these changes, given their primary reliance upon its natural resources.

Changes in agricultural and forest cover

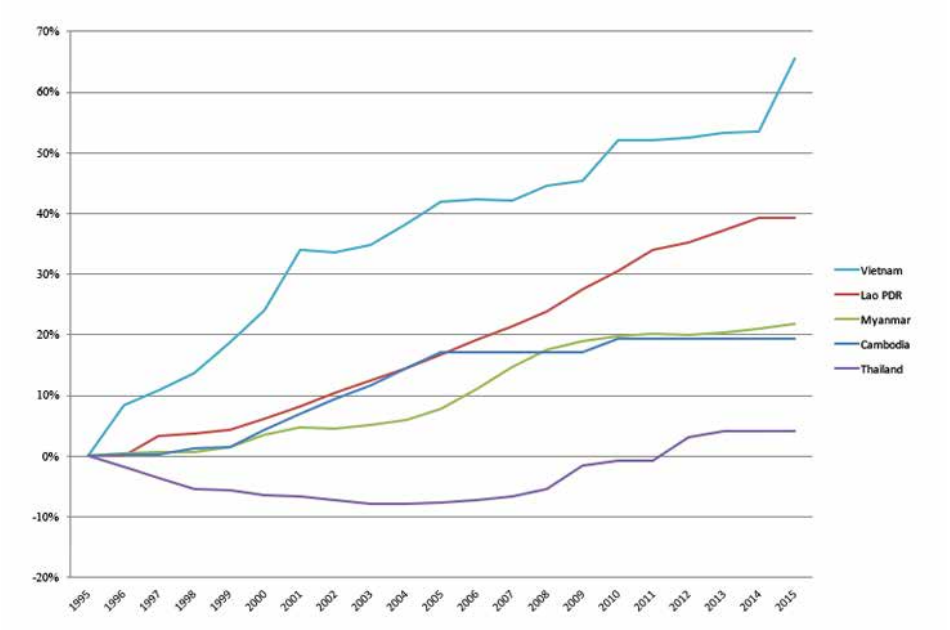
While the land area of the Mekong is dominated by forests and agricultural uses, the past two decades have witnessed a profound transition in the relative proportion of each, as well as a trend toward the conversion of forests and agricultural land through development, infrastructural expansion and urbanization. Generally, the Mekong countries have seen a substantial growth in the proportion of land area under agriculture, which in the aggregate has grown by 9.27 million ha, or 21%, over the past two decades according to standardized FAO data (see Table 1).

An important exception to this is Thailand, where agricultural development was early and agricultural land expanded only marginally during this period. Among the Mekong countries, Vietnam has seen the most significant growth, with a 65% increase in agricultural land over the last two decades, accounting for 45% of new agricultural land in the Mekong during these years. The distribution of agricultural land across the Mekong is highly uneven. More than 40% of all the Mekong's agricultural land is in Thailand, totaling around 22 million ha. Agricultural land in Laos, by contrast, comprises only 4% 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 agricultural commodities, in which the Mekong plays a critical role.

Table 1: Change in agricultural land area in Mekong countries
Data source: FAOSTAT

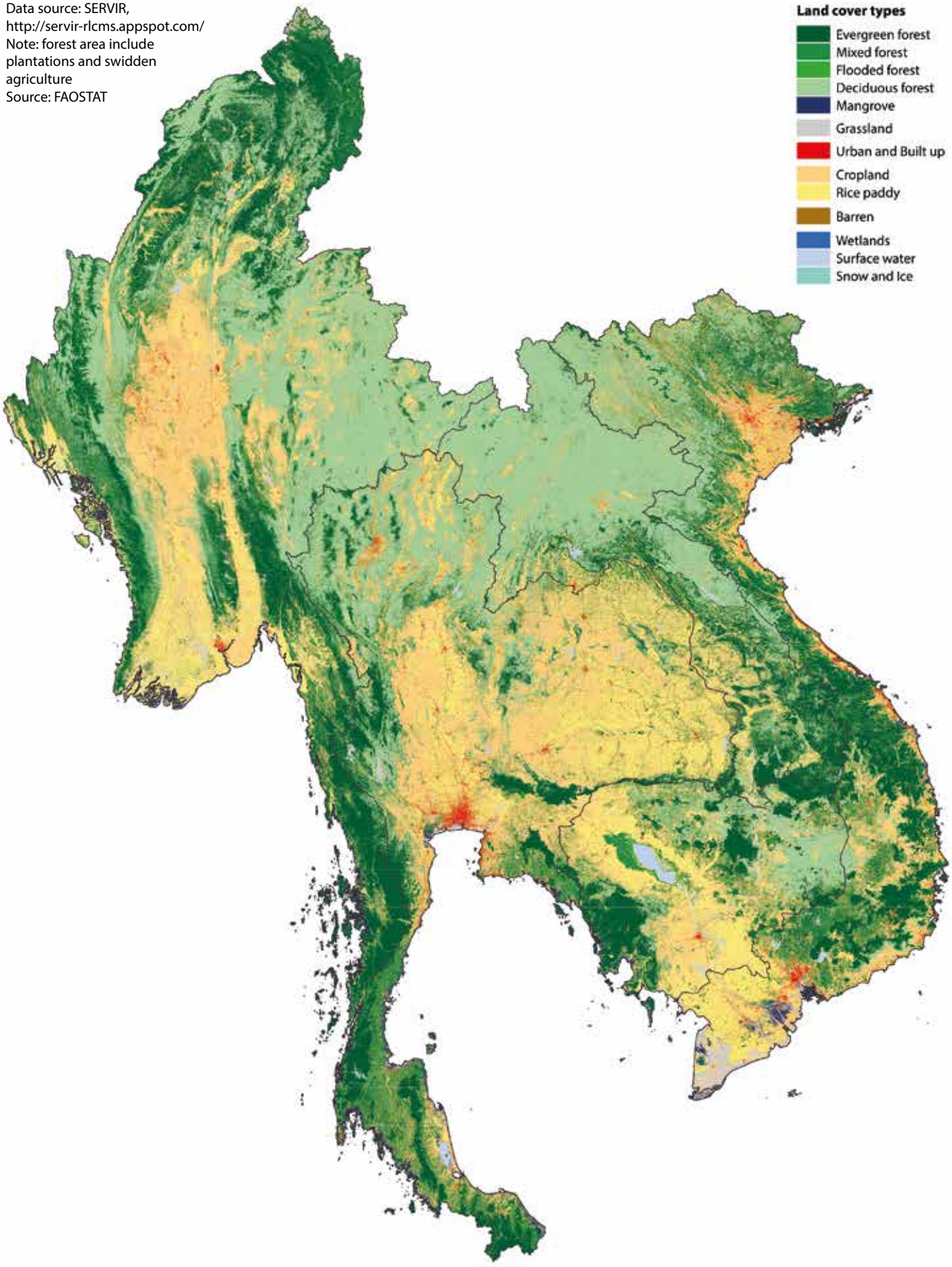
	Cambodia	Laos	Myanmar	Thailand	Vietnam	Mekong
1995	4,570,000	1,700,000	10,450,000	21,210,000	7,079,000	45,009,000
2015	5,455,000	2,369,000	12,735,000	22,110,000	11,710,000	54,379,000
Percentage increase 95-05	19.37%	39.35%	21.87%	4.24%	65.42%	20.82%

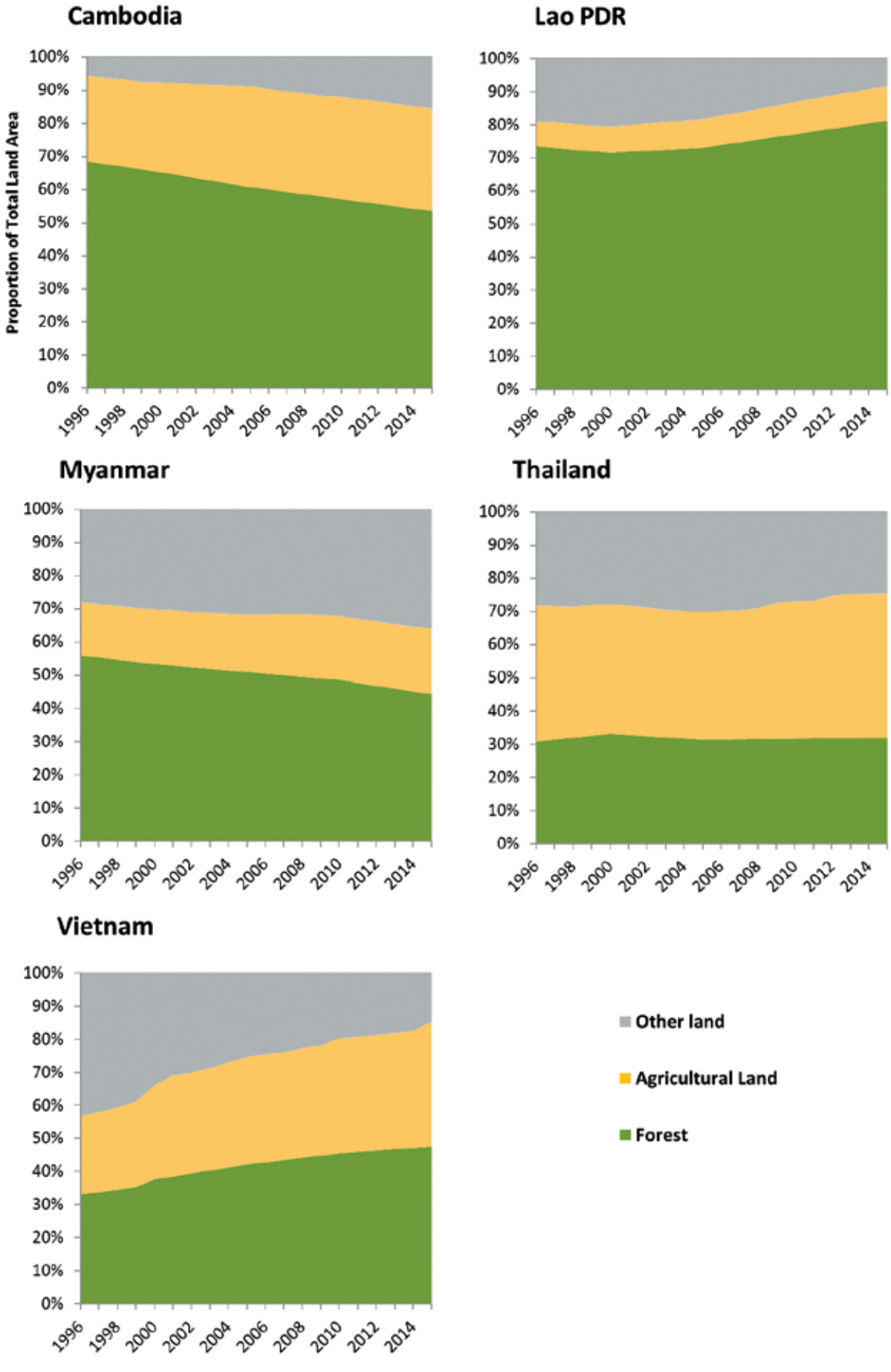
Figure 3: Cumulated annual changes of agricultural land area in the Mekong region
Data source: FAOSTAT



© ThomasCalame

Map 5: 2015 Land cover in the Mekong region
Data source: SERVIR, http://servir-rlcms.appspot.com/
Note: forest area include plantations and swidden agriculture
Source: FAOSTAT




Cambodia
Lao PDR
Myanmar
Thailand
Vietnam
Proportion of Total Land Area
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
Other land
Agricultural Land
Forest

Map 5 presents the land cover in the Mekong region as of 2015. The spatial pattern of agricultural and forest land is of course specific to the geography of each country but, in general, large, low-lying areas in the Mekong countries are generally under agriculture. At this spatial resolution, these areas are most obvious in the large, central area of Thailand, the Mekong lowland delta in Vietnam, and the Irrawady plains in Myanmar.

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 over the last century, though with deforestation accelerating particularly since the 1980s. 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 recognize 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 opportunities 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 efforts at protection will be effective. At present, according to FAO data, forests cover approximately 88.4 million hectares, or 44% of the land area of the Mekong, down from 92.3 million hectares in 1996 (Table 2).

The largest share of these forests lie within Myanmar, with 29 million ha of forests (almost 39% of all forest area in the Mekong), followed by Thailand (16 million ha) and Vietnam (14 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. 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. 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.

Table 2: Forest areas and change in the Mekong, 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

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 monocultural 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 forest cover level reported in the global FAO data.

© Phoung Nguyen

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% and 71% of total agricultural land, respectively. Due to their relatively low 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 in Laos, Myanmar and, to a lesser degree, Thailand produce upland rice through shifting cultivation. Shifting cultivation, a traditional agricultural practice adapted to sloping upland areas where other forms of agriculture are typically impractical, involves clearing vegetation and trees, burning these, and cultivating rice for one or more seasons before the land is left fallow to naturally regenerate. National policies aimed at reducing shifting cultivation, such as through 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 are, in the main, ethnic minorities, poorer, and less food-secure. Despite these pressures, shifting cultivation is prevalent in many upland areas, constituting the principal source of rice for many forest-dependent communities. In Lao PDR, for example, shifting cultivation cropped area accounts for 17% (or 220,000 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), 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.

Shifting cultivation in the Mekong Region

-Andreas Heinimann, PhD, 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 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 or crop areas involved in shifting cultivation are not available, mainly as 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 upland of Laos and Myanmar[9] 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 for environmental degradation and represents a poverty trap for upland communities (Ducourtieux, 2006; Fox, 2000; Heinimann *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 (NCPs) of the diverse mosaic of different land covers in shifting cultivation landscaped 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 system tended to increase household incomes, it came at very significant costs such as reductions of customary practice, socio-economic wellbeing, livelihood options, and staple 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 criminalizing 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.

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

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 (particular so-called "boom crops," discussed below) and infrastructure and 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, wherein annual crops comprise around 92% of agricultural land, this is perhaps most pronounced, while in Thailand annual crops remaining dominant, but to a lesser degree (65% of agricultural area).

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

Design © Vincent Roth

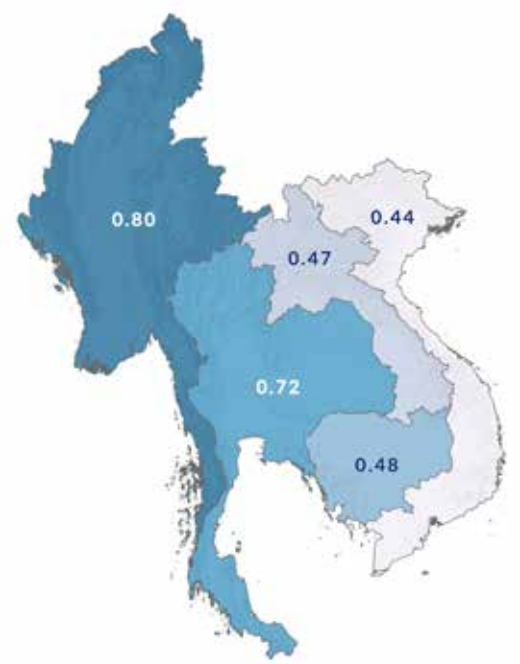
Crop Diversity

Crop and cultivar diversity is foundational to the resilience of agricultural systems to, for example, market- and price-shocks for particular products, climate change and pest outbreaks. Crop diversity also plays a significant role in nutrition-sensitive food security, a major concern for the large proportion of rural poor across the Mekong. Changes in agricultural diversity in the Mekong may be principally due to commercialization—and especially the rise of boom crops—that have in general 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 particularly 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 historical prevalence of rice as the dominant crop in the Mekong countries means that the rise of commercial crops that take in large areas of land has led, in some cases, to greater crop diversity at aggregate (provincial and above) scales (see text box below for a discussion).

The Crop Diversity Index (CDI) is a function of the diversity of crop types, taking into account both the number of crops and their proportional share of agricultural land, producing a value ranging from 0 (low) to 1. 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, predominating rice production in Thailand and Vietnam, and becoming increasingly prevalent in Laos, Cambodia and Myanmar. The Mekong region a center of origin for cultivated rice species and has thus been a global hotspot of rice diversity, suggesting that the loss of local rice cultivars may have global implications.

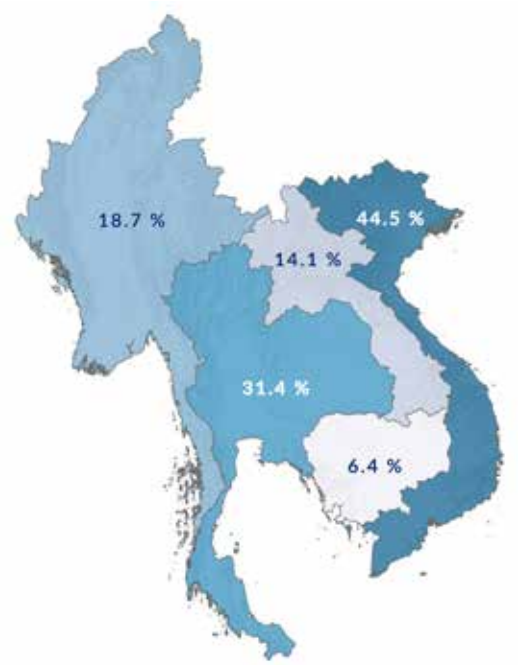


Map 7: Crop Diversification Index in the Mekong region
Source: see country chapters

Interpreting the Data: Strengths and limits of Crop Diversification Indices at national and sub-national levels

The Crop Diversification 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 farm level however, rice often exists alongside with other small-scale agricultural activities that are part of complex diversification strategies by agricultural households (gardening, collect of common pool resources, livestock and fishing) but not necessarily included in production statics, thus not in the Crop Diversification Index. Additionally, CDI does not capture the diversity of cultivars and genetic strains.

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



Map 9: Average wet season paddy rice yield in the Mekong region
Source: see country chapters

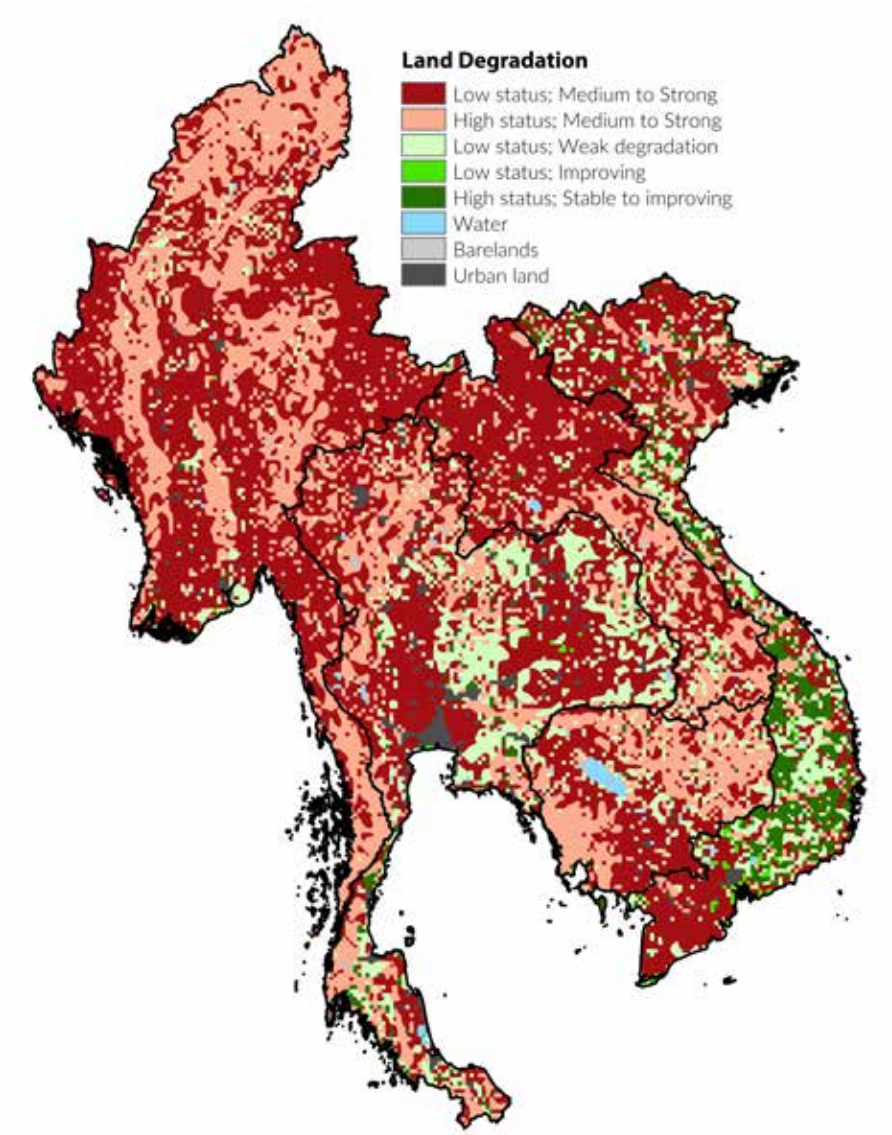
Irrigation and intensification of land use

While in general agricultural in the Mekong has expanded rapidly and has become increasingly intensive, not all potential agricultural land currently in use, nor is the productive potential of existing agricultural land fully realized due to, among other factors, a lack of investment in irrigation that could increase yields and cropping seasons per year. 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, while in other areas this due to the large number of unexploded ordnances (UXOs) that remain from the Indochinese conflicts in the 1960s and 70s. In Xiengkhouang, the equivalent of 90 percent of potential agricultural land is contaminated with UXOs, presenting a risk for farmers and limiting options for agricultural expansion.

Irrigation coverage and the quality of irrigation infrastructure remain key issue in many areas of the Mekong (see Map 8). Toward the bottom, only 6.4% of total agricultural land in Cambodia is irrigated (though for paddy land this is higher, at around 28%), while in Laos 14% of agricultural land is irrigated. In Vietnam, where agriculture is perhaps most intensive across the region, this number is much higher (44.5%), allowing for up to three rice crops per year in many areas.

© Thomas Calame

Map 10: Land degradation classes in the Mekong
Source FAO GLADIS



Land Degradation

Land degradation is a growing concern across the world, particularly within areas experiencing rapid land use change associated with agricultural expansion and intensification of agricultural pressures on land. Despite its significance, standard measures for assessing degradation are limited and hotly-contested, partly 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 the assessment. One approach, supported by the FAO Land Degradation in Drylands Project, produced a global assessment of (multivariate) land productivity and trends of change, including degradation. Other estimates put this somewhat lower: About one quarter of the Mekong is highly degraded, another quarter moderately degraded (Shrestha and Roy 2008).

Key drivers of land degradation are primarily anthropogenic, including the intensification of agriculture, its expansion into marginal areas (particularly steeply-sloping land, and areas with fragile soils), and unsustainable agricultural practices including poor soil conservation techniques. Particularly in recent years, the 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 but also globally—that have incentivized agricultural expansion, intensification.

© Phoung Nguyen

The GLADIS assessment suggests that the majority of the region's land area shows medium to high levels of degradation (Map 10). While this 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% of its total land area facing significant degradation pressures, or at risk of degradation, highest in the semi-arid central dry zone and upland areas. Laos, with a large amount of its area is steeply sloping follows second, with 89% of its land area under significant pressures. Conversely, modeling in Vietnam suggests that more than 16% of its area is stable or improving, particularly within the Central Highlands region, with less than 60% facing significant degradation pressures.

Arguably, dominant drivers of degradation are closely linked to the expansion of commodity crops into forests and other natural vegetation, and the intensification of agricultural production within existing land. This intersects problematically with poverty in the region. There a generally 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 affected by large-scale land acquisitions and other state-sponsored expropriations of land, have been increasingly displaced 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 primary 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, but perhaps especially for those whose reliance on agriculture and forest resources is most direct, the erosion of the natural capital basis upon which agricultural production is founded is an immediate and pressing concern, that has yet received insufficient attention or appropriate incentives in the Mekong. The degradation of terrestrial systems has further consequences for aquatic systems, as fragile and easily-eroded soils are transported into stream and river systems, leading to the loss of water quality. This has important negative impacts on freshwater fisheries, a principal source of protein for millions of people in the Mekong.

Distribution of the Land Resource

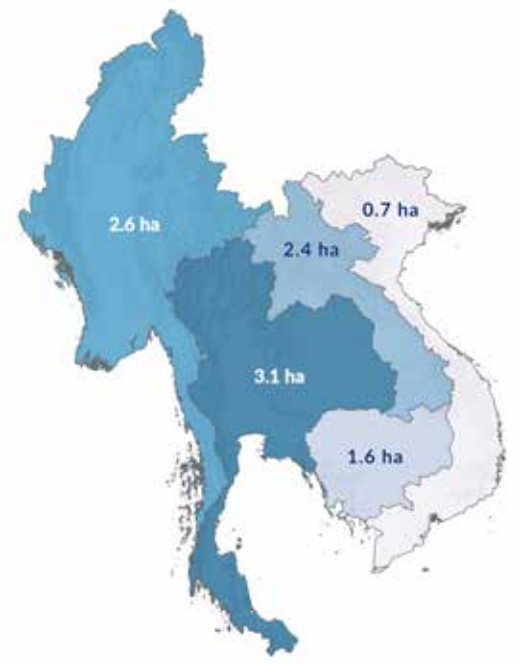
Given the central importance of agriculture and other primary sectors in the Mekong, the natural resource base—its land uses and land covers, crops, and the land itself—is foundational. This resource base is distributed unevenly across the Mekong, not only between countries but also within and between agricultural communities, public institutions and corporate entities. The following section deals with the ways in which this land resource base is distributed across society, with a particular focus on agricultural land, and the implications of these patterns of distribution for farmers and rural communities in the Mekong.

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 center-periphery dynamics, the ways in which the Mekong societies have responded to this colonial legacy have been 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, the land resources has come to be seen as the property of the state on behalf of the people. 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 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 still weights 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 (see Map 11), with the smallest average farm size (0.7 ha) found in Vietnam where intensification is arguably most advanced[10], while Thailand has the largest, with average farm sizes more than 4 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 20111), by approximately 50%. Cambodia, by contrast, has seen a general decrease in the average size of agricultural landholdings.

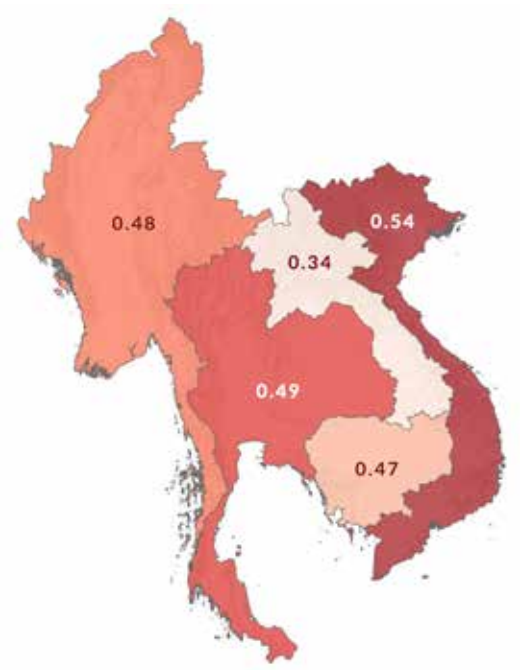
Calculation of the Gini coefficient of agricultural land distribution (see Methods annex) provides a clearer understanding of the ways in which household agricultural land is distributed in the Mekong countries (Map 12) Laos has the most equal distribution of agricultural land among the farming population in the Mekong region, with Gini coefficient of 0.34 (meaning, for example, that 10 percent of households' with largest landholding actually owns 25% of the total land area). The remainder of the Mekong countries have fairly similar 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) (see Map 11). The land Gini indexes here are calculated based on agricultural land holdings at the household level,



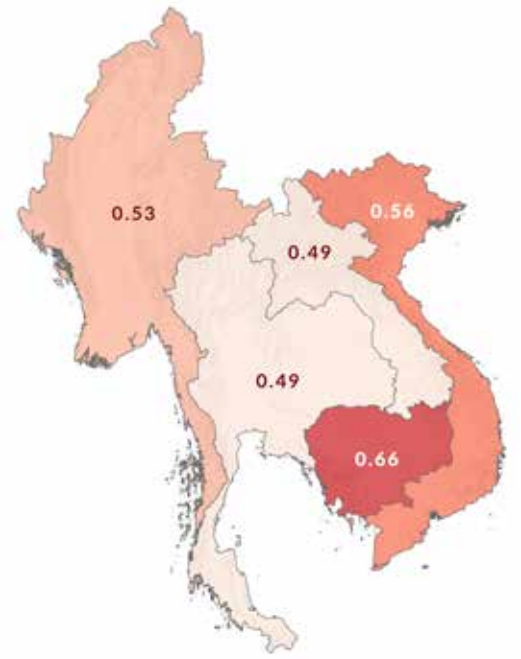
Map 11: Average size of agricultural landholding per agricultural household in the Mekong region
Source: see country chapters

[10] Note, for example, that average rice yields are nearly double those of Thailand

Map 12: Land Gini Index for the Mekong countries (excluding concessions)
Source: see country chapters



Map 13: Land Gini Index for the Mekong countries (including concessions)
Source: see country chapters



which does not take into account the landless population amongst agricultural households (though difficult to estimate) and the area granted to companies as large-scale agricultural concessions. The inclusion of agriculture and forestry concessions within the Gini calculation indicates that land distribution is even more uneven. In Laos (see Map 13), for example, the Gini coefficient jumps to 0.49 (top 10 percent of landholders own 35 percent of the land). Cambodia's coefficient similarly increases to 0.66, indicating the most uneven land distribution in the Mekong (top 10 percent land holder own nearly 60% of the total land area). Myanmar and Vietnam's coefficients increase to 0.53 and 0.56, respectively. In Thailand, where corporate commercial investment has generally not been through land expropriation, the expropriation of land for investment by state authorities has only recently begun to gain traction following the ouster of the democratic government, the impact is not yet apparent.

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 partly available. Landlessness in Laos is relatively low, with fewer than 7,000 families reported to be landless. However, fully 7.4% 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% of agricultural households are landlessness, while a large number of have very low land holdings and fragile tenure security, suggesting high vulnerability to future landlessness. Landless may be even higher in Myanmar, though no systematic data is available. While conservative estimates suggest that about one-quarter of all agricultural households are landless, a detailed case-study in the Myanmar's Dry Zone found that as many as 60% of agricultural households were landless (Boutry *et al*, 2017). In Myanmar, conflict is an important causal factor of landlessness, related to the seizure of traditional agricultural lands by state authorizes during the period of the military regime. Generally, ethnic minorities are particularly at risk of landlessness in Myanmar, Laos and Vietnam where

© Jack Kurtz

economic and political disadvantages as well as unclear or prejudicial legal and administrative structures place them at a disadvantage. While Vietnam officially recognizes 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) in an effort to enhance forest conservation. Similar patterns are seen in Myanmar where, for example, tradition claims to shifting cultivation lands are proscribed.

Land Leases and Concessions

In order to promote national development, attract foreign investment, and achieve socio-economic goals, 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 for export-oriented commodities 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 model has been a long-enduring pattern of its agrarian history.

Land disparities

-Philip Hirsch, PhD, 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. On the one hand, 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 disparity 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 plantation 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, whereas 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 programs that sought to redress land disparity, either through revolutionary agendas of land expropriation from landlords, as happened in northern Vietnam during the 1950s for example, 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 programs, as large areas of land that are deemed underutilised and are categorised as state property have been leased to large scale investors.

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

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 promote investments and stimulate agro-industrial activities requiring a large capital investment 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 basin, which would 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 thought 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 2000, and a bit earlier in Myanmar with the waste-land instruction released under the military government in 1991, the governments of Cambodia and Laos have developed legislation allowing the representative of the State to grant agricultural land concessions. The processes were in full swing especially between 2006 and 2011 (see Figure 4).

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 reconsidered as a key asset to generate profit.

© Jack Kurtz

Figure 4: Area under agriculture and tree-crop concessions, over time, in the Mekong

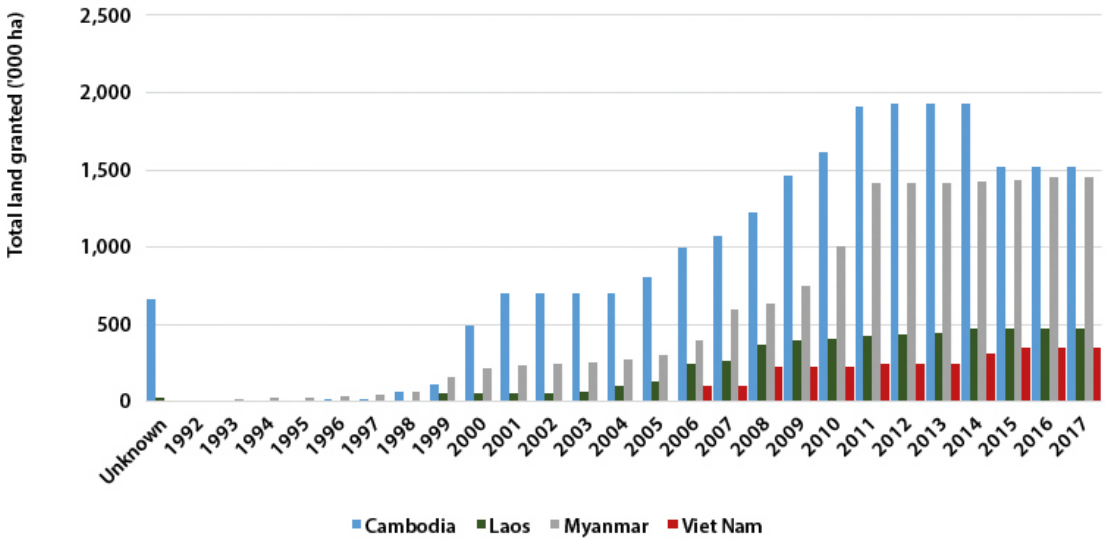


Table 3: Agricultural, tree crop and mining concession in the Mekong region (number and area)
Data source: see Methods annex.

	Smallholder farmers cultivated area (ha)	Concessions for agricultural and tree production			Mining Concession	
		No.	Area (ha)	Area as percentage of land cultivated by smallholder farmers	No.	Area (ha)
Cambodia	3,304,738	256	2,180,683	66%	267	3,398,649 (exploration and in operation)
Laos	1,666,822	496	500,091	30%	595 (362 in operation)	8,346,565 (360,374 ha in operation)
Myanmar	12,794,187	4,425	2,086,892	16%	N-A	
Vietnam	7,772,045	7	344,289	4%	N-A	
Thailand		0	0		0	

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 represent respectively 66, 30 and 16 percent of the area cultivated by smallholder farmers (Table 3). This is proportionally high considering that agricultural household 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 margin of manoeuvres are more limited, Vietnam has passed a legislation allowing expropriation for 'economic' development'. And the promotion of large scale development follows also 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 although it does not occur through formal concession agreements.

However, the concession landscape is not limited to the production of agricultural commodities and (fast growing) trees. Concession agreement between government and investors, are also mobilized in the mining sector (stone, minerals and precious stones extraction), usually consisting of an exploration and then an exploitation licenses. To the notable exception of Laos, mining concessions is not examined and monitored as their agricultural and tree crop counterparts. As a result, it is different to estimate accurately the area under exploration and effective exploitation. Nonetheless, figure shows they are significant and potentially represent a threat to smallholder farmers, particularly when exploration activities pave the way for effective exploitation (see Table 3).

The geography of the agricultural land concessions share similar patterns in the different countries of the Mekong. They are essentially 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 16).

© Phoung Nguyen

Hydropower and land use change in the Mekong River Basin

-Kim Geheb, PhD, 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 "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 sector[11] , while fully 30% of all 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.

There are very few studies addressing the impact of hydropower development on land use. Nevertheless, dams development can generate significant land use change. Perhaps the most obvious way in which this happens is through inundation. Laos has 30 commissioned dams of over 15 MW and above installed capacity. The 24 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 because of 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 quality.

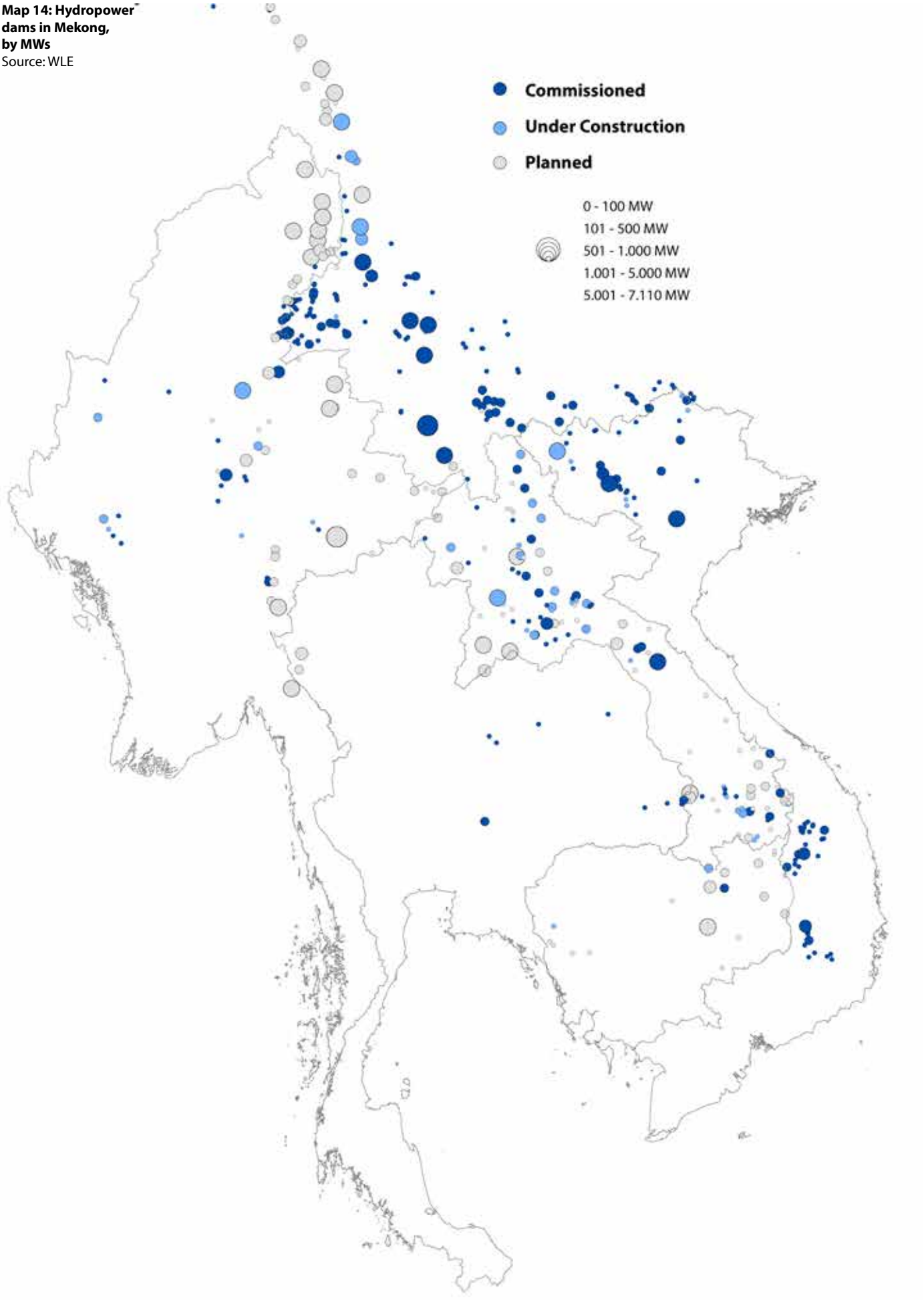
The physical presence of dams and associated reservoirs can rapidly accelerate land use change in the vicinity. Two studies from China (from the Manwan (1,670 MW) and Jinghong (1,750 MW) hydropower dams) both show significantly accelerated land use change in the reservoir vicinity, with greatest intensities the closer to the reservoir one moves. 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/or agricultural expansion. In Laos' Ca River Basin, there is clear evidence of land use change along roads and rivers. Agricultural intensity and deforestation are high along these is high along these (Thongmanivong 1999). Further changes associated with hydropower dams are the development of transmission lines and the service roads created to support these, resulting in further deforestation. The transmission line corridor associated with the Nam Ngum 3 dam in Lao PDR, for example, will affect 500 ha of land, about 60% of which is covered in various forest categories (NN3PC 2011).

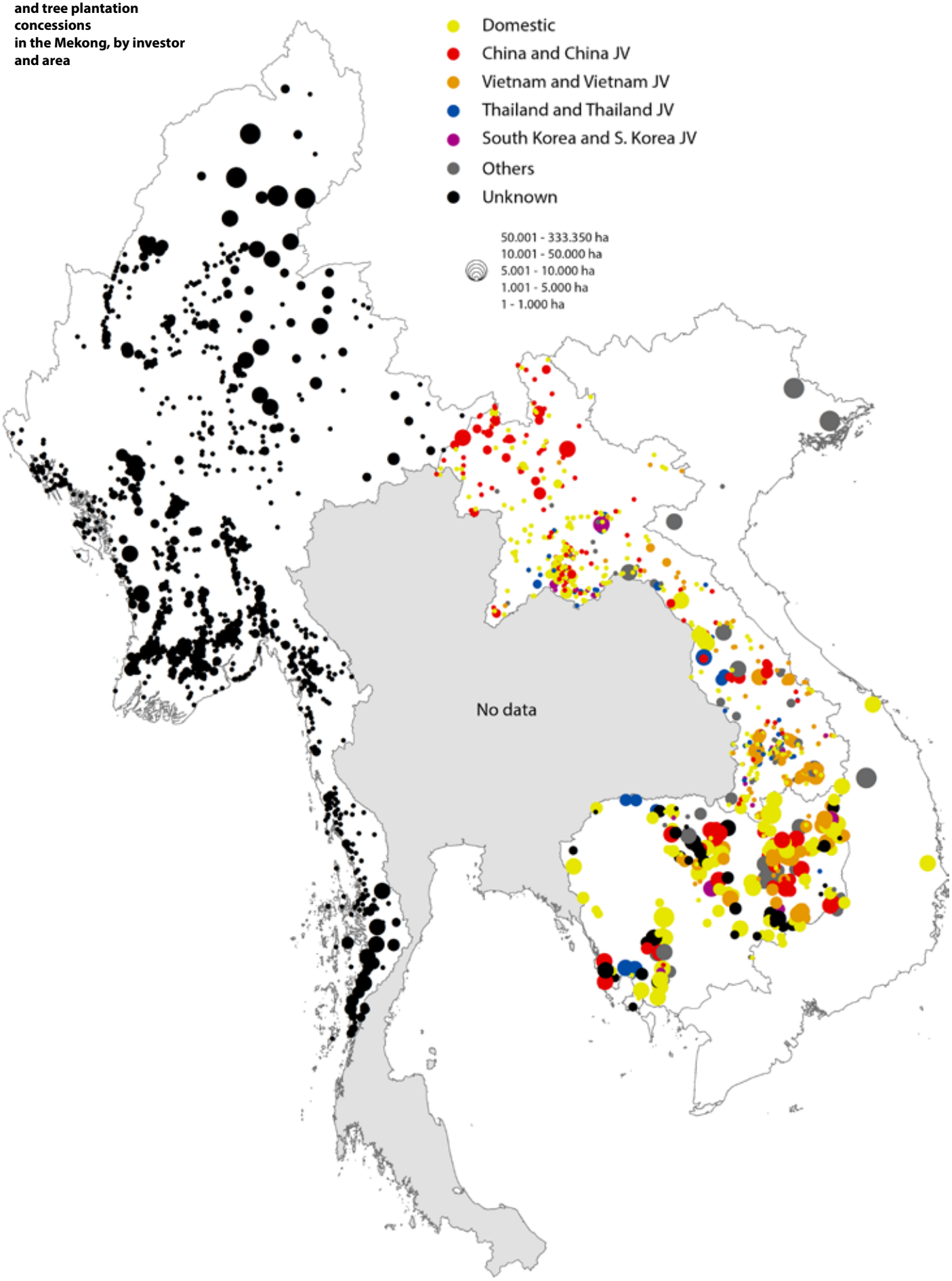
A final consideration for land use and hydropower relates to resettlement. Resettlement is not only associated with hydropower, and its magnitude is also difficult to determine. Resettlement opens up new lands to exploitation and land use change. Where resettled communities merge with existing ones, competition for land and other natural resources typically intensifies. Resettlement serves to concentrate large numbers of people. In many of the Mekong countries, no explicit provision is made to for resettled people to take advantage of non-agricultural or forest opportunities. Rather, agricultural activities remain central to resettlement planning, and the exploitation of forest resources typically follows suit (see, for example, Nguyen *et al*. 2007; Lestrelin *et al*. 2005).

[11] AQUASTAT: http://www.fao.org/nr/water/aquastat/water_use/index.stm

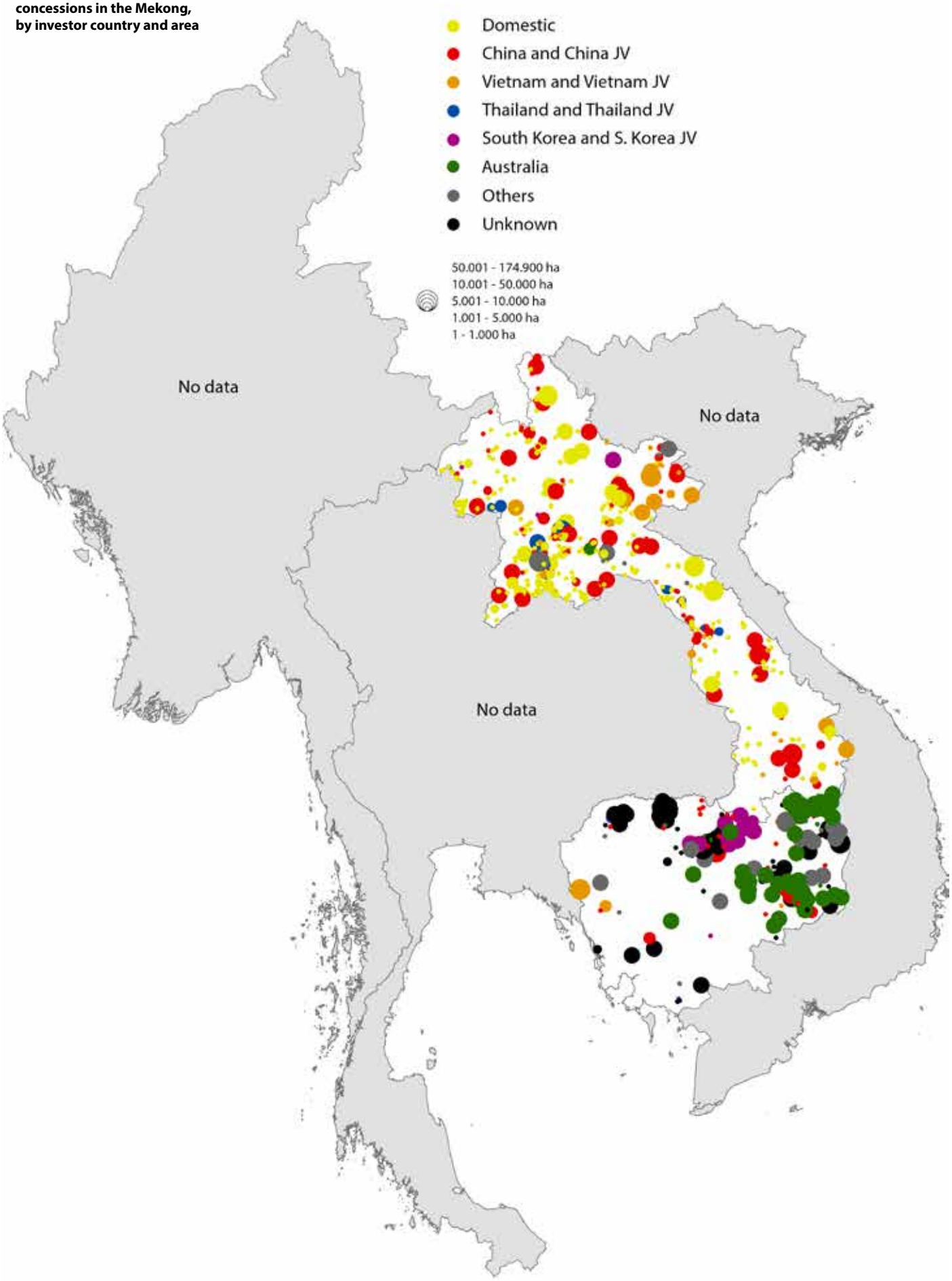
Map 14: Hydropower dams in Mekong, by MWs
Source: WLE



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



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



© Jack Kurtz

As far as land use is concerned, 76 percent of the total area under concession[12] crops is devoted to so-called boom crop that have benefited, at some stage, from attractive markets over the last two decades. In particular, rubber, tree plantation (acacia and eucalyptus) and sugar cane represent more than 70 percent of the concession area at the Mekong level (see Figure 5). Annual crops such as cassava and corn lag behind because they are essentially smallholder crops.

However, the results of large scale concessions have been largely disappointing and have mostly translated into fundamental problems for the communities and risks for the investors and the government: smallholder land dispossession, market vulnerabilities, land conflicts and environmental degradation. A fundamental problem is that most the land granted for concessions was in fact occupied or used by communities under customary tenure arrangements (individual and collective). And because the process of recognition and registration of land rights on these land has been slow, the overlap of land claims resulted in many conflicts and sometimes forced dispossession of local communities. The lack of transparency revolving around these land deals combined with a clear non-compliance with environmental and social impact requirements means that local communities are usually disregarded: their interest is rarely taken into account and they end out being the losers.

Others aspect is that the level of implementation of concessions has remained low. 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). The creation of jobs has been less than expected and revenue for government is lagging behind. In Cambodia in particular, the granting of concession has also been used as a mechanisms to circumvent the timber logging ban and access to timber. It has resulted in massive deforestation inside and outside the limits of the concession (Davis *et al* 2015). Land investments have contributed to national development targets (particularly in playing an important role in raising national GDP) but in the main, adverse impacts accruing to local communities and the natural environment have outweighed the benefits.

As a result, governments of Cambodia and Laos have established in 2012 moratoria on new concessions and have initiated evaluation of existing ones. The moratoria are respected and no new concession were granted since 201, expect in Myanmar where it swigs back. In Cambodia and Myanmar, processes of land conflict resolution have been activated, including through the return of land to smallholders. The future of concession is quite uncertain in the Mekong. A particular point of concern in Cambodia, Laos and Myanmar revolves around the cancellation of concession that are not performing or meeting their obligation. A central concern is to know whether they will be reproduced as State Land (thus allocated to other State-managed functions) or redistributed to smallholder farmers. These tensions are clearly palpable in current discussions in the three counties, and the policies to acknowledge and deliberate these competing interests have not been fully elicited.

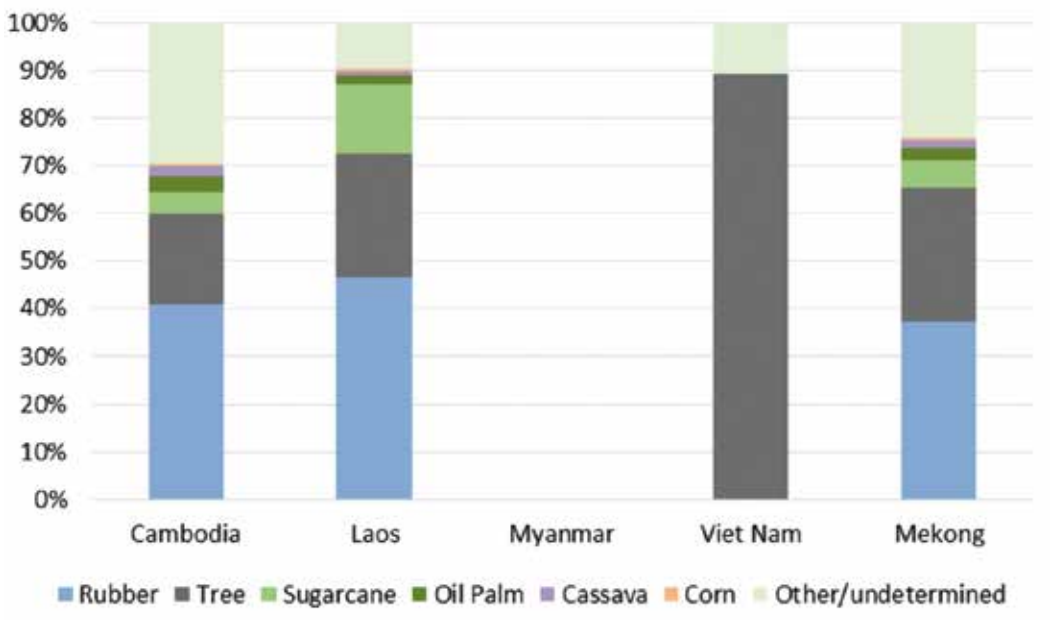


Figure 5: Distribution of area under concession by crop in the Mekong region
Source: see country chapters

[12] With the exception of Myanmar where the dataset does not allow to differentiate between different types of crops

(LSLAs) in the Global South

-Markus Giger, PhD, 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 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 both as a major site for these investments and also as a 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 globally-comprehensive set of data on recent large-scale land acquisitions (LSLAs) in the Global South. This data provide an overview on the extent, regional patterns and implementation of such land deals.[13] 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 17). More detailed analysis of Land Matrix data has shown that the availability of land and water resources are key determinant 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).

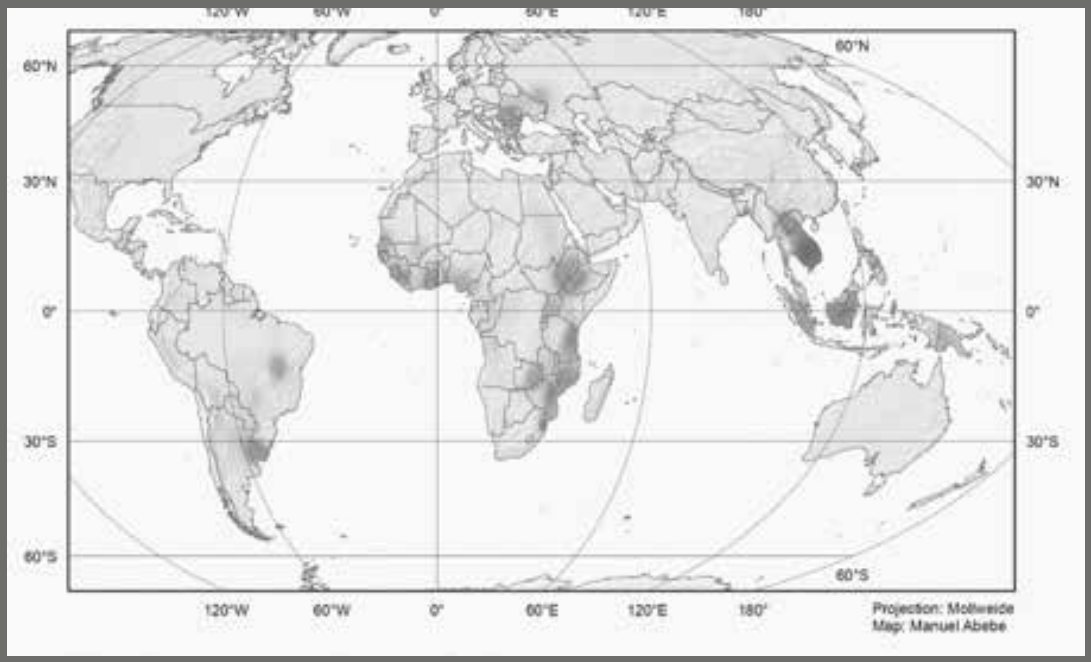
Globally, the largest portion of the area of agricultural deals is intended at food crops (38 % of the area). According to Nolte *et al*. (2016) unspecified agricultural products (23 %) and agrofuels (21%), are also important, but take a smaller share. However, in Asia, non-food agricultural commodities (29%) and unspecified agricultural products (33%) together account for 66 % of the area, while agrofuels account for a smaller share of only 16%. In Latin America food crops (50%) dominate. In Africa, agrofuels are more important (32 per cent) than in other regions, but food crops nevertheless occupy the largest share of the area (39%).

[13] 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 are involved in 31 % of concluded deals, which makes this the biggest investor region. 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, Hongkong and China). Globally, private (non-listed) companies are the most important investor category and are involved in over 40 per cent of all concluded deals. Stock exchange-listed firms account for a further 30 per cent 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 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 positively correlated with land acquisition with amount of land acquired. This material is based to a large extent on the Land Matrix Analytical Report II (Nolte *et al*., 2016)

Map 17: Global heat map of land deals (Nolte *et al*., 2016) [14]



[14] The figure above shows a global heat map of land deals in the LM indicating the target regions of land acquisitions. The higher the density, the darker the grey tones.

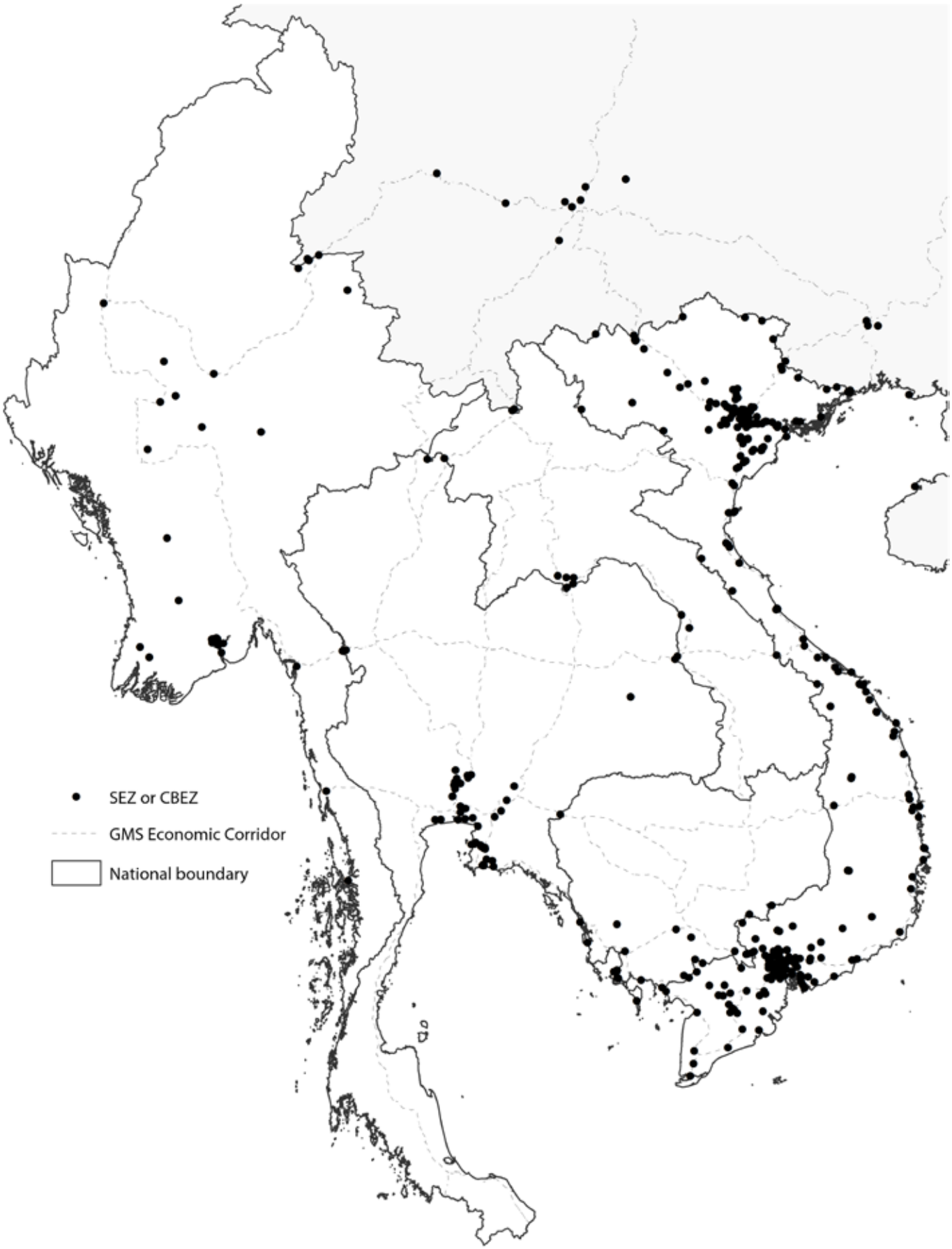
Special economic zones

While land concessions may arguably have reached a peak, other, related forums 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). These economic zones are geographic areas wherein normal legal and regulatory regimes—such as those pertaining to taxation, labor or even land administration—are suspended for the purpose of attracting foreign investment and economic activities.

In Lao PDR, a number of SEZs and CBEZs have been declared in recent years, most notably a 526,000ha concession on Bolaven Plateau to Chinese investors, an area larger by far than implementation concession granted to date. In Thailand, the military-led NCPO issued Order 17 in 2015, extending the powers of government to expropriate land for the creation of SEZs. This is in its early stages. At present, existing and planned SEZs cover 358,000 ha. In Myanmar, there are no clear regulatory mechanisms for dealing with compensating for displaced persons, leading to large issues surrounding the big SEZs and CBEZs, such as in Rakhine State and Kyauk Phyu. Dawei and Thilawa are also big SEZs, operations to resume. Lack of available data and clarity regarding the status of these make quantification difficult, but a reasonable estimation suggests that there more than 400 SEZs and CBEZs across the Mekong region, largely concentrated along the Greater Mekong Subregion's economic corridors (Map 18). More new zones expected within the coming years.

© Phoung Nguyen

Map 18: SEZs, CBEZs and economic corridors in the Mekong region
Source: Environmental Operations Center, Asian Development Bank and Open Development Mekong



Contract Farming

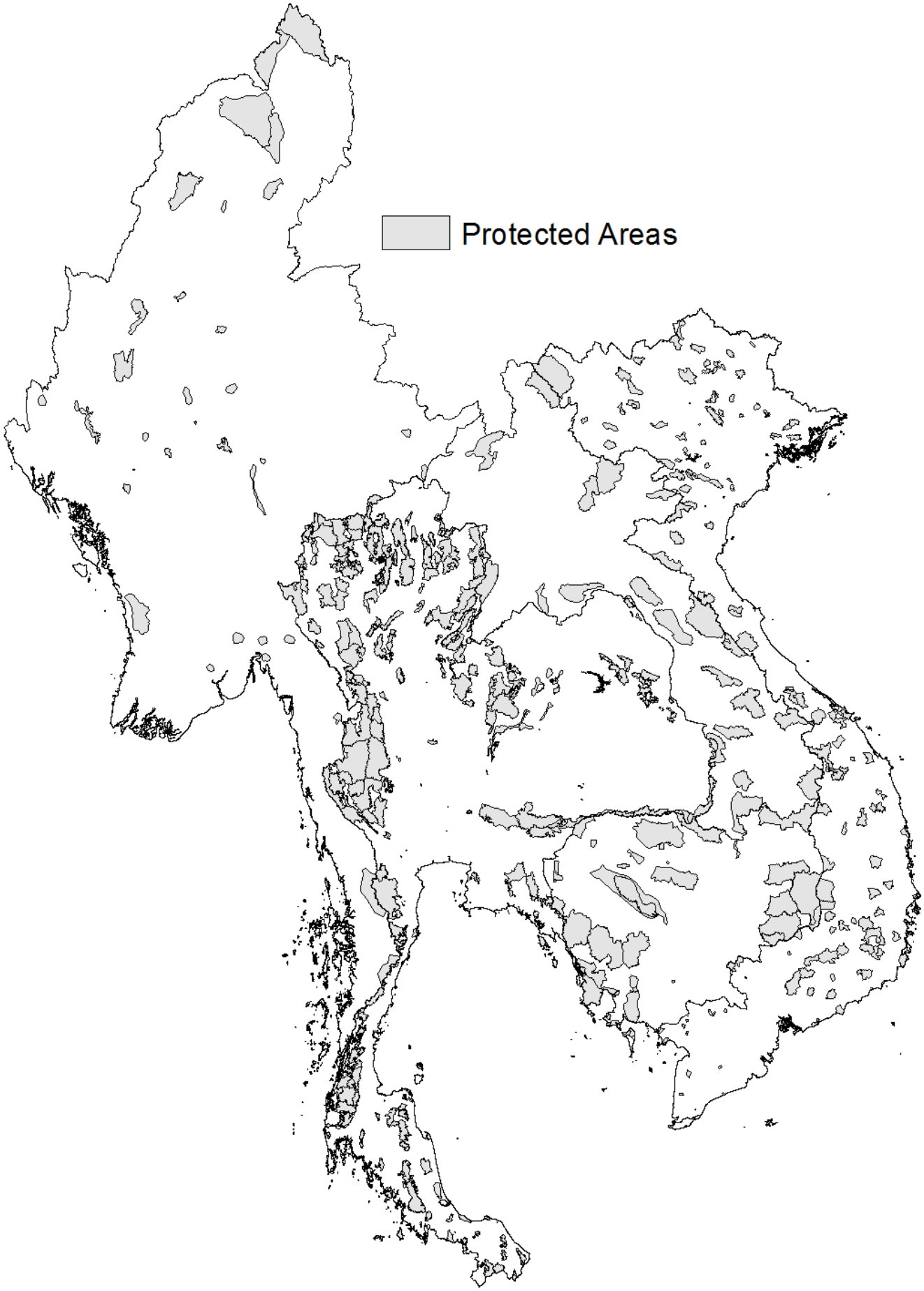
While there is some evidence to suggest that large-scale land concessions in the Mekong may have reached a peak, there are a number of signals that suggest private sector investments in land-based commodities will increasingly turn toward contract farming as a way to secure agricultural produce for export. Already, contract farming is well-established in Thailand, a context wherein privatization and more secure tenure regimes has generally precluded large-scale concessions of land. Contract farming is becoming increasingly common in large parts of Cambodia, Laos and Myanmar. While in Laos, for example, only 14% of agricultural households were engaged in contract farming arrangements in 2011, the proportion was much higher, in some areas involving more than half of the agricultural population.

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 gazettement—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 19). In Cambodia, protected areas cover 6 million ha, or 33% of total land area, in Lao PDR National Protected Areas (the most strict state forest category) involves around 3.8 million ha (or 14% 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% of the country, incorporated into National Reserve Forests and Protected Forests. Protected Areas in Myanmar are on the rise, currently involving around 3.9 million ha, or 5% of total land area. National policies relating to agricultural practices and land holding within protected areas vary significantly, as does the administration of protected areas in practice, which we explore below.

Map 19: Protected areas in the Mekong region
Source: Environmental Operations Center, Asian Development Bank and Open Development Mekong



Land securitization and the formalization of smallholder 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 resources. Tenure security regimes in each of the Mekong countries are complicated and, in most cases, have been changed considerably within the last two decades but struggle to keep up with the pace of change associated with globalization. Overlapping and contradictory legislation pertaining to land administration, large gaps between these legal frameworks and practice, and large domains of intransparency and corruption undermine tenure security across countries, despite some positive progress in recent years. Patterns within and across these tenure regimes suggest some important points of comparison.

Land and the SDGs

- Eva Hershaw, Land Monitoring and Data Support Specialist, International Land Coalition (ILC) and Ward Anseeuw, Senior Technical Specialist and CIRAD Researcher, ILC

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 fulfillment of land-related indicators. Among those that explicitly focus on land, 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 fulfillment 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 recognized 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. Indicator 5.a.2, complementary to 5.a.1, measures the degree to which national legal frameworks guarantees women's equal rights to land ownership and/or control.

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. While this task has been assigned to national statistical offices (NSOs), it also creates an opportunity for greater civil society involvement in the SDG monitoring process. This will depend, however, on the degree to which government and international agencies enable their effective participation, heeding calls for open, reliable land data and recognizing the importance of a data ecosystem around the SDGs in cases where official data is unavailable or unreliable. In the Mekong region, there are substantial concerns in this regard. While important strides have been made to improve the accuracy and availability of key data and information, significant limitations remain. These limitations potentially undermine the achievement of the SDGs themselves by restricting transparency in the monitoring process, limiting public involvement that would improve development programming and outcomes while ensuring that these outcomes are distributed equitably across society. There are also broader concerns about the degree to which civil society organizations are free to operate in the fulfillment of their purpose, both with regard to the SDGs process and in pursuing their work on land governance, more generally. Efforts to improve the openness of official data and facilitate the participation of civil society in support of 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-recognized 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 and the basis of agricultural development. In Mekong countries where the land is regarded as the property of the state[15] land holding rights are formalized through the issuance of Land Use Certificates which have similar, though lower, status than titles. Land tenure formalization through titling and land use certificates is most advanced in Thailand, Vietnam and Myanmar. (figure 6) In Thailand official figures indicate that 93% of agricultural parcels have been titled or certified to individual households. Similarly, Land Use Rights Certificates (or "red books") cover 90.1% of agricultural production land. In Myanmar, land titling coverage is similarly strong, covering 90% of eligible agricultural land. Land titling in Cambodia is considerably lower, covering approximately 66% of agricultural land holdings. Laos has, by far, the lowest coverage of titles (less than 3%), though these are largely restricted to peri-urban areas.

There are number of complicating factors associated with land titling coverage. Principal among these is the ways which land eligibility for titling is constrained. In Myanmar, for instance, only agricultural lands defined within the 2012 Farmland Law are eligible for titling, a definition which excludes all lands within the state-identified fallow and virgin lands (which comprise the majority of land holdings by forest-dwelling communities). Similarly, in Lao PDR where coverage is any very limited, all land holdings with forest lands are similarly ineligible. While we have here grouped land titles and land use certificates, the distinction is nevertheless important. Land use certificates are by their nature time-bound, contingent on renewal by state authorities.

Myanmar also presents a unique case in the Mekong, a feature of the ongoing armed conflict, producing a more nuanced picture of the status of formal tenure security and the role of the central state. 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.

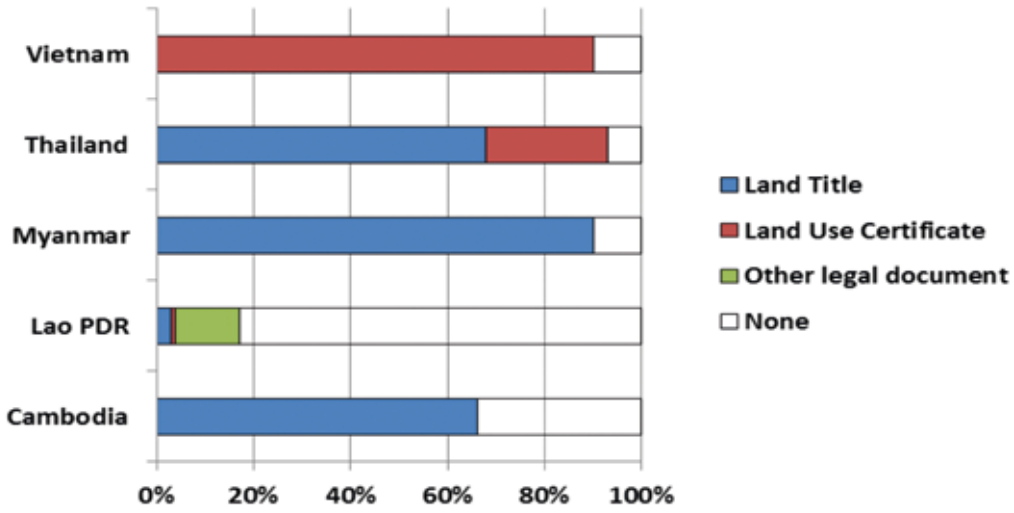


Figure 6: Distribution of land with titles, land use certificate or other legal document
Sources: see country chapters

[15] Or managed by the state on behalf of the people

While land titles and 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 land holders in a better position with regard to compensation. Secondary forms of documentation have also been used to demonstrate land claims, including land tax receipts, 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.

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 of themselves be sufficient to cover all legitimate claims. In each of the Mekong counties, this is formally recognized in principle within existing legislation or policy. Despite this, the application of such policies are unclear and, often, arbitrary and inequitable. This is perhaps particularly true in Myanmar, where recognition of customary tenure claims are recognized in the National Land Use Policy, but have not been recognized or operationalized in existing legal frameworks, which presents particular risks for communities living in VFV lands where land claims are not recognized by the state. Thailand is a similar case, where customary land uses not covered by titling generally existing within the nation's forest estate, wherein the land claims of forest-dependent communities are regarded with some ambivalence by present 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, though of the 166 communities that have applied for communal titling, only 19 have recognized thus far and the ethnic Khmer majority is ineligible. Lao PDR piloted a similar programme for communal land titling through two pilot cases, but has not progressed beyond these in large part because of technical concerns regarding how these will be implemented, but also political concerns that titling community land 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, though the implementation of this legal provision has been irregular and generally weak.

In Thailand where the privatization of land is well-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 17.

Co-management agreements have been used as a mechanism to support local land claims. In Cambodia, for example, Community Forestry schemes and Communal 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.

© Justin Mott

Land governance

The governance of land resources in the Mekong region plays a determining role in that ways in which the resource base is distributed, they was in which land claims are evaluated, negotiated and contested, and, through these, the conditions of the land resource bases and the ways in which the costs and benefits of land use and change are distributed across society. 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 the power relations between these. In the Mekong, the central importance of the land-related sectors in national economies and development pathways places particular importance on the governance of land, as something symptomatic and indicative of governance conditions more generally.

Regulatory frameworks pertaining to tenure security and resources access

There is a wide degree of variance in regulatory 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 are needed to grapple with the new opportunities and risks presented by globalization. This gap between the rapidly changing global drivers and the 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 rectified decades-long inequities in the administration of land.

Despite these important advances, there remain a number of insufficiencies in existing legislation and, in some cases, some signals indicating a regression from the principles of good governance. 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, while at the same time forcing the eviction of forest-dependent communities in many areas of the country. In Myanmar, while the NLUP was widely debated and informed through public consultation, the draft Farm Law has generally been elaborated behind closed doors. Particularly in Laos, Cambodia and Myanmar, irregularities in the development national legislation, formal policies and government, and the issuance of decrees and resolutions outside of the normal operations of legislative processes have led to legal pluralism, wherein legal frameworks contain internal inconsistencies and contradictions, undermining legal clarity and the ability to effectively address land disputes. This is perhaps most striking in Myanmar, where 73 different laws relating to the ownership and management of land, some of which remain in effect since the colonial period.

Relatedly, there are 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 between state-controlled areas and those administered by armed groups.

Tenure Security and resources access in practice

Whatever the current status of legal frameworks, a key issue across the region is that 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, but have had limited traction in addressing the sub-national practice of land governance or in their ability to address entrenched issues of corruption and the unaligned actions of local officials and agencies, particularly where conflicts of interest emerge 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 large 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 are often intransparent and effectiveness is limited.

In all countries, compensation is either not given or, when given, is inadequate and below market rates. This is particular true where land holders 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.

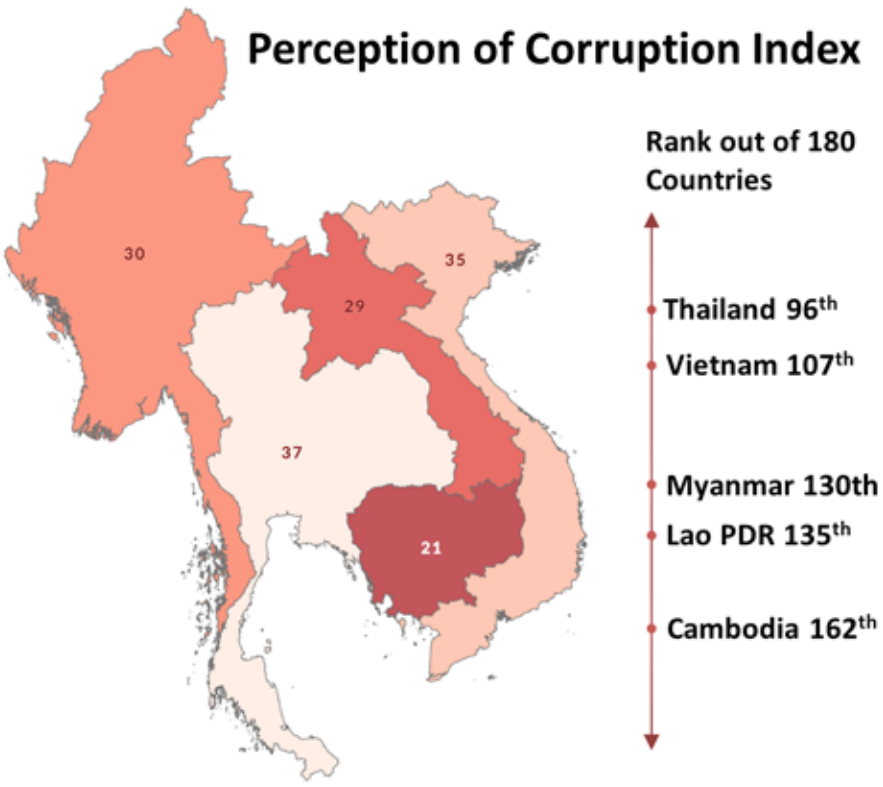
Cutting across all of these issues is the persistent problem of public corruption, an issue that is becoming increasingly apparent within state institutions that have struggled to enact sufficient reforms. The Mekong region in general ranks high in the perception of corruption, though particularly in Cambodia and Lao PDR. There are, however, some points of encouragement. The Mekong countries received higher scores in 2016 (see Map 20) compared with 2015, with the exception of Lao PDR (which achieved a lower (worse) ranking in 2016 versus 2015) 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, in general ethnic groups that comprise a minority of the national population in each country (the majority of these groups by number) are largely distributed in the uplands and peripheries of the region, tend to be poorer, and less politically-powerful than dominant ethnicities that occupy the lowland areas around 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 the agricultural practices and customary management of land conflict with national priorities and legal frameworks which, by and large, reflect the interests and norms of dominant, lowland people 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 land otherwise claimed by the state. That many ethnic minority people have not been granted full citizenship presents a particular problem, undermining legal protections and access

Map 20: Perception of Corruption Index
Sources:Transparency International[16]



[16] https://www.transparency.org/news/feature/corruption_perceptions_index_2017

to justice. In Myanmar, conflicts between ethnic groups is the most pronounced, where armed conflict has generally clustered around ethnic identity. Indigenous agricultural practices of Naga and other minorities that involve shifting cultivation in VFV lands have been particularly sanctioned, 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 general inclusion as ostensibly co-equal citizens of the larger society in Laos.

In a region where the state plays a dominant role in the administration of land and where civil liberties face some restrictions compared to some other countries in the world, civil society organizations play a particularly important role in seeking to bridge the gap between rural communities and government agencies, while serving a role as mediators and advocates for under-represented groups, including ethnic minorities. The space for civil society across the Mekong region varies significantly across countries and, within each country context, there have been significant changes in recent years. In Myanmar, civil society organizations began to (comparatively) 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 which, over the past year in particular, have led to a shrinking space for civil society groups engaged in land-related issues. Similarly, in Cambodia, the ruling Communist Peoples Party has 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 for engaging with government on key land issues, but continue to work in a space restricted in terms of information, freedom to express dissenting views (particularly those that pertain to core government priorities, such as land-based investments or the control of resources by state owned enterprises). Thailand enjoys the most open civil society environment within the region and a fairly vibrant civil society. There are, however, important restrictions relating to lese majeste laws that preclude critique of the royal family (the largest single land-holder 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 have also led to a general regression in freedoms.

Gender and land

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.

Figure 7 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.

Regional dynamics of trade and investment

Regional trade of land-based commodities

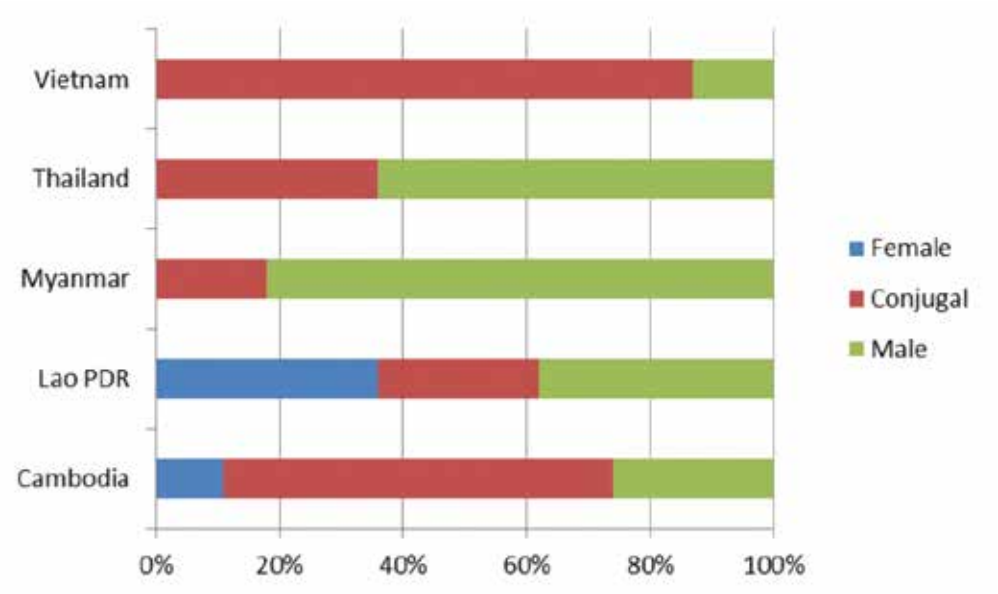
The trans-boundary trade flows of agricultural products, livestock, woods and mineral commodities indicate how land is mobilized in commercial relations between Mekong countries and the wider region.

We widen the geographic scope of the Mekong to include China and South Korea who are major players in regional trade of land-based commodities. In 2016, their balance of trade[18] was positive and significantly more important than of any other countries in the region (485 billion for China and 120 billion $US for South Korea, against 36 billion $US for Thailand and 14 billion $USD for Vietnam). In turn, Cambodia, Laos and Myanmar's balance of trade were smaller but also negative (respectively -3, -4 and -7 billion $US) indicating these three countries are net importer of goods (Asian Development Bank, 2017).

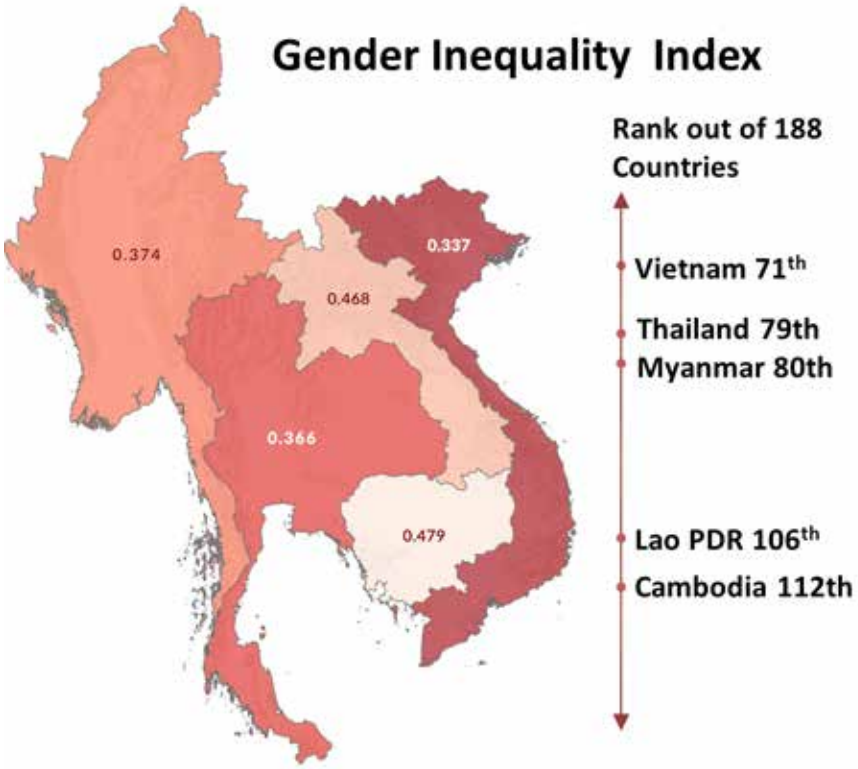
To make sense of trade flow, we use cumulated trade volume for a 10-year period (2006-2015) and we limit the regional analysis to export from CLMVT to Thailand, Vietnam and China and South Korea[19]. The statistics from importing countries are preferred to those of exporting countries such as Cambodia, Laos or Myanmar which are considered to be less reliable as they do not report cross-border illegal trade.

To set the scene, it is necessary to make some preliminary observations. First, the volume of trade of all goods from CLMVT has significantly increased through the reporting period (by 135 percent between 2006 and 2015), a conclusion that is held to be true when considering the trade of solely land-based commodities. In a context of economic growth, this evolution reflects the increased commercial inter-connectedness between Mekong countries and the world. Additionally, the largest share of trade flow (75 percent) goes outside the region (USA, Europe, Australia) and is mainly non land-based (69 percent). Yet, the trade of land-based commodities has a more regional dimension as 40 percent of their export from CLMVT goes to the Mekong, China and South-Korea.

Figure 7: Distribution of land titles and by sex in the Mekong
Sources: see country chapters



Map 21: Gender Inequality Index
Sources: Gender Inequality Index[17]



[17] http://hdr.undp.org/en/content/gender-inequality-index-gii

As shown in Figure 8 there is an important asymmetry in traded volumes between countries in the region. For instance, Cambodia export value in land-based commodities represent only 4 percent of the value of these goods exported by Thailand to the region. Cambodia, Laos and Myanmar export proportionally more to Vietnam and Thailand if compared to direct export to China. While Cambodia and Laos export predominantly agricultural products and timber and wood products to Vietnam and China, they export proportionally more minerals to Thailand. Myanmar main exports to Thailand and China are also minerals. Land-based commodities trade flows from Thailand and Vietnam to China and South Korea (see Figure 8) constitute the largest share of the regional trade. Thailand export a great deal of rubber while Vietnam exports proportionally more minerals and other crops.

A bulk of land-based commodities exports from Cambodia, Laos and Myanmar is predominantly destined for Vietnam and Thailand and to a lesser extend to China. However, most land-based commodities flow between Thailand and Vietnam to China. In this sense, the region is a segment of a wider world-system with China as core, Thailand and Vietnam as semi-peripheries, and Cambodia, Laos and Myanmar as peripheries.

The case of boom crops and agricultural commercialization

Increasing global connectivity and the acceleration of trade has resulted in the exponential growth of global agricultural commodities. The Mekong region lies at the center of many of this phenomenon, with direct implications for the agricultural conditions. Four of the five Mekong countries figure within the top ten global producers or exporters of, variously, rice, rubber, cassava, sugarcane and 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 or natural rubber. 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, and second largest producer or exporter of rice, cassava and sugarcane, and third largest producer of palm oil.

© Thomas Calame

[18] The balance of trade is the difference between the monetary value of a country's exports and imports over a certain period. A positive balance of trade means that value of exported goods is higher than of imported ones

[19] All statistics retrieved at UN Comtrade: https://comtrade.un.org/

Globalization, trade flow and land use change

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

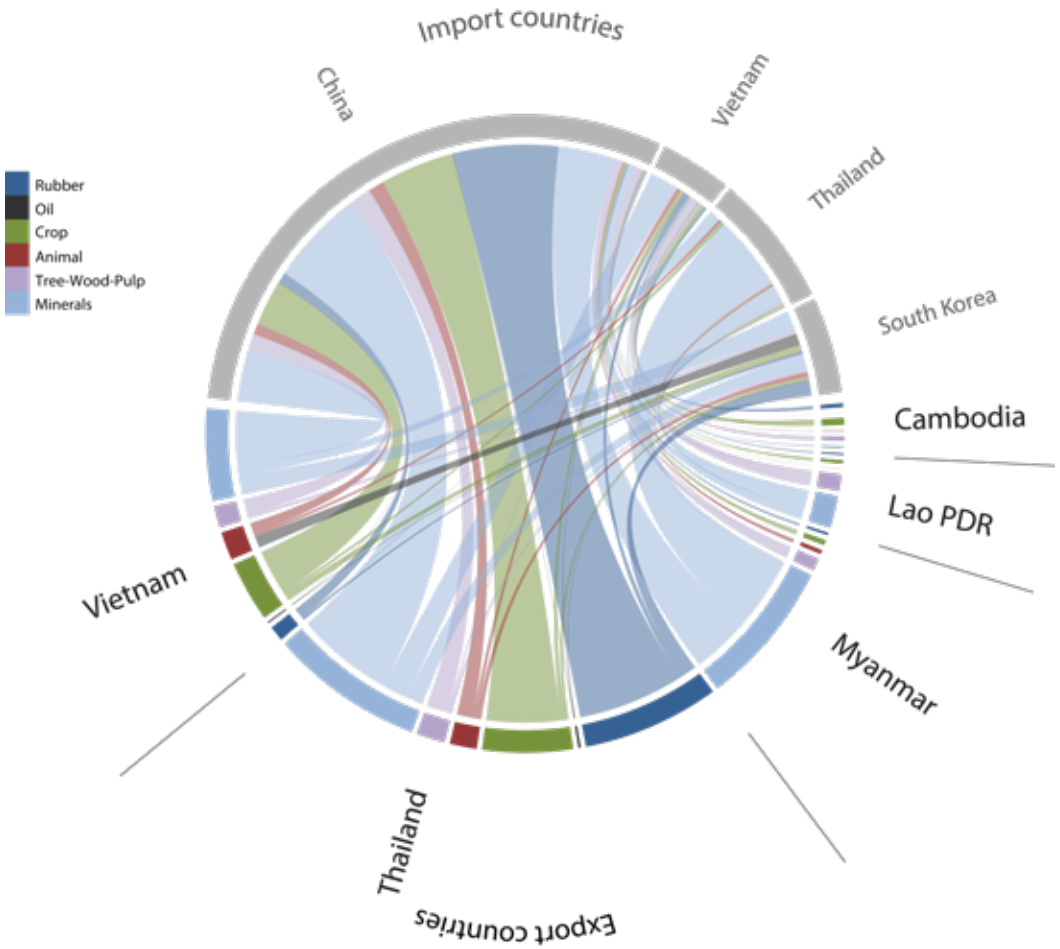
The rapid increase in the production and trade of land-intensive commodities in the Mekong region is large and accelerating, and mirrors similar growth in such commodities globally. Understanding the ways in which the production and trade of commodities from the Mekong influences patterns of land use 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. Globalization 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, over local markets, extension services and governance regimes (Lambin and Meyfroidt, 2011). Lifestyle changes and rising consumption patterns of high-income and emerging economies, including in particular 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 globalization 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).

Globalization 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 rising 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 and the USA´s Lacey Act for legal timber, and the EUs 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% by 2020 (Climate Focus, 2016).

Figure 8: Cumulated regional trade flows of land-based commodities from the Mekong region, 2006-2015[20]
Sources: UN Comtrade database[21]



© Vincent Roth

© Justin Mott

[20] Arrow widths are proportional to trade volume

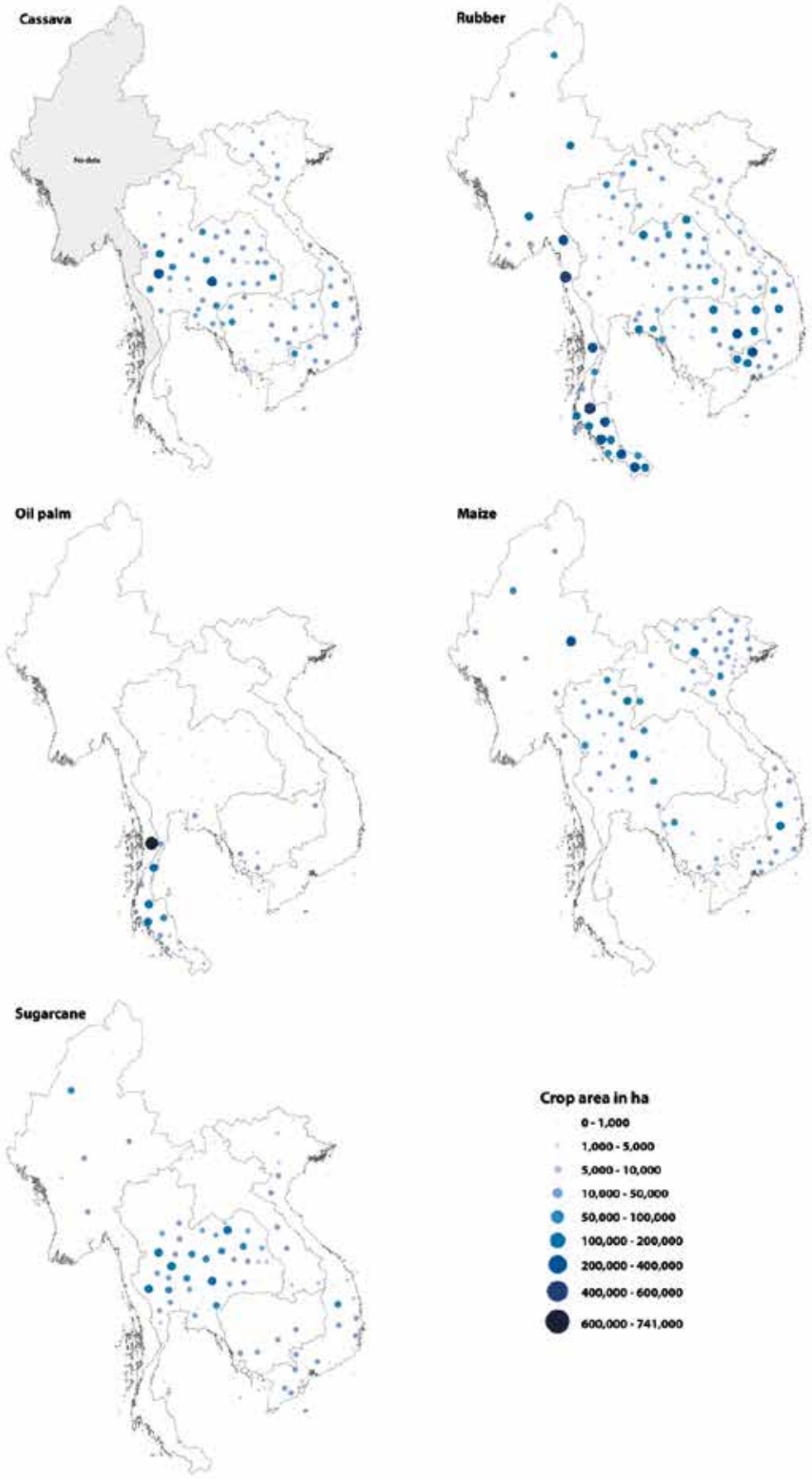
[21] https://comtrade.un.org/

While rice production and export has a long history in the Mekong, the so-called boom crops have generally not been significant products until the turn of the 21st century, with only minimal levels of production before 2008, with the notable exception of rubber. At present, the key boom crops—cassava, maize, sugarcane, rubber and oil palm—together comprise more than 30% of the total cultivated are of the Mekong, covering a total of 17.1 million ha, roughly equivalent to 60% of total rice production land. Among these, rubber holds the largest share, with 7.6 million ha. For all of these crops, except maize (where Vietnam leads with a slightly higher share), Thailand leads by a sizeable margin. The land area devoted to these crops is distributed unevenly across the Mekong, relating to trade and transport dynamics, land suitability and local sociopolitical conditions (see Map 22). In all of this, China figures prominently as a major global consumer of all of these products, a likely (if only partial) 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 agricultural toward commercial markets. While the commercialization of agriculture has been well-advanced for many years in Thailand, Vietnam and, to an extent, in Myanmar, this has significantly accelerated in recent years in Laos and Cambodia, as well as the large rural and upland areas through the Mekong. In Laos, for example, fewer than 6% of agricultural households were producing primarily for markets in 1999. By 2011, this number had increased to 33%, with some areas of the country significantly higher, with more the half of the agricultural population producing primarily for market. While the rapid rise of export commodity crop production and increasing connectedness to markets has had undoubted benefits for some communities and has played an important role in national economic growth, the outcomes have been mixed, including rise rural indebtedness as farmers borrow money to invest in commodity crop production, forest and natural vegetation have been cleared for commodity crop expansion, and land previously used for the production of food are being converted to cash crops. The ways in which the costs and benefits of agricultural commercialization and market integration have played out differentially 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, with increasing market integration has also come the rise of large-scale land acquisitions (addressed below), rising rural indebtedness and, in some cases, the dispossession of non-competitive producers. The ways in which the rural poor gain access to markets and commercial systems, and the governing conditions surrounding that access, rather than access itself, may be more important. A specific example relates to the very different ways in which smallholder rubber has played out between Thailand and Lao PDR. Thailand successfully developed a model of smallholder-led production that, in general, contributed substantially to economic development among farmers. In Laos, a similar smallholder model was adopted with the important difference that many farmers, lacking sufficient investment capital, entered into contracts with Chinese firms, with mixed but generally less positive outcomes.

The implications for agricultural diversity are particularly note-worthy: including rice alongside the five boom crops identified above, these six crops constitute more than 80% of all agricultural land in the Mekong.

Map 22: Distribution and areas of key boom crops in the Mekong region
Sources: see country chapters



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

Like the intensification of regional trans-boundary trade flow, foreign direct investment (FDI) into the Mekong has increased exponentially over the last 10 years. And here again, we note major differences between countries.

In 2015, investment in peripheral countries of Cambodia, Laos and Myanmar was low with respectively 1.7, 1.1 and 2.8 billion $US, which is low compared with Vietnam (11.8 billion $US), Thailand (5.7 billion $US) and South Korea (4.1 billion $US). With a value of 135 billion $US in 2015, the investment in China was significantly higher.

Yet, the share of foreign direct investment in land and agriculture was low: 10.3, 4.2, 2.1, 0.4 and 0.04 percent of the total FDI in Cambodia, Laos, Myanmar, Vietnam and Thailand respectively (ASEAN secretariat 2016). Agro-industries are an important aspect on this agricultural investment but direct investment in the form of large-scale land acquisition has had important consequences in terms of land use/land cover change, land tenure rights and socioeconomic transformation of local economies.

To the exception of Thailand, all countries in the Mekong region are concerned by large scale land acquisition. And Vietnam has the particularity to be at the same time a source and destination country. In fact, the regional character of these trans-boundary investment on land is undeniable. The table 4 below shows that a significant part of the investment are made by domestic funds whereas the second largest share come from investors from the greater Mekong Sub-Region and South Korea.

The combination of information about the investors, use and location of land concessions allows us to identify clusters of concession (see Map 23).

In northern Laos, a group of Chinese investment on rubber is clearly perceptible whereas in the southern part of the country, in the dynamic borderland between Laos, Cambodia and Vietnam, a diversity of domestic land-based investments are intertwined with Vietnamese agricultural concession (rubber and other crops). On the Cambodian side, the north-eastern corner of the country consist of a mosaic of Vietnamese and Chinese investments on rubber whereas domestic investment ion rubber are more prevalent in the Northern part of the country. Thai land-based investments for agricultural are more important along the Thai-Cambodia borderland, particularly in the southwest in mosaic with Chinese and domestic investment. The geography of large-scale land acquisition is less clear in Myanmar because the data set remain incomplete. However, a number of case studies shows that oil palm concession are prevalent in the south of the country (Tanintharyi region) and an important driven force is the Thai market for timber and oil. in the north-eastern part of the country (Kachin State), Chinese investment are more important as part of the opium substitution program (Woods, 2015). This particular geography of large-scale land deals, in conjunction with the trade flow of land-based commodities descried above, reveals the logic by regional big players to control access to land in order to secure the production of resources that are strategic to their domestic development and commercial relations.

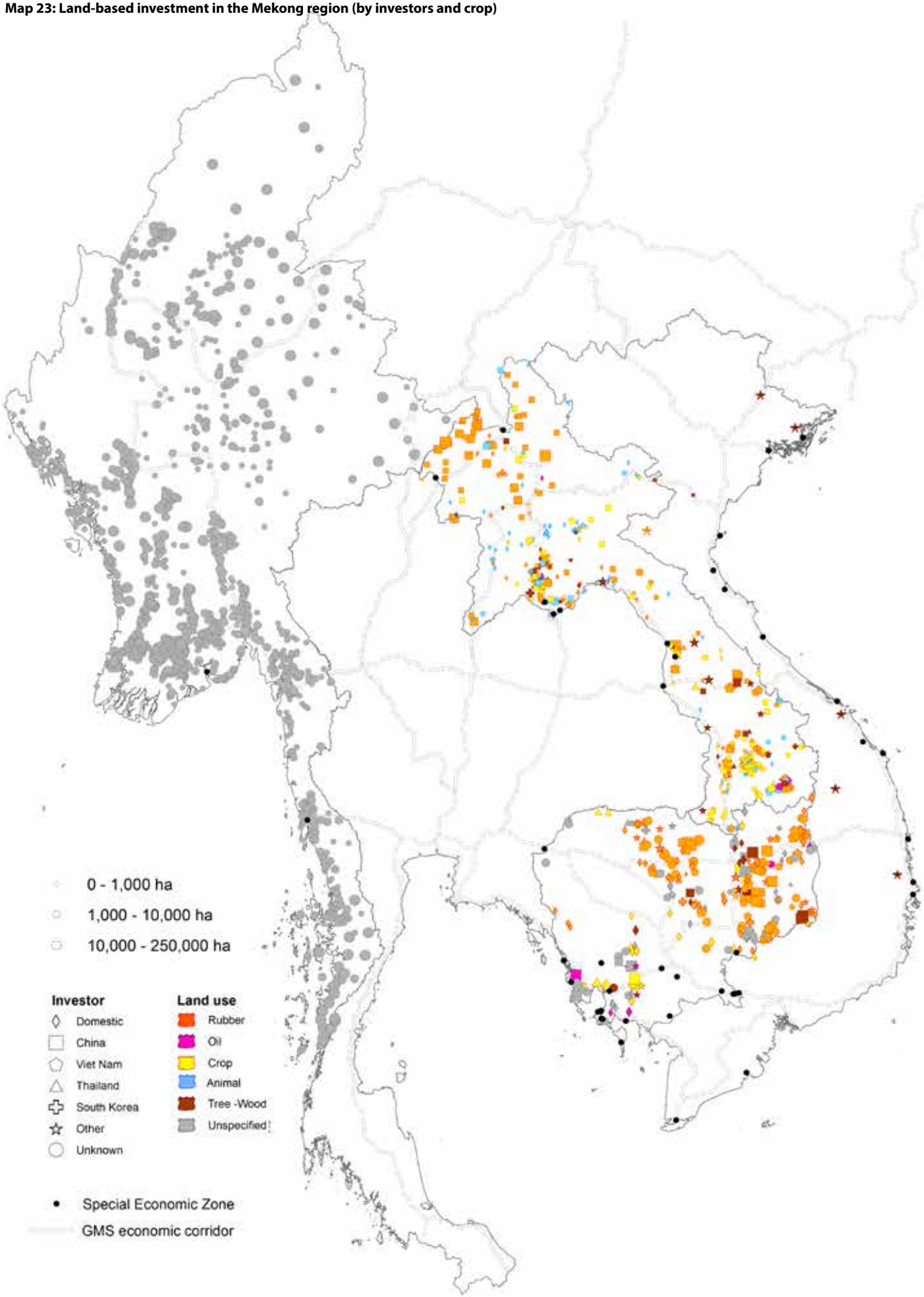
Table 4: Large-scale Land -based investments in the Mekong[22]

	Domestic Investor	China- Vietnam - Thailand - South Korea	Other
Cambodia	43.1%	36.3%	6.6%
Laos	30.8%	60.2%	9%
Myanmar	NA	NA	NA
Vietnam	0	0	100%
Thailand	0	0	0

[22] Percentages represent shares of area

[23] Indonesia =66% of total

Map 23: Land-based investment in the Mekong region (by investors and crop)



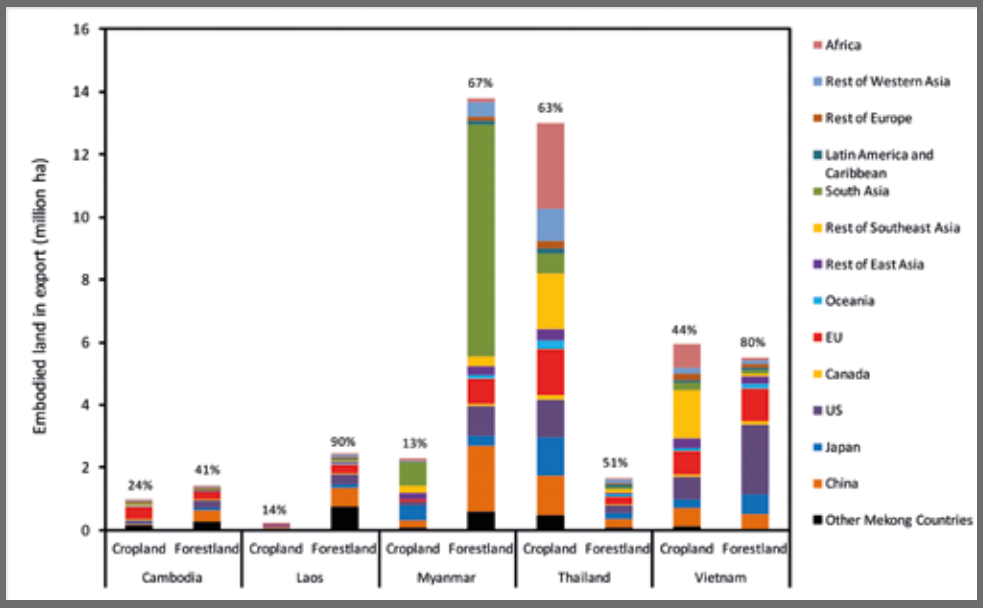
Embodied land and forest resources in global trade flows

-Klaus Hubaceck, PhD and Kuishu Feng, PhD, 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 times 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%) and Japan (92%). On the flipside, 47% of Brazilian and 88% of Argentinean cropland is used for consumption purposes outside their territories (Yu *et al*. 2010).

The Greater Mekong countries are 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 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% in Cambodia and 60% of total land use in Thailand are used for production of exports to other countries. For example, the figure below shows forestland area embodied in export in 2011. Forestland for exports ranged between 41% of in Cambodia and 90% in Laos of total designated forest production area. This land is used to fulfill the demand mainly for final consumers in the US (e.g.16 %), China (15%), and EU countries (11%). A similar picture is shown for cropland, which ranges from 14% of cropland used for export production in Laos to 63% in Thailand. This land is used for consumers in countries such as the US (10%), China (10%), EU countries (12%), and Japan (9%).

Figure 9: Land embodied in exports, Mekong region[24]



China has been a major driver of land use in the region using about 15% of exported forestland and appropriating 10% of export-driven crop land in the Mekong region. While a large share of these imported products are for the consumption of China's population and needs 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 chain but similar to the Mekong countries a net exporter of land to rich consumer countries (Yu *et al*., 2013).

[24] Notes: 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).

References

1. Bruun, T.B., Berry, N., de Neergaard, A., Xaphokahme, P., McNicol, I., Ryan, C.M., 2018. Long rotation swidden systems maintain higher carbon stocks than rubber plantations. Agric. Ecosyst. Environ. 256, 239–249. https://doi.org/10.1016/j.agee.2017.09.010
2. Bruun, T.B., de Neergaard, A., Lawrence, D., Ziegler, A., 2009. Environmental consequences of the demise in swidden agriculture in Southeast Asia: carbon storage and soil quality. Hum. Ecol. 37, 375–388.
3. Bruun, T.B., Mertz, O., Elberling, B., 2006. Linking yields of upland rice in shifting cultivation to fallow length and soil properties. Agric. Ecosyst. Environ. 113, 139–149. https://doi.org/10.1016/j.agee.2005.09.012
4. Cao, M., Wang, Z. and Huang, H. 2015. Effects of hydropower construction on spatial temporal change of land use and landscape pattern. A case study of Jinghong, Yunnan, China. Proceedings of the 3rd International Conference on Advances in Energy and Environmental Science 2015. DOI: 10.2991/icaees-15.2015.20
5. Charmes, J. 2000. The contribution of informal sector to GDP in developing countries: assessment, estimates, methods, orientations for the future. Paper presented at the 4th Meeting of the Delhi Group on Informal sector Statistics, Geneva 28-30 August 2000, Available at: https://www.researchgate.net/publication/237743723
6. Climate Focus. 2016. Progress on the New York Declaration on Forests: Eliminating Deforestation from the Production of Agricultural Commodities – Goal 2 Assessment Report. Prepared by Climate Focus in cooperation with the NYDF Assessment Coalition with support from the Climate and Land Use Alliance and the Tropical Forest Alliance 2020.
7. Cotula, L., 2012. The international political economy of the global land rush: A critical appraisal of trends, scale, geography and drivers. The journal of peasant studies, 39(3-4), pp.649-680.
8. Cotula, L. and Vermeulen, S., 2009. Deal or no deal: the outlook for agricultural land investment in Africa. International Affairs, 85(6), pp.1233-1247.
9. Daniel, S., 2012. Situating private equity capital in the land grab debate. The Journal of Peasant Studies, 39(3-4), pp.703-729.
10. Dao, N. 2015. Rubber plantations in the Northwest: rethinking the concept of land grabs in Vietnam, The Journal of Peasant Studies, 42(2), pp. 347–369. doi: http://dx.doi.org/10.1080/03066150.2014.990445.
11. Davis, K. F., Yu, K., Rulli, M. C., Pichdara, L. and D'Odorico, P. 2015. 'Accelerated deforestation driven by large-scale land acquisitions in Cambodia', Nature Geoscience, 8(10), pp. 772–775. doi: 10.1038/ngeo2540.
12. Deininger, K., Byerlee, D., Lindsay, J., Norton, A., Selod, H. and Stickler, M. 2011. Rising Global Interest in Farmland. Can it yield sustainable and equitable benefits? Washington: World Bank.
13. Department of Population. 2016. The 2014 Myanmar Population and Housing Census: Thematic report on migration and urbanization. Ministry of Labor, Immigration and Population, Nay Pyi Taw.
14. Dressler, W.H., Wilson, D., Clendenning, J., Cramb, R., Keenan, R., Mahanty, S., Bruun, T.B., Mertz, O., Lasco, R.D., 2017. The impact of swidden decline on livelihoods and ecosystem services in Southeast Asia: A review of the evidence from 1990 to 2015. Ambio 46, 291–310. https://doi.org/10.1007/s13280-016-0836-z
15. Ducourtieux, O., 2006. Is the Diversity of Shifting Cultivation Held in High Enough Esteem in Lao PDR? Moussons 61–86.
16. FAO 2015. State of Food Insecurity in the World 2015. http://www.fao.org/publications/sofi/2015/en/
17. FAO nutrition tables: http://www.fao.org/docrep/007/y5686e/y5686e08.htm (last accessed April 12, 2018)
18. Fella, T., Barua, S., Tamminen, L., Hatcher, J., Basik, N. and Yin, D. 2017. 'Systematic and Rapid Assessment of Concessions Using GIS and Remote Sensing: The Case of Economic Land Concessions in Cambodia', in World Bank Conference on Land and Poverty. Washington D.C., p. 61 p.
19. Fox, J., 2000. Swidden farming and fallow vegetation northern Thailand. Geogr. J. 166, 271–271.
20. Fox, J., Fujita, Y., Ngidang, D., Peluso, N., Potter, L., Sakuntaladewi, N., Sturgeon, J., Thomas, D. 2009. Policies, Political-Economy, and Swidden in Southeast Asia. Hum. Ecol. 37, 305–322. https://doi.org/10.1007/s10745-009-9240-7
21. Fu, K.D., He, D.M. and Lu, X.X. 2008. Sedimentation in the Manwan reservoir in the Upper Mekong and its downstream impacts. Quaternary International 186 (2008): 91-99.
22. Heinimann, A., Flint, C., Bernhard, R., C Hett. 2017. Putting upland agriculture on the map: The TABI experience in Laos, in: Crains M (Ed.), Shifting Cultivation Policies: Balancing Environmental and Social Sustainability. CABI, Wallingford, UK, pp. 819–835.
23. Hickel J. 2016. The true extent of global poverty and hunger: questioning the good news narrative of the Millennium Development Goals. Third World Quarterly 37/5, 749-767
24. Jadin I., Meyfroidt P, Lambin E. F. 2015. Forest protection and economic development by offshoring wood extraction: Bhutan's clean development path. Regional Environmental Change, 16(2), 401-415, doi: 10.1007/s10113-014-0749-y.
25. Jadin I., Meyfroidt P., Lambin E. F. 2016a. International trade, and land use intensification and spatial reorganization explain Costa Rica's forest transition. Environmental Research Letters, 11 (3), 035005. doi:10.1088/1748-9326/11/3/035005
26. Jadin, I., Meyfroidt, P., Zamora Pereira, J. C., & Lambin, E. F. 2016b. Unexpected Interactions between Agricultural and Forest Sectors through International Trade: Wood Pallets and Agricultural Exports in Costa Rica. Land, 6(1), 1. doi:10.3390/land6010001
27. Jiang, S., Zeng, H., Cao, M., Wang, Z. and Huang, H. 2015. Effects of hydropower construction on spatial temporal change of land use and landscape pattern. A case study of Jinghong, Yunnan, China. Proceedings of the 3rd International Conference on Advances in Energy and Environmental Science 2015. DOI: 10.2991/icaees-15.2015.20.
28. Kastner, T., Rivas, M. J. I., Koch, W., and Nonhebel, S. 2012. Global changes in diets and the consequences for 10197 land requirements for food. Proceedings of the National Academy of Sciences, 109(18), 6868–6872. http://doi.org/10.1073/pnas.1117054109
29. Keene, S., Walsh-Dilley, M., Wolford, W. and Geis-

ler, C., 2015. A view from the top: examining elites in large-scale land deals. Canadian Journal of Development Studies/Revue canadienne d'études du développement, 36(2), pp.131-146.
30. Labrière, N., Laumonier, Y., Locatelli, B., Vieilledent, G., and Comptour, M. 2015. Ecosystem Services and Biodiversity in a Rapidly Transforming Landscape in Northern Borneo. PLOS ONE 10, e0140423. https://doi.org/10.1371/journal.pone.0140423
31. Lambin E. F., Meyfroidt P. 2011. Global land use change, economic globalization, and the looming land scarcity. Proceedings of the National Academy of Sciences, 108(9), 3465–3472, doi: 10.1073/pnas.1100480108
32. Lambin E. F., Meyfroidt P, Rueda X, Blackman A, Börner J, Cerutti PO, Dietsch T, Jungmann L, Lamarque P, Lister J, Walker NF, Wunder S. 2014. Effectiveness and synergies of private and public actions for land use governance in tropical regions. Global Environmental Change, 28, 129-140, doi:10.1016/j.gloenvcha.2014.06.007.
33. Lay, J. and K. Nolte. 2018. "Determinants of foreign land acquisitions in low- and middle-income countries." Journal of Economic Geography 18(1): 59-86.Meyfroidt P, Lambin EF (2009). Forest transition in Vietnam and displacement of deforestation abroad. Proceedings of the National Academy of Sciences, 106 (38), 16139–16144, doi: 10.1073/pnas.0904942106
34. Lestrelin, G., Giordano, M. and Keohavong, B. 2005. When "Conservation" Leads to Land Degradation: Lessons from Ban Lak Sip, Laos. IWMI Research Report 91. Colombo, International Water Management Institute.
35. McMichael, P., 2013. Land grabbing as security mercantilism in international relations. Globalizations, 10(1), pp.47-64.
36. Menon, J. and Melendez, A. C. 2011. "Trade and Investment in the Greater Mekong Subregion: Remaining Challenges and the Unfinished Policy Agenda." ADB Working Paper Series on Regional Economic Integration. Asian Development Bank: Manila, Philippines.
37. Meyfroidt P., Vu T. P. and Hoang V. A. 2013. Trajectories of deforestation, coffee expansion and displacement of shifting cultivation in the Central highlands of Vietnam. Global Environmental Change, 23(5), 1187-1198, doi: 10.1016/j.gloenvcha.2013.04.005
38. Meyfroidt, Patrick, Eric F. Lambin, Erb, K.H. and T.W. Hertel. 2013. Globalization of land use: distant drivers of land change and geographic displacement of land use. Current Opinion in Environmental Sustainability, 5, pp.438-444.
39. Mertz, O. and Bruun, T.B. 2017. Shifting Cultivation Policies in Southerat Asia, in: Crains, M. (Ed.), Shifting Cultivation Policies: Balancing Environmental and Social Sustainability. CABI, Wallingford, UK.
40. Mertz, O., Padoch, C., Fox, J., Cramb, R.A., Leisz, S.J., Lam, N.T. and Vien, T.D. 2009. Swidden Change in Southeast Asia: Understanding Causes and Consequences. Hum. Ecol. 37, 259–264. https://doi.org/10.1007/s10745-009-9245-2
41. Messerli, P. M. Giger, M. B. Dwyer, T. Breu and S. Eckert. 2014. "The geography of large-scale land acquisitions: Analysing socio-ecological patterns of target contexts in the global South." Applied Geography 53: 449-459.
42. National Institute of Statistics (NIS). (2013). Cambodia Inter-Censal Population Survey 2013 Final Report. Phnom Penh: NIS, UNFPA and JICA
43. NN3 Power Company, 2011. Environmental Impact Assessment of the Nam Ngum 3 Hydropower Project. https://www.adb.org/sites/default/files/project-document/60630/41385-013-lao-eia.pdf, accessed March 23, 2018.
44. Nally, D., 2015. Governing precarious lives: land grabs, geopolitics, and 'food security'. The Geographical Journal, 181(4), pp.340-349.
45. Nguyen, H.T., Pham, T.H. and Lobry de Bruyn, L. 2017. Impact of hydroelectric dam development and resettlement on the natural and social capital of rural livelihoods in Bo Hon Village in Central Vietnam. Sustainability 9, 1422. doi:10.3390/su9081422.
46. Nolte, K., Chamberlain, W. and Giger, M.. 2016. International Land Deals for Agriculture. Fresh insights from the Land Matrix: Analytical Report II. Bern, Montpellier, Hamburg, Pretoria, Centre for Development and Environment, Centre de coopération internationale en recherche agronomique pour le développement, German Institute of Global and Area Studies, University of Pretoria.
47. Oberlack, C., Tejada, L., Messerli, P., Rist, S. and Giger, M. 2016. Sustainable livelihoods in the global land rush? Archetypes of livelihood vulnerability and sustainability potentials. Global environmental change 41: 153-171.
48. Picciolo, F., Papandreou, A., Hubacek, K., and Ruzzenenti, F. 2017. How crude oil prices shape the global division of labor. Applied Energy. Volume 189, pages 753–761.
49. Schierhorn, F., Meyfroidt, P., Kastner, T., Kuemmerle, T., Prishchepov, A. V., & Müller, D. 2016. The dynamics of beef trade between Brazil and Russia and their environmental implications. Global Food Security. doi:10.1016/j.gfs.2016.08.001
50. Sumner A 2016. Global poverty. Deprivation, distribution and development since the cold war. London, Oxford University Press.
51. Sunderlin, W.D. and Thu Ba, H. 2005. Poverty alleviation and forests in Vietnam. Bogor (Indonesia), Center for International Forestry Research.
52. Thongmanivong, S. 1999. Land Use Changes in the Upper Ca River Basin, Xiengkhuang Provinces, Lao PDR 1995–97: Effects of Roads and Rivers. Proceedings of a Workshop supported by GTZ Sustainable Management of Resources in the Lower Mekong Basin Project on the Application of Resource Information Technologies in Forest Land and Resources Management. 18–20 October 1999, Hanoi, Vietnam. http://www.mekonginfo.org/assets/midocs/0003474-planning-cadastre-land-use-changes-in-the-upper-ca-river-basin-xiengkhuang-provinces-lao-pdr-1995-97-effects-of-roads-and-rivers.pdf, accessed March 23, 2018
53. Thongmanivong, S., Fujita, Y., Phanvilay, K., Vongvisouk, T., 2009. Agrarian Land Use Transformation in Northern Laos: From Swidden to Rubber. Southeast Asian Stud. 47.
54. UN, World poverty. http://www.un.org/millenniumgoals/poverty.shtml (last accessed 12 April 2018)
55. van Vliet, N., Mertz, O., Heinimann, A., Langanke, T., Pascual, U., Schmook, B., Adams, C., Schmidt-Vogt, D., Messerli, P., Leisz, S., Castella, J.-C., Jorgensen, L., Birch-Thomsen, T., Hett, C., Bruun, T.B., Ickowitz, A., Vu,

K.C., Yasuyuki, K., Fox, J., Padoch, C., Dressler, W., Ziegler, A.D., 2012. Trends, drivers and impacts of changes in swidden cultivation in tropical forest-agriculture frontiers: A global assessment. Glob. Environ. Change-Hum. Policy Dimens. 22, 418–429. https://doi.org/10.1016/j.gloenvcha.2011.10.009
56. WWAP. 2012. The United Nations World Water Development Report 4: Managing Water under Uncertainty and Risk. World Water Assessment Programme, Paris, UNESCO
57. WWAP. 2014. The United Nations World Water Development Report 2014: Water and Energy. World Water Assessment Programme, Paris, UNESCO Paris, UNESCO.
58. Wiedmann, T. O., Schandl, H., Lenzen, M., Moran, D., Suh, S., West, J., & Kanemoto, K. 2015. The material footprint of nations. Proceedings of the National Academy of Sciences, 112(20), 6271–6276. http://doi.org/10.1073/pnas.1220362110.
59. Woods, K. 2015. Commercial Agriculture Expansion in Myanmar: Links to Deforestation, Conversion Timber, and Land Conflicts, Forest Trends Report Series.
60. Yu, Y., Hubacek, K., Feng, K., 2013. Tele-connecting local consumption to global land use. Global Environmental Change. Volume 23, Issue 5, Pages 1178–1186.
61. Yu, Yang and Feng, Kuishuang and Hubacek, Klaus and Sun, Laixiang 2016. Global Implications of China's Future Food Consumption. Industrial Ecology . Volume 20, Issue 3, Pages: 593–602.
62. Zhao, Q., Liu, S. and Dong, S. 2010. Effect of dam construction on spatial-temporal change of land use: A case study of Manwan, Lancang River, Yunnan, China. Procedia Environmental Science 2: 852-858. Jiang, S., Zeng, H.,
63. Ziegler, A.D., Bruun, T.B., Guardiola-Claramonte, M., Giambelluca, T.W., Lawrence, D., Lam, N.T., 2009. Environmental Consequences of the Demise in Swidden Cultivation in Montane Mainland Southeast Asia: Hydrology and Geomorphology. Hum. Ecol. 37, 361–373. https://doi.org/10.1007/s10745-009-9258-x
64. Zoomers, A., 2010. Globalisation and the foreignisation of space: seven processes driving the current global land grab. The Journal of Peasant Studies, 37(2), pp.429-447.

State of Land in Cambodia: Marginalizing or Centering Smallholder Farmers?

State of Land in Cambodia: Marginalizing or Centering Smallholder Farmers?

Introduction

Since the mid-1980s, after more than a decade of war and political instability, the development of Cambodia has profoundly transformed land resources and land-based social relations. Driven by a prolific and resilient peasantry, the growth in the agricultural sector has been particularly astonishing in terms of production. Land is, however, much more than capital to be mobilized in accumulation processes. It is also a resource that shapes and is shaped by social relations between farmers, the State and market actors. Recent changes in Cambodia's land sector have significantly altered land-based relations in ways that have pushed smallholder farmers into the margins of national development. Framed by the contradictions of contemporary development processes, this chapter endeavours to draw a multifaceted and updated picture of the Cambodian land tangle. The first section below provides an overview of key demographic and socioeconomic conditions, and changes to these, surrounding the rural and agricultural population and its position within the national socio-economy. The second section follows with a descriptive analysis of the land resources base upon which this population depends, including land use and land cover, key crops, and recent changes in these. The third section describes the ways in which these land resources are distributed across society, with a particular focus on smallholders. The remaining two sections describe and assess the status of tenure security and conditions of governance that surround the broader land issue in Cambodia.

The land and the people of Cambodia: A population 'on the move'

According to the latest inter-censal survey, the population figure in 2013 was 14,676,591 (NIS, 2013). Between 2008 and 2013 the annual demographic growth rate was 1.46 percent, somewhat lower than that during the 1998-2008 period (1.54 percent) but definitively higher than that of other countries in Southeast Asia. This decrease indicates that the Cambodian demography is in transition. The total fertility rate is in decline, due to improved education and changing economic conditions, and was estimated in 2013 at 2.8 births per woman (NIS, 2013). Infant mortality is also on the decline and estimated at 33 per 1000 live births (NIS, 2013).

Nationally, Cambodia's population density is 82 inhabitants per square kilometre (NIS, 2013) but the population has been concentrated in lowland areas around the Tonle Sap Great Lake and the Mekong River where population density is much higher than in the peripheral uplands (Diepart, 2015). While urbanization, measured as a percentage of the population living in urban areas[25] to the total population, has increased from 18.3 in 1998 to 19.5 in 2008, and 21.4 in 2013 (NIS, 2013), the vast majority of the population remains rural.

By far the greatest section of the population are of Khmer ethnicity (96.3 percent), with the most important ethnic minorities being Vietnamese (1.5 percent of the population) and Cham (0.5 percent). The proportion of indigenous peoples is generally estimated to range from 1 to 1.7 percent of the population as a whole, most of whom live in the Northeast plateau area where they practice swidden agriculture (Save Cambodia's Wildlife, 2014).

There is much evidence to suggest that an increase in the mobility of the population and its redistribution through migration, both within and beyond the national border, have been central to the recent development of Cambodia. According to the 2013 inter-censal survey, 28.9 percent of the population was considered to be internal migrants (in that they had changed their area of residence inside Cambodia), representing 25.8 percent of the total population (NIS, 2013). A relatively important migration flow is the movement from rural villages to the city, mostly to Phnom Penh. According to the National Institute of Statistics (2013), rural-to-urban migrants represent 24.5 percent of the total migrant population. Migrants to Phnom Penh come from every corner of the country but migration follows a basic 'gravity model' in that there are concentrations of migrants from provinces with large populations that are close to the capital city (Ministry of Planning, 2012). Another migrant flow has, however, remained practically unnoticed in Cambodia over the past 15 years. This involves people moving from one rural area to another, very often from lowland to upland regions. The phenomenon is significant—nearly twice the rural-to-urban migration rate (representing 58.4 percent versus 24.5 percent of the total number of migrants) (NIS, 2013). To a large extent, these migrations can be seen as an expression of smallholder farmers' agency in responding to rural poverty and landlessness, which is particularly high lowland regions (Diepart, Pilgrim and Dulioust, 2014).

[25] Urban areas are designated according to criteria set by the National Institute of Statistics and have the following characteristics: (i) population density exceeding 200 per km2; (ii) percentage of male employment in agriculture below 50 percent; and (iii) total population of each commune exceeding 2,000 people.

Although poverty in Cambodia has fallen sharply, the rate calculated in 2012 using the World Bank poverty line[26] was still considerable, at 18.6 percent, with almost 3 million people classed as `poor,' more than 8.1 million in the `near-poor' bracket (World Bank, 2013). Whereas the World Bank poverty line is essentially based on the level of consumption, the identification used by the Poor Households (IDPoor) Programme of the Ministry of Planning measures poverty based on socio-economic indicators relating to housing, ownership, productivity and food security characteristics (MoP and WFP, 2012). According to this programme, the poverty rate at national level is 20.5 percent. It is widespread across the country, despite important inter-provincial differences (Map 24).

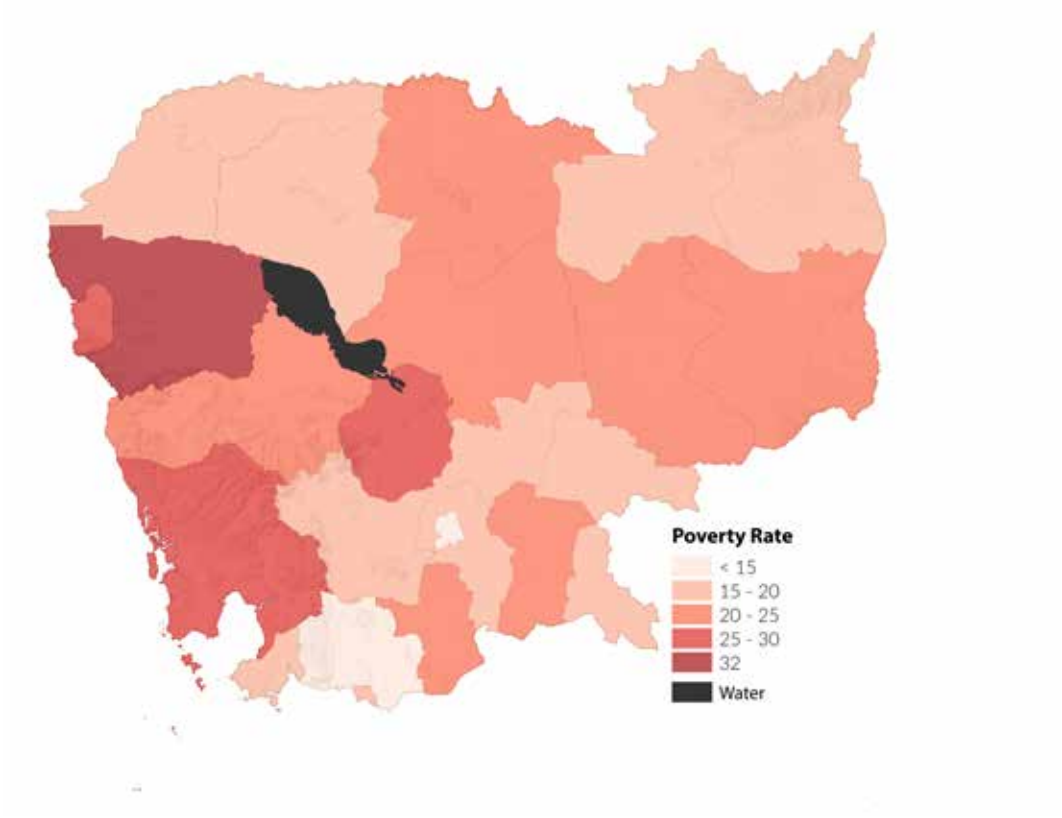
About 90 percent of poor and near-poor people live in the countryside. The actual gap between the rich and the poor has increased in absolute terms, and the majority of households that have escaped poverty have done so by only a small margin—they remain highly vulnerable to falling back into poverty (World Bank, 2013). A key source of risk for slipping back into poverty is related to rural indebtedness, as an increasing number of rural households have borrowed from micro-finance institutions to finance their development (Liv, 2013; Bylander, 2015).

An incomplete agrarian transition

Cambodia remains one of Asia's poorest countries but has witnessed dynamic and sustained growth over the past two decades. Amidst a challenging global economic environment, the annual growth in gross domestic product (GDP) between 2006 and 2016 was 6.9 percent. Agriculture is a central pillar of the economy representing 26.7 percent of the GDP (World Bank, 2017), compared with the industry and service sectors that accounted for 31.7 and 41.6 percent of GDP, respectively, in 2016.

The 2008 World Development Report (World Bank, 2007) classified Cambodia as a transforming country wherein the transition of people out of agriculture and rural areas is not keeping pace with the restructuring of the economy. Indeed, agriculture continues to provide the main employment for a majority of the total labour force. According to the commune database (NCDD, 2017), 50 percent of the population aged above 18 years (54 percent for males and 47 percent for females) have their primary occupation in the farming, livestock, fisheries or forestry sectors[27]. In provinces with more important urban centres, such as Phnom Penh, Preah Sihanouk, Kandal, Kampong Cham and Battambang, this percentage is below national average (see Map 25).

Map 24: Incidence of poverty in Cambodian provinces
Sources: Ministry of Planning, Sine die



[26] Equivalent to 4,081 KHR per day.
[27] 68.8 percent if both primary and secondary occupation are considered

A recent study suggests that by 2030 the annual increase in the economic labour force in rural area will be approximately 140,000 people (Diepart, 2016), which is lower than the annual increase that occurred between 1998 and 2004, 221,000 people/year (Lundström and Ronnas, 2006). Yet the transfer of unskilled labour from agriculture to industry and tertiary sectors will lag behind this increase in the active rural population as the total job creation in the non-agricultural sectors remains limited (Diepart, 2016)[28].

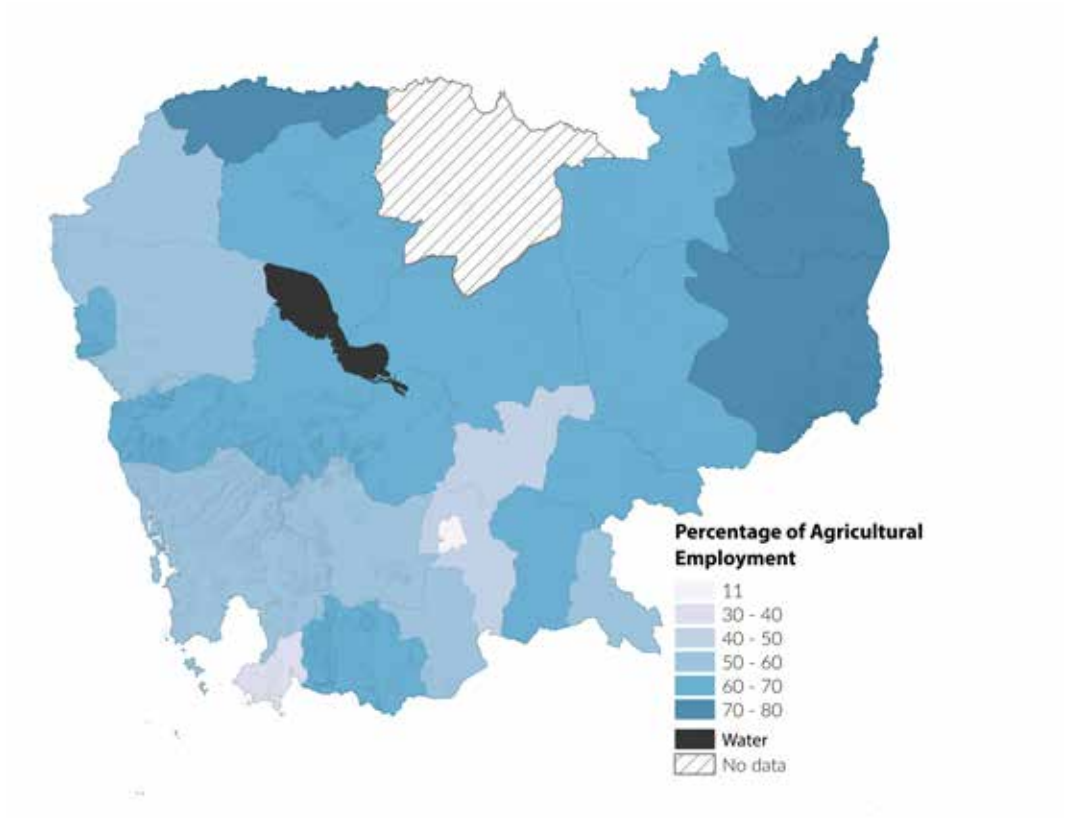
At the same time, the decline of landholding size per household due to demographic pressure on land creates key challenges for farming households: land markets, which are substantially wealth-biased, exacerbate the problem of access to land. As a result, the number of farmers living with less than 1 hectare has increased and agricultural landlessness was 29 percent in 2011 (Phann *et al*., 2015).

In this context, there is little doubt that the next generation of smallholder farmers will need agricultural land. And, in a wider perspective, job creation in the agricultural sector as well as an increase in agricultural productivities and incomes are among the core challenges that rural development policies need to tackle.

The land resource base

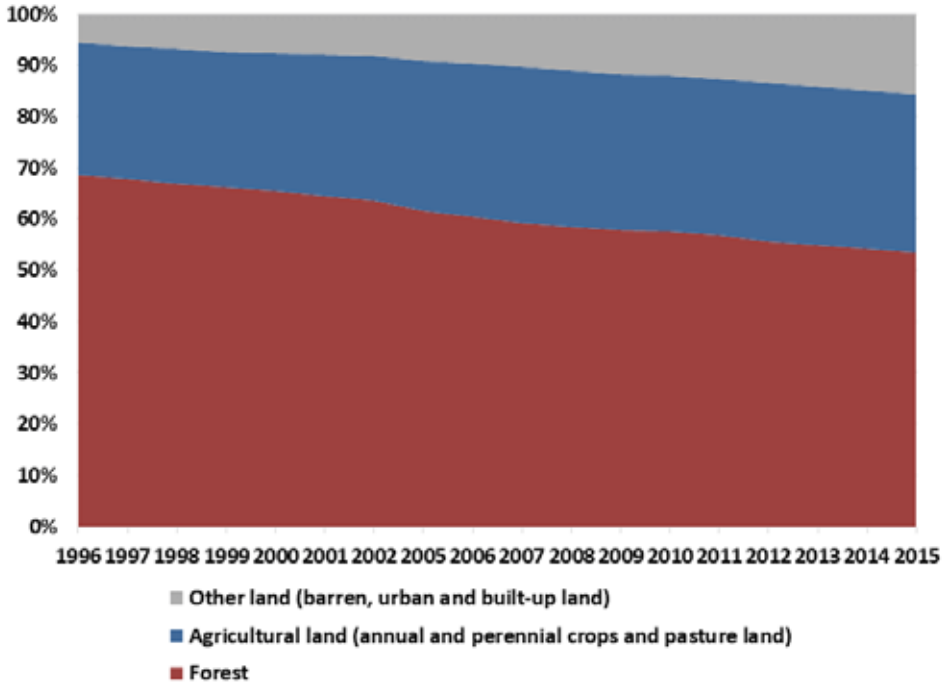
According to FAO land use statistics, Cambodian forest cover decreased by 22 percent between 1996 and 2015, currently around 53 percent of the total land area of the country (see Map 26 and Figure 10). The decrease in the forest cover – at a steady pace over the years - is a contentious issue because illegal logging is regularly reported in the media and is also under the scrutiny of environmental lobbyists. Driven by the regional timber market, deforestation has made space for the expansion of agricultural land and built-up area. The area of agricultural land increased by 19 percent between 1996 and 2015 while the urban and built-up area increased nearly three-fold over the same period (see Figure 10).

Map 25: Prevalence of employment in agriculture in Cambodia
Sources: NCDD, 2017

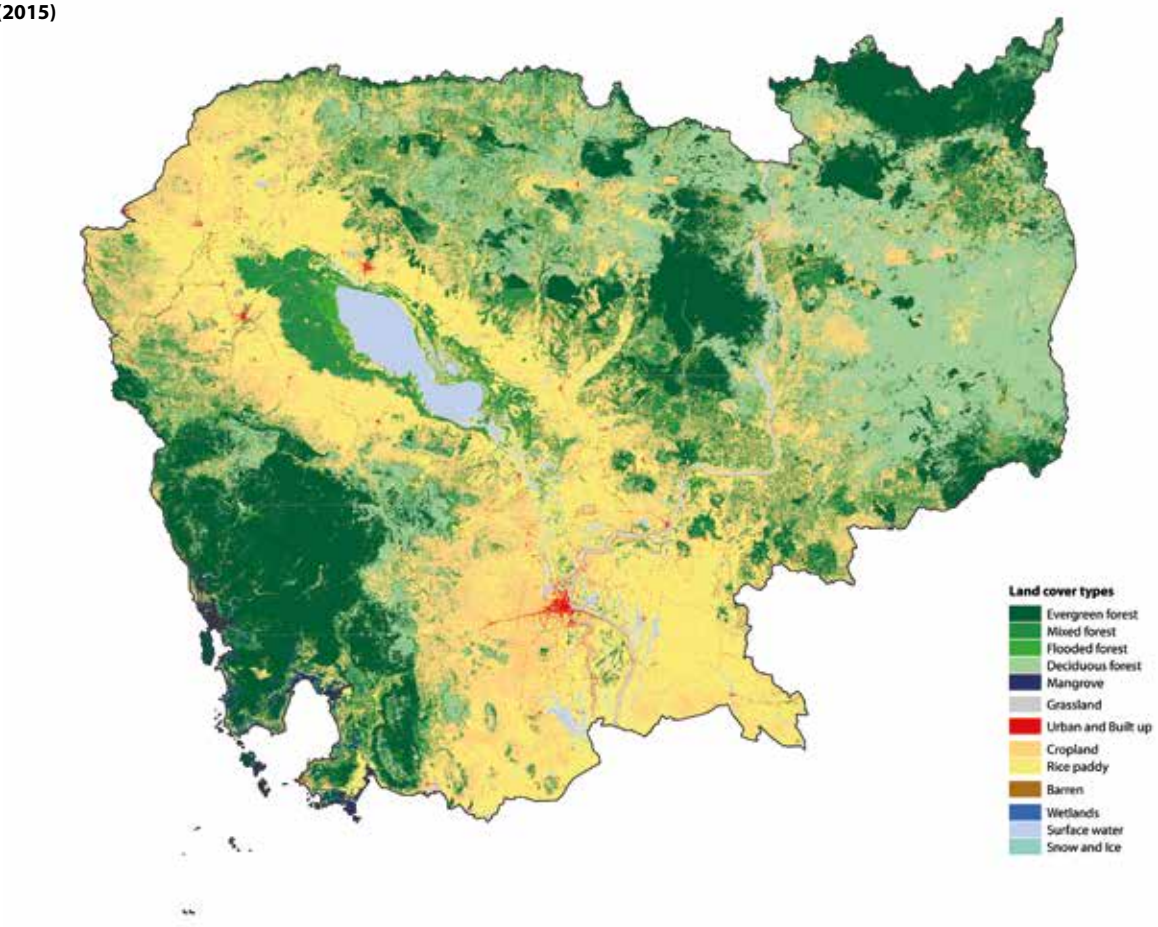


[28] The study considers that 40,000 unskilled jobs were created per year between 2008 and 2014, including jobs in the industry and service sectors together. Another study, commissioned by ILO, indicates that between 2004 and 2009, the industry sector created 162,736 jobs (27,122 jobs per year) while the number of unskilled jobs created in the service sector did not significantly increase during the same period (Chandararot and Liv, 2013).

Figure 10: Change in Land Use and Land Cover in Cambodia (1996-2015)
Sources: FAOSTAT



Map 26: Land Use Land Cover in Cambodia (2015)
Data source: SERVIR



The expansion of the agricultural area has been a key dimension of agrarian dynamics in Cambodia since the 1990s. The granting of large-scale land concessions for agro-industrial production (Economic Land Concessions - ELCs[29]) is a key driver of deforestation in Cambodia (Davis *et al*., 2015) in large part because ELCs have been granted to companies motivated not only by access to land but also—and sometimes as a primary motivation—timber. ELC contracts with the government have provided investors with the right to fell trees, allowing them to circumvent the 2001 timber logging ban (Milne, 2015). Additionally, the loss of forest has also been fuelled by smallholder farmers migrating from lowland to upland regions in search of agricultural land (as noted above). The smallholder migration has also been facilitated by the opening of land in peripheral frontiers and the development of transport infrastructures in previously less accessible areas.

Cropping patterns and diversity at smallholder farmer level

In 2013, family farmers cultivated a total of 3.13 million ha distributed across the different cropping seasons (NIS, 2015). The largest share of this area is dedicated to more than 100 types of annual crops that represent 91.6 percent (2.87 M. ha) of the total cultivated area. With a total area of 2.32 million ha[30] , rice is by far the most important crop cultivated in Cambodia (74 percent of total cultivated area), particularly in lowland regions. Far behind cereals, tuber and root crops comprise the second most important category or crops, followed by cultivated fruit trees, rubber/ tanning crops and edible nuts. Accounting for a smaller but more diverse share are fruit-bearing vegetables, oilseed crops, leguminous grain plants, spices and other crops (see Figure 11).

In the early 2000s, the boom in flex crops[31] has embraced the upland regions of the country. From a marginal area cultivated in 2003, this crop type has now gained considerable traction among smallholder farmers who cultivated 0.29 M ha of cassava and 0.13 M. ha of corn in 2013. Other important annual crops are mung beans and soybeans each accounting for about 20.000 ha.

Perennial crops represent only 8.4 percent of the total area cultivated by smallholder farmers. Rubber and cashew were the two most important crops totaling 2.6 and 1.9 percent, respectively, of the total. Mango and banana follow with 1.3 and 0.7 percent.

Crop diversity is an important dimension of agricultural systems, playing a key role in rural well-being, including with regard to nutrition-sensitive food security and resilience to changes associated with market shocks; climate change, and other drivers. In general, the commercialization of agricultural systems leads toward agro-ecological simplification and the erosion of bio-diversity and local knowledge, which are key in fostering social-ecological resilience. Diversity helps reduce vulnerability to economic and climate risks as a higher cropping diversity increases the sources of income and reduces the risks associated with changes in agricultural market conditions or with weather-related crop failure.

The Crop Diversification Index (CDI) [32] synthesizes the level of crop diversification of a given administrative or ecological area in a single value ranging between 0 and 1. For Cambodia as whole, the CDI is 0.44. However, as Map 27 reveals, there are important variations between provinces: those that are located in the lowland rice plain are less diversified because of the prevalence of rice in the overall cropping patterns and the resulting homogeneity in the agricultural landscape. The agricultural systems of the upland provinces have a higher CDI and are more engaged in cropping diversification away from rice[33].

Between 2002 and 2016, the yield of both rainy and dry season rice has increased respectively by 73 and 40 percent (see Figure 13), not only as a result of the better control of water, but also because of the use of improved varieties that have been promoted for commercialization and export. The increased use of fertilizers, and pesticides, and labour intensification on smaller landholdings, have also played a role.

In the upland regions, the advance of boom crops along the retreat of the forest frontier first took advantage of the natural fertility of soils. But heavy mechanization, repeated plough-based tillage (including on steep terrain), and the massive use of chemicals has resulted in rapid soil degradation (Belfield, Martin and Scott, 2013; Hok *et al*., 2018).

Overall, agricultural development in Cambodia has taken place at the expense of natural capital. According to the Global Land Degradation Information System, the lowland and upland regions in Cambodia are characterized by, respectively, a low and a high status in the provision of biophysical ecosystem services (biomass, soil, water and biodiversity) (see Map 28). But in both areas, the provision of these ecosystem services has tended to decline (FAO, 2017).

---

[29] For a more detailed discussion on the extent of ELC in Cambodia, see next section (Asymmetries in the distribution of land resources

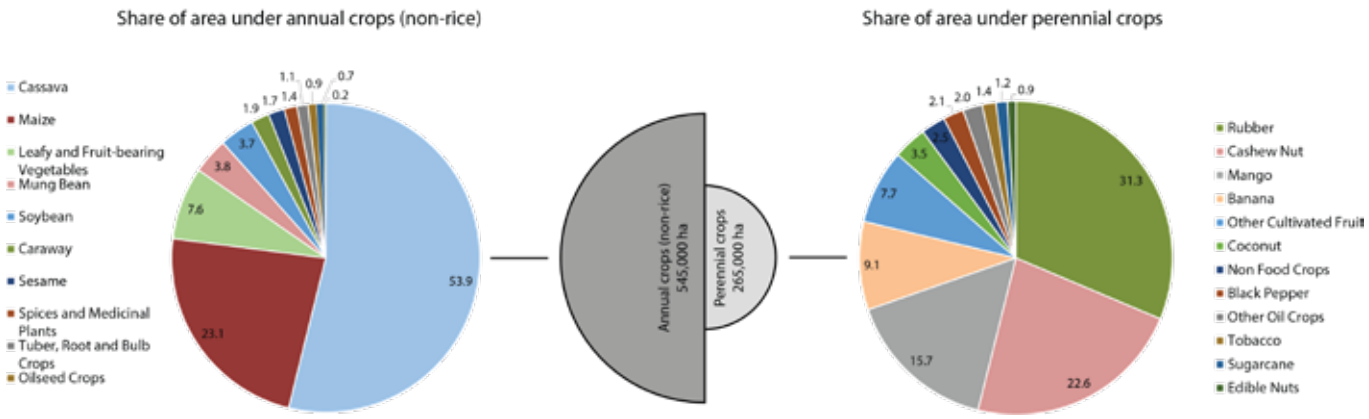
[30] With non-aromatic, aromatic and sticky rice varieties representing respectively 87, 12 and 1 percent of the total rice area.

[31] Flex crops are those crops that are used for a variety of purposes, including for human consumption, animal fodders, industrial uses and other purposes.

[32] The formula of the index is: $1-\sum(\frac{n_i}{N})^2$, where ni is the cultivated area for crops i and N is the total cultivated area. When the number and relative area of these crops increase, the value of the index increases towards 1. In reverse, a low diversification level is indicated by a value closer to 0 (Diepart et al., 2005).

[33] This crop diversification index considers provincial level data and express the diversification of crops away from rice, mainly in commercial crops. It should be noted that the household level diversity in cropping, livestock and use of common pool resources is not captured in this CDI.

Figure 11: Distribution of main annual and perennial crop types in Cambodia Sources: NIS, 2015



Map 27: Crop Diversity Index
Sources: NCDD, 2017

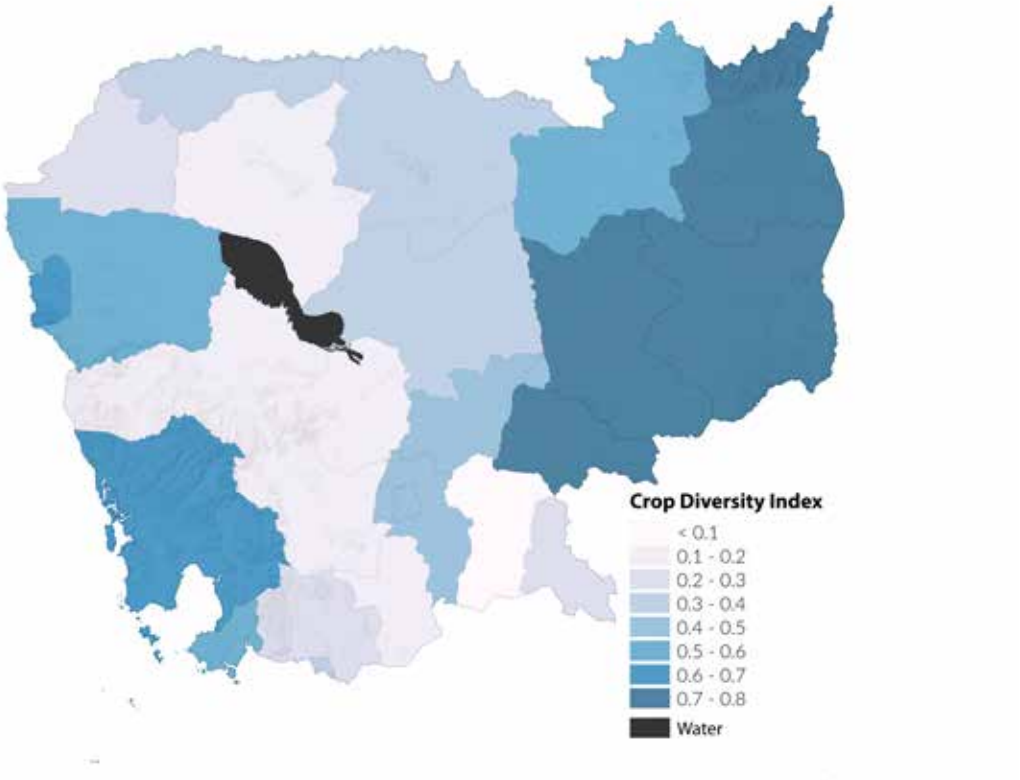


Figure 12: Evolution of rice cultivated area in Cambodia (2002-2016)
Sources: MAFF 2016

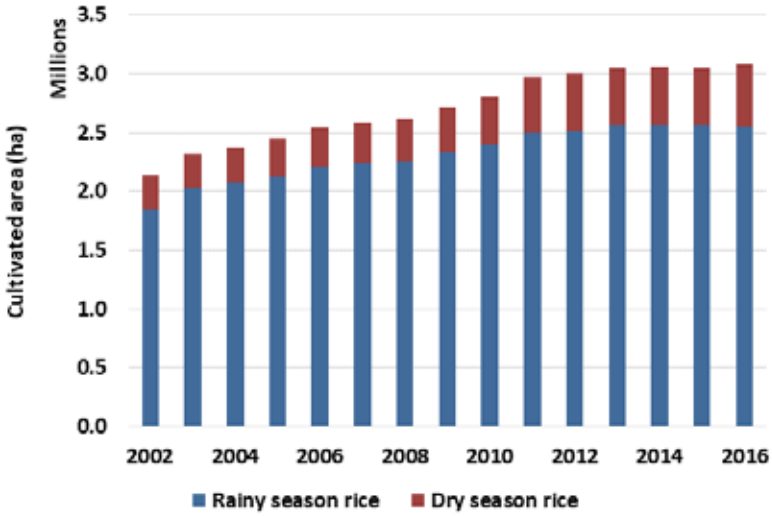
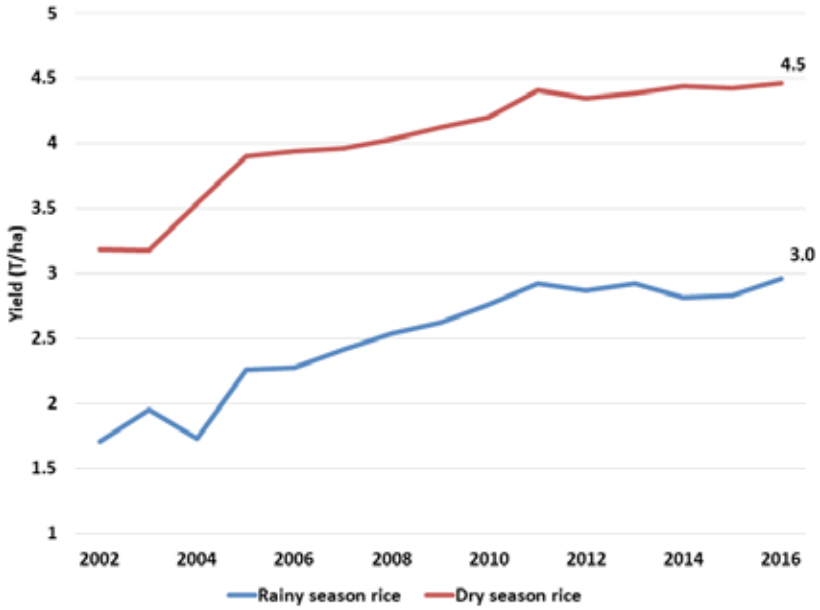


Figure 13: Evolution of rice yields in Cambodia (2002-2016)
Sources: MAFF 2016



Asymmetries in the distribution of land resources

In a country like Cambodia where agriculture is vital to the majority of the population, the ways in which agricultural land is distributed is a central concern for development, in terms of both production and equity. Even if smallholders have been the corner stone of the agrarian history of the country, the recent choices made the government towards large-scale development, hydropower dams and protected areas place limitation on land use and tenure security for smallholder farmers.

Land of smallholder farmers

In Cambodia, agricultural production is predominantly conducted at household level. As of 2013, 85 percent of the total number of households were engaged in some form of agriculture-related activities, and 72 percent of the total number of households in Cambodia (n=2,129,149) managed a so-called agricultural holding[34], covering a total land area of 3.3 million hectares. The average agricultural land size per farming household is 1.6 ha. Among households with agricultural holdings, 73 percent are engaged in agriculture mainly to meet their personal consumption needs (NIS, 2015).

On average, households only have a small landholding area, but land is rather unequally distributed amongst smallholder farmers. The distribution of households per class of landholding size illustrates this inequality: 0.89 million households own less than 1 ha and 1.7 million own less than 4 ha. Only 851 households own more than 50 ha. The Gini Index[35] of smallholder farmers agricultural land distribution is 0.47[36]. The provinces with important demographic density (e.g. Kampong Cham and Tbong Khmum), or that have come under high pressure from urbanization (e.g. Phnom Penh and Preah Sihanouk), and/or a high degree of agricultural commercialization (e.g. Pailin) each have a Gini Index score above the average (see Map 29).

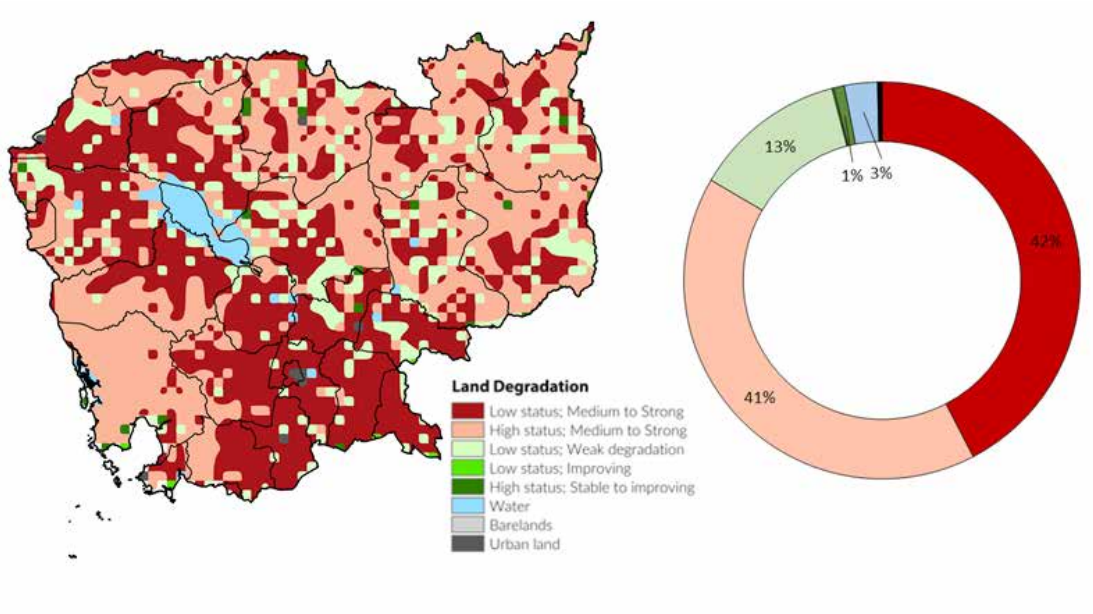
More generally, three processes of land access differentiation explain this relatively unequal land distribution among smallholder farmers. First, an age-based phenomenon of land concentration and atomization has placed households who acquired more land from the *Krom Samaki* [37] at an advantage compared with younger households who have acquired their land mainly through inheritance. Second, in the nineties onwards, unregulated access

[34] Consisting of at least 0.03 ha and/or with a minimum of two large livestock animals, and/or three small ones and/or 25 poultry.
[35] The Gini Index measures the degree of equality in the distribution of land between land owners. The index values range from 0 (perfect equality) to 1 (perfect inequality). The higher the value, the more unequal the distribution. For more information to understand and interpret the Gini index, the interested reader can refer to the methods annex.
[36] The calculation of the Gini Index is based on the data presented by the 2013 agricultural census taking into account landed households (and not the agricultural concessions). Agricultural landless households are under-represented, so that the actual value of the Gini Index is probably higher.
[37] During the eighties, a *Krom Samaki* comprised a small group of 10-15 families who used the land, agricultural equipment and draught animals collectively.

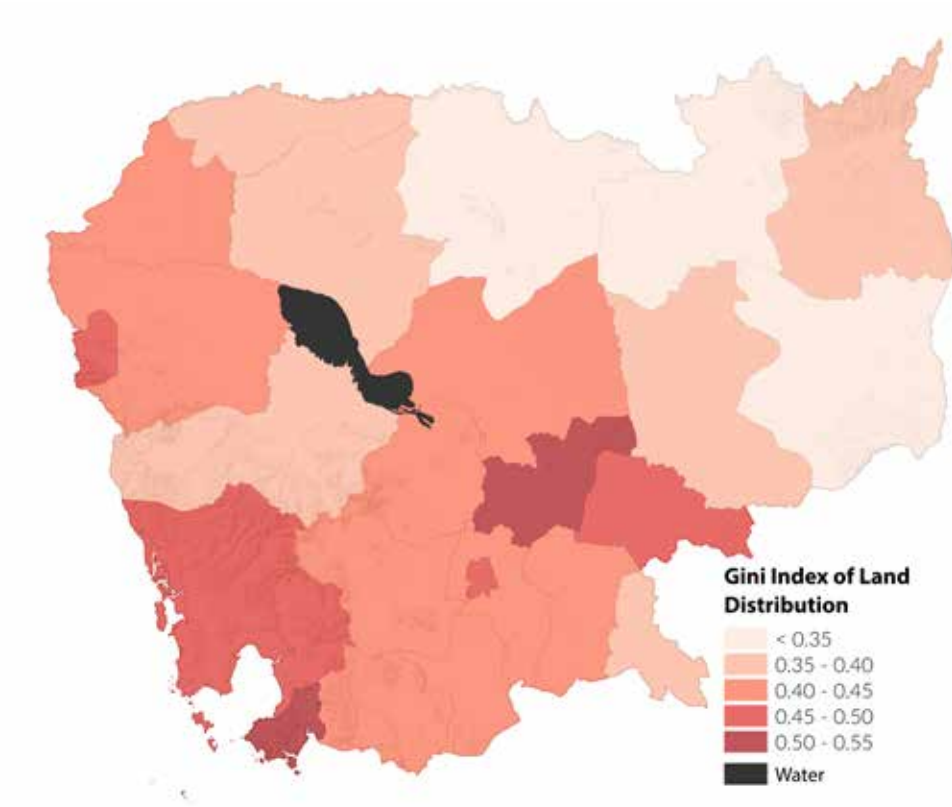
to additional land in the forest periphery of the village was possible through either reclamation of land (secondary forestland) cultivated prior to the war or was contingent on good connections with commune and/or district authorities. Third, land purchase and sale markets have enabled some households to purchase land from those in financial crises that have forced them to sell part or all of their agricultural land base.

A more recent trend is the increasing role that new actors - very often outsider to farmers communities - have played in appropriating land to establish medium size landholding (50-500 ha). Local elites, businessmen, members of the military and entrepreneurs have indeed acquired land through sale or grabbing of State land as speculative investment or to engage in agricultural production. These new acquisitions further challenge the access to and the control of land by smallholder farmers.

Map 28: Land degradation in Cambodia
Data source: FAO GLADIS



Map 29: Gini Index on smallholder farmers agricultural land distribution in Cambodian provinces (excluding large scale land concessions)
Data source: NIS, 2015



State land concessions

In Cambodia, State land is managed under different institutional arrangements including concessions, which provide the right to use State land for a specific purpose and a specific period of time enforced under a contract (East-West Management Institute, 2003).

Economic Land Concessions

Economic Land Concessions (ELCs) are granted by the government on private State land to domestic or foreign companies for agricultural or forestry development. Contracts cover areas of up to 10,000 hectares (Royal Government of Cambodia, 2005). The maximum concession period has been decreased from 90 years to 70 years.

Our data, gleaned from a consolidation of datasets from Open Development Cambodia (ODC) and the Cambodian League for the Promotion and Defence of Human Rights (LICADHO), suggests that 2,593,969 ha of land had been granted as ELCs by the end of December 2012). This encompasses 286[38] contracts. All ELCs are located in the peripheral uplands on both sides of the Tonle Sap Great Lake, with a higher concentration in the Northeast . The total number of ELC contracts after the Order 01 reform (see below) amounts to 256, covering a total area 2,180,683 ha (see Table 5 and Map 30).

ELCs were originally allocated through two different Ministries - the Ministry of Agriculture Forestry and Fisheries (MAFF) and the Ministry of Environment (MoE) - but sub-decree 69 (Royal Government of Cambodia, 2016) abolished this dual responsibility and the management of 73 ELCs has now been transferred from MoE to MAFF[39]. It is important to note that all ELCs originally allocated by MoE are located in a protected area as defined by the mandate of this ministry. Thirty seven percent of the total area of all ELCs is covered by rubber plantations, by far the most important crop. Other trees and crops in ELCs are mainly perennial (acacia, teak and palm oil) and some are temporary (sugar cane and cassava).

The granting of ELCs was expected to stimulate agro-industrial activities requiring a large capital investment that the State did not have and to develop so-called "under-utilized" land. They would increase employment in rural areas and would also generate State revenue at national and sub-national levels. But ELCs have failed to meet these expectations: they have often occupied land that was already cultivated or used by smallholder farmers, resulting in an encroachment on farmland or common pool resources and thus exerting a direct, negative impact on the livelihoods of these farmers. In fact, a fundamental cause of land conflicts has been because the genuine need for land of smallholder farmers has not been adequately addressed in the current land reform (Diepart, 2016).

Well aware of these issues, in 2012 the prime minister Hun Sen issued an important directive – the so-called Order 01 – with three measures aiming to strengthen and increase the effectiveness of the management of Economic Land Concessions (Royal Government of Cambodia, 2012). The Order 01 established a moratorium on the granting of ELCs, a titling campaign (see below) as well as a full review of existing ELCs in an effort to discover which companies were in violation of their contracts with the government. In the aggregate, our data computation (based on the detailed tracking carried out by ODC[40]), indicates that 158 ELCs do not appear to have been adjusted while 128 ELCs have been revised: 98 ELCs have been downsized by a total of 253,615 ha, whereas 30 ELCs have simply been revoked (159,671 ha.). However, it is not fully clear where these cancelled areas are located and how they should be managed in the future. A particular point of concern revolves around the extent to which cancelled areas will be reproduced as State Land (thus allocated to other State-managed functions) or redistributed to smallholder farmers. These tensions are clearly palpable in current discussions about State Land Management, and the policies to acknowledge and deliberate these competing interests have not been fully elicited.

Table 5: Number of ELCs and the area they cover before and after Order 01

	ELCs before Order 01		Order 01 revision		ELCs after Order 01	
	Number	Area (ha)	Number	Area excised (ha)	Number	Area (ha)
Government data	257	2,407,829	125	405,762	228	2,002,067
Other data	29	186,139	3	7,524	28	178,616
Total	286	2,593,969	128	413,286	256	2,180,683

[38] This number includes data that can be completely or partially sourced from governmental reports as well as other non-governmental data provided by LICADHO. We decided to keep them in our analysis because they indicate real agro-business operations on the ground.
[39] The MoE retained jurisdiction over 13 concession areas (89,253 ha) focusing on eco-tourism, hotels and resorts.
[40] https://opendevelopmentcambodia.net/dataset/?id=economiclandconcessions

When these large-scale agricultural concessions are factored into the distribution of land, the Gini Index of land distribution in Cambodia reaches the value of 0.66, which indicates significantly more inequality than the land distribution among smallholder famers only (Gini Index of 0.47).

Social Land Concessions

Social Land Concessions (SLCs) are tools the government has promoted to address the problem of landlessness and near landlessness. They constitute a legal mechanism to transfer private State land for social purposes to the poor who lack land for residential and/or family farming purposes. The national SLC programme differentiates between three types of concessions: one managed by the government to address civil poor landlessness; a second managed by the government to address the demobilization of soldiers from the Royal Armed Forces; and a third co-managed between the government and donor organizations also to address civil poor landlessness. Full ownership rights to SLC land are only acquired after 5 years and full occupation and use of the allocated land.

According to the Ministry of Land Management, Urban Planning and Construction (MLMUPC), as of June 2014 the total number of recipients of Social Land Concessions - for all three programmes – was 12,374 families in respect of 113,167 ha of land registered (for settlement, infrastructure and agriculture) (MLMUPC, 2014). This represents only 5 percent of the total area granted as Economic Land Concessions.

Mining concessions

The mining sector in Cambodia is in its infancy. The granting of licenses is managed by the Ministry of Mines and Energy under the 2001 Law on Mineral Resource Management and Exploitation. Most of the licenses granted so far are for exploration only but an important milestone was reached in 2017 when the government issued four exploitation licenses to four companies covering a total area of 52,500 ha(Sum, 2017).

The information on mining concessions is highly fragmented but the compilation made by the Open Development Cambodia team[41] of all exploration licenses granted from 1995 to 2014 includes a list of 267 projects covering a total area of 3.3 M[42] ha (see Map 30). Given the magnitude of the area at stake and the volatility of mineral prices on the global market, there is little doubt that the mining sector will potentially have a great impact on smallholder farmers in the years to come. In addition to the area dug up, the impact on smallholders is potentially important from the externalities such as dust and water pollution.

Chan Sophal,
Director,
Center for Policy Studies

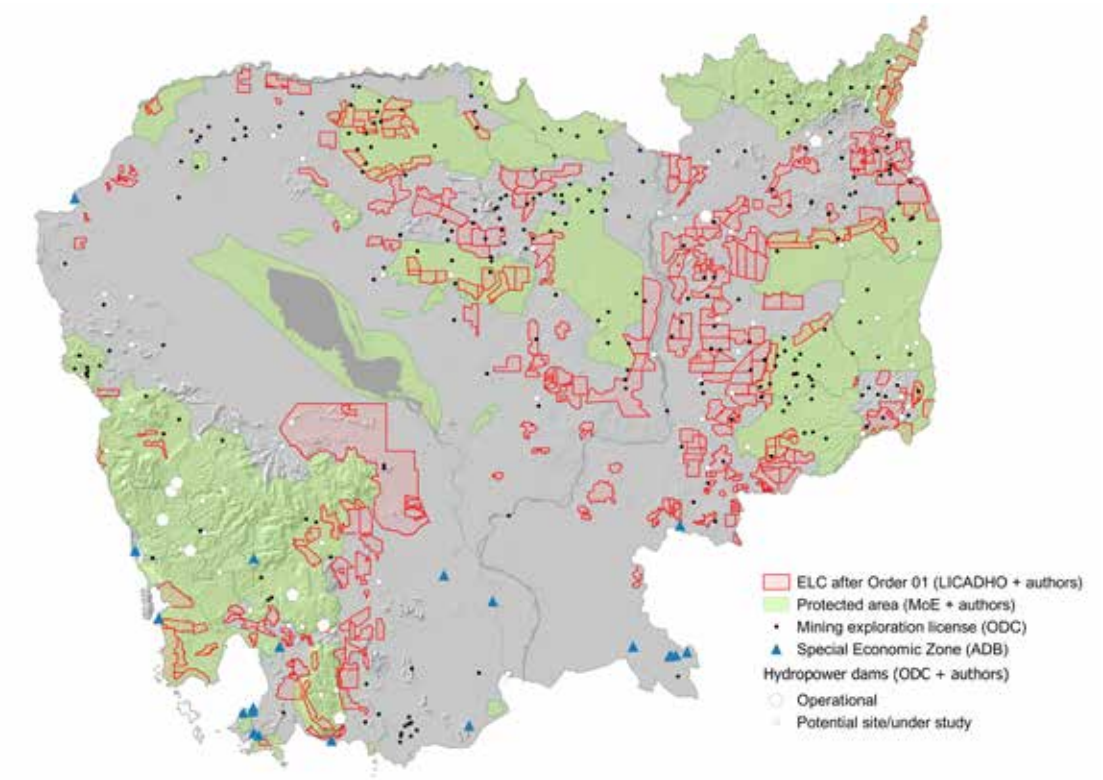
Perspectives: Unequal distribution of land

Cambodia has been changing rapidly from a closed, poor and war-torn but forest rich country to one that is very open to foreign investment and trade. The pressures on land and natural exploitation on more than two-thirds of the country area have been from sides ranging from poor to rich, and local to international firms. With both poor state capacity and loose governance, the distribution of state land tends to be skewed to those who can pay. Even if the smallholder farmers have received a fairly large chunk of public land, much more was allocated as large-scale concessions to domestic and foreign investors. As a result, there tend to be either too-large or too-small landholdings. In this globalized world, a more efficient, viable and competitive farm size could be between these two for smallholders to operate.

[41] https://opendevelopmentcambodia.net/dataset/?id=mining-license-in-cambodia-1995-2014-type-dataset
[42] The specific measurement of areas is missing for 85 licences.

Map 30: ELCs, Protected Areas, mining concessions, hydropower dams and Special Economic Zones in Cambodia

Note: The map shows the original areas covered by ELCs that were not revoked as a result of Order 01. Mapping by the authors



Protected Areas

In an effort to promote nature conservation, a royal decree for Protected Areas was issued in 1993 to empower the Ministry of Environment to lead, manage and develop a Protected Area system to preserve Cambodia's land, forest, wildlife, wetlands and coastal zones (Royal Government of Cambodia, 1993). Twenty-four areas were included in the decree covering a total area of 3.2 million ha (Royal Government of Cambodia, 1993), including three RAMSAR sites (i.e. wetlands of international importance) signifying the global importance of Cambodian wetlands (Save Cambodia's Wildlife, 2006). This decree distinguished four different types of protected natural areas: national parks; wildlife reserves; protected scenic view areas; and multi-purpose areas. To these, should be added the protected forests managed under the mandate of the Forestry Administration of the Ministry of Agriculture, Forestry and Fisheries that cover a total area of 1,531,357 ha.

As a result of sub-decree 69, however, the management of nine protected forest areas was transferred to MoE in 2016. The sub-decree has also officially created eight new Protected Areas but two of these have recently been cancelled (Royal Government of Cambodia, 2018). So altogether, the total area under Protected Area management now equals 6.0 million ha (33 percent of Cambodia's total national territory).

A law on Protected Areas has provided clearer information about the management of Cambodia's nature conservation areas (Royal Government of Cambodia, 2008). Among other things, it proposes that each Protected Area is structured into four different spatial zones: a core zone; a conservation zone; a sustainable use zone; and a community zone, which embraces area(s) to be used for the socio-economic development of local communities.

Hydropower dams and reservoirs

The Ministry of Mines and Energy is the main government body responsible for the development of the Cambodian hydropower sector. The State power company Electricité du Cambodge (EdC) is responsible for the daily management of the electricity generated. The granting of licences is not regulated under one single but multiple sector laws. A 2003 report by the government (MIME, 2003) identified 60 potential sites for the construction of hydropower dams and plants, and the list has been upgraded to 73 areas located on the mainstream of the Mekong River, on its tributaries and in the Southwest of the country (see Map 30). Nine hydropower dams and plants are now operational and connected to the national grid or provincial power systems.

There is, however, considerable controversy related to the development of dams and reservoirs due to the massive resettlements they initiate, the direct negative impact they have on fisheries (disruption in fish migrations and decline in fish stocks), and the loss in forest resources that harm local livelihoods and reduce bio-diversity. A constant criticism is that impact assessment studies are not properly conducted, thus, the externalities associated with the construction of the dams and reservoirs are not properly mitigated. Set against the dramatic increase in the production of electricity these hydropower plants will generate, the risks associated with development of all these potential sites is considerable (Koponen, Paiboonvorachat and Munoz, 2017).

Also, the rapid development of hydropower dams in Cambodia, particularly on the Mekong and its tributaries (e.g. the 3S dams) puts water resources under stress and threatens the ecosystems downstream. The Tonle Sap hydrological system is notably at risk. Its unique flood-pulse system and annual flow reversal creates an area of high biodiversity and productivity, which are conspicuous in the fish catches and the large number of livelihoods that are sustained around the lake (Arias *et al*., 2014). Scenarios predict that the disruption of the natural hydrological pattern of the Mekong River due to hydropower would change the flood-pulse system of the lake: the dry-season water level would rise and wet-season water levels would be lower. These alterations would affect ecological interactions and erode the productivity basis of the ecosystem (Kummu and Sarkukula, 2008).

Recognition and formalization of smallholder land rights

In a context of uneven distribution of land resources, the ways in which smallholder farmers land rights are recognized and formalized are crucial to secure their access to land and natural resources.

Securing land tenure by titling

An important element of the current market-based redistributive land reform implemented world-wide is the implementation of land titling which rests on the assumption that private property rights should be granted to people in order to increase the security of their tenure. In Cambodia, land titling is based on the possession of land - recognized with a land certificate signed by local authorities - that started before the promulgation of the 2001 Land Law. In practice, it means that any parcels of land cleared put under cultivation after 2001 can't be legally possessed, thus are not eligible for a land title.

According to a 2017 report from the Ministry of Land Management, Urban Planning and Construction (MLMUPC, 2017), 4,881,063 titles[43] were granted to urban and rural families, which constitute about 66 percent of the total estimated number of land parcels to be titled. Of these, 3,626,158 titles were granted under the so-called Systematic Land Registration scheme (SLR). Even if SRL team are now deployed throughout the country, the areas targeted by SLR are exclusively located in the central lowland plain where the decentralized and locally driven distribution of land to the households by the *Krom Samaki* allowed for the peaceful creation of secured land tenure arrangements (So, 2009). A considerable number of private land titles have been delivered through a second form of titling process, the so-called sporadic land registration. The latest update from MLMUPC suggests that 613,282 titles have been issued through this procedure (MLMUPC, 2017).

As part of Order 01 released by prime minister Hun Sen on 7 May 2012, an unprecedented land titling campaign was conducted in those areas where the land rights of people and companies overlapped with State land. The campaign specifically tried to address land security inside or adjacent to ELCs through private land titling. However, the implementation diverged from this objective as the adjudication areas for the Order 01 titling scheme were largely expanded to include other land categories such as forest concessions, Protected Areas, forest rehabilitation warrants from provincial authorities and even Social Land Concessions.

According to the ministry, a total of 641,623 titles were issued during the Order 01 land titling initiative (MLMUPC, 2017), covering a total surveyed area of 1,010,429 ha of which 92 percent (927,848 ha) was formally recognized for 317,444 families. The most important share (30 percent) of land excised from State land came from uncategorized forest cover based on a 2010 Forest Cover Assessment, while only 25 percent came from ELCs. It seems clear from these results that the Order 01 titling scheme was a comprehensive attempt to address the problem of tenure insecurity associated with the occupation of State land in the Cambodian uplands. It was also a recognition (sparking an effective response) by the government that land appropriations resulting from the lowland/upland migration movements described above had resulted in a huge population of people who were living on land that they appropriated after 2001, and in respect of which they had virtually no land tenure security under the 2001 Land Law institutions (Diepart, 2015).

Recognition of Customary Tenure

Communal land titling for indigenous peoples (IPs)

The possibility offered by the 2001 Land Law to grant a collective title on communal land is particularly significant as it was the first time in Cambodian history that this had occurred (Save Cambodia's Wildlife, 2014). Communal land titling was conceived to provide indigenous peoples communities (IPCs) with legal rights over their land in order to preserve their identity, culture and customary practices. Communal land titling applies to a variety of land uses - residential, or for use in swidden agriculture including fallow land, as well as for spiritual and burial forests (Royal Government of Cambodia, 2009). The process implies the recognition of the indigenous communities by the Ministry of Rural Development, the recognition of Indigenous People Community as a legal entity by Ministry of Interior, and the issuance of the collective land title by the Ministry of Land Management, Urban Planning and Construction. According to a recent update, a total of 166 communities have engaged in the process of applying for a collective land title. Of these, 117 indigenous communities have been

[43] This number includes titles issued under the systematic and sporadic land registrations as well as Order 01 land titling campaign

recognized by the Ministry of Rural Development and 111 have been recognized as IPCs by the Ministry of Interior. Among them, only 19 communities (1,784 households) have completed the process and received land titles covering an area of 16,271 ha (MLMUPC, 2017).

The co-management of forest and fishery resources

In the early 2000s, the idea of co-management gained traction in Cambodia in order to ensure the sustainable management of natural resources, biodiversity conservation and the protection of smallholder farmers' production systems. The approach rests on the premise that local communities living close to forest and fishery resources are best suited to manage these sustainably: locals know the local ecosystems better than anyone else, and they are in a better position to identify management problems affecting those ecosystems and to identify possible solutions (Li, 2002).

In early 2000, the overall area of forest concessions had been drastically reduced from the initial high of 7,084,215 ha to 2,163,600 ha (Save Cambodia's Wildlife, 2006). As an alternative, the Forestry Administration and donors alike started to encourage the establishment of Community Forestry management arrangements, which are co-management schemes through which a community-based association co-manages a determined area of forest in cooperation with the local Forestry Administration of a period of fifteen years which is renewable. Fifteen years after the release of the sub-decree on the Community Forestry initiative (Royal Government of Cambodia, 2003), the contribution of community forests remains modest. The most recent data indicates that there are 485 Community Forestry schemes in the country covering a total surface area of 410,025 ha (Forestry Administration, 2015). However, most Community Forestry areas are located in severely degraded forest, while the best forest areas are usually turned into Economic Land Concessions.

Similarly, the area covered by fishing lots was reduced by 56 percent in 2001 (Mom, 2009). In areas released from fishing lots, the Fisheries Administration and donors have encouraged the establishment of Community Fisheries, mainly on the Tonle Sap flood plain but also along the Mekong River and in the Mekong delta. In 2012, the remaining fishing lot system was totally abolished. According to most recent statistics there are 358 Community Fisheries (537,837 ha)[44] officially registered by the Fisheries Administration involving 115,000 families (Save Cambodia's Wildlife, 2014).

These co-management schemes have introduced State rules in resource management that are quite at odds with the endogenous logic of land and resource management of the commons (Diepart, 2015). However, the development of co-management was an important response to the general outcry against the fragmentation of territories that accompanied the enclosure of common pool resources across the country

Communities in Protected Areas

Protected Area management offers room for the recognition of the land (use) rights of smallholder farmers. As part of the Protected Area zoning (see above), the community zone entails area(s) used for the socio-economic development of local communities. It might contain residential land, rice fields and field gardens (chamkar), and should protect the rights of indigenous people. The release of land titles is possible in these areas but there should be authorisation by the Ministry of Environment in compliance with the Land Law.

In the sustainable use zone an agreement can be signed between the Ministry of Environment and local communities to give them the right to co-manage and exploit the so-called Community Protected Area for a period of 15 years. According to updated statistics from the Ministry of Environment, there are 151 Community Protected Areas in Cambodia covering a total land area of 255,076 ha (Ministry of Environment, 2018).

Land governance: The gaps between statutory rules and practices

The land governance assessment shown below is based on a conversation with 10 land experts in Cambodia who were selected to represent a variety of organizations and land-based sectors[45]. The discussion was structured in accordance with a framework consisting of 12 indicators[46]. Figure 14 shows the average scoring of each indicator.

[44] Area size available for only 235 Community Fisheries.
[45] The methodology used for the land governance assessment is given in the methods annex.
[46] Each expert was invited to put a score in a five-point Likert scale from very poor to very good.

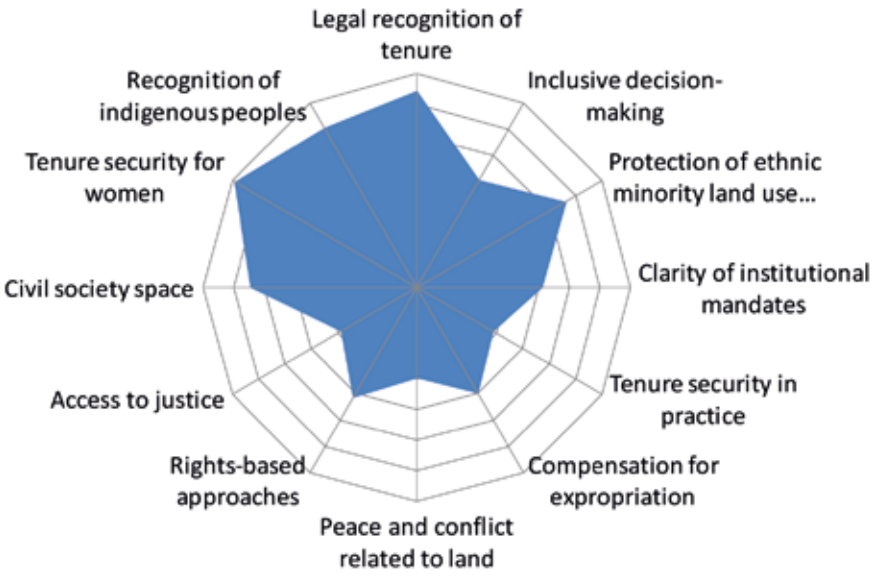
© J.-C. Diepart

Mom Sary,
Staff officer at the Department of Community Livelihoods, Ministry of Environment

Perspectives: Community Protected Areas

In implementing CPAs I see the challenges directly relating to a lack of clear land tenure designations, land registration, and the effective implementation of co-management and zoning plans. These complex challenges result in conflicts in resolving land use conflicts in and around PAs. CPAs are a key component of the PA process in Cambodia. They can play an important role in the involving communities is identifying and addressing the difficult challenges of sustainable management of PAs. To date CPA members have been involved in identifying CPAs boundaries, CPA management needs and use zoning which are significant for sustainable use of forest resources. To ensure sustainable management of PAs, clearer land tenure designations, land registration, management and zoning plans should involve key stakeholders including indigenous people from the beginning. The government should work with the local people and authority to provide land title, work with them to develop technical rice farming skills and other sources of livelihoods.

Figure 14 :
Land governance assessment in Cambodia
Sources: Expert consultatior
Phnom Penh



Clear legislation but narrow support for smallholder tenure security on State land

In Cambodia, the existing legal framework is thought to be generally strong and provides relatively clear recognition of the tenure rights of smallholder farmers in terms of their access to land and natural resources. The legislation that recognizes the agricultural and cultural practices of indigenous peoples is particularly advanced as it prescribes a distinct titling process that is unique within the region.

Where feasible, possession rights are upgraded to ownership rights through titling. On State land, however, smallholder tenure rights are weak with regard to Land Law institutions and they are often not scrupulously implemented, especially in cases where land is of high value and is sought after for development. A particular concern is the lack of coordination between State institutions who compete for State land and do not seem to tackle private interests that are at odds with laws and regulations relating to State land management.

Public consultation to support the formulation of policy and law has improved considerably over the years, but has tended to be limited to donors and NGOs, and has excluded farmer communities. Another concern is that the feed-back provided during public consultations lacks clarity and, as a result, is not obviously used in decision-making.

Asymmetry of power between smallholder farmers and other actors

An asymmetry of power structures is evident in land-based social relations in Cambodia. When faced with competing claims by powerful actors, smallholder farmers are often unable to exert their rights.

Land conflicts between smallholder farmers and well-connected actors are widespread, particularly on State land. The figures released about land conflicts are divergent because the methodologies and criteria used to compute them are based on different definitions of conflicts and rely on different sources of information. However, they all suggest that the magnitude of the problem is not small. During the period 2000-2013, land conflicts and resultant evictions affected 770,000 people (ADHOC, 2014). According to data collected by LICADHO (2014), the number of people affected by State-involved land conflicts between 2000 and 2014 passed the half-million mark. Based on a monitoring of media sources and reports from network members, the NGO Forum on Cambodia (2015) reports that a cumulated number of 352 land disputes broke out between 1990 and 2014, of which 77% of cases are still unresolved.

In cases of expropriation and eviction, there are regulations in respect of compensation but these are not fully implemented. Smallholder farmers with ownership titles tend to receive better compensation than others who have possession certificates (soft titles) and a fortiori better than farmers who do not have any documentation covering the land they occupy. When it is paid, compensation is often inadequate, below market values and usually does not allow the household evicted to buy an equivalent piece of land in a new location.

Limited ability of smallholder farmers to claim and defend their tenure rights

Rights-based claims, i.e. possession rights, are the basis for titling under the systematic land registration system, but these are recognized and applied only in certain contexts. When possession of the land started before the promulgation of the Land Law in 2001, rights-based claims are fully recognized. However, these claims are often overridden when the people occupy State land where they are considered to be illegal occupants. When it comes to IP communities, rights are often overridden despite the existence of laws and processes for granting collective titles.

Florian Rock,
Independent consultant

Perspectives: Insecure land tenure

Due to inconsistencies in the Land Law 2001 today millions of Cambodian smallholder farmers live on and make use of what is considered under the law as State land. This leaves them in a precarious situation! The only legal options to transform this land to privately owned land are by declaring this land a Social Land Concession area (which prescribes a very lengthy process) or by allocating the land as a donation by the state to the smallholder (as applied in Order 01). In both cases the land user remains dependent on actions to be taken by the state, on the benevolence of the Government and has no possibility to activate this process himself or herself. If the situation of these smallholders is not fairly regularized and regulated, profound tenure insecurity will limit investments in land and uncontrolled appropriation of large areas of land by migrating families and powerful, well-connected individuals will continue.

The avenues through which smallholder farmers can lodge complaints are somewhat limited. Courts and cadastral commissions exist but are not efficient in resolving cases, and smallholder farmers often cannot afford these services. To fill the gap, a significant number of NGOs work on land rights in Cambodia, providing important support for the communities who are affected. Strategies are not always streamlined and effective, and cooperation is often lacking. However, NGO/civil society organizations continue to play an important role in monitoring land issues and in providing community support.

Gender-sensitive land tenure rights

The Ministry of Land Management, Urban Planning and Construction, which is directly in charge of titling, now ensures that land is registered in the names of both spouses. This change in the titling procedures has refocused the position of women in terms of land tenure security as they are now recognized as equal to men in eligibility for a land title. This is reflected in recent statistics relating to land titling, which show that 63 percent of all titles are conjugal, 18 percent of all titles belong to women only, 11 percent to men only and 9 percent represent joint ownership (ML-MUPC, 2017).

Centering the role of smallholder farmers

Despite the important structural transformation of its economy, Cambodia remains predominately rural, and agriculture occupies the vast majority of its population. The agrarian transition has remained largely incomplete as the creation of job in the industries and services does not keep up with the increase of the activity population in rural areas. In this context, there is little doubt that the next generation of smallholder farmers will need agricultural land.

The agricultural systems have evolved at an impressive rate. The intensification of rice production has been effective and the agrarian expansion has contributed to the formidable growth and diversification of agricultural systems. Smallholders have been a cornerstone of this evolution. Nevertheless, the recognition of full ownership rights through titling which started from the lowlands and has more recently expanded to upland areas has not been able to keep up with the demand for secure tenure rights and still leaves many smallholder farmers in a state of insecurity.

Rural poverty is still prevalent. It particularly hits the central rice-growing lowland area where demographic pressure on land results in the atomization of agricultural land holdings. A key response by smallholder farmers has been mobility, which has considerably modified the balance between land and labour in the Kingdom. People are moving to cities but, due to the limited capacity of the non-agricultural sectors to create sufficient labour for a growing population, people have mainly migrated to upland areas in search of land and employment.

This movement has conveyed contradictions as these migrations have been completely at odds with the Land Law institutions. In fact, land appropriated is deemed State land and smallholder farmers have had virtually no land tenure security on it. This contradiction has been particularly problematic because the government has granted Economic Land Concessions on large tracts of State land. The lack of coordination between both processes has resulted in an overlap of land claims and conflicts.

The government has provided some key responses to these issues. The Order 01 initiative, aiming to title land appropriated by smallholder farmers on State land and to a complete revision of Economic Land Concessions, has partly addressed the associated difficulties. However, the nature of the problem has not changed as the implementation of Order 01 was stopped short and has left out most areas where smallholder farmers occupy State land. Yet, smallholder farmers continue to take centre stage in the conversation about the future development of Cambodian agriculture.

References

1. ADHOC. 2014. Land Situation in Cambodia 2013. Phnom Penh: ADHOC
2. Arias, M. E., Cochrane, T. A. and Elliot, V. (2014). Modelling future changes of habitat and fauna in the Tonle Sap wetland of the Mekong. Environmental Conservation, 41(2), pp. 165–175.
3. Belfield, S. C., Martin, R. J. and Scott, F. J. (2013). Alternative Cropping Systems for North-West Cambodia. International Journal of Environmental and Rural Development, 4(1), pp. 209–214.
4. Bylander, M. (2015). Micro-saturated: The Promises and Pitfalls of Microcredit as a Development Solution. In K., Brickell. and S., Springe, (eds.). The Handbook of Contemporary Cambodia, London and New York: Routledge Handbooks, pp. 64–75.
5. Chandararot, K. and Liv, D. (2013). Rural development and employment opportunities in Cambodia: How can a national employment policy contribute towards realization of decent work in rural areas?. Bangkok: International Labour Organization (ILO) Country Office for Thailand, Cambodia and Lao People's Democratic Republic.
6. Davis, K. F., Yu, K., Rulli, M. C., Pichdara, L. and D'Odorico, P. (2015). Accelerated deforestation driven by large-scale land acquisitions in Cambodia. Nature Geoscience, 8(10), pp. 772–775. Available from: doi: 10.1038/ngeo2540 [accessed 28th April 2018].
7. Diepart, J.-C. (2015). The fragmentation of land tenure systems in Cambodia: peasants and the formalization of land rights, Country Profile Series. Paris: Technical Committee on 'Land Tenure and Development'. Available from: http://www.foncier-developpement.fr/qui-sommes-nous/le-comite-technique-foncier-et-developpement/publications/ [accessed 28th April 2018].
8. Diepart, J.-C. (2016). They Will Need Land! The current land tenure situation and future land allocation needs of smallholder farmers in Cambodia. MRLG Thematic Study Series #1. Vientiane: MRLG. Available from: doi: 10.13140/RG.2.1.2877.2083 [accessed 28th April 2018].
9. Diepart, J.-C., Dogot, T., Ly, V., Loeung, C. and Bora, K. (2005). Le Monde Rural dans la Plaine Centrale du Cambodge. Analyse comparative à partir de cinq communes. Gembloux: Les Presses Agronomiques de Gembloux.
10. Diepart, J.-C., Pilgrim, J. and Dulioust, J. (2014). Migrations, in Atlas of Cambodia: Maps on Socio-Economic Development and Environment. Phnom Penh: Save Cambodia's Wildlife, pp. 89–96.
11. East-West Management Institute. (2003). Land Law of Cambodia. A Study and Research Manual. Phnom Penh.
12. F.A.O. (s.d.a). Food and agriculture data. Available from: http://www.fao.org/faostat/en/#home [accessed 20th January 2018]
13. F.A.O. (s.d. b). GLADIS - Global Land Degradation Information System. Available from: http://www.fao.org/nr/lada/gladis/glad_ind/ [accessed: 12th March 2018].
14. Forestry Administration. (2015). Updated List of Community Forestry in Cambodia, as of 11 December 2014. Phnom Penh: MAFF.
15. Hok, L., *et al*. (2018). Enzymes and C pools as indicators of C build up in short-term conservation agriculture in a savanna ecosystem in Cambodia. Soil and Tillage Research, 177, pp. 125–133. Available from: doi: 10.1016/j.still.2017.11.015 [accessed 28th April 2018].
16. Koponen, J., Paiboonvorachat, C. and Munoz, A. (2017). The Council Study: Study on the sustainable management and development of the Mekong River, including impacts of mainstream hydropower projects. Vientiane: Mekong River Commission (MRC).
17. Kummu, M. and Sarkkula, J. (2008). Impact of the Mekong River flow alteration on the Tonle Sap flood pulse. Ambio, 37(3), pp. 185–192. Available from: doi: 10.1579/0044-7447(2008)37[185:IOTMRF]2.0.CO;2 [accessed 28th April 2018].
18. Li, T. M. (2002). Engaging simplifications: Community-Based Natural Resources Management, Market Processes and State Agendas in Upland Southeast Asia. World Development, 30(2), pp. 265–283.
19. LICADHO (2014) 2014 Brings a New Wave of Cambodian Land Conflicts. Phnom Penh, Cambodia: LICADHO. Available at: licadho-cambodia.org.
20. Liv, D. (2013). Study on the Drivers of Over-Indebtedness of Microfinance Borrowers in Cambodia : An In-depth Investigation of Saturated Areas Final Report. Phnom Penh: BlueOrchard, Incofin and Oikocredit. Available from: https://sptf.info/images/oid-final-report.pdf [accessed 28th April 2018].
21. Lundström, S. and Ronnas, P. (2006). Employment and Growth in Cambodia - An Integrated Economic Analysis, Country Economic Report. Stockholm: Swedish International Development Cooperation.
22. Milne, S. (2015). Cambodia's Unofficial Regime of Extraction: Illicit Logging in the Shadow of Transnational Governance and Investment. Critical Asian Studies, 47(2), pp. 200–228. Available from: http://dx.doi.org/10.1080/14672715.2015.1041275 [accessed 28th April 2018]
23. Ministry of Industry, Mines and Energy (MIME). (2003). National Sector Review 2003: Hydropower. Phnom Penh: MIME and Cambodia National Mekong Committee.
24. Ministry of Agriculture, Forestry and Fisheries (MAFF). (2016). Report on Agricultural, Forestry and Fisheries activities 2015-2016 and Planning for 2016-2017. Phnom Penh: MAFF.
25. Ministry of Environment (MoE). (2018). List of Communities in Protected Areas (CPA) - Update January 2018. Phnom Penh: MoE.
26. Ministry of Planning (MoP). (2012). Migration in Cambodia: Report of the Cambodian Rural-Urban Migration project. Phnom Penh: MoP.
27. Ministry of Planning (MoP). (s.d.). Identification of Poor Households Program. Available from: http://www.idpoor.gov.kh/ [accessed 03rd March 2018].
28. Ministry of Land Management, Urban Planning and Construction (MLMUPC). (2017). Report of the General Assembly of the Ministry of Land Management, Urban Planning and Construction: results of 2017 and planning for 2018. Phnom Penh: MLMUPC.
29. Mom, K. (2009). Fisheries Sector Policy, Legal and Institutional Framework in Cambodia: Is there a place for strengthening decentralization?. In Emerging Trends, Challenges and Innovations. Community Based Natural Resource Management (CBNRM) in Cambodia. Learning Symposiums and the Development of Selected Papers. Phnom Penh: CBNRM Learning Institute.

30. Ministry of Planning and World Food Program (MoP & WFP). (2012). Identification of Poor Households - Cambodia. Results from Data Collection Rounds 4 (2010) and 5 (2011). Phnom Penh: MoP and WFP. Available from: http://www.idpoor.gov.kh/Data/En/Reference/IDPoor_ATLAS_Round_4_5_Eng-FINAL.pdf [accessed 28th April 2018].
31. National Committee for Democratic Development (NCDD). (2017). Commune Database - 2016. Phnom Penh: NCDD.
32. National Institute of Statistics (NIS). (2013). Cambodia Inter-Censal Population Survey 2013 Final Report. Phnom Penh: NIS, UNFPA and JICA.
33. National Institute of Statistics (NIS) (2015). Census of Agriculture of the Kingdom of Cambodia 2013: National Report on Final Census Results. 2nd ed. Phnom Penh: MoP and MAFF.
34. NGO Forum (2015), Statistical Analysis of Land Disputes in Cambodia, 2014, Phnom Penh, Cambodia: NGO Forum on Cambodia. http://www.ngoforum.org.kh/library-ngof-publication/
35. Phann, D. *et al*. (2015). Landlessness and Child Labour in Cambodia. Phnom Penh: Cambodia Development Resource Institute.
36. Royal Government of Cambodia (1993). Royal Decree on the Protection of Natural Areas (PRK/1Nov93).
37. Royal Government of Cambodia (2003). Sub-Decree on Community Forestry Management (79 ANK/BK), 79 ANK/BK.
38. Royal Government of Cambodia (2005). Sub-Decree on Economic Land Concessions (146 ANK/BK). Phnom Penh.
39. Royal Government of Cambodia (2008). Law on Protected Areas (NS/RKM/0208/007).
40. Royal Government of Cambodia (2009). Sub-Decree on the procedures of registration of land of indigenous communities (83 ANK.BK).
41. Royal Government of Cambodia (2012). Order 01 on the procedure to reinforce and improve effectiveness of economic land concession management.
42. Royal Government of Cambodia (2016). Sub-Decree 69 on the Transfer of Protected Forest, Protected Areas, Production Forest and Economic Land Concessions between the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Environment. Phnom Penh, Cambodia. Available at: http://bit.ly/1XbGeRnl.
43. Royal Government of Cambodia (2018). Royal Decree on the Cancellation of Snoul Wildlife Sanctuary in Kratie province and Roneam Daun Som Wildlife Sanctuary in Battambang province.
44. Save Cambodia's Wildlife (2006). The Atlas of Cambodia. National Poverty and Environment Maps. Phnom Penh: Save Cambodia's Wildlife.
45. Save Cambodia's Wildlife (2014). Atlas of Cambodia: Maps on Socio-Economic Development and Environment. 2nd ed. Phnom Penh: Save Cambodia's Wildlife.
46. SERVIR (s.d.). Regional Land Cover Monitoring System. Available from: http://servir-rlcms.appspot.com/ [accessed 20th January 2018].
47. So, S. (2009). Political Economy of Land Registration in Cambodia, Department of Political Science. PhD Dissertation, Northern Illinois University.
48. Sum, M. (2017). Four large companies bag mining licenses. Khmer Times, 27 June. Available from: http://www.khmertimeskh.com/news/39684/four-large-companies-bag-mining-licences/ [accessed 28th April 2018].
49. World Bank (2013). Where Have All The Poor Gone? Cambodia Poverty Assessment 2013. Washington, DC: World Bank.
50. World Bank (2017). World Bank Open Data: Statistics on Cambodia. Available from: https://data.worldbank.org/country/cambodia?view=chart [accessed 5th March 2018].

©Thomas Calame

State of Land in Lao PDR Turning land into capital for whom?

State of Land in Lao PDR: Turning land into capital for whom?

Introduction

There are reasons for hope with regard to the land and agricultural situation in Lao PDR. Rural poverty has generally decreased along with food insecurity, while agricultural production continues to rise, particularly for exported commodities. These changes intersect with a number of profound transformations. As Laos is increasingly transitioning from a land-locked country to a land-linked one, market inter-connectedness and the commercialization of agricultural systems has had a wide-reaching, if unequal, effect on rural communities. The Government of Lao PDR's (GoL's) policies related to Turning Land Into Capital (TLIC), concomitant with the global rush for land that began in earnest a decade ago, has fostered unprecedented transformation of rural land relations through the rise of large-scale land investments, the costs and benefits of which have been unevenly distributed across society. The pace and scale of these changes have resulted in a dynamic land situation in Laos, presenting a number of difficulties for the public administration of land as government authorities and rural communities struggle to keep pace. Conflicting interests, overlapping priorities and limited transparency have undermined public accountability and trust, though the impacts of this are in some way mitigated by continued economic growth and movements toward much-needed reforms in the land sector. Laos is at a critical juncture. Laos currently ranks 138 out of 188 countries in the Human Development Index, but has set ambitious development targets including the goal of graduating from Least Developed Country status by 2020. In a country where nearly 80% of the population is engaged in agriculture, the bulk of these developments primarily depend upon (and impact) the rural, agricultural population. Ongoing revisions of the Land Law, and the willingness of the government to implement reforms in practice, remain key tests of public accountability and the government's capacity to effectively engage with the drivers of change in the land sector that are increasingly regional and global in nature.

This chapter provides an overview of these changes and the current state of land in Lao PDR. The first section below provides a brief analysis of key demographic and socioeconomic conditions, and changes to these, surrounding the rural and agricultural population and its position within the national socio-economy. The second section follows with a descriptive analysis of the land resources base upon which this population depends, including land use and land cover, key crops, and recent changes in these. The third section describes the ways in which these land resources are distributed across society, with a particular focus on smallholders. The remaining two sections describe and assess the status of tenure security and conditions of governance that surround the broader land issue in Lao PDR.

The Land and the People: A resilient rural population

Demographics

Laos is one of the most ethnically-diverse countries in the world for its size, with 49 ethnic groups (generally within the larger Mon-Khmer, Hmong-Mien, Sino-Tibetan and Lao-Tai groups) and more than 250 distinct sub-groups. These groups are distributed unevenly across the country. Lao-Tai ethnicities—the most numerous and economically- and politically-powerful—dominate the fertile lowland areas along Mekong corridors and it's a major tributaries. Within this group, the ethnic Lao are numerically dominant (comprising 56.4% of the national population). Hmong-Mien, Sino-Tibetan and Mon-Khmer are generally distributed across the more remote upland areas in the northern and southern provinces, where agricultural land is relatively scarce.

The total population of Laos is around 6.5 million as of 2015, having grown at an average annual rate of 1.45% since 2005, though the rate of population growth varies significantly by province, with more remote provinces like Sekong (where population has grown at around 3% per year) having generally higher growth rates. The population is relatively young (Figure 15). Within agricultural households specifically, half of the population falls within the most economically-active age-classes, between 15 and 44 years old, while only 18% of the population is older than 45. The population is distributed unevenly across Laos, with nearly 1 million (or 13% of the total population) residing within Laos's largest agriculturally-producing province Savannakhet, and a further 1 million people residing with the capital city of Vientiane.

Between 2005 and 2015, the sex ratio has tilted toward a higher proportion of males, which is even more pronounced in rural provinces such as Xaysomboun, where there 111 males for every 100 females. While the reasons for this are unclear, young women are disproportionately likely to leave rural provinces, moving out of agricultural communities into cities or Thailand in search of employment.

Figure 15: Sex Ratio and Age Class Distribution in Lao PDR
Data Source: Lao PDR Population and Housing Census 2015

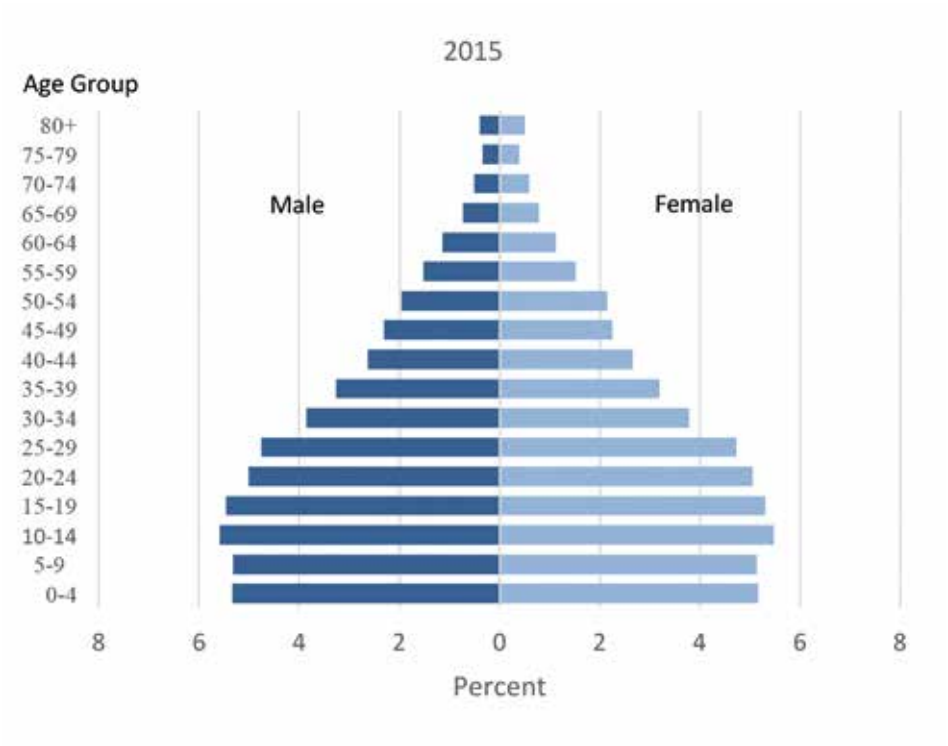
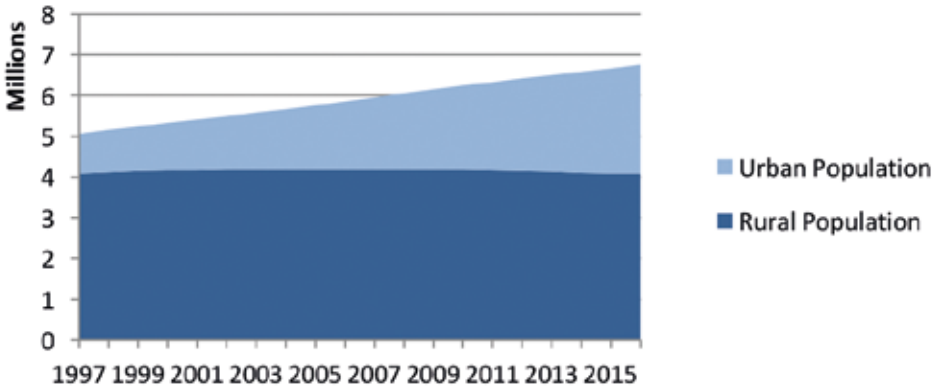


Figure 16: Change in Urban and Rural Populations in Lao PDR (1997-2016)
Data Source: World Bank Database



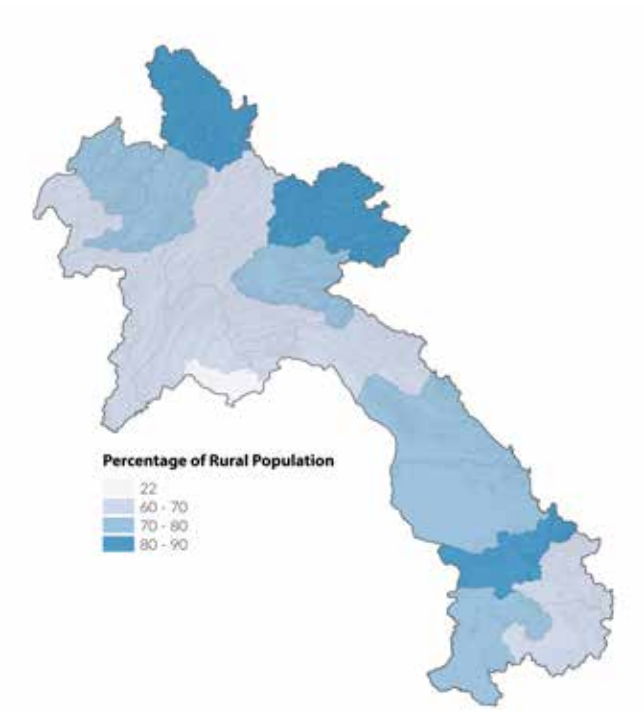
Despite these trends, Laos remains predominantly rural, where the population has remained more or less stable at around 4 million. While the urban population has grown disproportionately to the rural population (Figure 16), urbanization has been slow compared to other countries in the region. In 2015, the total urban population was around 33% having increased marginally from 27% in 2005, largely attributable to the development of provincial capitals such as Xayabouri, where the urban population grew from 27% to 40% between 2005 and 2015.

Between 2005 and 2015, the sex ratio has tilted toward a higher proportion of males, which is even more pronounced in rural provinces such as Xaysomboun, where there 111 males for every 100 females. While the reasons for this are unclear, young women are disproportionately likely to leave rural provinces, moving out of agricultural communities into cities or Thailand in search of employment.

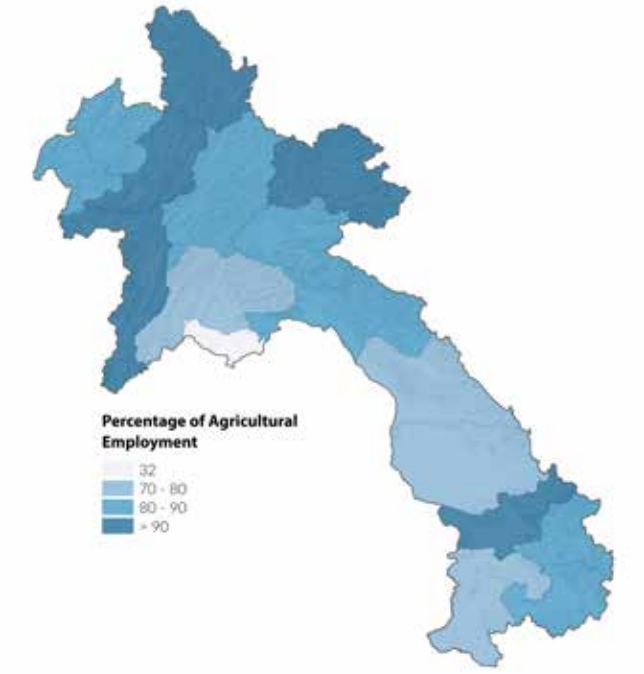
The rural population is largely engaged in agriculture, which involves 77% of the total national workforce, involving around 783,000 households (ref). The proportion of the population engaged in the formal agricultural sectors varies considerably at the subnational-level, with rates above 90% in northern, upland provinces such as Salavanh, Xayabouri, Bokeo, Phongsaly and Houaphan to as low as 32% in Vientiane Capital. Between agriculture census years (1999 and 2011), the number of agricultural households increased by 17%, though their proportion of the total population decreased.

Though high, official statistics on agricultural employment underestimate the role of agriculture within Lao society. For example, fully 90% of the rural households (including those for whom agriculture is not their primary occupation) cultivate rice (MAF 2013 RVS) while 47% of urban households report engaging in some form of agricultural production.

Map 31 Distribution of Rural Population by Province in Lao PDR
Data Source: Lao PDR Population and Housing Census 2015



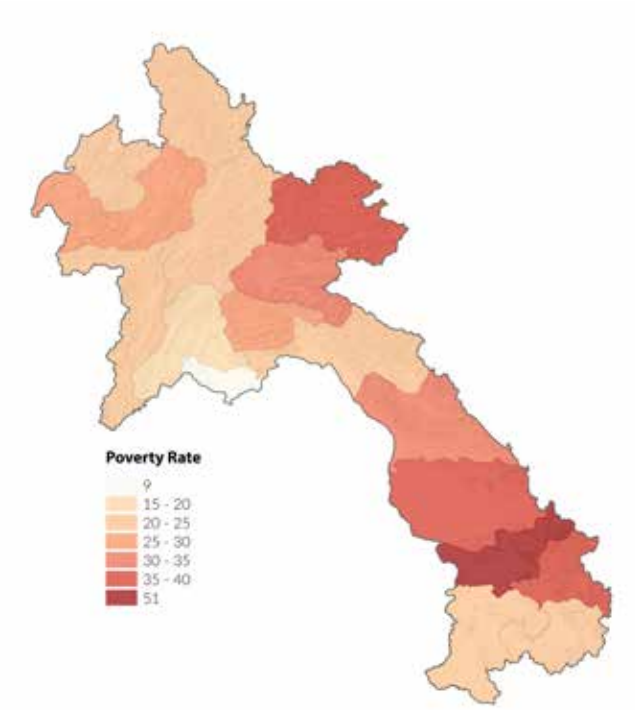
Map 32: Prevalence of employment in the agriculture across provinces in Lao PDR
Data Source: Lao PDR Population and Housing Census 2015



The rural, agricultural population is also disproportionately poor. While in the aggregate poverty levels have declined in Laos, improvement has been faster in lowland areas than in uplands, where pockets of poverty persist in remote areas, particularly among groups that struggle to compete in the increasingly competitive market economy. Villages without road access comprise 2 out of every 5 poor households, due to lack of market access and flat land for agricultural production (Epprecht *et al*. 2008). Of particular concern, some segments of society are experiencing new poverty, prompted by landlessness and dispossession resulting from investment projects, concessions and other factors. Poverty remains highest in Houaphan Provinces in the northwest and in the middle-southern provinces of Khammouane, Savannakhet and Sekong Provinces, while Salavanh Province has the highest overall poverty rate, with more than 50% of the population remaining poor.

Despite some gains that have been made in addressing rural poverty, food insecurity and undernourishment remain high, with Laos ranking 91 out of 119 countries in the 2017 Global Hunger Index. Between 2007 and 2016, undernourishment declined from 25.7% to just over 17%, with about 1.2 million individuals undernourished. Despite modest gains in food security and nutrition, stunting rates (due to chronic malnutrition) are alarmingly high—at around 44%—among rural children (MoPH and LSB, 2012), among whom nutrient deficiencies (versus caloric intake more generally) are of particular concern (WFP 2013).

Map 33: Provincial Poverty Rate
Data Source: Lao PDR Population and Housing Census 2015, CDE analysis



There is a generally low-level of internal migration in Laos. The 2015 Census indicated that only 7.4% of the Lao population could be considered migrants. Those that did migrate tended to be young and primarily rural. Despite a degree of migration to urban areas for employment or education, this involved only 40% of the migrant population; most migrations were from one rural area to another. Of any individual region, Vientiane Capital had the largest net migration[47], while the northern provinces showed a total net negative migration. This was most pronounced in Huaphan, where out-migrants exceeded in-migrants by more than 21,000 individuals, followed (in descending order) by Luang Prabang, Xiengkouhang and Phongsaly.

Figures on international migration are more difficult. While there is some amount of migration, notably to near-neighbors China and Vietnam, the largest recipient of Lao migrants, particularly rural youth, is Thailand. In 2016, it was estimated that around 300,000 Lao individuals were working in Thailand, most of whom (71%) were from rural areas. The outmigration of young people from rural communities is significant for several reasons, with implications for agricultural labour. Nearly 42% of those working in Thailand owned farm land in Laos, while a further 8 percent had previously worked as farm laborers prior to emigration (IOM 2016). However, remittances from migrant labourers contribute substantially, in some cases, to household income in their villages of origin. The large-scale movement of Lao rural youth to Thailand is symptomatic of the lack of rural employment and land availability in rural areas, which have struggled to provide adequate opportunities to retain the young.

Socioeconomic Context

Laos has achieved rapid GDP growth over the past decade, averaging 7.7% per year between 2007 and 2016 (World Bank, 2017). While the majority of its population—and, especially, that part of the population that lives in rural areas—remains involved in agriculture, this development is increasingly attributable to the non-agricultural sectors. While commercialization, investments in agriculture and the expansion of local and regional markets have fostered some modest growth in the agricultural sector, its relative contribution to GDP shrank by nearly 16% between 2007 and 2016, increasingly replaced by industry and, especially, services, whose proportion of GDP grew by 4% and 11%, respectively (Figure 17).

While this shift is due to a number of factors outside of agriculture—including rapid increases in FDI-related development in the non-agricultural sectors and, especially a growing service industry stimulated by of international tourism—agricultural production itself has shown only modest progress. Rural farmers struggle to compete with regional neighbors in terms of production volume and quality, limited by a general lack of investment capital and land scarcity—both in absolute terms (given its mountainous topography) and due to competition for land resulting from FDI-based investments and forest conservation policies.

[47] In-migrants minus out-migrants

© Thomas Calame

Socioeconomic dynamics of the agricultural sector have arguably been dominated over the past two decades by two inter-related dynamics: large-scale land investments and the burgeoning trade in land-intensive commodities. Given its abundance of natural resources, general lack of internal investment capital and critical limitations of domestic markets, Laos's impressive economic growth has been achieved through policies that have sought to leverage its natural resources to attract foreign investment, global and regional integration and market expansion. Alongside this growth, however, is the increasingly apparent reality that the costs of this strategy have been borne largely by rural and agricultural communities, while the benefits of growth have accrued disproportionately to the non-rural and non-agricultural segments of society. While natural resource exploitation has been foundational to economic growth in Lao PDR since its independence (perhaps especially since the economic reforms of 1986), the pace and scale of exploitation over the past decade have been dramatic.

In 2006, the GoL the emerging TLIC began set the stage for rapid, large-scale land investments that began in earnest during the 2008 global food and energy crisis. Today, these investments involve more than 1 million ha on land concessions to foreign and domestic firms (see below).

These land investments have played a formative role in the concurrent, and equally rapid, growth in the export of land-intensive commodities[48]. Between 2007 and 2016, Laos' exports of land-intensive commodities to its three principal export partners (in descending order: Thailand, China and Vietnam) grew three-fold, from USD 726 million to 2.8 billion, with an annual average growth of nearly 19%. While Thailand remains the main recipient of these exports, Chinese imports have seen the most impressive growth over that decade, increasing more than 10-fold with an average annual growth of nearly 44%.

The last two years of this period, 2015 and 2016, saw however an overall decrease in exports of -24% and -2%, respectively, due mostly to drastic drawdowns in the export of timber from Lao PDR (Figure 18 and Figure 19). However, exports of agricultural products (including rubber) remained strong, increasing by 29% in 2015 and a further 22% in 2016 (Figure 20).

The rapid expansion of land investments, trade, and the changes in rural agricultural systems intersect with key changes in land use and land cover, and efforts to conserve forest areas, with direct implications for agricultural communities.

Alongside the expansion of land investments has been the rise of contract farming in recent years. While available systematic data in 2011 indicated that only 14% of agricultural households are engaged in contract farming, regional variations are important. In Huaphan, for example, more than half of all households are engaged in contract farming while Luang Namtha and Xayabouri had similar, but lower rates, due to cross-border firms from China and Thailand.

The rise in FDI in land concessions, export-oriented trade, and contract farming reflect a general trend in the commercialization of Lao agriculture, a dominant feature of change in recent decades. Between 1999 and 2011, the proportion of farmers engaged primarily in the production of agricultural commodities for trade rose steeply, from around 6% to more than 33%. As with contract farming, and related to it, this pattern has been more pronounced in northern provinces such as Xayabouri (involving 55% of households) and Luang Prabang (45%) as well as in central provinces such as Savannakhet and, in the south, Champasak. While updated data is lacking, evidence suggests that this trend has largely accelerated in recent years with increasing investments in the agricultural sector and the expansion of large, multinational corporations such as the Thai-based Charoen Pokphand (CP) Group. While the commercialization of agriculture is a cornerstone in MAF's Strategy to 2025 and brings some key benefits to rural communities, there are risks as well, pertaining both to food security (as communities re-orient their agricultural production toward market commodities, MAF 2013- RVS) and to rural indebtedness, as farmers borrow money for agricultural inputs to improve yield. Population growth, land investments and the expansion of commercial agriculture also entail key impacts on land use and land cover in Lao PDR, to which we now turn.

[48] Wood, agricultural products, rubber latex, and minerals

Figure 17: GDP Structure by Sectors in Lao PDR (2006-2016)
Data Source:
World Bank Database

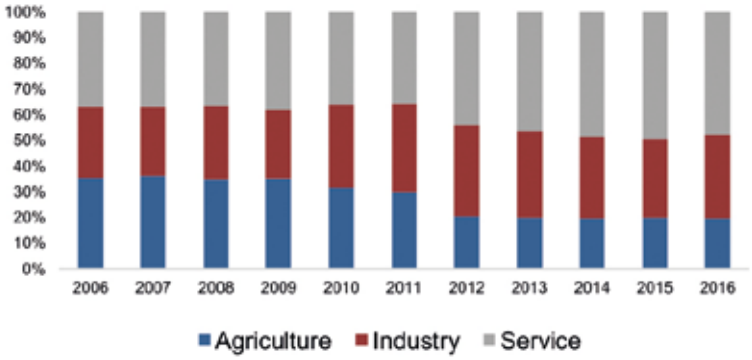


Figure 18: Lao PDR's export of land intensive commodities to regional trade partners (2007-2016)
Data Source:
UN Comtrade Database

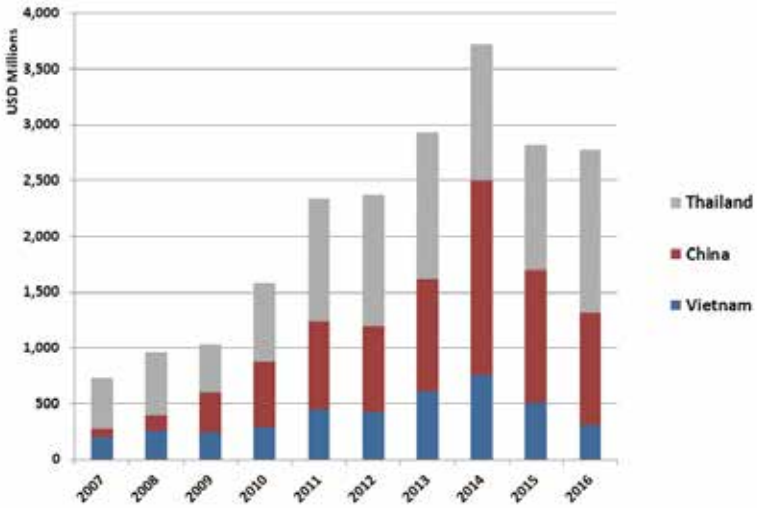


Figure 19: Value of Lao PDR's export of land intensive commodities to select countries (2007-2016)
Data Source:
UN Comtrade Database

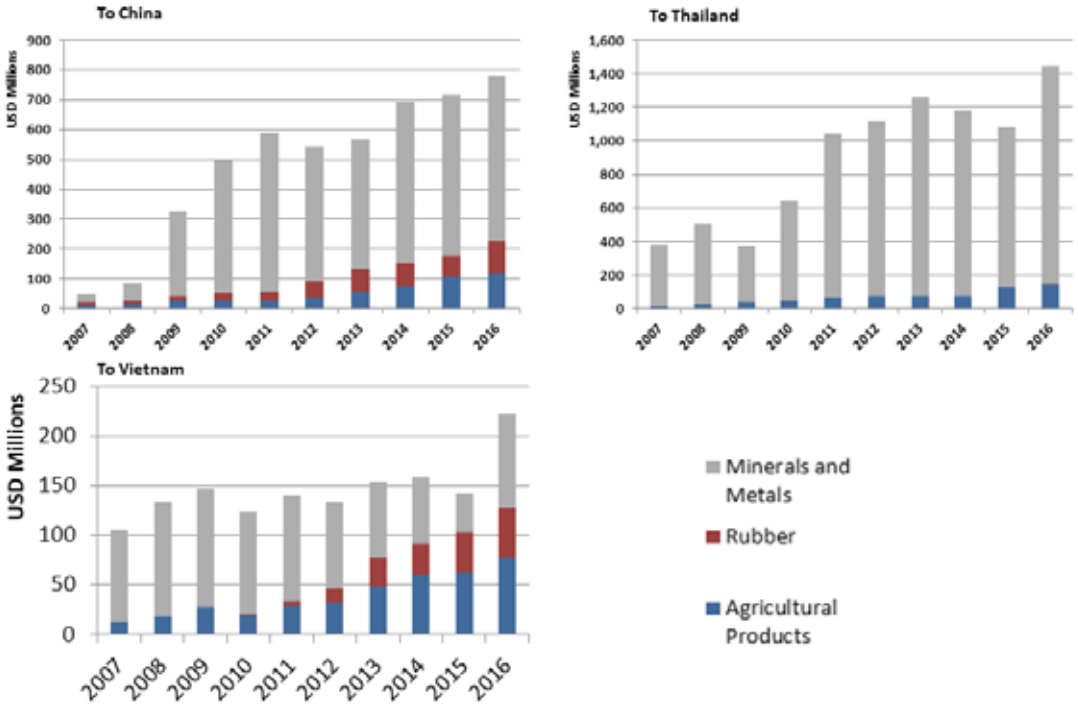
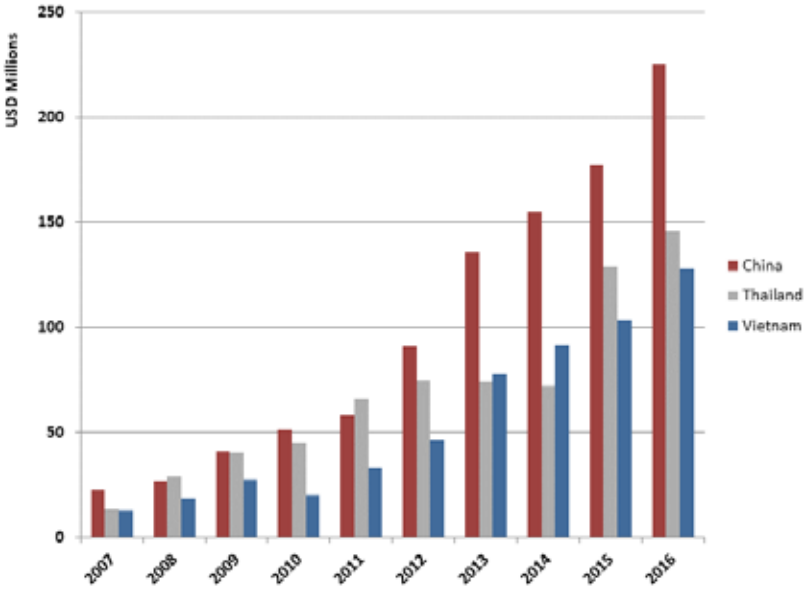


Figure 20: Crop (including rubber) exports from Lao PDR to select countries (2007-2016)
Data Source:
UN Comtrade Database



Dr. Thateva Saphanthong,
Deputy-Director General, Department of Agricultural Land Management, Ministry of Agriculture and Forestry, Lao PDR

Perspectives:

"National development planning and strategies have struggled to achieve credibility at the local level and to provide an adequate framework for development. This is due to several factors, but a critical issue is the basic disagreement between these various plans and strategies and a lack of consistency in how they address fundamental, strategic issues affecting local areas. There is an urgent need for closer coordination between government agencies, and between the central level and local stakeholders to ensure a clear framework and direction for development that is coordinated and responsive to local realities and needs."

© Micah Ingalls

The Land resource base: Forests and agriculture in tension

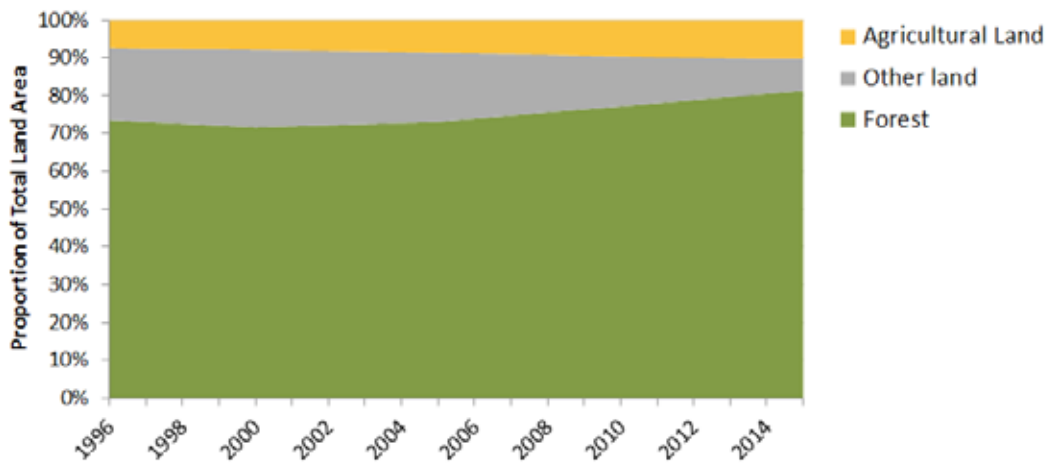
Land Use Land Cover

Forests comprise the largest individual share of Laos's territory, at around 43.5% (DoF, 2018, and see Map 33). Lao PDR's forest cover steadily declined between 1982 and 2010 at an average annual rate of 0.3%, with even higher deforestation rates in provinces adjacent to the Vietnam border (Lestrelin *et al*., 2013). In 2010, the GoL estimated forest cover to be around 9.5 million ha, or 40.3% of total land area. From 2010 to 2015, official figures indicate an increase in forest area, though these increases were largely attributable to the expansion of commercial tree plantations, especially rubber (FRA, 2015a), with a small share arguably contributed by the regrowth of shifting cultivation fallows.

Despite these modest advances, the GoL (2010) estimates that due to the expansion of commercial plantations and other land-based investments, the country will continue to lose around 67,000 ha of natural forests per year through 2020. In addition to other ecosystem service values, including watershed protection values that support national hydropower goals, forests provide key resources for local communities.

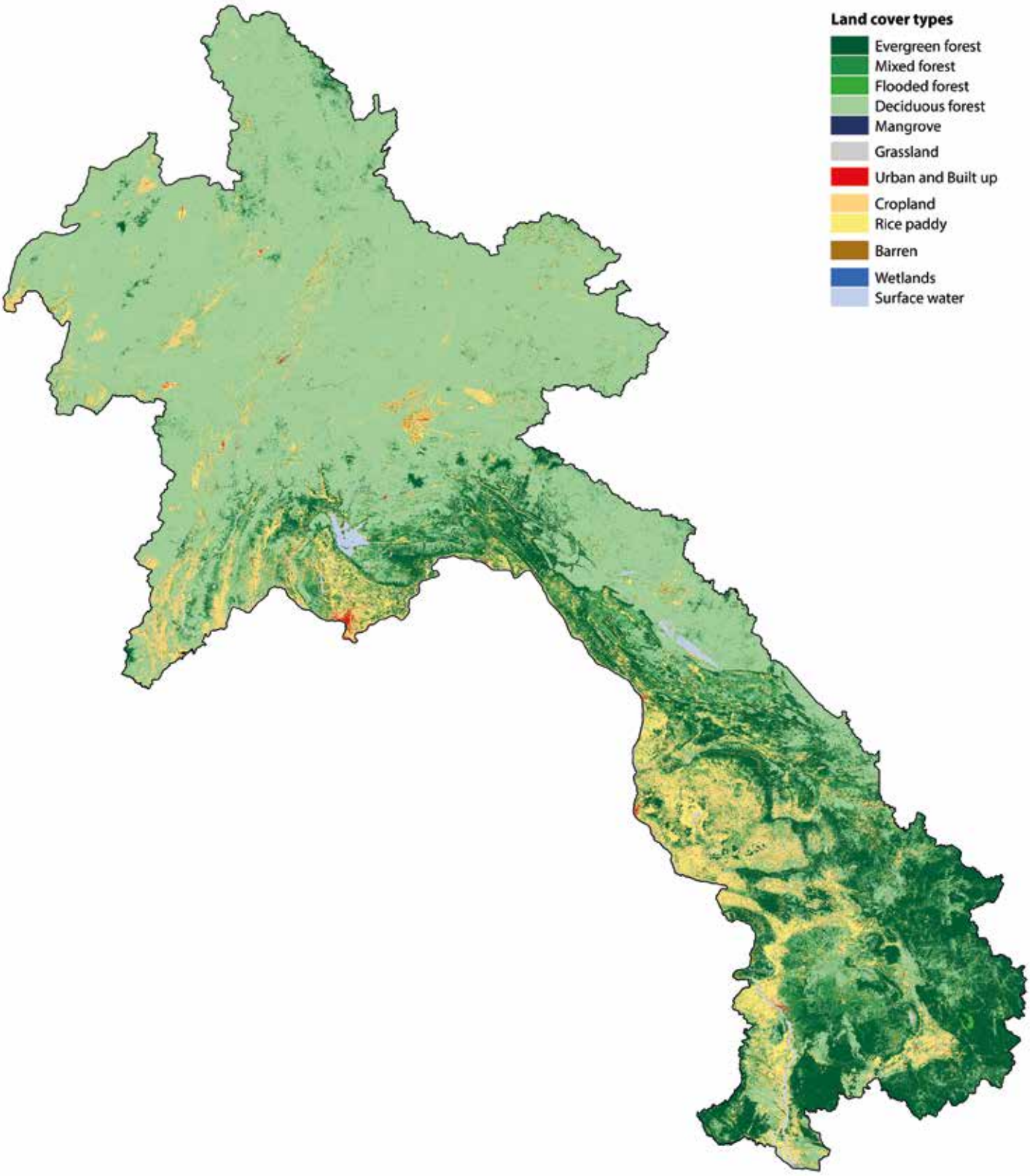
Due primarily to the constraints imposed by Laos's mountainous topographical character, agricultural land area is low, comprising approximately 7.9% of total land area. While FAO data indicates that agricultural land area increased by around 39% between 1997 and 2016 (Figure 21), comparison between the 1999 and 2011 agricultural census data suggests a much more rapid increase in agricultural land of 59%, from less than 1 million hectares up to 1.49 million ha in 2011.

Figure 21: Land Use Land Cover Change in Lao PDR (1997-2016)
Source: FAOSTAT



© Thomas Calame

Map 33: Land Use Land Cover in Lao PDR (2015)
Source: SERVIR Mekong



There are major discrepancies between the data on forest cover in Laos provided through the FAO's global database and those provided by the GoL and the Laos office of FAO. Official estimates of forest cover in Laos are currently around 43.5% of total land area, almost half the forest cover rate reported in the global FAO data (DoF, 2018). These discrepancies are generally due to differing ways that forest is defined. The major distinction is that the national definition of forest cover includes 20% canopy closure, while the globally-standardized FAO definition includes only 10%. The trends of change are, however roughly consistent. However, forest cover estimates (according to both FAO and national definitions) include moncultural plantations of non-native species such as rubber, despite the substantial differences between natural forests and such plantations with regard to environmental and social benefits.

Cropping and Crop Diversity

According to the 2011 Census of Agriculture, rice continues to dominate agricultural land uses in Laos, comprising around 70% of total agricultural land and 80% of all land under annual crop cultivation. Rice cultivation area grew by nearly 31% between 1999 and 2011. Of total area, (wet season) paddy rice production comprises the largest share of land area, covering nearly 1 million hectares of land, largely within central and southern Laos along the floodplains of the Mekong and its major tributaries. Savannakhet has the largest per-province area of rice, followed by Champasak and Khammouane. Upland rice production nevertheless remains important, especially in the northern upland provinces, comprising approximately 212,000 ha under active cropping (see below). Behind rice, maize, Job's tears and cassava command large areas of production (102,000 ha, 38,000 ha and 19,000 ha, respectively). Xayabouri contributes the largest amount of land area for both maize and Job's tears, constituting 50% and 67% of national cultivated area, respectively.

Perennial crop area under agricultural households is dominated by rubber and, secondarily, coffee. Between 1999 and 2011, rubber plantation area grew from 412 ha (almost entirely within Vientiane Capital) to nearly 66,000 ha, involving 26% of agricultural households nationally but with a pronounced concentration in the northern provinces Luang Namtha, Phongsaly and Bokeo[49]. Coffee production in 2011, involving more than 43,000 ha, was concentrated in the Bolevan Plateau in southern Laos, though recent years have seen the expansion of coffee plantations elsewhere. Conversely, the amount of area under banana and mango plantations decreased between 1999 and 2011, by 67% and 57%, respectively, though in subsequent years banana production in northern provinces along the Chinese border expanded rapidly.

The diversity of crops cultivated by agricultural households varies greatly. Savannakhet, Laos's major rice producing province, has the least crop diversity with more than 96% (approximately 220,000 hectares) of cultivated area dominated by (predominantly lowland paddy) rice, followed by Khammouane Province, wherein rice production dominates nearly 94% (or approximately 81,800 ha) of cultivated area. Northwestern provinces that have been more directly impacted by the crop booms of the last decade shown the highest degrees of diversity, attributable primarily due to the expansion of rubber and maize plantations but also a higher diversity of crops grown at the household level, where agricultural families cultivate an average of 12-13 different crops. Similar levels of diversity are found in south, especially in Sekong Province.

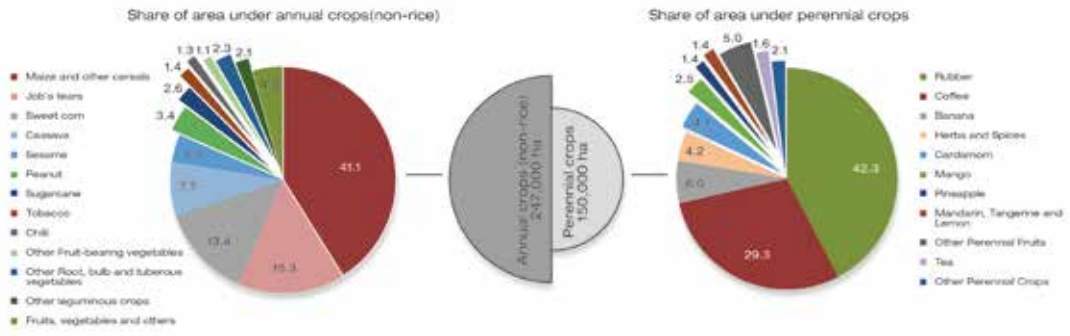
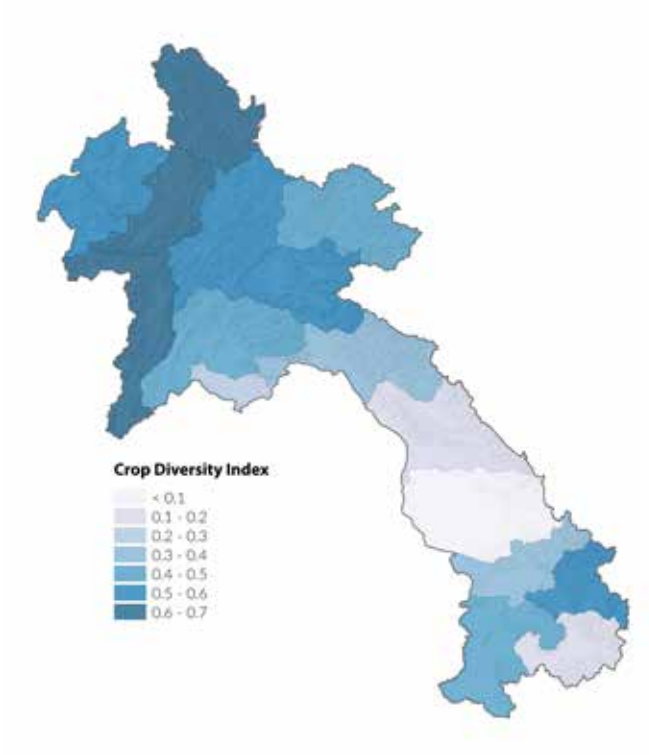


Figure 22: Distribution of main annual and perennial crop types in Lao PDR
Source: Lao PDR Census of Agriculture 2011

[49] Shall holdings in rubber are dwarfed by the amount of land under rubber in concessions, which total 215,773 ha, predominantly in the south

Map 34. Crop Diversification Index in by province in Lao PDR (2011)
Data Source: Lao PDR Census of Agriculture, 2011



Crop and cultivar diversity is foundational resilience of local producers and the food system more generally to, for example, market and pricing shocks for particular products, climate change and pest outbreaks. Generally speaking, commercialization tends to lead toward agricultural simplification but this is also a generalization. At the farm level, diverse assemblages of crops, NTFPs and other semi-domesticated wild species are facing continual pressures from replacement as commercial monocultural plantations—especially for the so-called boom crops maize, cassava, rubber, etc.—take up an increasing amount of land area. This transition toward large-scale monocultural production are creating simplification at the landscape scale, particularly where they replace natural vegetation and forests, or are expanding at the expense of multifunctional shifting cultivation landscapes that typically comprise of a complex mixture of cultivated areas, managed fallows and early-successional forests. The Crop Diversity Index (CDI) presented here (Map 34) is done at the provincial level and, in some sense, provides a different picture. At this higher level of aggregation, smaller and unreported crop[50] areas are overwhelmed by the dominance of rice and other crops that take in large areas of land. At this scale, the most diverse provinces in terms of the CDI are those where non-rice crops, including large-scale plantations of maize, cassava and rubber complement the large areas under rice production. However, both farm-level and aggregate provincial-level diversity indicators generally accord with regard to those provinces that are highest and lowest, respectively, with regard to 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. While these improved varieties have undoubtedly been instrumental in increased rice productivity, contributing to food security and livelihood improvements, the rapid replacement of traditional varieties with improved cultivars also gives rise to some concerns. Laos is second only to India with regard to the degree and diversity of endemic rice cultivars, many of which are upland varieties associated with shifting cultivation. It also has by far the highest proportion of its production in glutinous varieties, accounting for approximately 90% of production area. With the expansion of improved cultivars and pressures on shifting cultivation in the uplands (see below), this genetic resource-base is threatened. While 50% of agricultural households report using improved varieties, subnational adoption rates are by no means uniform, with central and southern provinces increasingly converting to improved, fast-maturing varieties, while northern provinces (where upland rice plays a more dominant role) continue to cultivate traditional, late-maturing varieties. There are also important ethnic variations in the adoption of improved varieties, relating to economic factors as well as the spatial patterning of ethnic groups. Adoption rates are highest among lowland Lao-Tai households, 52% of which reported using improved varieties, compared to just 8% among Hmong-Mien groups who are more likely to engage in upland, shifting cultivation.

[50] Agricultural statistics presented here are based on the 2011 Census of Agriculture, which includes crops planted on at least 100m2, thus does not include managed NTFPs, dispersed crops, and others.

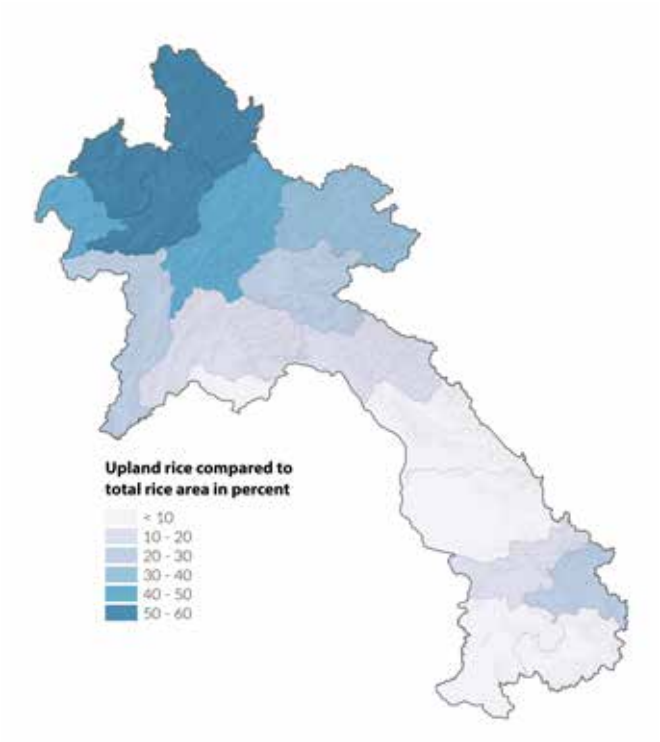
Shifting cultivation

While the largest share of rice cultivation area and production comes from lowland paddy, 22% of total production area is in the form the upland shifting cultivation, a traditional livelihood practice that supports 240,000 households, particularly within poorer upland areas, that fits uncomfortably within the contemporary political and economic space. While research suggests that, under appropriate conditions, shifting cultivation has been shown to have significant social and environmental benefits and represents a sustainable land use within upland areas, it is commonly seen by policy makers as backward and in conflict with priorities relating to commercialization and agricultural intensification on the one hand and forest conservation on the other. While formal policy has moved away from the eradication of shifting toward its "stabilization," in practice policy and development trajectories continue to put pressure on shifting cultivation, perhaps particularly in favor of halting fallow clearance in favor of allowing for forest regeneration in order to achieve Laos's 2020 Forest Strategy, the goal of which is to achieve 70% forest cover[51]. Shifting cultivators are generally poorer and less food secure (MAF, 2013), suggesting that efforts to further restrict shifting cultivation practices absent of adequate alternatives, could have major ramifications.

Despite government programmes aimed at eradicating shifting cultivation, it has continued to persist as an important livelihood strategy in the Lao uplands (Map 35). While, according to the 2011 Census of Agriculture, the number of agricultural households engaged in shifting cultivating declined by 8% between 1991 and 2011, the amount of area cultivated increased by 6% to 212,000 ha. Given its high reliance on fallowing (to recover nutrients and soil quality, and suppress weeds and pests), the amount of land area involved in shifting cultivation is much higher, possible 9 times more than the cropped areas (Messerli *et al*. 2009). Conservative estimates suggest that the total amount of land involved in the shifting cultivation in Lao PDR may be around 7 million hectares (*Ibid*.).

Shifting cultivation fallows—areas of often seen by policy makers and conservationists as potential forest—are essential not only to the practice of shifting cultivation but are also actively managed by farmers for vegetable cultivation and the production of NTFPs, which play an essential role in household food security, nutrition and income, especially for poorer households (WFP 2013). In Laos, there are more than 1,000 species of NTFPs used by for food, medicine, and other purposes. While NTFPs are popularly assumed to be associated with forests, a recent study involving more than 200 villages found that 48% of NTFP values derived from shifting cultivation fields and fallows, while only 10% came from forest areas (TABI and CDE, 2018). The 2011 Census indicated that 69% of agricultural households reported harvesting from forest areas.

Map 35 Proportion of shifting cultivation area to total rice production area, by province, in Lao PDR (2011)
Data Source: Lao PDR Census of Agriculture, 2011



[51] As mentioned, the FAO global data would suggest that this target has been reached, while national estimates place forest cover levels currently around 43.5%.

Livestock

Livestock and poultry are commonly raised around settlements and within permanent pastures, shifting cultivation fallows and communally-managed forest areas. This does not include, however, the amount of land that is devoted to the production of feed-grains, especially maize. The impact footprint of livestock is thus higher than pasture and grazing areas. In Laos, the vast majority of Lao feed-grain production is for export, pointing to the transboundary nature of livestock impact areas. As of 2011, 62 percent of agricultural households raised chickens, 39 percent raised pigs, and 38 percent raised cattle. These were predominantly raised for household consumption, with a limited share being sold in the market. Despite their importance, capture fisheries and wild animals comprise the principal sources of consumed protein, particularly for poorer households and in upland areas. For example, wild animals were found to comprise 32% of consumed protein nationally, with higher rates (45 percent) in upland areas (MAF 2013). Sixty-seven percent of the population reported engaging in wild-capture fisheries, primarily for subsistence, with 77 percent of these households reporting that did not sell these in the market.

Land use suitability and agricultural intensification

Due to its mountainous, steeply sloping terrain, Laos in general has limited potential for agricultural expansion. However, several provinces currently use a low proportion of land that has been identified as suitable for agriculture. The northern provinces of Phongsaly and Xiengkhouang, for example, use only 25% and 34% of their potential agricultural land. This contrasts, however, with other provinces wherein cropped land actually exceeds the amount of area identified as suitable for agriculture, such as Champasak, Xayabouri and Bokeo—provinces with a relatively high degree of commercial production—suggesting that land use and market pressures may be pushing agricultural into marginal lands, with risks related to sustainability and degradation. In general, the underutilization of land relates to a historic lack of capital investment, low labor availability, insufficient irrigation infrastructure and the presence of unexploded ordnances (UXOs).

Chanthaviphone Inthavong,
PhD, Deputy Director General,
Information Center,
MONRE

Perspectives: Open Data Policy

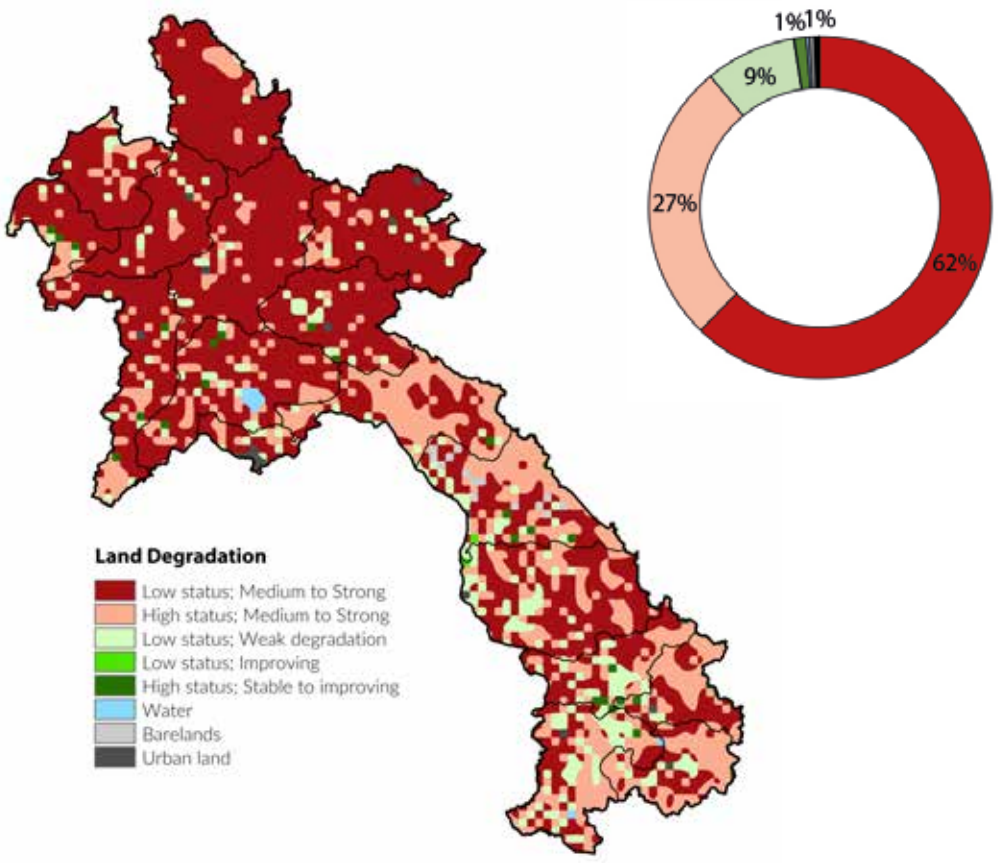
Recently, the government has recognized that a key development challenge in Laos is sustainable management and governance of its natural resources, which requires improved availability of and accessibility to up-to-date and comprehensive data and information of resources in the country. It is generally agreed that clear and accurate data and information is the foundation of good management. However, what many of us don't know is that it is not enough just to have data and information from one or some sectors, but instead we have to bring together data and information from all concerned sectors if we want to be able to comprehensively and effectively manage resources, support the Lao people in development, and ensure a sustainable future. Because development is the responsibility of us all which include not only government agencies and private entrepreneurs but also local communities, this data and information cannot be held privately by only the few, it needs to be shared with the people particularly those at the grassroots level so they can be active participants in their own development and support the government's efforts relating to both poverty alleviation and sustainable and equitable development in the country. Until now, strong progress has been made in many sectors and regions to bring together key information and make it public, but nevertheless more work needs to be done. Thanks to the present availability of improved technology, social media and the internet, it is very easy now to compile, bring together and share data and information from every sources and sectors. Hence a future where everything including resource data and information can and shall be made public is possible and the key driver for this is the government's willingness and leadership. The government has an important opportunity and responsibility to lead the way toward effective and sustainable resource management, starting from transparency and an open data policy to set a good example for the people."

The persistence of UXOs from the Indochinese conflicts of the 1960s and 70s (from which Laos has the unfortunate distinction of being the most heavily bombed country in the world) remain an important limiting factor for agricultural land use in some parts of Lao PDR. UXO contamination is highest in along the Vietnam border, especially in Xiengkhouang Province where UXOs contaminate nearly 54,000 ha, or the equivalent of 90% of all agricultural land in the province. The significant role that UXOs play both in limiting agricultural production, land investments and the threat they pose to rural communities (especially children) prompted the Government of Laos to include their removal as the country's 18th, nationally-defined SDG.

Laos has an abundance of water resources potentially suitable for irrigation, suggesting that there is significant irrigation potential. Despite this, a lack or irrigation was raised as the most significant challenge for development by village leaders surveyed during the 2011 agricultural census. While 62% of villages have irrigation systems, there is significant variation, with some provinces much lower, such as Attapeu where only 17% of villages benefit from irrigation systems.

Land degradation is a growing concern across the world, particularly within areas experiencing rapid land use change associated with agricultural expansion, in areas with steeply sloping land, and where unsustainable practices have eroded the underlying resource base. The impacts of land degradation are felt most acutely by the rural poor, both because of their primary reliance on agricultural and forest resources, and because their capacities for dealing with the impacts of change are more limited. Despite its significance, standard measures for assessing degradation are limited and hotly contested, partly 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 the assessment. One approach, supported by the FAO Land Degradation in Drylands Project, produced a global assessment of (multivariate) land productivity and trends of change, including degradation. While the assessment was global in nature and thus coarsely resolved at the national level, several inferences can be made with regard to land degradation patterns and risks in Lao PDR. Laos's steeply-sloping topography and relatively shallow soils present substantial risks for soil degradation. The GLADIS assessment suggests that the majority of the country's land area shows medium to high levels of degradation. While this 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.

Map 36 Land Degradation in Lao PDR
Source: FAO GLADIS



Michael Victor,
Chief Technical Adviser/
Team Leader,
The Agrobiodiversity
Initiative

Perspectives: Agrobiodiversity

The Uplands of Laos are some of the most biologically- and socially-diverse landscapes in world. They are home to an amazing array of plant and tree species. What is surprising is that much of this 'biodiversity' has been cultivated by generations of ethnic men and women living in the uplands. What we have found in the Agrobioidviersty Initiative (TABI), a ten-year initiative to improve how biodiversity is managed and used in northern Laos, is that the 'upland fallow" (land used by upland farmers for shifting or rotational cultivation) provides more than just rice to the people of the Uplands. We have seen that fallow provides the largest proportion of livelihood opportunities for upland people which includes rice, non-timber forest products, medicinal plants and grazing space. Attempts to stabilize and eradicate shifting cultivation often do not succeed because it is carried out for external objectives (industrial concessions or forest conservation) and does recognize the importance of the fallow in upland livelihoods. It is essential that future forest and agriculture land use planning and management activities in the uplands build upon current land use of local people and recognize both formal and informal ways that land is used. Only then will we be able to manage the landscape for the multitude of goods and services it provides.

Distribution of the Land Resource Base: Turning whose land into whose capital?

The ways in which the land resource base is distributed across society is a core concern for development and food security and central to questions of justice and equity. Particularly for agrarian societies such as Laos, wherein the vast majority of the population is engaged in agriculture, the issue of agricultural land distribution is thus core national concerns and a hotly-debated topic. While national policy and various strategies, such as MAF's Strategy to 2025, emphasize the critical role of household agriculture as the basis of the rural economy, other policies—most notably policies relating to TLIC—signal a movement away from a focus on smallholders toward large-scale investments in land through FDI and domestic concessions of land, with immediate implications for land resource distribution.

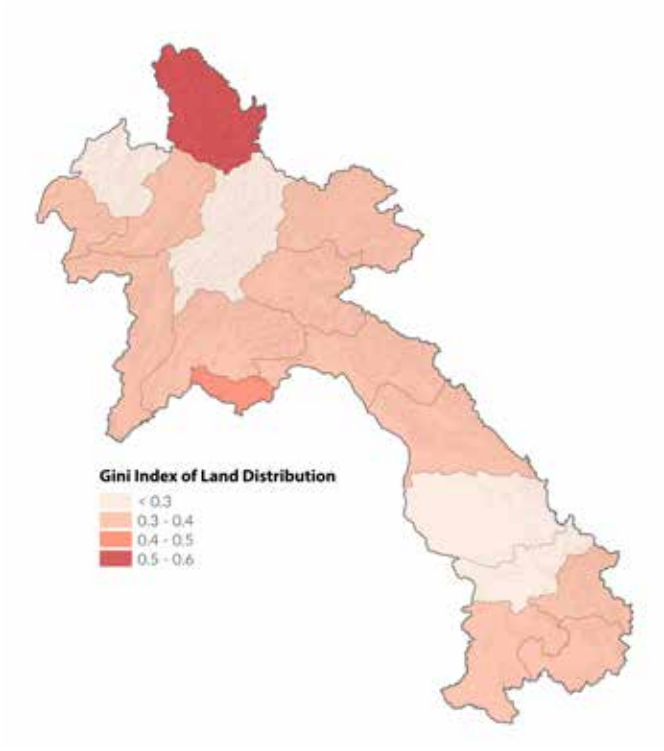
Agricultural Land Distribution

The distribution of rural society and agricultural land uses and have been in a state of flux since the mid-20th Century. During and after the revolutionary conflicts up until the early 1990s, nearly half of the population of Laos was displaced or resettled due to various causes, including avoidance of conflict areas and, in the years immediately following independence, state-based efforts to establish national identity, reshape and modernize rural areas, and ensure internal security (Baird and Shoemaker, 2009). While the government's official policy of broad-scale resettlement more or less ended during the 1990s and early 2000s, resettlement driven by village consolidation policies and from investment projects have continued to produce displacement across many rural areas. While official policies have sought to mitigate these impacts through compensation and other forms or remuneration, implementation has been limited and inconsistent. The 2011 agricultural census indicated conservatively that around 10% of all villages had been resettled nationally but in the uplands this almost doubled, with 19% of households having been resettled.

Between 1999 and 2011, average land holdings by agricultural households increased by nearly 50%, to 2.4 ha per family, but the distribution of these land holdings has been irregular, and more pronounced within lowland areas. Equity in land holdings is a key indicator of the degree to which the land resources base is distributed across society. While differences in the classes of land holdings may not necessarily indicate inequity (i.e. unfairness in distribution), in a largely agrarian, socialist society whose landholdings are ostensibly distributed according to need, equity in land holdings would be expected. However, the pace of commercialization and the unevenness of economic development at the household level have played an important role in shaping the irregular expansion of land holdings and conglomeration in some areas.

Nationally, 27% of agricultural households operate 3 hectares or more of land, in the aggregate accounting for a disproportionately high—nearly 60%—proportion of agricultural land. 65% of farming households operate between 0.5 hectares and 2.99 hectares of land. The Gini Index—showing equity and disparity through values ranging from 0 (complete equality) to 1 (complete inequality)—here presented at the provincial level, provide insights into disparities in land holdings across Lao PDR (Map 37). The evenness of distribution of land holdings also serves as an indicator of conglomeration, a common feature of commercialization. Luang Prabang province has the greatest equality of agricultural land holdings, while Vientiane Capital and Phongsaly show highest disparities. Taking into consideration only household agricultural land holdings, the country as a whole has a Gini coefficient value of 0.34. Factoring in agriculture and forest concessions to foreign and domestic firms, the national coefficient jumps to 0.49. By way of comparison against Gini Indices for income (the more common application of the Gini coefficient), the world's top 15 most unequal countries have Gini Indices of 0.49 and above.

Map 37: Gini Index of agricultural land distribution, by province, in Lao PDR
Data Source: Lao PDR Census of Agriculture 2011



The Gini Index of land above relates to land managed by agricultural households, but does not reflect the degree to which those households have tenure security over these lands. This is particularly relevant given the relatively low coverage of land titling programmes and the default policy stance which situates the government, rather than the community or household, as the land owner (see below). The Gini Index of land also does not take into account disparities with regard to land quality, prices, or other aspects relevant to understanding resource disparities more generally.

Despite the expansion of agricultural land and increases in the average size of land holdings in recent years, land shortages remain a persistent obstacle to development and food security (MAF 2013), with 29% of households indicated that lack of available agricultural land was a major constraint.

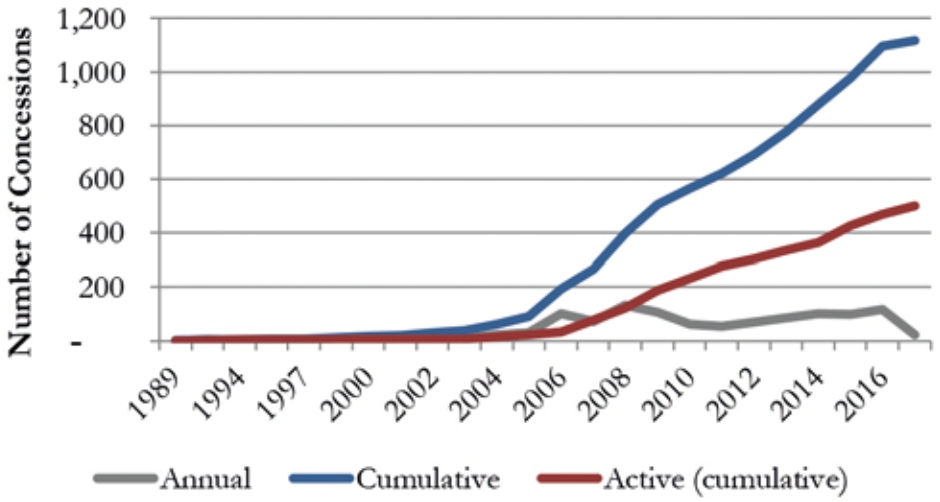
Landlessness

In 2011, there were approximately 6,200 landless households for whom agriculture was their primary occupation. While this represents a relatively low proportion of total agricultural households (around 1%), the number of landless households tripled since the 1999 census period. Further, approximately 7% of the agricultural population operates less than 0.5 ha and thus may be considered at risk of functional landlessness, with holdings below a minimum threshold to allow for subsistence crop production. While landlessness results from a variety of causes, including the sale of agricultural land use rights for repayment of debts or the purchase of livelihood inputs, increased public attention has been paid to landlessness that has resulted from the concession of community land to investment projects. Dispossession through the improper granting of land concessions has been arguably the most contentious issue in contemporary land debates, explicitly referenced in, for example, the Politburo Resolution on land in 2017.

Land Leases and Concessions

Lao PDR has aggressively pursued a model of economic growth through export-oriented FDI and a heavy reliance on the primary sectors of forestry, agriculture, hydropower and mining in an effort to promote national development, eradicate poverty and achieve other socioeconomic goals. While foreign investments in land and forest resources have occurred since at least the 1970s, recent years have seen the rapid expansion of such investments through TLIC-related policies (UNDP, 2010; Baird, 2011). During the years 2010-2014, government figures indicate that FDI in Lao PDR grew at an average rate of 47.4% per year (MPI, 2015).

Figure 23: Number of land concessions granted in Lao PDR between 1989 and 2016
Source: Lao PDR Land Concession Inventory 2017



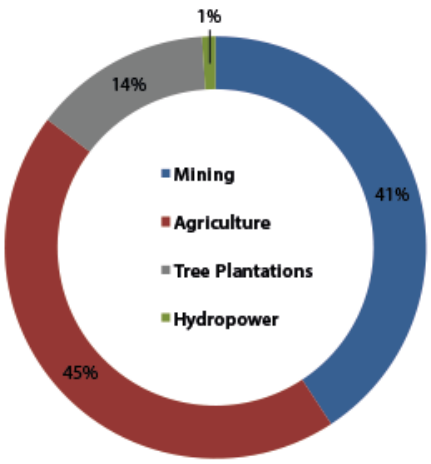
LSLAs through state-sponsored concessions have expanded over the past ten years at a startling pace (Figure 23). At present, 1,758 land deals have taken place, involving 1,019,340 ha of land[52], with a further 10.7 million ha (45% of the total land area of Laos) have been granted for mineral exploration (CDE and MONRE, 2018).

Land concessions predominate in the central and southern provinces. Just three provinces—Savannnakhet, Khammouane and Bolikhamxay—comprise 47.5% of all land involved in concessions. Of these, Savannakhet has the largest share, with a total of 225,873 ha. Agricultural concession, including rubber, account for the largest share of land under concessions, with 454,376 ha, followed by mining concessions[53] (with 415,527 ha), tree plantations (138,981 ha) and hydropower[54] (10,456 ha) (Figure 24).

Between 2010 and 2017, an important shift occurred with regard to the ownership of concessions. While domestic investments comprised only 17% of total concession area in 2010, this proportion nearly doubled to 30% in 2017, signaling the localization of state-sponsored land acquisitions and the rise of increasing prosperity among some segments of Lao society (Figure 25).

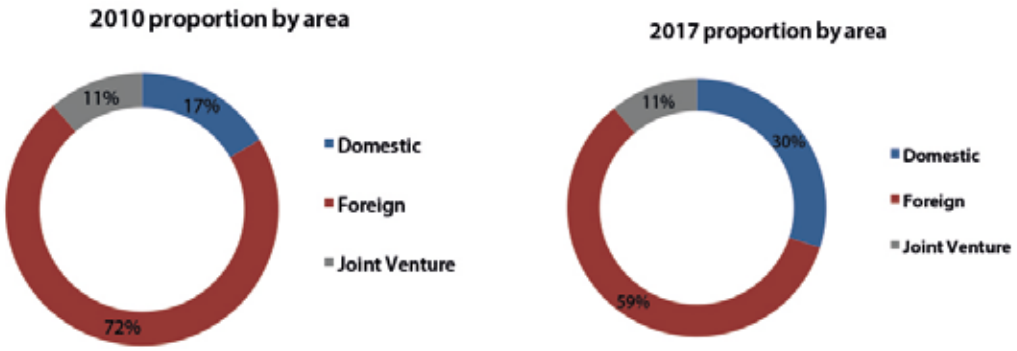
Large-scale investments in land have resulted in massive changes in the ownership and the use of land resources. Rural communities and government regulatory agencies have struggled to keep up with the pace of change and adapt to its impacts, particularly with regard to land, but also forest resources, as land-based investments are playing an increasingly role in deforestation (Ingalls *et al*., 2018).

Figure 24: Share of land under concession, by land use, in Lao PDR
Data Source: Lao PDR Land Concession Inventory 2017



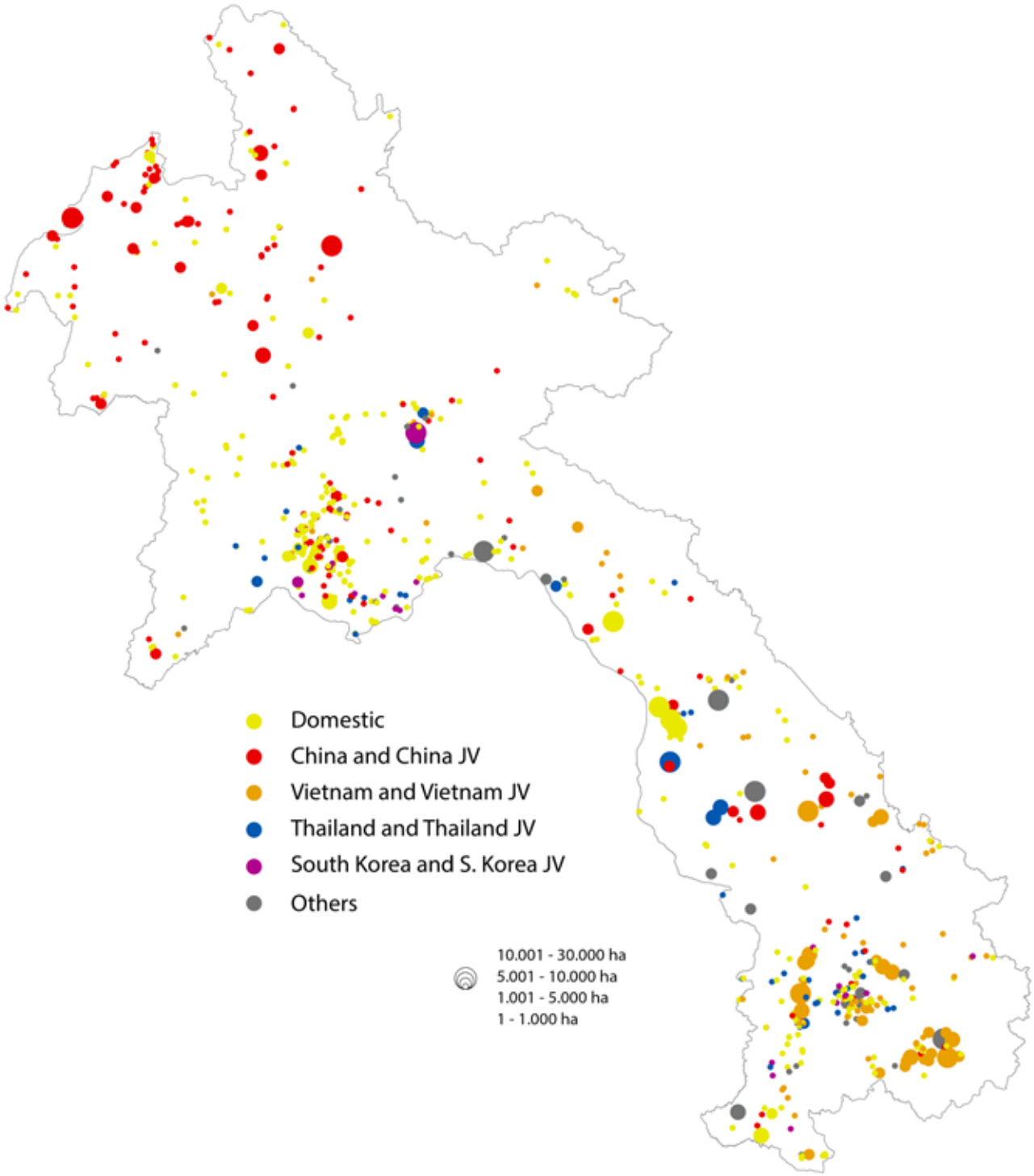
[52] Though not all of this land has been developed
[53] Excluding exploration concessions
[54] Importantly, hydropower concession area here refers only to land concession areas for the hydropower facility itself and does not include inundation areas or access roads, etc., the inclusion of which would increase this figure by several orders of magnitude. Rough estimates suggest that total inundation areas of planned and constructed dams may total more than 500,000 ha.

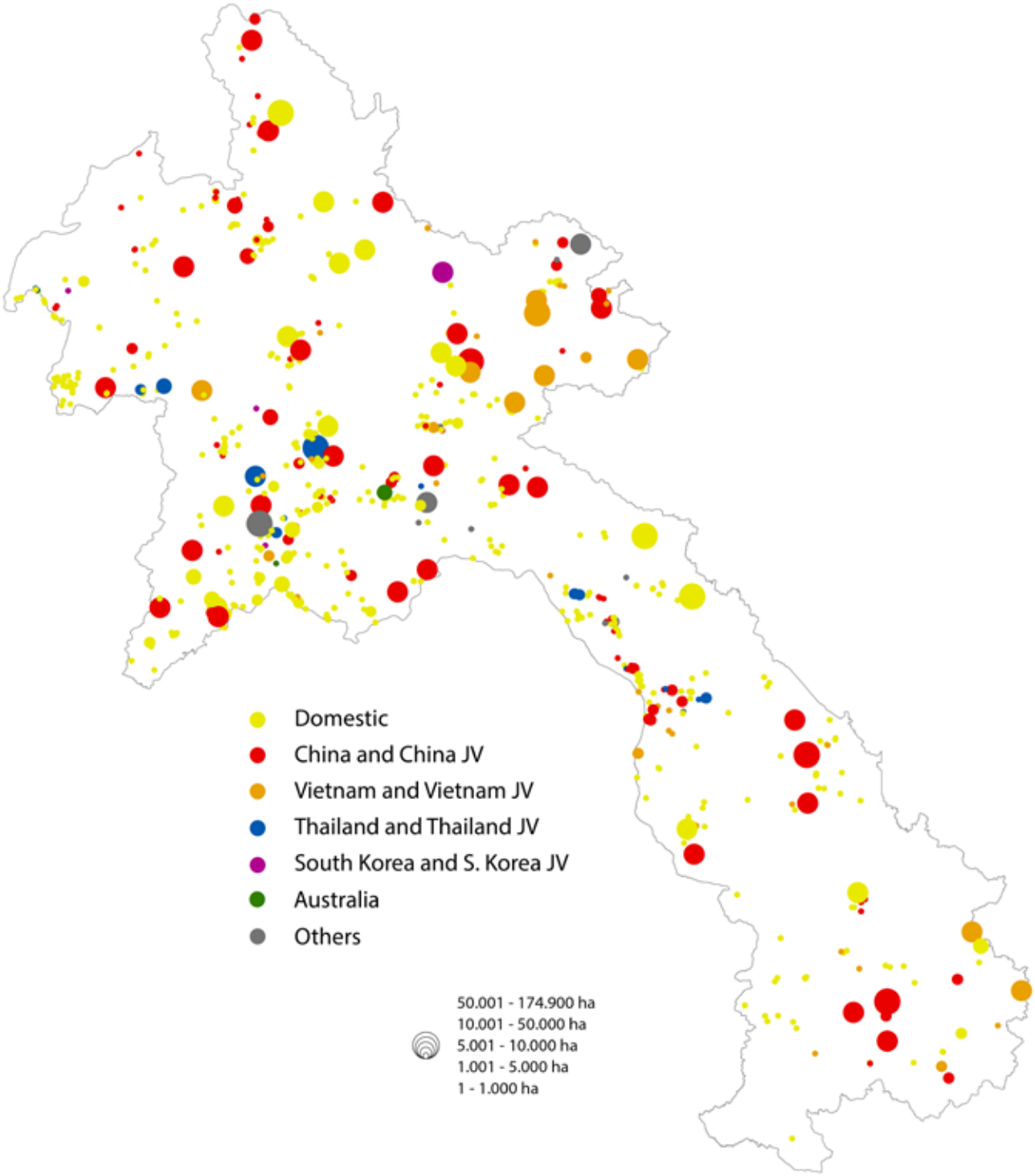
Figure 25: Share of land under concessions, by investor origin, in Lao PDR in 2010 and 2017
Data Source: Lao PDR Land Concession Inventory 2017



© Micah Ingalls

Map 38: Agriculture, forestry and mining concessions, by investor and size, in Lao PDR
Data Source: Lao PDR Land Concession Inventory 2017





1.3.4 Protected Areas

In addition to—and often overlapping with—land that is distributed to agricultural households and large-scale land investments, a large amount of rural land in Laos has been incorporated into various state protected areas. In 1993, the GoL established the national forest reserve system by Prime Ministerial Decree 164, initially covering approximately 2.4 million ha distributed across 18 National Protected Areas (NPAs), though this has been gradually enlarged to cover 3.8 million hectares (or 14% of total land area) across 24 NPAs. In addition to the NPAs, provinces and districts have designated a further 1.4 million hectares of protected forest areas. The establishment of the protected areas system has been a cornerstone of environmental protection and biodiversity conservation, supporting the delivery of a number of key ecosystem services including important livelihood benefits to resident communities. However, the designation of these areas for conservation values entail a number of restrictions for local livelihoods and for agricultural development. Article 4 of Decree 164 included specific provision for the regulation of human uses inside the forest reserves, including: (1) a prohibition on the holding of lands under title, (2) the erection of new houses by local households, (3) the expansion of agricultural fields, (4) allowance for the collection of NTFPs only by state permission, (5) an absolute prohibition on "slash and burn agriculture" (or shifting cultivation) and (6) the removal of any trees with the exception of sampling for approved scientific purposes. In practice, however, Laos's protected areas are generally inhabited and managed as multi-use areas, though their protected status has important implications for land availability, particularly where existing legislation is arbitrarily enforced when local land uses come into conflict with government priorities or private sector interests (Ingalls, 2017).

Other forest land distinctions are also important because of the ways in which these shape agricultural land availability for households. In addition to the NPAs above, the GoL has also established 51 National Production Forests (covering 3.1 million hectares) and 49 National Protection Forests (7.5 million ha). Together, these three forest categories cover 14.5 million hectares, or 61% of the land area of Laos. While the latter two national forest land designations are less-strictly managed than the NPAs, they nevertheless shape management and agricultural use practices, even at the local level. Arguably, national legislation prohibits issuance of land titles in all of these forest lands (DoF 2018).

Land Tenure Security

Article 7 of the Constitution of the Lao PDR specifies that the resources of country belong to the people of Laos, on whose behalf the State functions as caretaker and manager, and that "the State protects the property rights (such as the rights of possession, use, usufruct and disposition) and the inheritance rights of organisations and individuals. All lands, minerals, water sources, atmospheres, forests, natural products, aquatic and wild animals, and other natural resources are a national heritage, and the State ensures the rights to use, transfer and inherit it in accordance with the laws." The Constitution thus makes provision both for the role of the state as manager of the resource and decision-maker with regard to its allocation, but also (albeit vague) recognition of the usufruct and inheritance rights of the people. Working this out in practice has been a complex task with a mottled history. While the limited rights of communities over (relatively small amount of) intensively-used lands such as for residence and paddy rice cultivation is somewhat more clear, large domains of uncertainty and inconsistency have surrounded the (significantly larger amount of) lands where local communities have struggled to secure rights and access, or in which the government perceives a lack of intensive use and thus opportunity for expropriation by the state for investment. Following Liberation in 1975, an early project of governance was to define and limit land under village administration[55] and identify areas over which the state could assume a more direct role and, potentially, leverage for promoting state development interests. The Land and Forest Allocation (LFA) programme was the earliest instance of this.

Land and Forest Allocation (LFA)

Beginning in the mid-1990s, the LFA program was the first attempt to systematically identify and allocated land use rights to communities, specify accepted use zones within these territories, and to differentiate communal land from land that might be available for state purposes. This was the most expansive programme of its nature to date, involving more than 5,000 villages across the country. While physical maps and official documents were produced through this programme, lack of digitization and systematic record keeping has meant that most of these have been lost. The LFA designations, however, remain relevant and have continued to guide subsequent land distribution and planning efforts. Absent of updated and more detailed land use plans or titles (see the following sections), the LFA maps remain the only documentation demonstrating local land claims for most villages in Laos.

[55] Particularly the amount of land used for shifting cultivation

Land Use Planning

Subsequent to the closure of the national LFA program, land use planning activities have been carried out largely through donor-funded projects. Land use planning approaches vary by projects, depending on purpose, with some approaches focused more on detailing local uses and ensuring agricultural land holdings, while others are more focused on forest resource conservation. For rural areas where titling programmes have had very limited access, land use plans have served to provide limited tenure security for communities over land and forest resources, though their legal status and the degree of security provided is debatable. Due to the high human resource and financial costs of land use planning, it is estimated that land use planning has been carried out in fewer than 2,000 of Lao PDR approximate 8,500 villages.

Land Titling

While land titles are considered the most secure form of land tenure security in Lao PDR, coverage is limited primarily to urban and peri-urban areas and typically does not pertain to agricultural land. The Lao Land Titling Programme (LTP) initiated in 1997, focused on the issuance of titles in urban areas and, in 2003, began to pilot titling in rural areas, though these latter efforts were later abandoned. In principle, land titling remains an important government priority, but financial constraints and a general unease regarding the limitations that titling may impose on the allocation of land for investment purposes remain obstacles. In order to reduce costs associated with individual-level land titling and to secure tenure for lands that are managed collectively at the village-level, communal land titling has been piloted in Laos on a very limited basis in two districts.

Absent of land titles, many households have historically achieved a degree of tenure security in the form of family land books, land survey certificates (LSCs), Temporary Land Use Certificates (TLUCs, though most of these have officially expired), and through land tax receipts. These provide a mechanism through which to demonstrate land use rights, though the legal protection afforded by these in practice is mixed. There is at present no systematic assessment of the coverage of these forms of tenure formalization. A recent sub-national assessment, carried out in preparation for the nascent National REDD+ Programme (covering six northern provinces) found that 17% of village lands had some form of documented recognition, ranging (in descending order of coverage) from land use books (7%), tax receipts (4%), Land titles (3%), LSCs (2%) and TLUCs (1%). Land titles were restricted to urban and peri-urban areas (DoF, 2018).

Recognition of Customary Tenure

In principle, customary land tenure rights are recognized but the legal recognition of rights based on customary tenure have been limited. Article 26 of the Prime Minister's (2008) Decree on the Implementation of the Land Law reaffirms the state's recognition of customary tenure but clarifies that these rights are legally-recognized where officially documented, stating "the state recognizes the customary land use rights of individual, organization, or village community by issuing the Land Survey Certificate or Land Title or Land Certificate on a case-by-case basis, as specified in the land law, through the application for land registration submitted to the Land Management Authority." It is now increasingly recognized that to require such documentation in order to ensure legal recognition of customary tenure is inadequate. While it is not yet clear how this will be treated in the (upcoming) revised Land Law, the 2017 Politburo Resolution on the "Enhancement of Land Management and Development in the New Period" affirmed the government's commitment to protecting rights associated with customary use.

Ms Vansy Senyavong is the Director of Maeying Huamjai Phattana (MHP), which translates to Women Mobilizing for Development, a civil society organisation based in Bokeo province, Lao PDR.

Perspectives:

Tenure security over community forest areas is foundational to local livelihoods and conservation. Where we work, wild forest tea has huge potential to support local communities and create incentives for forest conservation. MHP has partnered with local Akha and Lahu communities to form a cooperative and establish a processing facility to add value to tea and increase farmer incomes. However, local management of the tea forests has become threatened by Chinese investors seeking concessions to plant bananas and other crops. We realized that without secure tenure their future would be at risk, and since titles have not been offered within forest areas, other approaches were needed. We found the solution in communal land use planning and collective titling of forest areas. With support from local authorities, The Agrobiodiversity Initiative (TABI) and MRLG, the villages mapped and allocated tea plots to individual households for harvest in return for their efforts in nurturing the plot, including the protection of young tea seedlings and supplementary planting to increase forest cover. Innovative solutions are needed to address the crucial issues of tenure insecurity that ethnic minority communities are facing in Laos—without these, we fear for the future of the communities and their forests.

Gender and Land

While the degree of gender equality and the rights of women varies across society, in the aggregate Laos ranks 106 of out 188 countries in the 2015 Gender Inequality Index. Women are typically underrepresented in the formal institutions of decision-making at all levels of society. Generally speaking, men are considered the head of the family with regard to formal representation, including in village decision-making. Village committees are similarly male-dominated, through minimal female participation is partly protected by the inclusion of the Women's Union Representative within the Village Committee. This is particularly important with regard the management of agricultural land and women's security over tenure of their resources for while 67% of agricultural households in Lao PDR are managed jointly by husbands and wives, 9% are managed by women. Customary practices relating to agriculture and other livelihood activities vary with, in many instances, women bearing a disproportionate responsibility for cultivation, in addition to household tasks. While formal land titling has generally not penetrated rural communities, Article 43 of the Land Law requires that land titles be issued jointly in the name of both husbands and wives, as joint rights holders, indicating that land tenure formalization may provide opportunities for increasing tenure security. Common narratives of gender-based disparities in tenure security suggest that, absent of formal protections afforded formalized tenure systems, women are systematically disadvantaged. While this is certainly often the case, traditional systems of matrilineal inheritance and matrilocation (where the husband resides with the wife's family) are also found, suggesting that traditional mechanisms also exist to protect the rights of women.

Governance of the Land Resource

The governance of land resources is central to the ways in which development outcomes are distributed across society and has a number of implications with regard to agricultural land management, agricultural production, rural food security and sustainability. Land governance in Lao PDR has seen some important, potentially positive developments within the past few years, particularly with regard to key legislation such as the Resolution on the Land Policy (2017) and ongoing revision of the Land Law, but also supportive legislation and technical instructions regarding environmental and social impact assessment, compensation and resettlement, and investment promotion.

Despite these potentially positive advances, land governance in Laos is beset by a number of complex issues. Lack of clarity in—but, perhaps more importantly, the irregular application/interpretation of—existing law on land and land-related issues has partially undermined the capacity of government policies (such as TLIC), land-related investments and agricultural commercialization to contribute equitably to poverty alleviation and development. The loss of community lands through expropriation for concessions, in many cases without adequate compensation or recourse to impartial justice systems, has resulted in a number of negative outcomes at the local level and undermined public confidence in land administration. The role played by public officials in these land deals and a general lack of transparency has also contributed to rising concerns of malfeasance. In 2017, Lao PDR scored 29 in Transparency International's Perception of Corruption Index, ranking Laos 135 out of 180 countries, and the second lowest (behind Cambodia) in the Mekong.

© Thomas Calame

Figure 26: Land governance assessment for Lao PDR
Source: Land governance assessment consultation, April 2018

In preparation for the State of Land report, a consultation process was carried out 2018 to assess the current status of land governance in Lao PDR, involving 29 national and international land experts, civil society actors, private sector representatives and government officials in group consultations and bilateral discussions. Based on the outcome of this, a number of other strengths and weaknesses emerged (Figure 26).

On the positive side, institutional mandates with regard to the governance of land resources are, in the main, clear but hampered by the frequency of institutional reorganization and revision of mandates over the past several years, most notably the reorganization of MONRE's departments related to land and the transfer or forest conservation responsibilities from MONRE to MAF in 2016.

Land conflicts are present but generally low compared with neighboring countries, though concerns around the freedom of communities to voice complaints may have contributed to a lack of overt conflicts. While there is significant sub-national variation and conflicting anecdotal perspectives on the tenure security of women (see above), there was a general perception that the formal titling system has been generally equitable with regard to the inclusion of women on land titles, though this also varies by location, potentially an important step toward the full realization of women's land resource rights.

The degree to which communities and households are compensated for expropriated land remains an area of debate. Important positive developments have occurred in recent years with regard to compensation for registered land, though often this is compensated at below-market rates. Unregistered land—land which has been customarily used by local communities—has been compensated less adequately, if at all, leading to negative socioeconomic outcomes for affected communities. A broad-based assessment of the quality of these investments[56] was carried out between 2014 and 2018 While multidimensional assessment of investment quality does not cleanly identify "good" versus "bad" concessions, several general observations are possible. In the main, while land investments have contributed to national development targets in come measure (particularly in playing an important role in raising national GDP), the adverse impacts of concessions—and, in particular, those impacts accruing to local communities and the natural environment—have outweighed the benefits. Non-compliance with environmental and social impact requirements has been especially clear. An initial assessment indicates that fewer than 10% of agricultural investment projects carried out impact assessments. While commercial tree plantations fared somewhat better (43% of whom carried out impact assessments), the vast majority of these (nearly 70%) did so after the land had already been cleared.

Land investments through state-granted concessions have fallen under increasing scrutiny, as civil society actors and government agencies increasingly question the benefits these bring to local communities and the national economy. In 2012, the Prime Minister of Lao PDR issued a selective moratorium (Prime Minister Order 13) on new concessions for rubber, eucalyptus and some minerals. Recent reforms in regulatory standards and enhanced law enforcement may presage improvement, but it is too early to tell.

[56] Investment quality was assessed against 29 of criteria within four domains, pertaining (respectively) to environmental, social, legal and economic outcomes.

While land acquisitions in have entailed a number of negative rural outcomes and, in some cases, have been clearly illegal, they intersect with national priorities and local patronage networks in ways that make them particularly difficult to resolve. Aspirations of economic development loom large in national priorities. The core engine of these national development strategies are land- and forest-intensive sectors, made explicit in Lao PDR's TLIC policies that have paved the way for concession-based development. Despite their demonstrable negative social and environmental impacts, they are generally promoted are on grounds of the benefits these may bring to rural communities in terms of enhanced investment in the agricultural sector and wage-labor employment, though the realization of such benefits have been very limited. The future of land concessions in Laos remains unclear, but it appears that the issue will remain a pressing issue far into the future. While national policies have expressed some hesitance recently regarding commercial tree plantation concessions and some other forms of investment, there is no indication that hydropower will cease to be a national priority. Similarly, Special Economic Zones (SEZs), deals that are very similar in nature to the land concessions considered above, appear to be increasing and, possibly, involving an increasingly visible role of Chinese investment.

Inclusivity in decision-making has been generally low in Laos. Public engagement on key legislation is generally uncommon, and the views of local communities are neither systematically solicited nor explicitly incorporated into laws and other regulations. While representation of public perception, needs and interests might in some part be provided through civil society groups, these remain nascent and are generally given very limited space for operation or engagement with government agencies and political processes. The revised Decree on Associations (2018) is widely seen as a retraction of the freedom of civil society to operate in the country.

While the international community has established important international conventions and treaties around the concept of human rights (including some to which Laos is a signatory), domestically such rights are not typically seen as a basis for governance. Other concepts—such as national solidarity and identity, collective (versus individual) benefit, and goals of national socioeconomic development—are generally seen as superordinate to rights-based approaches.

Land governance in Laos is at a key juncture. The government has made strong strides in recent years to address key issues that have beleaguered effective land governance, but there remain large areas of uncertainty with regard to how far-reaching such reforms will be, or how permanent given the tendency to rule by decree rather than through normal legislative process. Recent years have seen what appears to be the expansion of the roles and powers of the People's Assemblies under the National Assembly to advocate on behalf of communities. The revision of the Land Law, expected to be passed in 2018 or 2019, and its application in practice, remain key litmus tests for Laos's political will for reform.

Conclusion

Laos is at a critical point with regard to the land situation. Since its inception, Lao PDR has arguably never seen a more profound change in rural land and land-relations than that of the last two decades. The expansion of agricultural land area, commodity crop booms, the growth in land-intensive commodities and the rapid rise in land concessions are all symptomatic of Laos's agricultural transition and its movement from the periphery to the center of the regional and global economic order. The planned expansion of trade and transportation networks with China, Thailand and Vietnam, presage future changes, the impacts of which remain unclear. Recent and expected future reforms in land-related legislation and land governance practice, and the growing (if constrained) civil society presence and a potentially more expansive role for Local People's Assemblies provide some measure of hope for the future of land, and the people who depend on it, in Laos. It remains to be seen, however, whether the nation will be able to capitalize on these opportunities, mitigate their risks and impacts, and ensure equitable, sustainable development for all.

References

1. Agricultural Census Office. 2012. Lao Census of Agriculture 2010/11 Highlights. Vientiane: MAF/LSB.
2. ADPC and NDMO. 2010. Developing a National Risk Profile of Lao PDR. The National Disaster Management Office and the Asian Disaster Preparedness Center: Vientiane.
3. Baird, I.G. and Shoemaker, B. 2007. Unsettling experiences: Internal resettlement and international aid agencies in Laos. Development and Change, 38(5), pp 865–888.
4. Barney, K. 2009. Laos and the making of a 'relational' resource frontier. Geographical Journal, 175(2), pp 146–159.
5. Barney K. 2011. Grounding global forest economies: Resource governance and commodity power in rural Lao PDR. PhD thesis, York University, Toronto.
6. Bartlett, A. 2012. Dynamics of Food Security in the Uplands of Laos: A Summary of 10 Years of Research. Vientiane: NUDP & NAFRI.
7. DoF. 2018. Draft Emissions Reduction Programme Design. Department of Forestry and the National REDD+ Programme: Vientiane.
8. Ducourtieux, O., Laffort, J.R. and Sacklokham, S. 2005. Land policy and farming practices in Laos. Development and Change, 36(3), pp 499–526.
9. Dwyer, M. B. and Ingalls, M. L. 2015. REDD+ at the crossroads: Choices and tradeoffs for 2015-2020 in Lao PDR. Working paper n. 179. Bogor: Center for International Forestry Research.
10. Epprecht, M. *et al*. 2008. The Geography of Poverty and Inequality in the Lao PDR. Bern: Geographica Bernensia, NCCR, IFPRI.
11. FAO. 2015. Forest Resources Assessment: Lao PDR.
12. Fenton, N. *et al*. 2010. Household Reliance on Natural Resources in Lao PDR: Some Evidence from the LECS Surveys. In Lao PDR Development Report 2010 Natural Resource Management for Sustainable Development. Vientiane: World Bank.
13. Friis, C. 2015. Small-scale land acquisitions, large-scale implications: The case of Chinese banana investments in Northern Laos. Paper prepared for the international conference: Land grabbing, conflict and agrarian-environmental transformations: perspectives from East and Southeast Asia, 5-6th June 2015, Chiang Mai: Chiang Mai University.
14. Foppes, J., *et al*. 2011. Understanding Food Security in Northern Laos: An Analysis of Household Food Security Strategies in Upland Production Systems. National Agriculture and Forestry Research Institute: Vientiane.
15. GiZ 2014. Building up Land Concession Inventories: The Case of Lao PDR. Deutsche Gesellschaft fur Internationale Zusammenarbeit: German Technical Cooperation: Vientiane.
16. Global Witness. 2013. Rubber Barons: How Vietnamese Companies and International Financiers are Driving the Land Grabbing Crisis in Cambodia and Laos. London: Global Witness.
17. Government of Lao and UNDP. 2009. National Adaptation Program of Action (NAPA) to Climate Change. Vientiane: National Environment Committee
18. Government of Laos. 2010. Readiness Preparation Proposal (R-PP). Government of the Lao PDR and the Forest Carbon Partnership Facility: Vientiane.
19. Hirsch, P. and Scurrah, N. 2015. The Political Economy of Land Governance in the Mekong. Vientiane: Mekong Land Governance Project.
20. Hirsch, P. and Scurrah, N. 2015. The Political Economy of Land Governance in Lao PDR. Vientiane: Mekong Land Governance Project.
21. IOM. 2016. Assessing Potential Changes in the Migration Patterns of Laotian Migrants and their Impacts on Thailand and Lao People's Democratic Republic. International Organization of Migration: Vientiane and Bangkok.
22. IFAD. 2010. Country Technical Notes on Indigenous People's Issues, Laos. International Fund for Agricultural Development: Vientiane.
23. LSB. 2012. Food Security in Lao PDR: A trend Analysis. Lao Statistics Bureau: Vientiane.
24. Ingalls, M., 2017. Not just another variable: untangling the spatialities of power in social–ecological systems. Ecology and Society, 22(3).
25. Ingalls, M.L., Meyfroidt, P., To, P.X., Kenney-Lazar, M. and Epprecht, M., 2018. The transboundary displacement of deforestation under REDD+: Problematic intersections between the trade of forest-risk commodities and land grabbing in the Mekong region. Global Environmental Change, 50, pp.255-267.
26. Kenney-Lazar, M. 2012. Plantation rubber, land grabbing and social-property transformation in southern Laos. Journal of Peasant Studies, 39(3-4), pp. 1017–1037.
27. Lefroy, R., Collet L., and Grovermann, C. 2010. Potential Impacts of Climate Change on Land Use in the Lao PDR. Vientiane: Center for International Tropical Agriculture (CIAT).
28. MAF. 2010. Strategy for Agricultural Development 2011 to 2020. Ministry of Agriculture and Forestry: Vientiane. Available from: https://www.globalwitness.org/campaigns/land-deals/rubberbarons/ [accessed 29th April 2018].
29. MAF. 2013. Risk and Vulnerability Survey 2012/2013, Analysis Report. Ministry of Agriculture and Forestry: Vientiane.
30. MPI and LSB. 2010. Poverty in Lao PDR 2008.. Ministry of Planning and Investment and the Lao Statistics Bureau: Vientiane.
31. MoJ. 2011. Customary Law and Practice in Lao PDR. Vientiane: Ministry of Justice and the Law Research and International Cooperation Institute: Vientiane.
32. Oxfam. 2016. Vietnamese Agricultural Investments in Cambodia and Lao PDR: Benefits, Impacts and Challenges. Hanoi: Oxam.
33. Schönweger, O., Heinimann, A. and Epprecht, M. 2012. Concessions and Leases in the Lao PDR: Taking stock of land investments. Bern and Vientiane: Centre for Development and Environment (CDE) and University of Bern.
34. Schoenweger, O. and Ullenberger, A. 2009. Foreign direct investment (FDI) in land in the Lao PDR. Eschborn: GTZ.
35. Üllenberg, A. 2009. Foreign Direct Investment (FDI) in Land in Cambodia. Eschborn: GTZ.
36. WFP. 2011. WFP Lao PDR Country Strategy 2011-15. World Food Programme:Vientiane.
37. MoPH and LSB. 2012. Social Indicator Survey 2011-12. Ministry of Public Health and the Lao Statistics Bureau, Ministry of Planning and Investment: Vientiane.

©Jack Kurtz

State of Land in Myanmar: Land reform or new dynamics of land alienation?

State of Land in Myanmar: Myanmar: Land reform or new dynamics of land alienation?

Introduction

In 2010, Myanmar embarked on a political transition that resulted in broad reforms. However, the reform process has not been linear, with violent conflict resuming in Kachin and Shan State and recent ceasefires in the South East coming under increasing pressure. The land agenda is an important element of these broad reforms. Current land reform aims to establish a unified land governance framework of laws, regulations and norms to manage the access to, use of and control over land and natural resources.

Among the reforms engaged by the quasi-civilian government in 2011, the return of land confiscated under the military regime and resolution of land conflict has captured media attention. The question of land return is also central in the work of the new government. However, in lowland Myanmar, increasing land tenure insecurity presents significant concerns (Boutry *et al*, 2017). Conversely, in upland areas, customary land tenure and specific land management practices such as shifting cultivation still have no formal legal recognition. Shifting cultivation is in violation of the law on certain land categories such as Vacant Fallow and Virgin land, as it is considered to be illegal encroachment into state forests (RUM, 2012).

In October 2014, the Myanmar government unveiled a highly-anticipated draft National Land Use Policy (NLUP). The policy was eagerly awaited because it promised to make profound changes to the current land-related economic, social, and political-institutional landscape in a way that would be more inclusive of smallholder farmers, ethnic groups and displaced populations from conflict (Franco *et al*. 2015). After an extensive drafting process with high levels of input from civil society groups, the NLUP was passed in January 2016 by the Thein Sein government in their final months of office. After a two-year gap, the incumbent government and ruling party - the National League for Democracy - decided in early 2018 to establish a National Land Use Committee (NLUC), which has been tasked to implement the NLUP.

These reforms are particularly important for the development of Myanmar where agricultural sector has suffered from poor and sometimes predatory state policies (Boutry *et al*, 2017) but is still considered to be the backbone of the economy (Ritzier *et al*., 2015). The challenges at stake are tremendous and positive change is taking place slowly, while the institutions inherited from the past continue to exist in many of today's governance arrangements and dialogue about the future.

The land and the people

Demographics

Myanmar has a population of 51,486,253 people according to the 2014 Population and Housing census (Department of Population, 2017a). Between the 1983 and 2014 censuses, Myanmar's population increased by almost 16.2 million people. The average annual growth rate during this period was around 1 per cent, making Myanmar one of the slowest growing countries in South-East Asia (Department of Population, 2017b). Compared with its neighbours in the Mekong region, Myanmar on average has a low population density (81 people per km2), with only Lao PDR (at 29 people per km2) being less densely populated.

In Myanmar, the flat predominately lowland rice growing areas of the central dry-zone and delta form a relatively densely populated central corridor. Surrounding the plains is a mountainous periphery that is sparsely populated. Tanintharyi Region is found in the far South East, and covers the long strip of land on the Kra Isthmus, whose coastline forms an archipelago of over 800 islands. The differences between the centre and the periphery are a recurrent theme of Myanmar's social and economic geography, and are evident on many of the maps presented in this chapter. Even if the urban population increases at a faster rate than the rural (see Figure 27), Myanmar is at an early stage in its urban transition. The country is still predominantly rural with only about 30 per cent of the population living in urban areas (Department of Population, 2017b)[57].

[57] Census data distinguishes between urban and rural based on the General Administration Department (GAD) of the Ministry of Home Affairs classification (Department of Population, 2017c). Areas of rural land are classified as "village tracts", which have a relatively low population density and where land use is predominantly agricultural. Whereas urban areas are classified as "wards", and generally have a relatively high density of building structures, high population density and better infrastructure development than areas classified as rural.

Figure 27: Urban and rural population (1997-2016)
Data source: Department of Population, 2017a

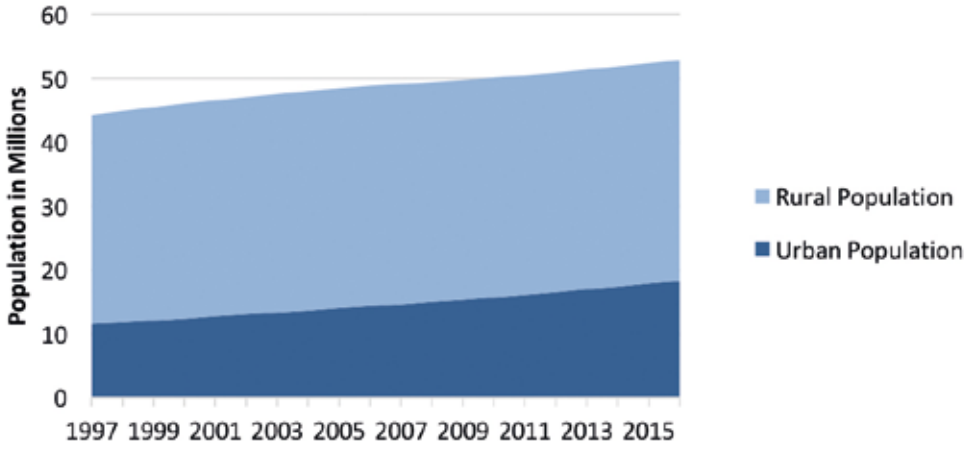
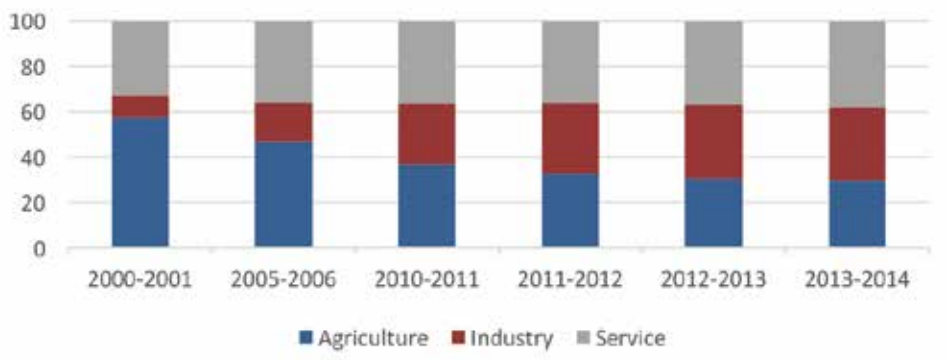


Figure 28: GDP Structure by Sector (2000-2014)
Data source: World Bank, 2017c



Myanmar is still in the process of a demographic transition, with the population growth rate having dropped from 1.77 percent in 1990 (Department of Population, 2017a). The total fertility rate has declined to 2.5 births per woman in the 2014 census, down from 6.1 births per woman in 1960 (Department of Population, 2017b). Compared to some other countries in the region that have very low fertility, Myanmar's fertility level is still high. However, there are high levels of State and Region variation; Chin State has the highest total fertility rate (5.0 births per woman), compared to 1.9 births in Yangon Region, the lowest rate nationally. Conversely, the mortality rate has declined from 182.7 per 1,000 live births in 1968, to 54.8 per 1,000 live births in 2014 (Human Mortality Database cited in Index Mundi).

Socio-economic context

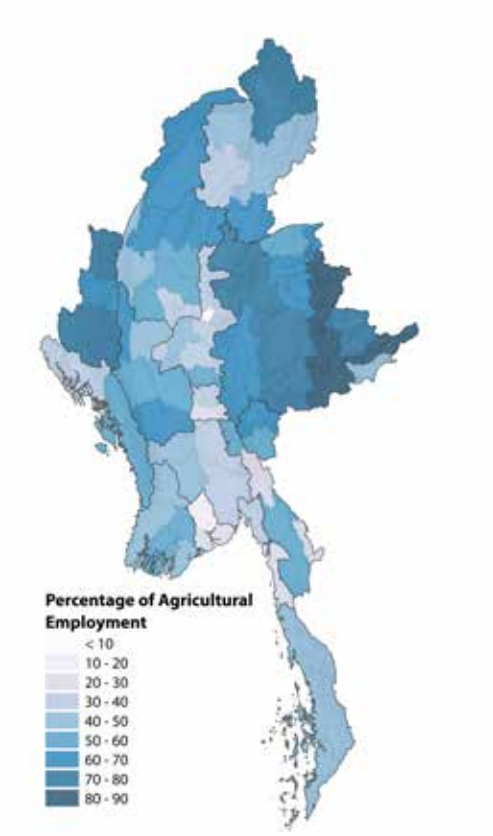
Myanmar's economic growth rate is estimated to have slowed to 5.9 percent in 2016-17 compared to 7 percent in 2015-16, due to slower investment demand (World Bank 2017). Between 2000 and 2014, the share of the agricultural sector, vis-à-vis industry and services has steadily decreased (see Figure 28).

Agriculture is a major sector in Myanmar's economy, forming 32 percent of GDP (Figure 28) and 52.4 percent of the labour force[58] involved in agriculture, forestry and fishing (Department of Population, 2017a). Employment in the agricultural sector is highest in remote mountainous areas (See Map 40), and generally higher in upland areas in the periphery. Employment in agriculture is lowest in the capital Nay Pyi Taw, economic capital Yangon and the second largest city Mandalay. Employment in the agricultural sector is also surprisingly low in south-western Kachin due to the high prevalence of mining of jade in Hparkant and amber in Tanai.

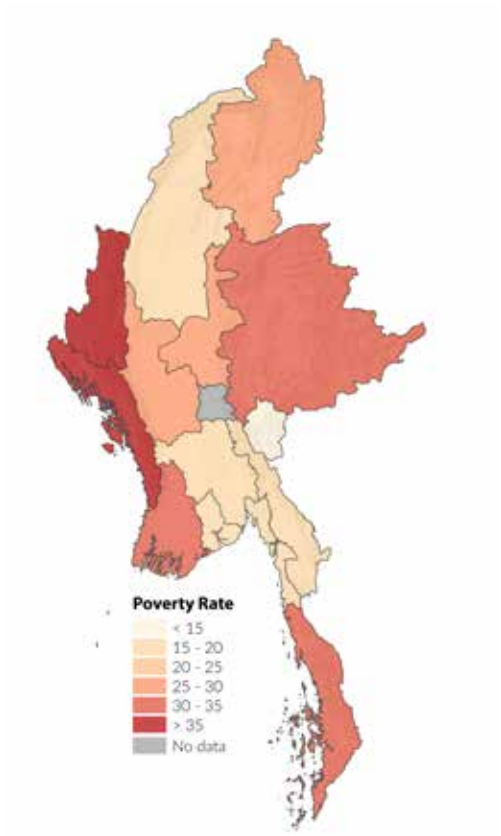
Agricultural yields are constrained by a lack of inputs and intensification, further hampered by minimal provision of public services such as extension, training, education and technology transfer (IMF, 2015), particularly within conflict areas. Rice is the staple crop and a significant export commodity. Like most crops, productivity is well-below regional averages. This is due to poor government policies and the lack of affordable credit that has left farmers and those in the wider rural economy under-capitalised and unable to invest or caught in debt-traps with private moneylenders. However, some crops such as beans and pulses have managed to thrive away from government interference (DFID, 2015).

[58] This is based on employment data for the age group aged 10 and over from the 2014 Population and Housing Census (Department of Population, 2017a).
[59] This is according to $1.90/ day which in the International Poverty Line (World Bank, 2015).

Map 40: Prevalence of employment in the agriculture across Myanmar provinces
Data source: Department of Population, 2017a



Map 41: Incidence of poverty in Myanmar provinces
Data source: IHLCA, 2011



At 37 percent, poverty[59] is high with major differences between ethnic groups and geographic regions (World Bank, 2014). There is also a large group of people living just above the poverty line suggesting high vulnerability to shocks. The Gini Coefficient on income distribution in Myanmar is 0.30 (2010) though data is weak (DFID, 2015). This is relatively high but lower than Vietnam (0.35) and China (0.40) (World Bank, 2014). This suggests that there is considerable inter-regional inequality (see Map 41). Parts of the country are extremely poor such as Rakhine and Chin, with poverty rates above 70 percent (*Ibid*.). These drastic differences can be partly explained by their remoteness. The rural share of poverty is around 82 percent, and one in four people in rural areas cannot get enough to eat and one in three children are stunted (DFID, 2015). Conflict is also a major driver and the regions within Myanmar affected by conflict have higher poverty rates than those unaffected – 40 percent compared to 22 percent (*Ibid*.).

The Land resource base

The Republic of the Union of Myanmar is the second largest country in Southeast Asia. Myanmar is richly endowed with land and water resources and favourable climates for agricultural production. Out of Myanmar's total land area of 161 million acres (or 65.2 million ha) about 25 percent, or 42.6 million acres (or 17.2 milion ha) are suitable for cultivation. However, of this, only 31.5 million acres (12.7 million ha) are used at present (Thant & Win, 2016).

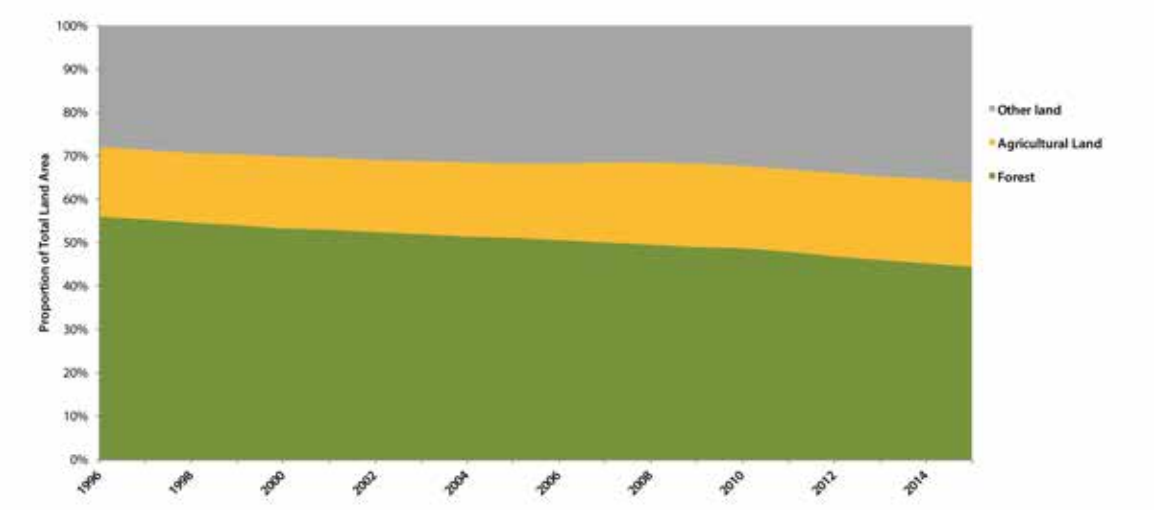
Alluvial and swampy soils dominate in the delta and coastal zone, while heavy clay soils are more important in the irrigated rice lands of the central dry zone (*Ibid*.). About 1,000,776 acres of coastal mangroves border the delta and coastal zone in the south. Alluvial lowlands dominate agricultural production areas in the central dry zone, while the hill zones and Shan plateau offer more temperate climate, well suited for fruit and horticulture crops. In addition, diverse topography and ecosystems enable farmers to produce a wide range of cereals, pulses, horticultural products, and fruits, as well as livestock and fishery products (World Bank, 2016). The highland regions of Myanmar are covered with highly leached, iron-rich, dark red, and reddish brown soils. When protected by forest cover, these soils absorb the region's heavy rain, but they erode quickly once the forest cover has been cleared (Baroang, 2013).

Land use and land cover

The historical trend since the 1996 suggests that agricultural land is growing at the expense of forested land (see Figure 29).

In 2015, land cover in Myanmar was composed of over 31.5 million acres (12.7 million ha) of agricultural land, or 19 percent of total land area, and an additional 71.8 million acres (29.1 million ha), or 45 percent of the total land area (Figure 29). This data was taken from FAO Stat that relies on Government data. Reliable and updated data on land and some socio-economic indicators are limited in Myanmar. Information on agricultural land in the uplands, including land used for long-fallow subsistence agriculture, is non-existent. Land-related spatial information is managed by separate government departments, and is not standardized, and is often not in the public domain.

Figure 29: Land Use Land Cover Change in Myanmar 1996-2015



With regard to agricultural land use, in 2015 there was 26,882,571 acres of arable land, which formed 85 percent of all agricultural land. Permanent crops covered 3,830,130 acres or 12% of agricultural land, compared to 756,142 acres for permanent meadows and pastures, which is only 3 percent of agricultural land. Agricultural land has increased at an average annual rate of around 1% since 1996, whilst the area for permanent meadows and pastures has remained generally stayed (see Figure 29). Indeed, most production gains over the past two decades have come from the expansion of agricultural land rather than from increases in yield (Haggblade *et al*., 2013).

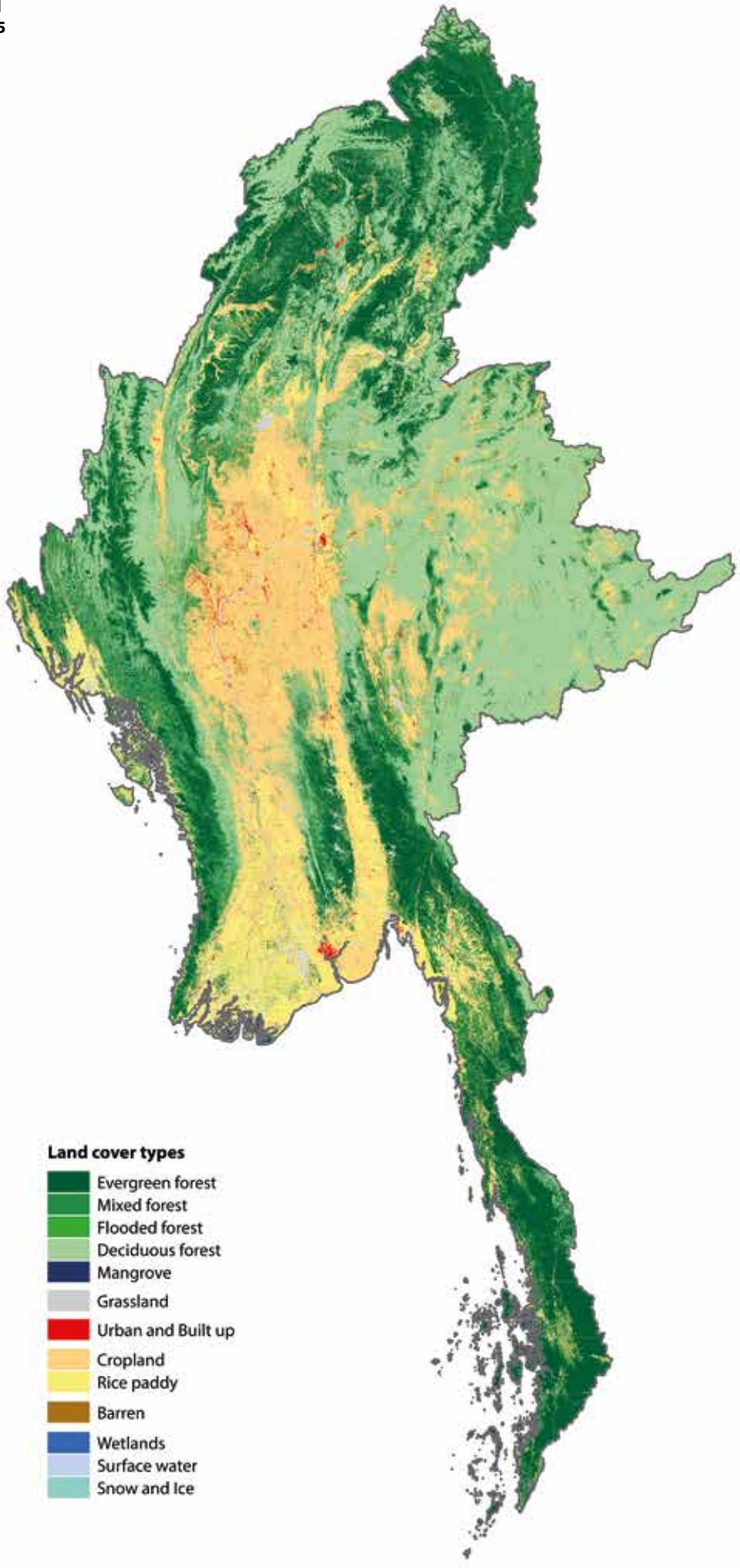
The Crop Diversification Index (CDI) provides an indication of the diversity of crop in a given administrative or ecological area by taking into account the number of crops and the relative importance of each crop. The CDI was computed for each Region and State based on official agricultural production including statistics for 40 of the most important crops[60]. The value of CDI for the entire country is high, with a composite value of 0.80 but there are significant differences between regions (see Map 4). Magway, Mandalay, and lower Sagaing situated in the central Dry-Zone, produce a higher number of important crops that are planted widely in addition to rice. These include cereals such as wheat and maize, a wide variety of legumes such as groundnut, black-gram, green-gram, sesame as well as perennial crops such as toddy palm and a wide variety of fruits and vegetables.

Rice covers 17,722,355 acres in Myanmar, or 41 percent of the area covered by crops in Myanmar (DALMS, 2015). The main rice growing areas - Ayeyarwady, Yangon, Rakhine and Bago - show the lowest levels of diversity due to the high prevalence of rice. These rice-growing areas are all located in relatively lower lying areas in Southern Myanmar, mainly in the Delta or other coastal areas. The total rice production growing area has expanded by 32 percent in Myanmar between 1995 and 2015 (DALMS, 2015), reflecting similar trends in other crops and the general expansion of agricultural land.

In Shan State, the main crops are paddy rice, maize, sugarcane, rubber, tea and vegetables. Sugarcane and rubber are mainly found in large-scale mono-plantations. Maize is initially planted as a result of contract farming, which has led to high levels of dispossession of land from poorer households due to inequitable and poorly-regulated contracts. In Shan State, informal Chinese agro-investment driven by China's opium substitution programme has led to a significant increase in rubber concessions, which have wide-ranging negative socio-economic impacts and have exacerbated political tensions in affected areas (Buchanan *et al*., 2013).

[60] See Annex 1 for further information on the CDI

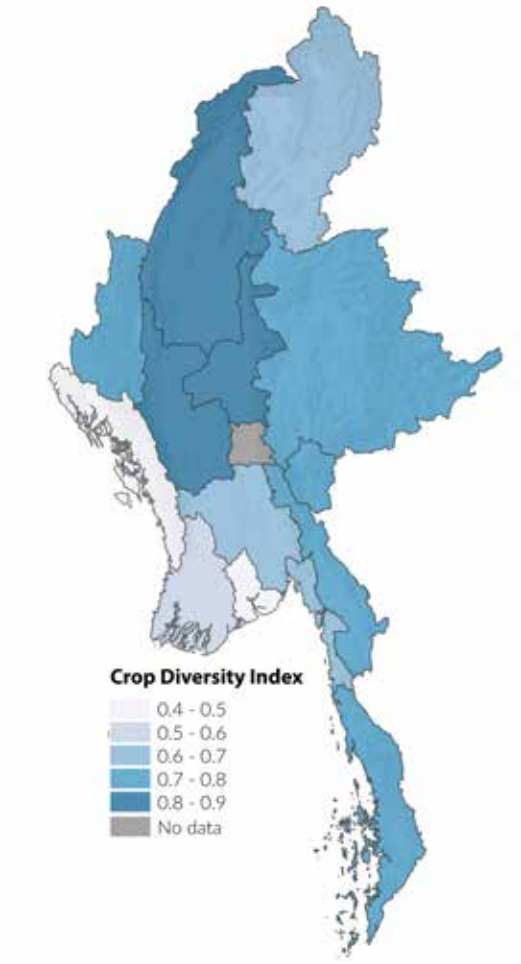
Map 42: Land Use Land Cover in Myanmar 2015
Source: SERVIR



Rubber is concentrated in the south-east (Karen, Bago, Mon and Tanintharyi States), where with more than 1 million acres (400,000 ha) of rubber, account for 76 percent of the national total (DALMS, 2015). Myanmar faces challenges such as low rubber productivity and poor rubber quality. These challenges are not concentrated in one segment of the value chain, but span across it (van Asselt *et al*., 2016). Poor farming, tapping and processing methods lead to low yielding, low quality rubber. In addition, Myanmar has weak quality standards and certification processes for rubber processers and therefore farmers and processors receive discounted prices for their rubber. Myanmar had and an estimated forest cover of 65 percent in 2000 however, by 2015, that figure has reduced to 45 percent, with 1,349,194 acres (545,999 ha), or 2% of forests lost annually (Srivinas & U Saw Hlaing, 2015). Myanmar had the third-highest annual rate of deforestation, behind Brazil and Indonesia (Hansen *et al*., 2016).

Myanmar's forest lands are organized under the state's Forest Estate (PFE), which include Reserved Forest, and Protected Public Forests (NEPCon, 2013). The Forest Law (1992), identifies several sub-categories of Reserved Forest, including commercial reserved forest, local supply forest, watershed or catchment protection reserved forest, and environment and biodiversity conservation reserved forest (Protected Area Systems). The vast majority of Reserved Forests are used for commercial timber production (*Ibid*.).

Map 43: Crop Diversity Index in Myanmar, by province
Data source: DALMS, 2015



Forest loss has taken place, mainly outside of land classified as state owned reserved forest (Treue *et al*., 2016), with approximately two-thirds of forest loss from non-reserved areas between 2002-2014. However in relative terms, the loss of intact forest was almost as high inside forest reserves (10.3 percent) as that of other land categories (11.7 percent). Of this, 0.22 million acres (89,030 ha) or only 2.3 percent of loss of intact forest took place within protected areas (national parks, wildlife sanctuaries etc.). Non-forest areas increased by an overall 4.7 percent (2.4 million acres), which was distributed a 9.1 percent,11.6 percent and 4.1 percent increases in forest reserves, protected areas and other land categories respectively (Treue *et al*., 2016).

Thus, intact forest and general forest cover has been comparatively well-conserved within protected areas, where as forest reserves and other land categories have been poorly conserved. As a consequence, forest reserves are now generally exhausted and most of these are largely dominated by degraded forest. Despite the general trend of deforestation and forest degradation within both forest reserves and non-reserved areas, large tracts of continuous intact forest are still found in remote parts of the country, particularly Kachin state and Tanintharyi region. Nationwide, deforestation and forest conversion to other land-uses appears driven by a rationale of maximising financial returns from both legal and illegal logging which happens most intensively along rivers streams, major roads, and land borders to neighbouring countries, particularly China and India (Treue *et al*., 2016).

Forests are used for small-scale agroforestry, and currently up to 77 percent of the Myanmar's energy demands are being met by traditional fuel sources, mostly fuel wood. Bhagwat and colleagues (2017) identified a number of drivers of deforestation, and forest conversion from between 2002-2014 (in descending order of significance):

- Mining, clear-cutting for agriculture, and infrastructure (accounting for 2.47 million acres, or 999,573 ha, of forest loss)
- Logging and fuelwood consumption causing forest degradation (1.16 million acres, or 469,435 ha)
- Plantation crops such as oil palm, rubber, and sugarcane (1.33 million acres, or 538,231 ha), and
- Hydro-electric dams and reservoirs (0.17 million acres, or 68,796 ha)

Driver analysis also identified shifting cultivation as an important driver of degradation, however this is complicated by a tendency to view shifting cultivation fallows as forests, or potential forest. In shifting cultivation systems, however, fallows are an integral part of the agricultural system. No systematic data exists on the amount of area under shifting cultivation in Myanmar. However, ongoing analysis by Lukas Wuersch indicates that there are around 13.8 million acres (5.6 million ha) involved[61] in shifting cultivation across the country.

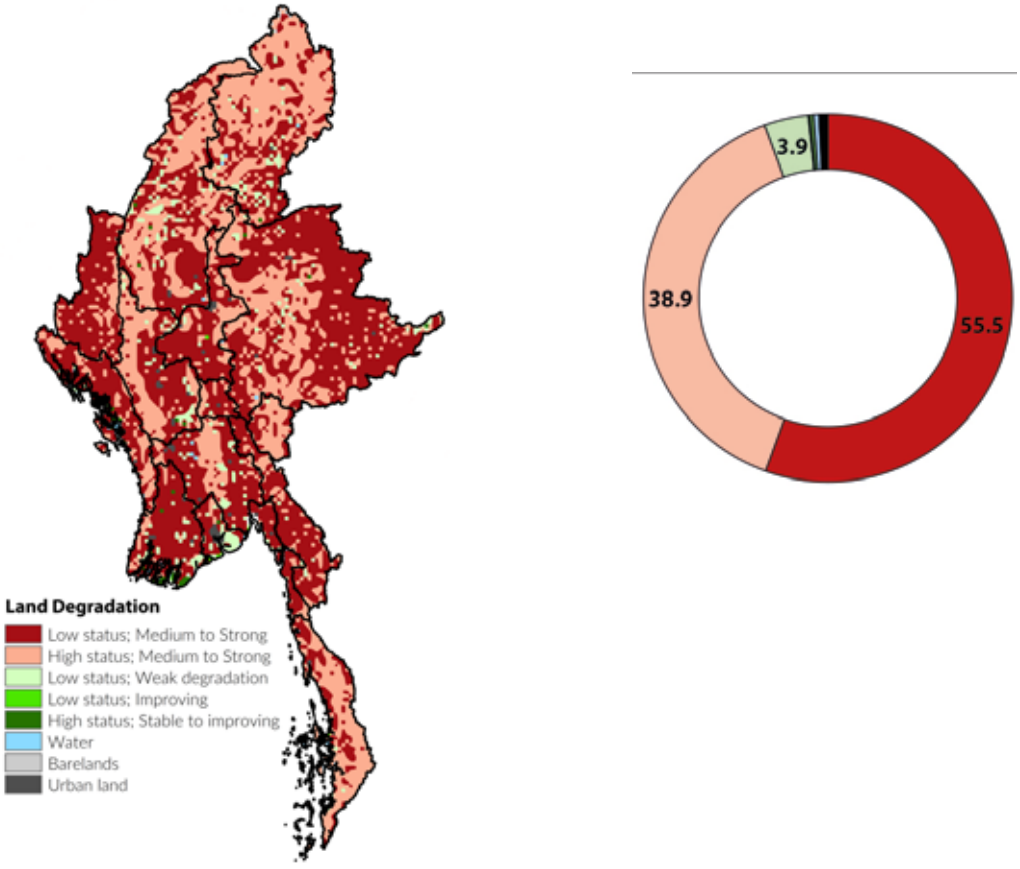
[61] Including both cropped areas and managed fallows. Depending on the fallowing period, fallow areas may be as much as nine times larger than the planted area (Messerli *et al*., 2009).

Land degradation

Land degradation is a growing concern across the world, particularly within areas experiencing rapid land use change associated with agricultural expansion, in areas with steeply sloping land, and where unsustainable practices have eroded the underlying resource base. The impacts of land degradation are felt most acutely by the rural poor, both because of their primary reliance on agricultural and forest resources, and because their capacities for dealing with the impacts of change are more limited. Despite its significance, standard measures for assessing degradation are limited and hotly contested, partly 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 the assessment. One approach, supported by the FAO Land Degradation in Drylands Project, produced a global assessment of (multivariate) land productivity and trends of change, including degradation. While the assessment was global in nature and thus coarse resolution at the national level, several inferences can be made with regard to land degradation patterns and risks in Myanmar (see Map 44, and Annex 1 for further details on the method). According to the FAO (sine die b), 38.9 percent of land has a "high" status which corresponds to medium to strong degradation, with 55.5 percent has a low status (medium to strong), and 3.9 percent low status with weak degradation. Only 0.1 percent is improving and 0.4 percent is shows to be stable to improving. This assessment is likely high, but serves as an indication of the general trends toward land degradation.

Land degradation is most severe in the following areas in Myanmar: in the semi-arid central dry zone [62], northern Myanmar, the Shan plateau, in low lying areas along the Chindwin valley and in Tanintharyi region. The semi-arid central dry zone in Myanmar is highly vulnerable to soil degradation. Kyawt K.K. Tun *et al*. (2015), in a study on the central Dry-Zone found that the major types of land degradation were both physical and chemical in nature, relating generally to soil management practices. soil degradation. Farmers identified the topographic condition, soil types, improper crop management practices and climatic factors as the main causes of soil erosion. The observed crop yields of monsoon rice, groundnut, sesame and cotton in highly degraded areas was 3–12 times lower compared with the yields of these crops grown in less degraded area. Generally, livelihoods of farmers in highly degraded areas are affected by crop yield reduction, increased cultivation costs and increased uncultivable land area. Therefore, the impact of land degradation on crop production is dependent on the severity of degradation.

Map 44: Land degradation in Myanmar
Data source:
FAO (sine die b).



[62] The Dry Zone covers more than 54,000 km2, encompassing 58 townships which span from lower Sagaing region, to the western and central parts of Mandalay region and most of Magway region. It is estimated that approximately one-quarter of the country's population live in this area. Situated in the shadow of the Rakhine mountain range, the Dry Zone receives limited rains compared to country averages.

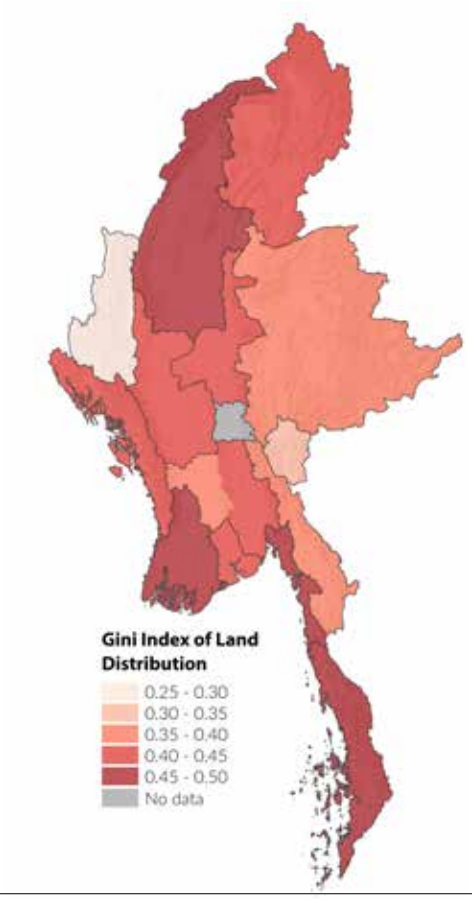
© Patrick Oswald

Distribution of the land resource: subtitle

Land of smallholder farmers

In Myanmar, agricultural production is predominately carried out at the household level, however, Myanmar is characterised by high levels of inequality in size of land ownership and landlessness, or near landlessness (Scurrah *et al.* 2015). It is estimated that nearly one quarter of all famers are landless, through a recent study by GRET finding a rate of 60 percent landlessness in some areas of the Myanmar Delta, including not only agricultural households (Boutry *et al*., 2017). In total there are 4,986,672 household holdings in Myanmar, covering a total of 31,615,098 acres which on average is 6.34 acres per holding (RUM, 2013).

The Gini Index on land distribution provides information on land distribution amongst landholders (See methods annex for explanation). At the country level, the Gini Index on land distribution is 0.48, similar to Cambodia and Thailand. However, when the land area granted as concessions are factored in, the Gini index of land distribution becomes 0.53. The Map 45 shows the Gini Index of agricultural land distribution amongst smallholder farmers (excluding concessions). Broadly, Map 45 shows that land is more fairly distributed in the uplands. In low-lying areas there are higher levels of inequitable land distribution.



Map 45: Gini Index on agricultural land distribution in states and regions
Data source: RUM, 2013

Landlessness is reported to be lower in the uplands than in the central plains as there is more land available and farming operates under different agro-ecological and customary systems (Scurrah *et al*., 2015). However, large-scale concessions in upland areas, particularly in conflict zones where there are high levels of tenure insecurity leads to smallholder dispossession (Buchanan *et al*., 2013). In Tanintharyi the unequal distribution of land between smallholder farmers is exacerbated due to over 40 large-scale oil palm concessions. In the Delta (Ayeyarwaddy Region), inequality in land ownership is very high. According to a study by GRET, crop procurement policies by the former military regime caused high levels of land conflict and dispossession which contributes to high levels of landlessness (Boutry *et al*., 2017).

From the 1960s onwards, access to adequate amounts of agricultural land has become increasingly difficult for famers. Land fragmentation became more frequent as the military-backed government of the mid-1990s launched a program to reclaim "fallow and vacant land" (Woods, 2012). Land supply for farming households became much more limited, especially in lowland areas and sub-divisions or informal transactions occurred within families (Boutry *et al*., 2017). The situation has been exacerbated by atomization of farmland, with the poorest households having to reallocate their modest smallholdings between family members (Srivinas & U Saw Hlaing, 2015).

Land leases and concessions

There has been a large increase in issuance of permits for land concessions since 1991. Between 1991 and October 2016, a total of 5,156,819 acres of land was allocated by the government[63] to agribusiness companies and individual companies (San Thein and Diepart, 2018). The largest amount of land (2.2. million acres) that was allocated was done so prior to 2012, under the 1991 directive, The Management of Cultivable Land, Fallow Land and Waste Land. This was replaced in 2012 by The Vacant, Fallow ad Virgins Land Management Law (VFV Law). In addition, at least 1.1 million acres of land was granted by the Ministry of Natural Resources and Environmental Conservation (MoNREC) which is not included as concessions on VFV land.

The VFV law is primarily aimed at identifying large tracts of "wasteland" and making them available for domestic and foreign large-scale investment projects, which aims to boost agricultural productivity and enable export earnings (Woods, 2012). Tracts of up to 50,000 acres of vacant land may be leased for up to 30 years. While there are some limitations on how leased land is used, including requirements that projects be initiated within four years of the concession, in practice these regulations are rarely followed with little enforcement of penalties for failure to comply (BEWG, 2016).

[63] All data on leases and concessions is in principle managed by the Department of Agricultural Land Management and Statistics (DALMS), under MOALI. While DALMS holds data on agribusiness ventures and other permits in VFV lands, concessions on forestland are granted by Ministry of Natural Resources and Environmental Conservation (MoNREC). The government, at present has no unified database on land concessions or land permits that have been issued. There is also no functional mechanism at present to coordinate data sharing or management at the district, provincial, and national levels.

Land use permits have been granted on VFV land for agricultural concessions from 1991 to present, however the rate at which they have been issued has fluctuated considerably (see Figure 30). Despite a peak in 1999, the issuance of permits on VFV land largely took place between 2006 and 2011 during the final years of the military government. Most agro-industrial investments operating today are from this particular period. Up to 2006, land use permits on VFV land were granted predominantly by Regional commanders and to a lesser extent by the previous Central Committee of the Cultivable Land, Fallow Land and Waste Land. Between 2006 and 2011, this Central Committee became the main body to grant VFV land (San Thein and Diepart, 2018).

When reforms commenced from 2012 onwards, there was a sharp decrease is permits being granted on VFV land from with a temporary stop in 2013 and a gradual increase from 2014 onwards (see Figure 30). This drastic reduction coincided with the military proxy Union Solidarity Development Party (USDP) coming to power, which was led by President Thein Sein, and embarked on a series of national reforms. The National League of Democracy (NLD) has been in power since 2016, and the concession area granted for that year is also consistently low with the period from 2012 onwards.

The Myanmar Investment Law permits the Myanmar Investment Commission (MIC) to approve foreign investment on land leases of up to 50 years, with two possible extensions of ten years each. Longer leases can be granted by the MIC, with approval from parliament, to investors whose projects operate in the nation's "least developed and remote regions" (BEWG, 2017). Extended tax exemptions are also offered to investors operating in areas that are considered "least-developed". Both aspects pose a significant threat to landholders in Burma's ethnic borderlands, where tenure security is weakest. There are some safeguards as sections 65(a) and 41(c) require investors to "respect and comply with the customs, traditions and culture of the national races in the Union" and prohibit investment projects which "may affect the traditional culture and customs of the racial groups within the Union". However, there is no clear guidance on how this should be carried out and is rarely followed.

The extractive industries sector is still operating within a framework of limited information and relations between the government, companies, civil society and communities are characterised by grievances over land conflict and benefit sharing. Currently there is no concession data available for mining, however a recent study identified 222,495 acres of potential mining areas in Myanmar, of which 58% (129,265 acres) was assigned high certainty, 29% (64,868 acres) medium certainty, and 13% (28,363 acres) low certainty (LaJeunesse-Connette *et al*., 2016).

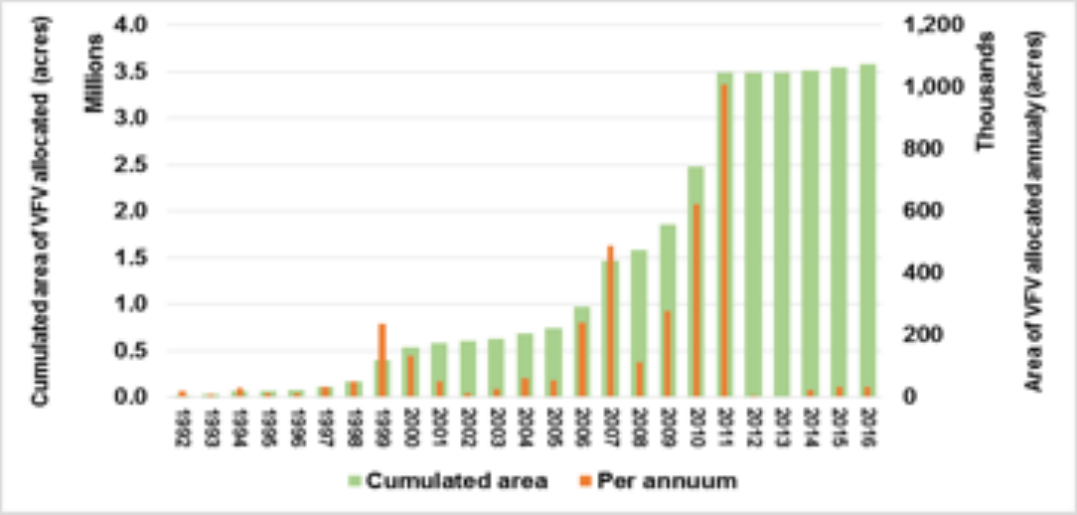


Figure 30: Issuance of land use permit granted on VFV land from 1991 to 2016
Source: San Thein et al., 2018

Case Study: Large-scale land conversion for oil palm development

Oil palm development in Myanmar began in 1999, when the Military government initiated an industrial palm oil scheme, as part of a drive for national self-sufficiency and a broader plan for economic development. All oil palm production takes place exclusively in Tanintharyi Region, which was chosen for its suitability due to high annual rainfall and an extended monsoon season to allow for commercial production. At present over forty companies currently hold oil palm concessions. Since national-level reforms began in 2011, investment in the oil palm sector has come solely from joint ventures with foreign investment (TNRW, 2018).

In total 1.8 million acres of oil palm has been allocated to the private sector (35 percent of all agri-business concession areas nationally) (BEWG, 2016). Of the 1.8 million acres, only 535,000 acres, or 29 percent of the total area granted, was planted by the end of 2016 due to high investment costs (see Table 6). Poor land use planning has allowed oil palm companies to clear cut large areas of High Conservation Value (HCV) forest, including critically endangered lowland Dipterocarp rain forests (Woods, 2015).

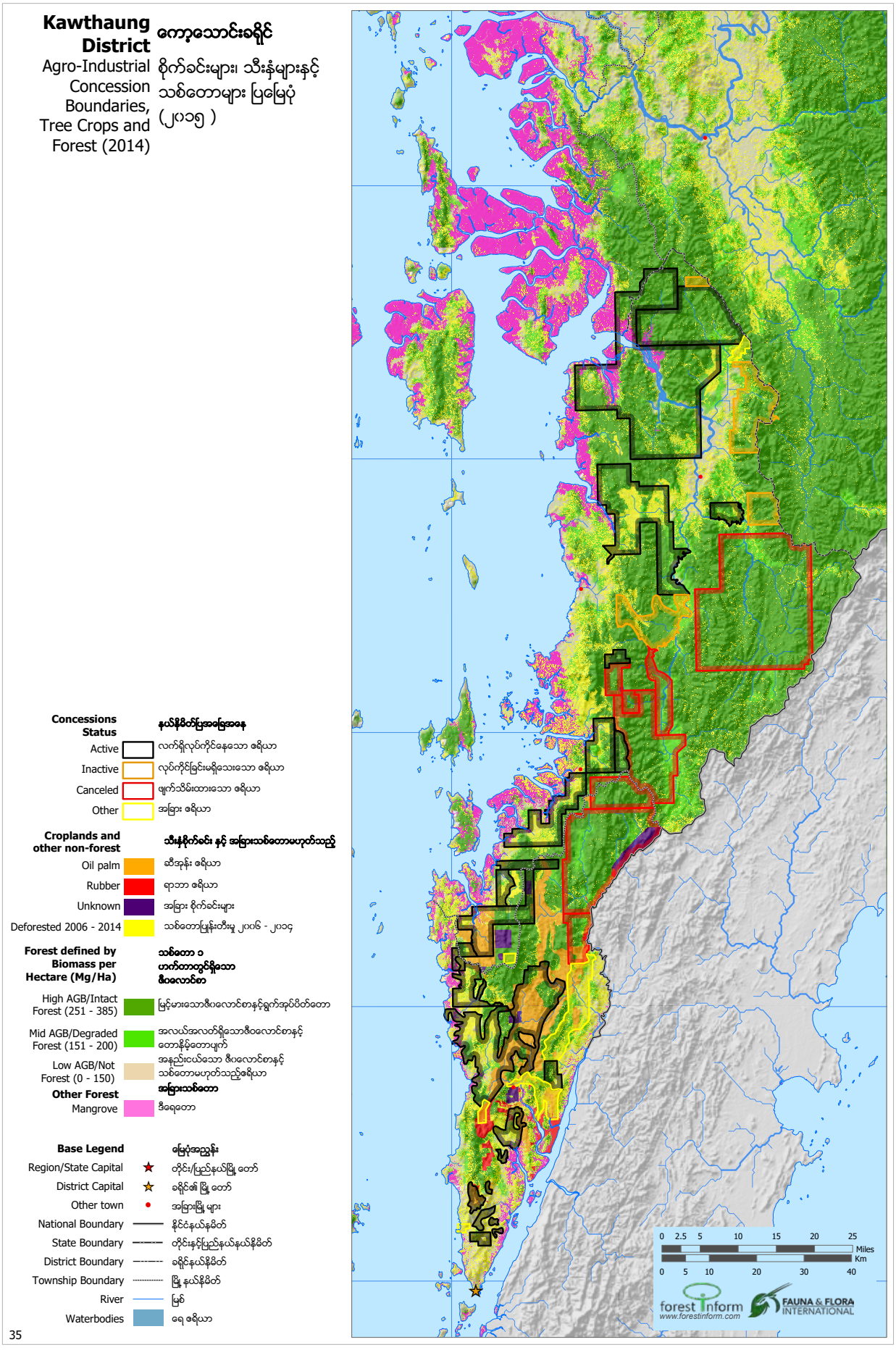
Oil palm expansion in Tanintharyi has caused many land conflicts, as the predominately ethnic population have not been able to register their land due to civil war. Until 2007, the government categorised the entire area as a "black" area, or zones where insurgents operate (TNRW, 2016). In these areas the government does not provide state services. With large areas of Tanintharyi being classified as "black" areas, with no government presence aside from security forces, it has been impossible for famers to register their land. As a result of government-initiated offensives against the Karen National Union (KNU), historically there has been widespread violence against ethnic Karen communities, leading to multiple cycles of displacement and forced-relocation. To this day 11 thousand refugees wish based on the Thai border wish to return to their villages in Tanintharyi region.

Many oil palm plantations have been allocated on customary land belonging to ethnic communities, causing land conflict and dispossession in contested areas between the government and the Karen National Union (KNU). The conflict has also led to large-scale, repeated displacement, and currently there are still 11,000 refugees who wish to return to their land, which places increasing pressure on land availability. Permits for oil palm are allocated from the centre and approved by the Central Committee for Vacant, Fallow and Virgin Land, however in practice there are no safeguards to check actual land use. The 1984 Land Acquisition act is used when acquiring land for "public purposes", however key tenets of carrying out adequate notification and allowing for objections are seldom followed (TNRW, 2016). For instance, in the MSPP concession out of 49,227 acres, 38,900 belonged to community communities in 4 separate villages (*Ibid.*).

Table 6: Oil Palm concession areas allocated versus actually planted
Data source: Department of Industrial crop development, MOALI, from Tanintharyi Hluttaw News, No.8, August 19th, 2015, page 44

Years	Concession area granted (in acres)	Concession area planted (in acres)	Percentage of concession area planted (%)
2011-2012	329,650	95,721	29
2012-2013	353,659	96,856	27
2013-2014	363,399	102,887	28
2014-2015	375,894	106,457	28
2015-2016	408,755	133,382	33
Total	1,831,357	535,303	29

Map 46: Land concessions in Kawthawng, Tanintharyi
Source: Saxon & Sheppard, 2016



Special Economic Zones in Myanmar

Many Southeast Asian countries have adopted Special Economic Zones, which typically involve major investments in infrastructure and demand large amounts of land. The term SEZ is used to describe clearly delineated geographic areas within which there is a different legal and regulatory regime relating to business and trading activities (Oxfam, 2017). Their success is usually viewed in terms of economic impacts, and overlooks wider social and environmental impacts.

In the late 2000s, the military government initiated the development of SEZs in Myanmar. In 2014 the USDP government to promulgate the SEZ law replacing two older laws. In 2016, the National League for Democracy (NLD) Government affirmed its commitment to SEZ projects previously initiated in Thilawa (operative since 2016) and in Dawei and Kyauk Phyu, which are currently both non-operative. In total, there are 29 known zones, though the geographic extent of these is not available.

The SEZ Law confers responsibility for land acquisition to the Ministry of Home Affairs, however it does not specify which national laws governing land apply in zones designated as SEZs. In practice, the 1894 Land Acquisition Act has been the primary law used for State land acquisition in SEZs. However, neither the law nor the accompanying rules and regulations offer provisions for planning or carrying out resettlement for persons whose home, land and/or livelihoods are displaced (ICJ, 2017). Failure to have fully developed compensation and resettlement provisions has led to dispossession of land from smallholder farmers such as at Kyauk Phyu in Rakhine State.

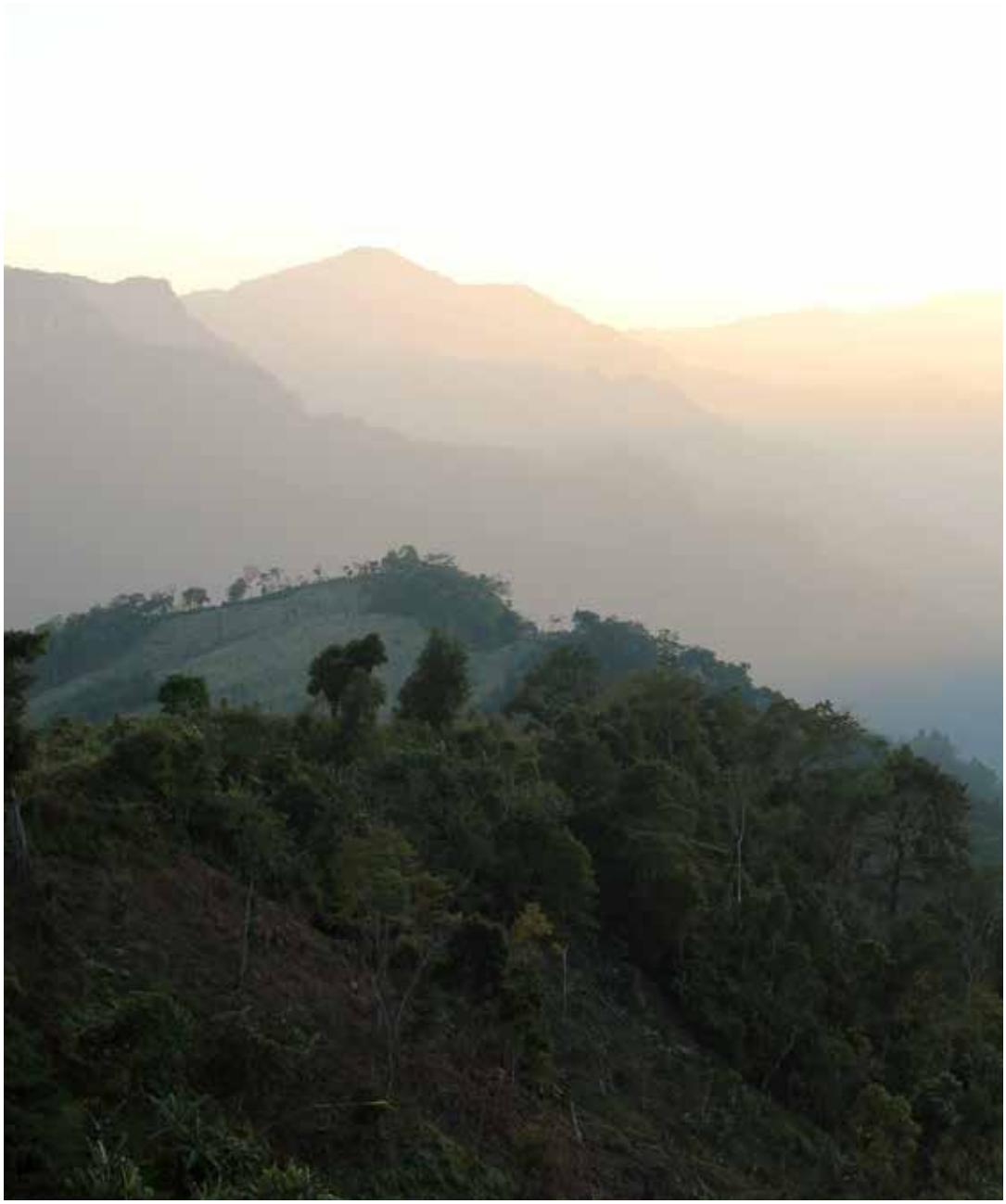
Protected areas in Myanmar

As of 2017, Myanmar has 40 Protected Areas and 10 proposed Protected Areas (MoNREC, 2017). Myanmar's 40 Protected Areas extend over 9.68 milion acres which represents 6 percent of the total land area of 161 million acres of land area. This represents an increase from less than 1 percent protection in 1996. Older Protected Areas tend to be smaller whereas the more recent ones aim to protect entire landscapes to preserve species with large home ranges such as the tiger and Asian elephant.

Due to the presence of a few large Protected Areas in Kachin and Sagaing, a number of ecoregions such as the Eastern Himalayan alpine shrub and meadows (96 percent in Protected Areas), Northern Triangle temperate and subtropical forests (36 percent in Protected Areas) are well represented whereas seven separate ecoregions have less than 1 percent or no protection, including 4 ecoregions classified as critically endangered (MCRB, 2017). Conserving large landscapes in the north that support highly threatened charismatic megafauna is likely to be a priority in the context of limited resources and those sites are less likely to come into conflict with other competing land uses.

Protected Areas have the potential to protect wildlife whilst reconciling community needs and access to forests, and providing regulating and provisioning ecosystem services to downstream users. However, in Myanmar, protected areas (PAs) are delineated with the explicit purpose of wildlife and biodiversity conservation. Protected Areas are governed under the Nature Wildlife and Conservation Division (NWCD), a division within the Forest Department. The 1994 Protection of Wildlife and Conservation of Natural Areas is used to both designate these areas and enforce strict resource access and use restrictions. According to the law, local communities have no access rights to forest resources within the boundaries of protected areas. There are provisions for PA authorities to establish buffer zones in which subsistence resource use can be permitted, however they are rarely implemented. People caught engaging in livelihood activities in PAs are often seen as encroachers that cause deforestation and are often levied with heavy fines or arrested (CAT, 2018).

Figure 31: Myanmar Land Governance Assessment
Data Source: Expert consultation, Yangon March 2018



Land Governance and tenure security

Land governance conditions were assessed by a panel of fifteen land experts, representing a range of institutional and topical perspectives[64]. The assessment was used to identify particular areas of strengths and weaknesses with regard to the current administration of land in Myanmar, shown graphically in Figure 31 and explained further in the text below. In the graphic representation, positive scores are indicated by a larger area along the respective indicator outward toward the margin.

Legal frameworks and institutional mandates regarding land

The legal framework relating to land is recognised in different ways across different laws and there is also selective implementation and enforcement. Myanmar's successive military regimes and their different ideological orientations, from the Burmese Way to Socialism under Ne Win, towards economic liberalisation after the 1988 uprising have led to "stacked laws" with multiple layers existing simultaneously, creating conflict and many legal contradictions (Mark, 2016; Scurrah *et al*., 2015). In total, there are currently 73 different laws relating to the ownership, management, and control of land, many of which do not synthesise well with each other (Srinivas & U Saw Hlaing, 2015).

[64] See Annex 1 for an explanation of this process and the tool used for assessment

The mandated responsibilities of different ministries and departments dealing with land administration are often poorly defined with frequent institutional overlap between both different authorities and within them at different levels of government. For instance, sometimes there is overlap regarding spatial planning with areas having been designated as proposed national parks and land concession areas simultaneously. There is also institutional overlap of some land categories, for instance in concession areas under the VFV law, DALMS has authority over the land and the FD has authority over the trees. While there is clarity over the institutional roles between the General Administration Department (GAD), MOALI & MONREC at the Union level, often the situation is uncertain at the sub-national level or site level. There is also a confused relationship between different levels of decentralised decision making regarding land management, for instance community forestry is permitted on VFV land, however the decision can only be made at the Union level, so often there are long delays or certificates are not issued. The roles and responsibilities of the Central Reinvestigation Committee for Confiscated Farmlands and Other Lands, Farmland Administrative Body and Vacant, Fallow and Virgin Land Management Central Committee also overlap significantly.

Smallholder tenure, gender and ethnic minorities rights to land

The overarching objective of the 2012 Farmland Law is to put in place a system for securing rural land for smallholders through a land-use certificate registration system (Obendorf, 2012). The Farmland law and issuance of land use certificates (LUCs, also known as Form 7), provide a formalization of tenure recognition for many farmers, supplementing existing forms of tenure documentation such as land tax receipts, with the additional formalization of the right to transfer, sell or mortgage land, which has stimulated the land market. . In total 9.6 million farmers have been issued a certificate, covering around 90% of land eligible under the Farmland Law. With an average of 3-5 people per household, this accounts for a large proportion of famers in Myanmar (approximately 24 million individuals), therefore approximately 90 percent of eligible (see below) parcels of land have LUCs. However, while LUCs have arguably strengthened tenure security within the formal system, they have not generally been sufficient to prevent the expropriation of land by state authorities nor have provided sufficient protection for smallholders involved in disputes with powerful corporate actors.

Eligibility criteria set forth in the Farmland Law excludes large areas of cultivated land that lie within state forest lands, legally incorporated as VFV land, where smallholder rights are not legally recognized and where no LUCs can be issued. While there are legal provisions for the allocation of VFV land to landless households, this has generally not happened in practice. In the area around Kyauk Phyu SEZ for example, many farmers had been awarded a Form 7 (LUCs) for parts of their land, but over 50 percent had been voided as it has been classified as VFV land.

Lack of recognition of customary practices and rules

Currently there are inadequate legal and policy provisions to recognise the rights and farming practices associated with ethnic minorities. The VFV law and the Farmland Law do not recognise rights to farming practices associated with ethnic minorities. This means that such practices, including shifting cultivation have no protection under the law at present. The NLUP has provisions to recognise shifting cultivation, however there is still not the accompanying legal framework. The recent formation of the National Land Use Council, which has been tasked to activate the NLUP is a positive sign that the situation may improve in the future, however it is not clear if this will lead to the formulation of new laws in line with the policy. There are also some provisions in the Agricultural Development Strategy to recognise shifting cultivation, which is currently being drafted.

There are also some minor legal provisions that recognise the rights and farming practices associated with ethnic minorities, although they are not usually enforced. For instance the 2016 Investment Law (section 64) recognises ethnic rights. In the EIA procedures it is noted that until Myanmar has its own standards, World Bank and IFC standards on indigenous people should be followed (section 7 of the 2015 EIA Procedures). However, at present, shifting cultivation is disallowed by law in Myanmar. The revised Community Forestry Instruction also does not allow for shifting cultivation, thus presenting a substantial risk for forest-based communities.

Glenn Hunt,
Land Core Group

Perspectives: Legal recognition for shifting cultivation

Currently shifting cultivation is viewed as a driver of deforestation and degradation from the state-centric perspective of forest cover management. Research has shown that shifting cultivation is sustainable and can promote biodiversity as well as securing livelihoods. Shifting cultivation should in fact be viewed from a broader perspective in order to capture economic, social, natural resource management and governance benefits. Rotational fallow systems provide economic benefits for most ethnic upland farmers which represent at least 15 percent of the total population of Myanmar. If famers do decide to transition to sedentary agriculture, the decision should be voluntary and made by upland famers themselves. Therefore, both ethnic land rights and traditional practices need to be recognised within the national Land Law based on the guidelines of the National Land Use Policy.

Ethnic conflict and contested lands in Myanmar

Over twenty ethnic armed organisations control territory in Myanmar to varying degrees. Civil war erupted in Myanmar in 1947, and has continued ever since. Since Myanmar began a trajectory of political change and liberalisation in 2010, ten ethnic armed organisations have signed the National Ceasefire Accord (Reuters, 2018). Broadly there are three main areas of territorial control between the state and ethic armed organisations (EAOs): a) government controlled areas, b) areas controlled by EAOs, and c) contested areas of mixed-administration or influence (South, 2017).

Some ethnic armed organisations have extensive governance structures that resemble those of the state and have separate ministries that relate to land and forest governance and administration. Recently, a number of these armed organisations have realised the importance of having legal and policy frameworks relating to land governance and administration. The Kachin Independence Organisation (KIO), New Mon State Party (NMSP), and the Karenni National Progressive Party (KNPP), are the political wings of ethnic armed organisations, which are all undergoing a process of drafting new laws and policies in order to formalise land tenure and land related institutional arrangements in areas under their control or influence.

The Karen National Union (KNU) has already issued a land policy in 2016. The policy allows for individual titling of household plots of land, and currently proscribes methods for the demarcation, ownership, and governance of six categories of land. Individual household plots titled under the KNU policy offer residents tenure security, but do not accord full freehold rights: any moves to transfer or sell land by individuals must first be approved by village land committees (KNU, 2016). To date, the KNU has issued over 40,000 individual land titles, one hundred community forests, twenty customary owned areas and are creating the Salween Peace Park a 1.28 million acres, a PA that is established by a bottom up process, which has involved extensive community participation and has received widespread grass-roots support.

The KNU land policy is in many ways more progressive than the Myanmar government policy, all land is the property of community and individual landowners; the KNU is responsible for "protecting, promoting, and ensuring the rights of communities." Unlike land legislation under the Union Government, the KNU Land Policy recognises customary tenure systems, using the term Kaw land to refer to customary territories. Under the policy, Kaw land is recognised as a distinct land type. Community claims to Kaw territories are recognised if they are deemed socially legitimate, defined by the policy as "land tenure claims that, although they may not be formally recognized by law, are widely accepted according to local norms and values." The Forestry Department of the KNU is also in the final stages of developing a Forest Policy to accompany the Land Policy.

It should also be noted that as a result of several decades of civil war there is considerable conflict, especially in contested areas of mixed administration or influence. Due to the longevity of the conflict, government services have been unable to access conflict areas, and therefore there is very little registered smallholder land, or land that is classified as farmland. Often governance arrangements in these areas are especially weak and land tenure insecurity is high. This is compounded in areas of mixed-control as both State and EAO institutions compete for legitimacy from civilians. Often communities have been displaced multiple times by conflict, and there are many IDPs and refugees who wish to return to their former land which complicates and confuses claims over land. New risks to land claims and rights are also emerging, particular due to recent conflict in Rakhine State.

In particular, since the 1980s the government has pursued a strategy of managing conflict by signing ceasefires with different EAOs. Since 2010, the Government has signed ten new ceasefires with different groups across the country. Often newly established "ceasefire" zones become subject to rapid development from investment, often with complicity from both government and EAO authorities. Rapid investment in turn creates a new set of threats for smallholders from land-based investment.

Gender and tenure security

Legally, women are able to hold land titles in Myanmar but recognition in practice has ben low. Namati, an NGO, conducted a large-scale survey, which is representative of the country, which found that 18 percent of titles are registered to women. The database is based on over 2,200 cases and is drawn from nine States and Regions. However, tenure relations and the security of women relates not only to the formalization of these under LUCs. Traditional systems of matrilineal inheritance, for example, have enabled women's control over land in some areas.

However, there are some important differences, a significant part of these women headed-households are elderly and widowed, living either alone or with one or two other household members living with them. Women household heads seem unable to access more than 10 acres; this is often because they cannot mobilize an adequate labour force after the death of spouses. Women household heads are still vulnerable as they are not socially influential and have weaker relationships with authorities. Due to these factors and labour constraints, women headed household may transfer their lands to their children earlier than male-headed households. In addition women headed households are especially vulnerable when there are instances of separation or divorce.

There is a high-level of variety with regards to customary land tenure and under certain systems women are unable to inherit land. Generally in Kachin and Zomi (Northern Chin) cultures men receive the inherit land, whereas in Karen society female inheritance is prioritized and under KNU controlled areas, all village committees include a women's representative (ECDF, 2016). Shan, Mon and Kayah villages generally do not prioritise any particular gender. However, comparing the roles of women among village chiefs, village committees and land and forest comittees it was found that only 6 percent of the elected members were female (*Ibid*.). This can be viewed in comparison with only 0.25 percent female village ward of village tract administrators nationwide (Namati, 2016).

Lack of enforcement of existing laws protecting smallholders

Existing smallholder land tenure rights are often systematically overridden by more powerful actors. This is sometimes aided and abetted by the state and where there are limited safeguards and they are seldom followed. For instance the Land Acquisition Law (1894) has provisions to protect smallholder farmers, including over compensation, which are rarely followed. Across key land-based agricultural concessions such palm oil, banana, and rubber there is widespread evidence that smallholders are being dispossessed from their land, as well during the creation of SEZs.

Difficulties to access to justice and solve conflicts

Avenues that are provided by laws for making complaints are not transparent or publicly accessible, and often fail to resolve land disputes. The Farmland Administration Body (FAB) is a line agency within the MOALI designated under the Farmland Law (2012). The Farmland Administration Body has the power to settle land disputes at different geographic scales, through the Village Tract Farmland Administration Body, Township Farmland Administration Body, District Farmland Administration body, Region/State Farmland Administration Body and the Union (national) Farmland Administrative Body. However, they often fail to resolve land conflicts relating to smallholders.

In addition, the new government initiated the Central Reinvestigation Committee for Confiscated Farmlands and Others Lands as well as corresponding State/Region committees (RUM, 2016). The Committee was tasked with scrutinizing complaints as well as providing recommendations that would ensure the effective return of land to the original owners (San Thein *et al*., 2017). The Committees for Land Reinvestigation are functioning and meet regularly, however the mandate and process is not widely accessible, effective or clear enough for the vast majority of famers or affected persons. Often, for the formation of the committee (41a), farmer representation is prescribed, however in practice this does not happen. Therefore, at present there is no equitable, functioning land dispute mechanism. The NLUP states specifically that an enabling environment should promote an equitable and affordable land dispute mechanism but at present there is currently no robust legal framework to ensure that this happens.

For legal cases that are eligible to files as claims in court, the process tends to be lengthy and time consuming, resulting in highly inequitable outcomes and often there is corruption. Therefore, many farmers are not able to access transparent and independent judicial processes, which is also prohibitively expensive.

With regard to compensation, the system is complicated and inconsistent. When compensation is rarely awarded, it is usually well below the market price. Farmers with a Form 7 (LUC), stand a better chance of receiving compensation, however frequently it is inadequate to buy farmland and recipients rely on other forms of manual labour to generate income. Rarely is compensation given when land is confiscated, instead it is only awarded if people complain and the conflict generates public interest. As such the system fails to systematically award compensation and when it does, the process is protracted and the sums awarded are well below the original value of the land.

Civil society space

There are few avenues for civil society to defend tenure and land use right claims. Civil society networks and coalitions have successfully campaigned and had concessions reduced or cancelled. Generally, civil society has grown and flourished since regime change in 2010 and in particular civil society that work on land governance have been very active. While the space for civil society to operate is substantially better than during the period under the former military regime, and despite several examples (such as the process that produced the National Land Use Policy, see below) wherein the avenues for communication and negotiation between the government and civil society were open and progressive, this space nevertheless remains limited. Further, recent developments may signal regression. However, in the last year, it appears that the space for civil society has been diminishing with more prosecutions taking place under the current government. Often activists are charged under the section 66D of the Telecommunication Law (2013) for defamation, and MPs have been told they cannot meet with unregistered NGOs. The National Community Forestry Working Group has seats for CSOs, as does the national FLEGT process. However, overall there is limited formal inclusion, and many challenges regarding process if civil society representation is present.

Inclusiveness in decision making on policy or legislation that impacts on access to land

Generally speaking, famers and more broadly citizens, are not included in decision making processes that relate to land. However, during the drafting of the NLUP, there was significant input from civil society and farmers networks. The NLUP, determines the management of the countries land and natural resources such as forests and rivers that shape the social, political and economic institutions that govern land use and management (Franco, *et al*. 2015). After pressure from civil society the government carried out 17 public consultations over 8 months, which were generally considered to be inclusive (Forbes, 2017). However, with events being held mainly at the national level or at State and Region capitals in Burmese language there were some barriers for rural farmers and ethnic minorities. In addition, over 60 pre-consultations were carried out by the Land Core Group, a Myanmar NGO and 11 by Land In Our Hands, a grass-roots civil society network.

The Agricultural Development Strategy (ADS) was relatively inclusive, with consultations in States and Regions, however unlike the NLUP, suggestion points were not recorded, so it is impossible to track important or frequently repeated points in order to see if they will be incorporated into the final strategy. However, there are still barriers for many rural famers to access national level consultation processes, therefore, inclusiveness in policy formulation processes have been moderate, with relatively good consultation.

There has been little inclusivity for current legislation that impacts land. Amendments to the Farmland Law were discussed in upper and lower houses of parliament. While parliamentarians are elected, there was no consultation with farmers or those likely to be directly impacted. There are also concerns raised about the accountability of MPs to farmers in rural communities and their technical acumen on issues relating to land tenure. The process of drafting and passing laws, including the Farmland Law and the VFV land law, simply did not allow for input and consultation with those affected. Other consultations, such as for the Investment Law, were extremely rushed and it was not practically possible to participate without fluency in English.

Conclusion

In conclusion, Myanmar is a country that has embarked on multiple land-based reforms after years of isolation, which provides optimism for the future. In particular the establishment of the NLUC in early 2018 offers hope that this will lead to a new Land Law, which will be the starting point for reconciling a stacked and contradictory legal framework, which is antiquated with some laws dating back to the colonial era. There are also positive signs from the development of the NLUP that this process will be inclusive and draw on previous experiences from developing policies since 2012.

However, it is expected that Myanmar is likely to face many issues harmonising laws and policies and changing the institutional environment in order to ensure that that there are widespread governance improvements that impact farmers nationwide. In particular, decades of mismanagement by the former military regime, has left a legacy of land conflict and displacement – a repetitive theme in this chapter – will be difficult to overcome. A top priority will be establishing a robust smallholder land tenure regime that recognises customary practices and protects famers, especially in ethnic areas.

In order to transform the agricultural sector into one that is regionally competitive it is necessary to create an enabling environment. It is also important to establish strong supply chains, and access to credit in order that famers are lifted out of poverty and debt-traps and are able to produce high quality crops and sell them at fair market prices.

U Shwe Thein,
PhD, Land Core Group

Perspectives: The National Land Use Council

After two years in power, the incumbent government of Myanmar has used the National Land Use Policy (NLUP) to form the National Land Use Council (NLUC) in January 2018. I personally and truly welcome this action as it presents an opportunity to improve overall land governance. It has the potential to bring all key actors together across different stakeholder groups, including smallholder farmer associations, CSOs, local ethnic groups and in principle, Ethnic Armed Organisations based on their involvement in the peace process. This is also a unique opportunity to encourage participation of women in the NLUC (section 10-b, 10-c, 11) as the guidelines allow respective stakeholder to select their own representatives to take part in the land use committee formed at state/regional and local levels. If the NLUC follows the NLUC guidelines then there is the possibility of true ethnic representation in order to recognize and protect ethnic tenure rights in the National Land Law and existing land laws.

References

1. Baroang, K. (2013). Myanmar Bio-Physical Characterisation: Summary Findings and Issues to Explore. New York: Center on Globalization and Sustainable Development, Earth Institute at Columbia University.
2. Bhagwat, T. *et al*. (2017). Losing a jewel – Rapid declines in Myanmar's intact forests from 2002-2014. PLoS ONE 12(5), e0176364. Available from: https:// doi.org/10.1371/journal.pone.0176364 [accessed 29th April 2018].
3. Boutry, M. *et al*. (2017). Land tenure in rural lowland Myanmar: From historical perspectives to contemporary realities in the Dry zone and the Delta. Yangon: Of lives of land Myanmar research series GRET.
4. Buchanan, J., Kramer, T. and Woods, K. (2013). Developing Disparity: Regional Investment in Burma's Borderlands. Amsterdam: Transnational Institute (TNI).
5. Burma Environmental Working Group (BEWG). (2017). Resource Federalism: Road Map for Decentralised Governance of Burma's Natural Heritage. Chiang Mai: BEWG.
6. Conservation Alliance of Tanawthari (CAT). (2018). Our Forest, Our Life: Protected Areas in Tanintharyi Region Must Respect the Rights of Indigenous Peoples. Tanintharyi: CAT. Available from: http://www.mylaff.org/document/view/4205 [accessed 29th April 2018].
7. Department of Agricultural Land Management and Statistics (DALMS). (2015). Sown acreage of selected crops by region and State, Years 2007/2008-2014/2015. Nay Pyi Taw: MoALI.
8. Department for International Development (DFID). (2015). Myanmar Inclusive Growth Diagnostic: November 2015. Laondon-Yangon: DFID. Available from: http://themimu.info/sites/themimu.info/files/documents/Report_Inclusive_Growth_Diagnostic_DFID_Nov2015.pdf [accessed 29th April 2018].
9. Department of Population (2017a). Census Atlas Myanmar: The 2014 Myanmar Population and Housing Census. Nay Pyi Taw: Ministry of Labour, Immigration and Population.
10. Department of Population (2017b). The 2014 Myanmar Population and Housing Census: Thematic Report on Population Dynamics. Nay Pyi Taw: Ministry of Labour, Immigration and Population.
11. Donateo, C. (2017). Special Economic Zones and Human Rights Abuses in Myanmar. Yangon: Heinrich Böll Stiftung. Available from: https://mm.boell.org/sites/default/files/uploads/2017/03/sez_and_hr_violations_in_myanmar_final.pdf [accessed 29th April 2018].
12. Ethnic Community Development Forum (ECDF). (2016). Our Customary Lands: Community-Based Sustainable Natural Resource Management in Burma.
13. FAO (s. d. a). Food and agriculture data. Available from: http://www.fao.org/faostat/en/#home [accessed 12th March 2018].
14. FAO (s. d. b). GLADIS - Global Land Degradation Information System. Available from: http://www.fao.org/nr/lada/gladis/glad_ind/ [accessed 12th March 2018].
15. Forbes, E. (2017). Civil Society Participation in Land Policy Making: the innovative experience of Myanmar's pre-consultation on the National Land Use Policy. MRLG Capitalization Note Series #2. Vientiane & Yangon: Mekong Region Land Governance, Land Core Group and Loka Ahlinn.
16. Franco, J. *et al*. (2015). The Challenge for of Democratic and Inclusive Land and Policy Making in Myanmar: A Response to the Draft National Land Use Policy. Amsterdam: Transnational Institute (TNI).
17. Haggblade, S. *et al*. (2013). A Strategic Agricultural Sector and Food Security Diagnostic for Myanmar. Draft working Paper for USAID/Burma. Michigan State University and MDR. Available from: http://fsg.afre.msu.edu/Myanmar/myanmar_agricultural_sector_and_food_security_diagnostic_report.pdf [accessed 29th April 2018].
18. Human Mortality Database. University of California, Berkeley (USA), and Max Planck Institute for Demographic Research (Germany). Cited in IndexMundi.com. Available from: https://www.indexmundi.com/facts/myanmar/mortality-rate [accessed 29th April 2018].
19. IHLCA. (2011). Integrated Household Living Conditions Survey in Myanmar (2009-2010). Poverty Profile. Yangon, Myanmar: MiNPED, UNDP, UNCF, SIDA. Available from: http://catalog.ihsn.org/index.php/catalog/6256 [accessed 29th April 2018].
20. International Commission of Jurists (ICJ). (2017). Special Economic Zones in Myanmar and the State Duty to Protect Human Rights. Geneva: ICJ. Available from: https://www.icj.org/wp-content/uploads/2017/02/Myanmar-SEZ-assessment-Publications-Reports-Thematic-reports-2017-ENG.pdf [accessed 29th April 2018].
21. International Monetary Fund (IMF). (2015). Myanmar 2015: IV Article Consultation. Available from: https://www.imf.org/external/pubs/ft/scr/2015/cr15267.pdf [accessed 29th April 2018].
22. Kyawt K. K. Tun, *et al*. (2015). Assessment of land degradation and its impact on crop production in the Dry Zone of Myanmar. International Journal of Sustainable Development & World Ecology, 22(6), pp. 533-544.
23. LaJeunesse Connette, K. J. *et al*. (2016). Assessment of Mining Extent and Expansion in Myanmar Based on Freely-Available Satellite Imagery. Remote Sens. 8(11) 912. Available from: http://www.mdpi.com/2072-4292/8/11/912 [accessed 29th April 2018].
24. Mark, Siu Sue. (2016). Are the Odds of Justice 'Stacked' Against Them? Challenges and Opportunities for Securing Land Claims by Smallholder Farmers in Myanmar. Critical Asian Studies 48(3), pp. 443–60.
25. MONREC (2017). Biodiversity Conservation in Myanmar, an Overview. The Republic of the Union of Myanmar, Ministry of Natural Resources and Environmental Conservation Forest Department.
26. Myanmar Centre for Responsible Business (MCRB). (2017). Biodiversity in Myanmar, including Protected Key Areas and Key Biodiversity Areas. Yangon: MCRB. Available from: http://www.myanmar-responsiblebusiness.org/pdf/resources/Biodiversity-Myanmar-Further-Reading-and-Maps.pdf [accessed 29th April 2018].
27. Namati. (2016). Gendered Aspects of Land Rights in Myanmar: Evidence from Paralegal Casework. Available from: https://namati.org/wp-content/uploads/2016/03/Namati-Gender-policy-brief-FINAL-1.pdf [accessed 29th April 2018].
28. NEPCon. (2013). Myanmar Forestry Sector Legality Analysis. Available from: http://www.burmalibrary.org/docs22/Myanmar_Forest_Sector_Legality_Analysis-ETTF_Programme.pdf [accessed 29th April 2018].
29. Obendorf, R. (2012). Legal Review of Recently Enacted Farmland Law and Vacant, Fallow and Virgins Lands Management Law: Improving the Legal & Policy Frameworks Relating to Land Management in Myanmar. Food Security Working Group's Land Core Group. Available from: https://www.forest-trends.org/wp-content/uploads/imported/fswg_lcg_legal-review-of-farmland-law-and-vacant-fallow-and-virgin-land-management-law-nov-2012-eng-2-pdf.pdf [accessed 29th April 2018].
30. Nash, Robert. (2017). Responsible investment in Myanmar: Lessons from experiences of SEZ develop-

ments. Oxfam Discussion Paper. Available from: https://policy-practice.oxfam.org.uk/publications/responsible-investment-in-myanmar-lessons-from-experiences-of-sez-developments-620179 [accessed 29th April 2018].
31. Prescott, G.W., *et al*. (2017). Political Transition and Emergent Forest-Conservation Issues in Myanmar. Conservation Biology, 31(6), pp. 1257–1270.
32. Republic of the Union of Myanmar (RUM). (2012). The Vacant, Fallow and Virgin Lands Management Law. Pyidaungsu Hluttaw Law No.10/2012.
33. Republic of the Union of Myanmar (RUM). (2013). Report on the Myanmar Agricultural Census 2010. Nay Pyi Taw: MoAI, Department of Settlement and Land Records Department.
34. Republic of the Union of Myanmar (RUM). (2016). Terms of Reference of the Central Reinvestigation Committee for Confiscated Farmlands and Other Lands. Nay Pyi Taw: Presidential office.
35. Ritzier, D. A., Wong, L. and Samson, J. (2015). Myanmar's Agricultural Sector: Unlocking Potential for Inclusive Growth. Asian Development Bank: Economic Working Paper Series No. 470. Available from: https://www.adb.org/sites/default/files/publication/177652/ewp-470.pdf [accessed 29th April 2018].
36. San Thein, Diepart J.-C., Hlwan Moe and C. Allaverdian (2018). Large-Scale Land Acquisitions for Agricultural Development in Myanmar: A Review of Past and Current Processes. MRLG Thematic Study Series #9. Vientiane: MRLG.
37. San, Thein, Pyae, Sone and Diepart, J.-C. (2017). Transparency Under Scrutiny. Information disclosure by the Parliamentary Land Investigation Commission in Myanmar. MRLG Case Study Series #1. Vientiane: Mekong Region Land Governance. Available from: http://www.burmalibrary.org/docs23/MRLG-2017-02-Case-study-Parliamentary-Land-Investigation-MMR-red.pdf [accessed 29th April 2018].
38. Saxon, E. C., and Shepard, S. M. (2016). Atlas of Spatial Data for Forest Planing, Taninthayi, Myanmar. Taninthayi Conservation Program Report, Fauna and Flora International. Yangon: Fauna and Flora International.
39. Scurrah, N., Hirsch, P. and Woods, K. (2015). The Political Economy of Land Governance in Myanmar. Yangon-Vientiane: Mekong Region Land Governance.
40. SERVIR (s. d.). Regional Land Cover Monitoring System. Available from: http://servir-rlcms.appspot.com/ [accessed 03rd February 2018].
41. Srinivas, S. and Saw Hlaing, U. (2015). Myanmar: Land tenure issues and the impact of rural development. Roma: Food And Agriculture Organization (FAO).
42. Tarkapaw, TRIP NET, Southern Youth, Candle Light, Khaing Myae Thitsar, Myeik Lawyer Network and Dawei Development Association (TNRW). (2016). Green Desert: Communities in Tanintharyi Renounce the MSPP Oil Palm Concession. Available from: https://eia-international.org/wp-content/uploads/Green-Desert-FINAL.pdf [accessed 29th April 2018].
43. Thant, Y. Z. M. and Win, H.H. (2016). Myanmar Agricultural and Rural Statistics System and Development Plans. United Nations Economic and Social Commission for Asia and the Pacific (SIAP). Available from: http://www.unsiap.or.jp/e-learning/el_material/Agri/1606_Advocacy_KOR/cr_Myanmar.pdf [accessed 29th April 2018].
44. Treue, T., Springate-Baginski, O. and Htun, Kyaw. (2016). Legally and Illegally Logged out: Extent and Drivers of Deforestation & Forest Degradation in Myanmar. Yangon: ALARM-DCA.
45. van Asselt, Kyan Htoo and Dorosh, P. (2016). Prospects for the Myanmar Rubber Sector: An Analysis of the Viability of Smallholder Production in Mon State. In Feed the Future Lab for Food Security Policy: Research Paper 35. Michigan: Michigan State University, pp. …
46. Woods, K. (2012). Agribusiness Investments in Myanmar: Opportunities and Challenges for Poverty Reduction. Kunming: Centre for Myanmar Studies, Yunan University.
47. Woods, K. (2015). Commercial Agriculture Expansion in Myanmar: Links to Deforestation, Conversion Timber and Land Conflicts. Washington: Forest Trends.
48. World Bank. (2014). Myanmar: Ending poverty and boosting shared prosperity in a time of transition. A Systematic Country Diagnostic. Available from: http://documents.worldbank.org/curated/en/871761468109465157/Myanmar-Ending-poverty-and-boosting-shared-prosperity-in-a-time-of-transition-systematic-Country-Diagnostic [accessed 29th April 2018].
49. World Bank. (2015). FAQs: Global Poverty Line Update. Available from: http://www.worldbank.org/en/topic/poverty/brief/global-poverty-line-faq [accessed 29th April 2018].
50. World Bank. (2016). Myanmar: Analysis of Farm Production Economics. Economic and Sector Work Report No. 10. Available from: http://documents.worldbank.org/curated/en/509581468181132091/pdf/100066-ESW-P144951-Box394886B-PUBLIC-MM-Farm-Production-Economics-online-version.pdf [accessed 29th April 2018].
51. World Bank. (2017a). An analysis of poverty in Myanmar: part one - trends between 2004/05 and 2015 (Vol. 2) (English). Available from: http://documents.worldbank.org/curated/en/556581502987486978/An-analysis-of-poverty-in-Myanmar-part-one-trends-between-2004-05-and-2015 [accessed 29th April 2018].
52. World Bank. (2017b). Myanmar Economic Monitor, October 2017: Capitalizing on Investment Opportunities. Available from: http://pubdocs.worldbank.org/en/138051510537368636/MEM-FINAL-Oct-2017.pdf [accessed 29th April 2018].
53. World Bank. (2017c). World Bank Open Data: Statistics on Myanmar. Available from: https://data.worldbank.org/country/myanmar?view=chart [Accessed 8th March 2018].

©Jack Kurtz

State of Land in Thailand: Smallholder security or structural inequality?

State of Land in Thailand: Smallholder security or structural inequality?

Overview

Thailand carries a distinctive position within mainland Southeast Asia, and an appreciation of its particular socio-political history is necessary when looking at arrangements of land. Firstly, alternating cycles between military rule and civilian governance without a fundamental regime change has resulted in long-standing consistency for land tenure policy and practice. Thailand was never formally colonised and did not follow a path of post-colonial socialist experimentation as did its regional neighbours, thereby side-stepping any period of land collectivisation. Through the 1997 Constitution, Thailand established a democratic regime with the King as Head of State, its culture based on a trinity of nation, religion and monarchy (Constitutional Drafting Assembly, 1997). Nevertheless, the balance between democracy and military control remains fragile. The present day is framed by the latter scenario. Following a military coup in 2014 (the nineteenth since 1932, Hodal, 2014), the country is now under a new military-drafted Constitution, governed by the National Council for Peace and Order (NCPO) under the leadership of retired army officer Prayut Chan-o-cha. Whether, and when, Thailand will return to an electoral system remains unclear. Secondly, over the last forty years Thailand has achieved economic wealth faster than its near-neighbours, combining the marketization of agriculture with burgeoning industrial, construction and service sectors. However, signs of middle-income stagnation are displayed, suggesting Thailand may yet be unable to make a further transition to match regional economic powers such as South Korea and Japan (Phongpaichit *et al*., 2014).

Thailand is a country of contrasts, deeply entrenched in cultural and religious traditions while also embracing an urbanised technological future, centering on its primate city of Bangkok. Land relations in Thailand have been built upon a base of private ownership and the development of individualized, liberal markets. However, while the country has not witnessed the large-scale land acquisitions for agribusiness or mining as its neighbours have, it is a key investor in such large-scale investments in the neighboring countries of Lao PDR and Cambodia. An understanding of these dynamics is needed when approaching the topic of land not only within the kingdom, but also when considering Thailand's broader role in land relations across the region.

This chapter provides an overview of the state of land in Thailand. The first section below provides an overview of key demographic and socioeconomic conditions, and changes to these, surrounding the rural and agricultural population and its position within the national socio-economy. The second section follows with a descriptive analysis of the land resources base upon which this population depends, including land use and land cover, key crops, and recent changes in these. The third section describes the ways in which these land resources are distributed across society, with a particular focus on smallholders. The remaining two sections describe and assess the status of tenure security and conditions of governance that surround the broader land issue in Thailand.

The Land and the People

Demographics

Thailand has a population of nearly 69 million people with a density of 134.8 people per km2 (World Bank, 2018). The annual growth rate (0.3% in 2016) is slowing towards a projected demographic peak of around 70 million by 2030 (World Population Review, 2018). This is resulting in an increasingly aging population, with more than a third of the people now over 45 years old (Figure 32). Fifty-two percent of the population live in urban-designated areas, with the rural population steadily decreasing in absolute numbers since the turn of the century (World Bank, 2018; Figure 33). The ratio of urban population level lies above the global average, and is much higher than the rest of the Mekong Region. While some areas of the country are highly-urbanized, other areas retain a high proportion of their population in rural areas, with several provinces exceeding 70% of the total (Map 47). In terms of ethnicity, around 75% of the population belong to ethnic Tai groups, 14% are ethnic Chinese, 3% Malay, and a variety of minority groups are commonly found in the mountainous areas of the country (World Population Review, 2018). In the latter case, these pockets of ethnic minorities often lacking full citizenship rights, with their land lying in state-claimed zones (whether national parks, wildlife sanctuaries or other protected areas).

Figure 32: Sex Ratio and Age Class Distribution in Thailand
Source: Population and Housing Census, 2010

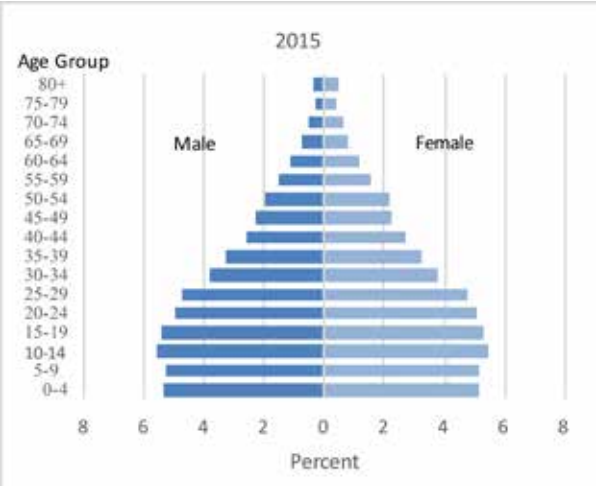
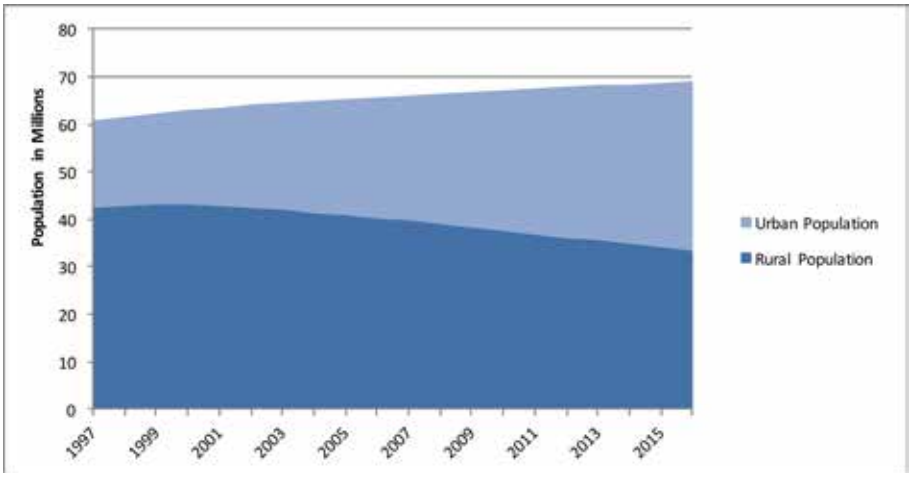
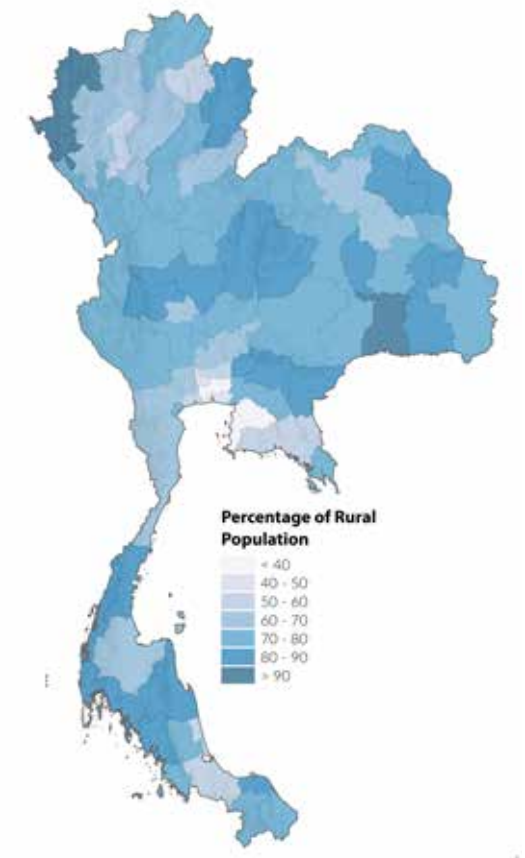


Figure 33: Urban and Rural Population (1997-2016)
Source: World Bank Database



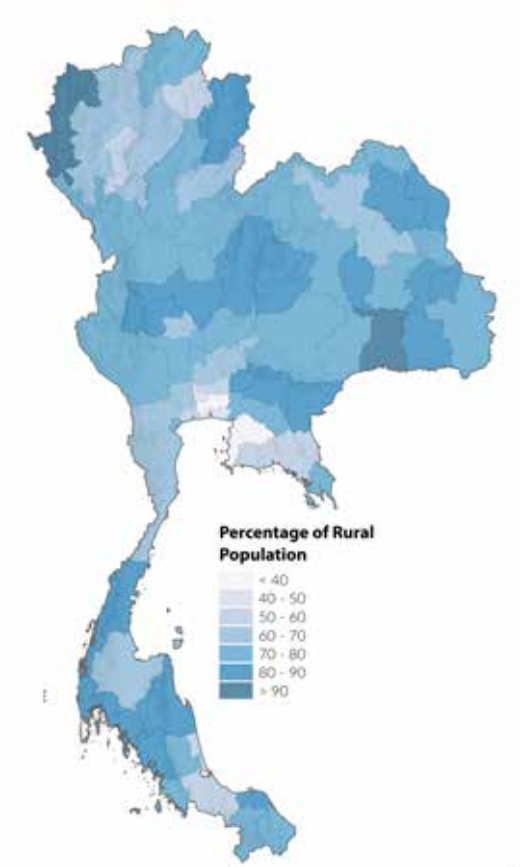
Map 47: Distribution of rural population by province in Thailand[65] pulation (1997-2016)
Source: Housing and Population Census, 2010



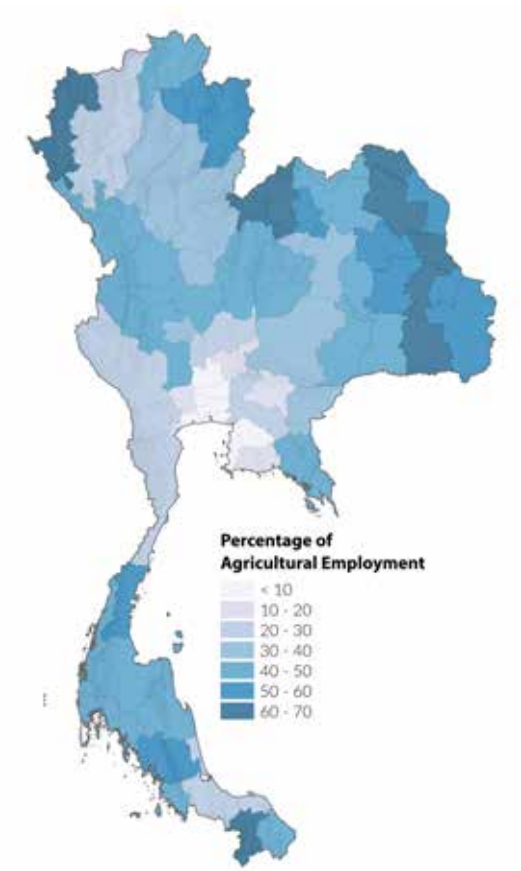
Migration in Thailand is primarily agent-led rather than state-sponsored. Thailand is a sender, transit stop, and receiver of migrants in the region and globally (IOM, 2011). As well as internal movements by nationals, in-migrants include regional neighbours (supplying both documented and undocumented workers in the agriculture, construction and service sectors) and a range of international residents from all over the world. A recent report by the International Organization for Migration estimates that there are around 4-5 million international migrants in Thailand, of which 1-2.5 million are irregular (IOM, 2017). Although movements tend towards urban centres (principally Bangkok), migrants are increasingly found around the country. Indeed, the migrant stream to urban areas (447,159) is lower than to rural areas (487,056) (NSO, 2016). However, migration figures are hard to calculate, and official figures struggle to offer an effective representation of reality. In particular, urban migrants often remain registered in family household books at their village of origin.

[65] The data here represents population in municipal versus non-municipal administrative areas. This differs from data strictly measuring rural-urban population, which is only available at national level.

Map 48: Incidence of poverty by province in Thailand
Source: Housing and Population Census, 2010



Map 49: Prevalence of employment in the agriculture across Thai provinces
Source: Agricultural Census 2013

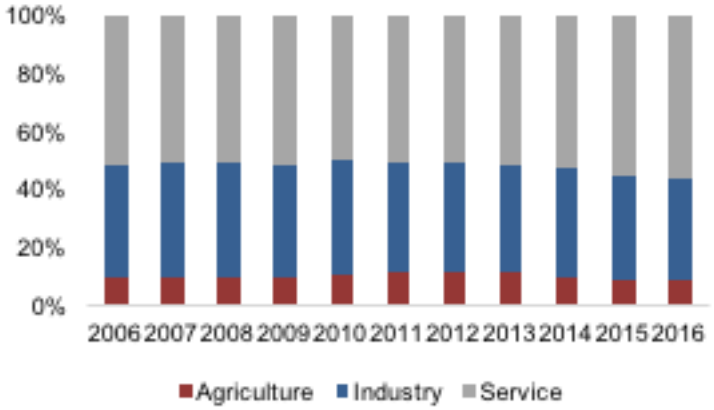


Socioeconomic Context

With a GDP per capita at US$5,908, Thailand maintains an upper middle-income status according to World Bank measurements, a level first reached in 2011 (World Bank, 2018). National growth reached double-digit figures during the 1980s and 90s, but has been tempered by a series of crises in 1997 (Asian Financial Crisis), 2008 (global economic downturn) and 2011 (extensive flooding), alongside continuing political uncertainty. As a result, prospects for the future remain cautious, with growth forecast for 3-4% annually up to 2019 (ADB, 2017). GDP growth has been mirrored by a higher level of income inequality compared to other Mekong region countries, in 2014 represented by a Gini index of 37.85 (World Bank, 2018). This is despite a reduction in poverty rates among the population from 21.9% in 2006 to 8.6% in 2016 (NSO, 2016; World Bank, 2018). Poverty is most pronounced in the peripheries of the country, particularly within the north-west, north-east and southern corners (Map 48). This potentially links to remoteness and limited accessibility (Mae Hong Son) and ongoing conflict (Narathiwat). Parallel to growth in Thailand over the past thirty years, the instance of food insecurity has been substantially reduced from 30% of the population in 1990-92 to 9.5% in 2014-16 (FAOSTAT, 2018). Nevertheless, the northeast remains a higher-risk area due to a susceptibility to drought (MRC, 2014).

29.5% (2015 figure) of a workforce over the age of fifteen years old operate in agriculture, a reduction from 65% in 1990 (NSO, 2018; World Bank, 2018). A higher proportion of agricultural labour is found in geographically peripheral provinces of the country (Map 49), where alternative employment options are less forthcoming, and farming practices less mechanised. Nevertheless, agriculture only contributes 8.3% of GDP in 2016 (World Bank, 2018). This represents a level that has remained roughly consistent over the past twenty years (Figure 34), with a significant drop occurring between 1960 and 1990. Generally, the lowest incomes are found in agriculture. Looking at the highest clustering within specified income bands, 44.4% of workers in agriculture, forestry and fisheries earn 3,501-6,500 baht per month, as opposed to 52.8% of construction and 55.4% of manufacturing workers, who earn 6,501-10,000 baht per month (NSO, 2016). These figures should be tempered with the fact that an estimated 57.6% of the workforce occupy the informal sector, denying a full overview of wage levels. Overall, the trend of employment diversification and economic growth matches a transition to an urban society. This urbanism can be viewed not only as movements of the population to urban centres such as Bangkok, as a younger generation look beyond agriculture for their livelihoods, but also in a lifestyle moving outwards to areas previously rural in character. Such movements are aided by an extensive network of roads, rail lines, and regional airports hosting a number of low-cost airlines, as well as high usage of numerous communication technologies.

Figure 34: Change in GDP Structure in Thailand, by Sectors (2006-2016)
Source: World Bank database

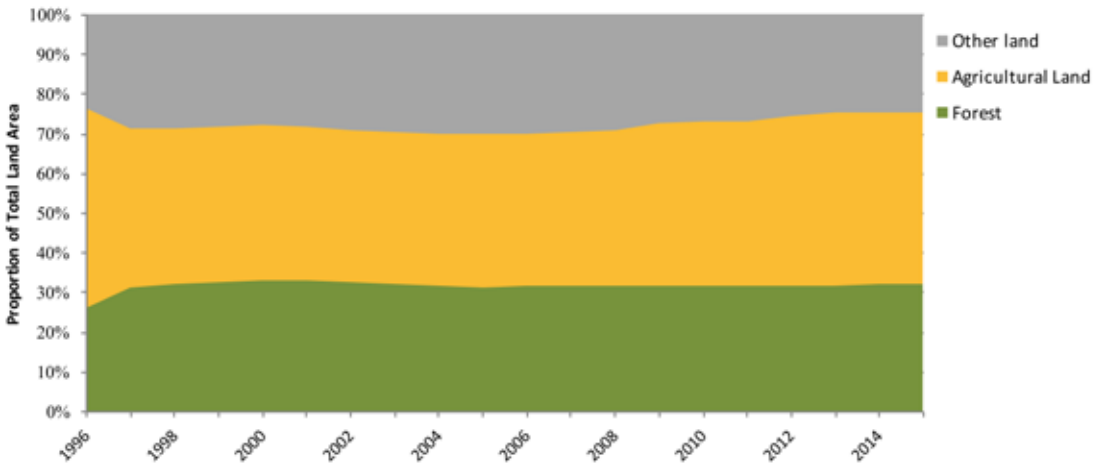


The Land Resource Base: The dominance of agriculture

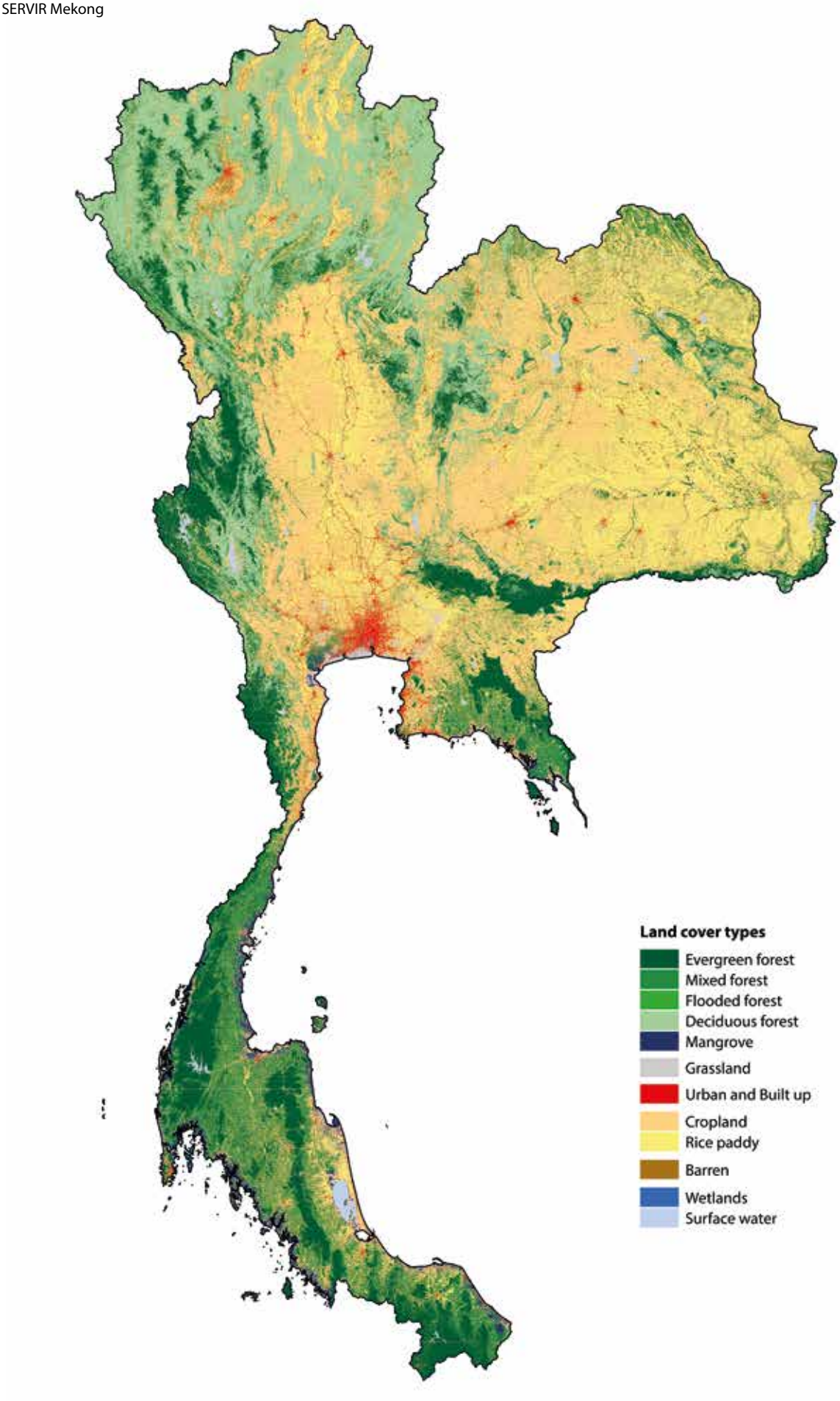
Land Use Land Cover

Agriculture in Thailand is a highly developed sector geared to compete in global markets. This was instigated through an expansion of land use and industrialisation of practices through the 1960s and 70s. In 2015, 46.5% of national land was cultivated, involving alluvial plains and upland areas all around the country (figure 35) (OAE, 2016; World Bank, 2018). This is nearly twice the amount as that at the beginning of the 1960s, albeit a level that has remained rather stable over the past twenty years (Figure 35). Rice remains the most commonly cultivated crop. As of 2016, it occupies over 40% of agricultural land use, with production concentrated in the plains of the central and north-eastern regions (OAE, 2016). For many years, Thailand was the world's largest exporter of rice (it now lies second behind India at around 10 million metric tons exported per year). The second highest crop in terms of land use is rubber, in 2016 occupying 15.6% of the total agricultural area. Thailand is the highest global producer at 4.4 million metric tons in 2014, which is a third of global production, and mostly for export. Although found throughout the country, a core of production is located in the southern region, particularly the provinces of Surat Thani, Songkhla and Nakhon Si Thammarat. As well as rubber, there are two other significant perennial crops, namely oil palm and sugar cane (Figure 36). Oil palm is also found primarily in the South, particularly in Surat Thani, Krabi and Chumphon provinces. On the other hand, sugar cane is cultivated around the country excluding the south, with key provincial centres of production in Nakhon Ratchasima, Nakhon Sawan and Udon Thani. Thailand is the second highest global exporter of sugar. On a smaller scale for perennial crops, tropical fruits and coffee are also important for many smallholders.

Figure 35: Land Use Land Cover Change in Thailand 1996-2015
Source: FAOSTAT

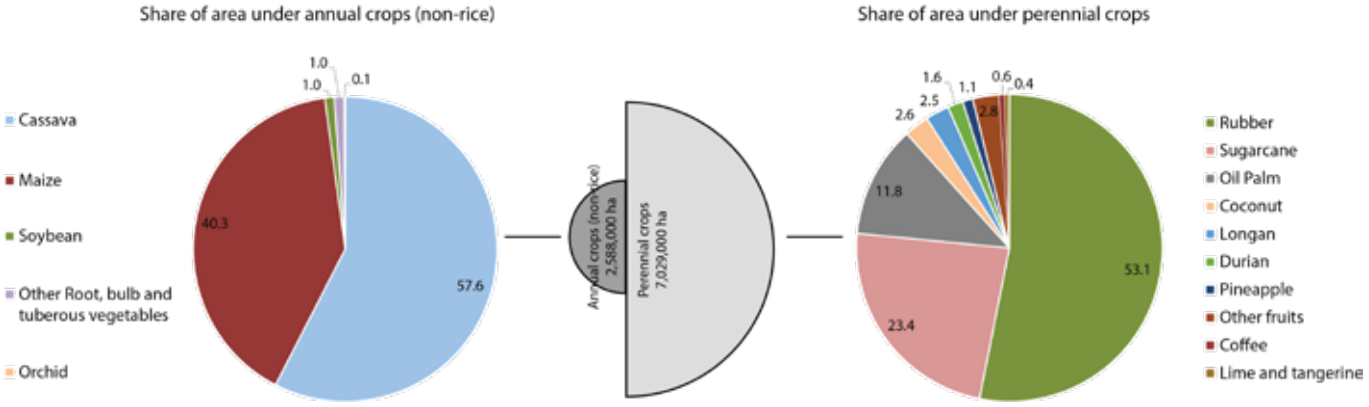


Map 50: Land Use Land Cover in Thailand, 2015
Source: SERVIR Mekong



© Jack Kurtz

Figure 36: Distribution of main (non-rice [66]) annual and perennial crop types in Thailand
Source: Agricultural Statistics of Thailand, the Office of Agricultural Economics



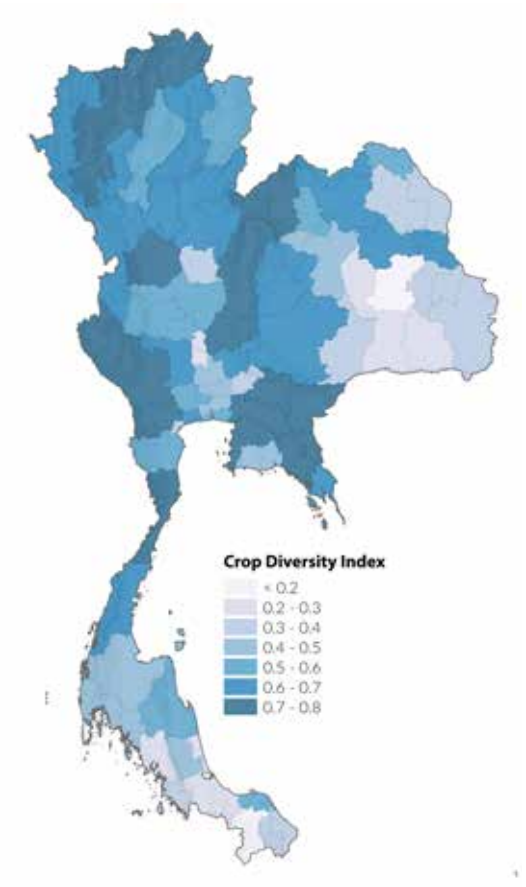
Annual crops are dominated by cassava and maize (Figure 36), although like oil palm and sugar cane, in 2016 none used more than 7% of the total agricultural land area. Both cassava and maize are found throughout the country excluding the southern region, with Nakhon Ratchasima a core centre of production in both cases. In 2016, other key provinces for cultivation included Phetchabun and Nan (maize), and Uthai Thani (cassava). In terms of forestry, the 2013 Agricultural Census highlights teak (40,902 ha) and eucalyptus (72,356 ha) as the most land intensive planted species (NSO and MICT, 2013). Only 1.6% of land area is classed as permanent pastures or meadows (World Bank, 2018).

A highly modernised and productive agricultural sector remains dominated by smallholders. This influences a relative maintenance of crop diversity at provincial level (Map 51). Only in the south (rubber and oil palm) and the northeast is diversity lower. However, individual plots may still practice intensive mono-cropping that may increase vulnerability to climate change, soil degradation, and pests.

In 2015 forest cover in Thailand stood at 164,000 km2 (32% of total surface area) (OAE, 2016). Over half of this area is found in the mountainous north of the country (Map 50). This represents a significant increase from around 27% coverage in 1990, following a ban on logging in 1989, and the instigation of numerous

[66] Rice is excluded from this graphic due to its overwhelming dominance in terms of cropped area, to allow other crops to be visible.

Map 51: Crop Diversification Index in Thai provinces



© Jack Kurtz

Nattakant Akarapongpisak,
College of Politics and Governance,
Mahasarakham University

Perspectives: The Green Lobby in Thailand

The green lobby's influence over changes in land control and land use reflects controversial debates in Thailand. For example, 'dark green' conservationists advocated forest land reclamation in support of NCPO orders that in 2015 resulted in evictions of forest people in twelve provinces nationwide. On the other hand, community forest arrangement promoted by environmental NGOs and endorsed by the state have stirred conflicts between the 'villagers-as-regulators' who strictly enforce conservation rules within their designated community forests and the 'regulated' co-villagers who rely on forest incomes. In 2017, the Supreme Administrative Court revoked licenses for wind power companies to rent agricultural land reform plots from villagers, a project under state and green lobby approval. The ruling, as reported in the media, followed the lawsuit filed by co-villagers and environmental lawyers who claimed the lands were preserved for 'agricultural uses' only.

new plantations. Indeed, only 41% of cover comprises primary forest, with 34.7% naturally regenerated and 24.3% planted (2015 figures) (World Bank, 2018). Nevertheless, the level of forest has remained stable over the past twenty years. It has long been a site of contestation involving state control, conservation, corporate interests, farmer rights, royal foundations, and habitation of minority ethnic groups. Under Order 64/2014, the military government aims to increase forest cover to 40% of the country, a sign that the management of natural resources has become a priority policy area (FTA Watch *et al*., 2015). This has resulted in the redrawing of forestland boundaries and extensive land reclamation, often at the expense of farmers operating around ambiguously marked zones.

Shifting cultivation has traditionally been associated with the north of Thailand, particularly along its border to Myanmar. The amount of land under this practice remain notoriously difficult to estimate, and can be mistaken for destroyed forest. New research by Lukas Wuersch and colleagues suggests between 5-7,500 km2 is involved[67] in shifting cultivation. This chimes well with statistics from the Land Development Department. An area of 6,933 km2 was highlighted in 2016, predominantly in the north, but with small pockets in the northeast and central regions (LDD, 2018). This represents a vastly diminished area over the past fifty years, during which time it has disappeared completely from the south of the country.

[67] Shifting cultivation landscapes include both cropped areas and managed fallows.

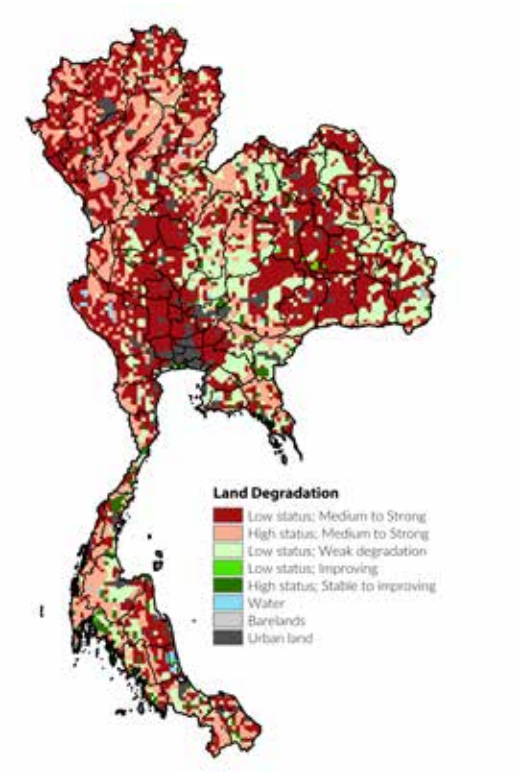
Land Use intensification and Potential

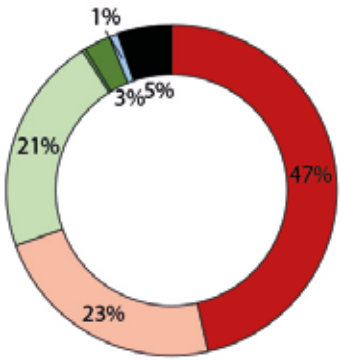
Thailand's reputation as a well-honed agricultural power is partly justified. Land has on the whole been well utilised and agricultural practices modernised so that production is labour efficient, if sometimes lacking workers at peak periods of demand. Research and development has a strong interface with a farming population, and supply chains are well developed to cater to domestic needs and export markets. Nevertheless, when it comes to land efficiency, the picture is less favourable. Yields are frequently similar to or lower than neighbouring countries, such as in cassava, and maize (OAE, 2016). Sugarcane is one crop with greater land productivity. However, in the case of rice, Thailand has one of the lowest yields in the world (World Bank, 2018), although this is tempered by a preference for high-quality but low-yield varieties that fetch higher prices in the world market. As a result, projections for future improvements in productivity are exclusively based on enhanced yields (OECD and FAO, 2017). Although FAO data only refers to 2007, the evidence is of partial implementation for irrigation, with only 34% of cultivated land equipped and 79% of that area actually irrigated (FAO, 2016). There is also a problem of land suitable for cultivation remaining idle due to acquisition for speculation, with policy to counter the practice unenforced.

Land Degradation

Land degradation is a growing concern across the world, and the case of Thailand is no exception following the expansion of an industrialised agricultural sector over the past 50 years. The ability to measure degradation has proved limited and contestable, partly due to its multivariate nature, high degrees of local variation, and a lack of consistent and comparable data on which to base an assessment. An estimation supported by the FAO Land Degradation in Drylands Project offers some useful points of analysis, albeit through a measurement providing coarse resolutions at the national level (Map 52). Nearly half of the total land area has been attributed a poor status of productivity and health, with a strong downward trajectory of degradation (areas coloured red-brown). In particular, highly intensified and longstanding agriculture in lowland areas of the central plains and northeast region seem to have instigated negative impacts, although there is also evidence in highland areas, with high-risk steep terrain. On 23% of land, productivity remains high, yet with a strong trend of degradation (areas coloured peach). These include northern upland areas, where agricultural expansion is more recent, and the sloping land fragile against continued exploitation. For 24% of the total land area, the trend of degradation is less intensive (areas coloured different shades of green). The northeast region seemingly carries the greatest potential for maintaining high productively on richer soils. However, more specific mapping would be needed for a clearer picture. Just as important is how the impacts of land degradation are felt most acutely by the rural poor, both because of their primary reliance on agricultural and forest resources, and because their capacities for dealing with the impacts of change are more limited.

Map 52: Land degradation in Thailand
Source: GLADIS, FAO



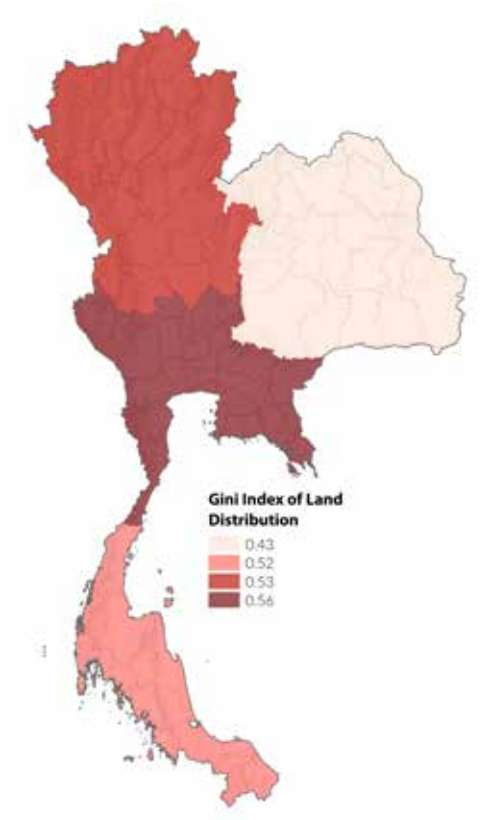


Distribution of the Land Resource Base: Privatization and stability

Agricultural Land Distribution

An intriguing feature of land distribution in Thailand is the persistence of the smallholder. Thailand has not witnessed the large farm sizes commonly associated with rapid economic growth in the agricultural sector of the Mekong region. According to the 2013 Agricultural Census, there are 5.9 million land holdings, with nearly 3.4 million households possessing a single parcel (NSO and MICT, 2013). Most holdings are found in the larger north-eastern (2.7 million plots) and northern (1.3 million) regions. Over the past ten years there has been an increase in the number (5.8 to 5.9 million), area covered by (18.0 to 18.7 million ha), and average size of holdings (3.10 to 3.15 ha), potentially explained by increased land availability and usage, and/or increased capture by official statistics. Part of the reasoning behind the persistence of the smallholder can be traced to historical pressures whereby strategies on land were tied up with the protection of national sovereignty (Larsson, 2012). Initially, the threat was perceived as external, and particularly against extraterritoriality involving (at different stages) European colonial powers, the Japanese, Chinese settlers, and the United States of America. Subsequently, under the threat of communist insurgency, the Thai farmer became a key figure to securitise the land, as opposed to landlordism, which was seen as a potential catalyst for peasant dispossession and antagonism. The 1954 Land Code initially inserted a land ceiling of 50 rai (8 ha), although this was later dropped. Overall, agrarian policy has attempted to nurture and foster the smallholder, aided by extensive research and development. Crops identified with large-scale plantations elsewhere (such as rubber and oil palm prevalent in the south of the country) carry a legacy of smallholder production in Thailand (Cramb *et al*., 2017). In the present day, household diversification sees a younger generation moving away from agriculture, including migration to urban-oriented professions. Nevertheless, vulnerability in non-farm jobs means that where possible households are holding onto their land and maintaining agricultural traditions rather than giving up completely, even if this is represented by an aging working population.

A perceived paradox of Thai agriculture places the persistence of the smallholder next to high levels of land ownership inequality. Until now, the sole publicly-available study in this area involved rare access to data from the Department of Land (Laovakul, 2015). The data here focuses upon fully titled land ('chanote') and includes small urban plots. As an alternative perspective, the Gini index in terms of agricultural land distribution (based on 2013 Agricultural Census data, which does not include urban areas, and covers a wider range of titles including state leaseholds) suggests varying degrees of disparity and equity, ranging between 0.4 and 0.6 (Map 53). The highest figure of 0.56 in found in the Central region, an area known for high degrees of tenancy and the concentration of land holdings among a limited portion of the population.



Map 53: Gini Index on agricultural land distribution in Thai provinces
Source: Agricultural Census 2013

Land Leases and Concessions

When it comes to large-scale land acquisitions for agribusiness, mining or other related activities, Thailand carries a reputation as a cross-border investor rather than a provider of land (Hirsch and Scurrah, 2015). Internally, the land administration system support for a smallholder population counters the potential for accumulation, particularly by foreign powers. As a result, Thai investors have looked elsewhere and sought opportunities in the emerging land markets of post-socialist neoliberalised economies. Therefore, of the 5.9 million domestic landholdings, only 1,859 (0.03%) are titled under the name of a corporation, covering an area of 44,778 ha (0.24% of agricultural land) (NSO, 2018). Agribusiness has generally centred around domestic corporations who have played a key role in the development of an export industry. Rather than accumulate land, this has been achieved through a variety of contract models (if not involving paddy rice cultivation), including inputs and product purchase from individual landholders or cooperatives. The Pracharat policy of the present military government, which aims to facilitate closer public-private-people partnerships, has the potential for increased large-scale land use for mono-cropping under this corporate contract system. In particular, border zones have been re-imagined as resource rich areas that gain strategic importance in the rise of the ASEAN Economic Community (AEC) and the promotion of Greater Mekong Subregion (GMS) Economic Corridors.

Forest concessions ended formally in 1989, coinciding with the ban of logging. Since then, there have been attempts by the state to commercialise (degraded) forest lands into large plantations, but an active farmer and conservationist voice has been quite effective in opposition. The role of the state (albeit in an often-ambiguous relationship with the private sector) is also key in power generation. For example, hydropower plants are owned and run by EGAT (Electricity Generating Authority of Thailand), under management of the Ministry of Energy. There has been a presence of foreign companies in partnership with domestic firms for extractive industries such as mining. Permits are required on both state and private lands, with the area covered by these presently standing at 32,600 ha (DPIM, 2018). Many of these (on both public and private plots) will represent concessions, although in some cases the land may be owned through the extracting company. Mining exploration and activities are prohibited in category 1A watershed areas and/or various protected lands (wildlife reserves, national parks, conservation and economic forests, and areas reserved for security purposes) (Chandler *et al*., 2018). However, the new Minerals Act, which took effect on 30th August 2017, may facilitate future exploitation in doubling the amount of land available for each surface mining permit to 600 rai (96 ha), and aligning the decision-making process for permits closer to industry stakeholders (Fernes and Gurney, 2017).

Special Economic Zones (SEZs)

After seizing control of the country, the military-led NCPO issued Order no. 17/2015 titled "The Provision of Lands for SEZs", which was announced in the Royal Gazette No.132 Special Section 112 (May 15th 2015). This authorised the government to use Section 44 of an interim constitution (2014-17) to acquire lands for a series of SEZs for potential development. Ten province-based areas have been identified in Chiang Rai, Nong Khai, Nakhon Phanom and Mukdahan (in the north and northeast, bordering Laos); Sa Kaeo and Trat (in the east, bordering Cambodia); Songkhla and Narathiwat (in the south, bordering Malaysia); and Kanchanburi and Tak (in the west, bordering Myanmar) (ADB, 2016; NESDB, 2016). The first five pilot locations were approved in July 2014, with selected sub-districts to provide land in total covering an area of 2,932 km2. A second phase was announced in January 2016 with plans to acquire land from sub-districts with a total area of 3,578km2. Located in border areas of the country, the SEZs are placed to profit from emerging markets through the AEC and development along GMS economic corridors. National forest reserves, permanent forest areas and common state properties, and private land, have all been acquired to supply land for these areas, acting counter to the aspiration for 40% state forestland. Whether all proposed SEZs come to fruition is uncertain, as it looks like the Thai government is maximising its options, regardless of the impacts emerging directly from land acquisitions.

Protected Areas

Theoretically, all land that is not private is State-owned forest land. This covers 40% of the country (distinctive from forest cover at 32%) and is divided into national reserve forests (36% of forest land) and protected forests (63% of forest land) (RECOFTC, 2017). The key legislative demarcations were defined in the 1961 National Parks Act and 1964 National Forest Reserve Act (Hirsch, 1990). Protected areas are further divided, presently with 129 national parks (including 22 marine parks), 119 forest parks, 59 wildlife conservation areas, 65 no hunting areas, 18 botanical gardens, and 53 arboreta. In total, they cover an area of 106,090 km2 (NSO, 2018). However, the actual use of land and precise boundaries remain ambiguous, with many areas under farmer occupancy. Indeed, during the 1960s and 70s, the government encouraged farmers to move to upland areas, staving off communist insurgency and contributing to widespread deforestation (Larsson, 2012). Less than a month after the coup of 2014, a Master Plan was put forward calling against encroachment and destruction of forest resources, placing the management of natural resources as a priority of the junta (Pawakapan, 2015). Between 2014 and 2016, hundreds of reclamations took place under the auspices of conservation, albeit at lower levels than desired.

As mentioned above, protected areas have emerged as contested areas attracting multiple interest groups, including conservationists wanting to protect forests and areas of biodiversity, and farmers having the access to places they can cultivate restricted.

Land Securitization and the Formalization of Tenure

Land Titling

Thailand has benefitted from long-standing continuity in its land policy. The 1901 Land Law adopted an Australian Torrens system of registration, and the 1954 Land Code set out the basic titling forms that prevail today (Hayward, 2017). A desire to enshrine individual rights can be traced back to the threat of colonial rule with a need to bolster sovereign status to prevent foreign ownership. However, the greatest development in a privatised land system occurred under the perceived threat of communism. Unlike other regional lands, counterrevolutionary land tenure reforms were extremely successful in Thailand, manipulating property rights to promote state subject loyalty (Larsson, 2012). The World Bank-supported Thai Land Titling Programme (1984-2004) supported the decentralisation of administration, distributing approximately 13 million titles in its duration (Bowman, 2004). 40% of national land under private ownership sets Thailand apart from its neighbours. On agricultural land 68.4% of parcels are held under a secure bundle of tenure rights, namely carrying the NS3 or NS4 title (NSO and MICT, 2013). The titling programme has subsequently been held up as a model of fostering private ownership and land markets, providing an argument for the linkage between poverty reduction, economic growth and formalized property rights (Rattanabirabongse *et al*., 1998).

Dr Somnuck Jongmeewasin,
EEC WATCH

Perspectives: SEZ Development

In 2015, the NCPO established 10 SEZs around Thai border areas to improve trade and investment with neighbouring countries and prepare for AEC integration. They have introduced several measures to attract domestic and international investors, including infrastructural improvements, tax and non-tax exemptions, One-Stop-Service Centers, and foreign labour regulations. However, this attractiveness has been negatively affected by poor SEZ locations, and multiple cases of land conflict between government and local people. Since 2016, the government has further been targeting Chachoengsao, Chonburi and Rayong provinces, east of Bangkok, to promote the EEC (Eastern Economic Corridor). In their mind, these areas are not yet connected to Bangkok and deserve further development as part of the 4th Industrial Revolution, or "Thailand 4.0". Section 44 has been dramatically applied to grab and manage targeted lands in the EEC zone.

In parallel with the titling programme, land reform (following the 1975 Land Reform Act) has attempted to provide and control access to degraded forestland for landless farmers, with the introduction of usufruct land certificates. Much ambiguity remains even today over the demarcation of state forest land and reserves, so that such certificates represent partial tenure security as a leasehold from the state (Hall *et al*., 2011). From the 2013 Agricultural Census, around 24.6% of agricultural land is held under such certificates, of which SPK-4.01 (issued from 1993 onwards) is the most common (NSO and MICT, 2013). A further complement to titling, the Bank of Agriculture and Agricultural Cooperatives (BAAC, established 1966) allows farmers to access credit using their land (including that under leasehold through reform policy) as collateral. While undoubtedly offering a vital facility for investment to the poorest rural communities, transforming livelihoods, the bank has also become the principal source of debt for agricultural households. In 2013, 53.1% of agricultural households carried a debt of which 71.4% was incurred through the BAAC (NSO and MICT, 2013). However, the number of holders of debt has decreased over the last 20 years, with a significant decrease in informal borrowing.

Recognition of Customary Tenure

The recognition of customary tenure in Thailand is conspicuous in its relative absence, with state actors preferring to place those dwelling in areas demarcated as state land within national usufruct titling programmes. Nevertheless, the last 30 years has seen extensive debate of the rights of forest and mountain residents. Initial advocacy involving networks of farmer and ethnic minority groups promoted a range of community forest projects, leading to the Community Forestry Bill. This was passed in 2007, albeit in a form that favoured state control over local autonomy, but subsequently lapsed (Fisher, 2011). However, despite the lack of national legislation, land has continued to be designated as community forests. As of August 2016, 9,855 community forests cover 750,457 hectares (RECOFTC, 2017) under management use regimes, and with some space for customary-based policies. A government plan aims for 1.6 million hectares used in community forests by 2025, although recent legislation shoring up forest and protected land is creating insecurity both for existing and future projects.

Following the failure of the Community Forestry Bill, lobbying re-emerged under a call for community land titling. The land reform network P-Move has promoted the '4 laws for the poor' as a solution to rural poverty, based around the combination of community land titling, a national land bank, a progressive land tax, and a justice fund. In 2009, the Democrat Party-led government of Abhisit Vejjajiva piloted a Community Land Titling scheme (USAID, 2011), with titles eventually awarded to four communities in Nakhon Pathom, Lamphun and Phayao provinces. In forming the National Land Policy Committee (NLPC) in 2014, the present government has put forward its own scheme known as KTC (khana kammakarn nayobai thidin haengchat). The issuance of temporary 30-year leaseholds on public lands falls short of reform network demands, effectively acknowledging state ownership of the land and penalising farmers who claim occupation before forest reserve boundaries were drawn. However, the certificates do offer certain protections for community usage. Implementation has been slow, with only five areas in Chiang Mai and Nan provinces issued government-sanctioned certificates (Wittayapak and Baird, 2018). It seems just as likely that informal agreements between communities and the forestry department can provide protection, although not necessarily against shifting national policy. In a further measure, a land and buildings tax is being put forward by the government (box 3), which could potentially impact upon land speculation. However, the draft bill places an exemption ceiling at 50 million baht (over US$1,5 million) for first homes, thereby limiting this possible effect.

Gender and Land

Thai statutory law enshrines equal rights for women and men (FAO, 2018). This includes matters of inheritance, legal protection, and equal rights to the management and sales of private property. In practice, households are commonly registered under a male head which may influence access to formal credit for women. Further, equal rights to property and inheritance undermines a traditional matrilocal system of land tenure. Nevertheless, the number of agricultural female landholders has increased considerably over the past 20 years, both in absolute and relative terms. In 2013, female landholders stood at 36.3% compared to 27.7% in 2003 and 15.4% in 1993 (NSO and MICT, 2013). However, the data is unclear on joint titling between spouses, and so many more women may have their names on land titles. The proportion of permanent female agricultural workers decreased from 63.2% in 1993 to 44.5% in 2013, although this could represent a diversifying workforce rather than a wholesale exit from farming.

Land Governance

An evaluation of land governance policies and practice in Thailand was conducted in conjunction with the one-day workshop "New directions for land research in Thailand", where a series of State of Knowledge papers were used to identify emerging agendas in land research. Twenty-one respondents to the evaluation included academics and civil society representatives, with a few participants also involved from government institutes. As a result of the group constellation, the results must be seen as carrying an overtly critical eye on land policies and practice in Thailand (Figure 37). Expert assessment provide here should be seen as a first pass at an evaluation, but useful observations can still be made. For example, when looking at the legal recognition for smallholder rights, a mixed perspective reflects uncertainty in the present political climate. Thus, it is possible on the one hand to identify a majority of smallholders with titled private holdings who are well supported legally, particularly compared to other regional lands. On the other hand, those in areas claimed as state forest land may possess partial rights or none at all. In particular, rights for ethnic minorities may be hampered, whether in terms of a ban on shifting cultivation or limitations due to the fact that many communities live in areas designated as protected zones. Uncertainty over legal mandates in Thailand becomes further illuminated when thinking in terms of inclusiveness in decision-making processes. While there is a legal pathway for public participation, recent legislation under the military government, such as the provision of Section 44, allows for decisions to be made bypassing all consultation. Nevertheless, even when institutional mandates and practices can be fulfilled through established government operational frameworks, the performance of different organisations or departments often overlaps or acts in competition to each other.

When it comes to smallholder rights in practice, there are various emergent inhibitors that may threaten the stability of local livelihoods. For example, state development projects have been reclaiming land for the establishment of SEZs or to increase the level of protected state forest land. Further, the actions of local elites may not support the needs of local land users. Indeed, conflicts and instances of violence through land acquisition are seen to be increasing, with Section 44 having been applied to override any contested decisions. For those who may lose land through such developments, the provision of compensation may be inadequate to maintain the livelihood status of those affected. In the face of such barriers to secure land tenure, the ability of smallholders to make 'rights-based claims' are potentially recognised, although there are few successful cases to draw upon. Avenues exist to lodge a legal complaint, but they are often time-consuming, costly, and with question marks over an impartial judiciary. Alternative means of complaint may carry a greater price. For example, there has been a rise in

Figure 37: Land Governance Assessment in Thailand
Source: Expert consultation, Bangkok

© Jack Kurtz

defamation lawsuits placed by corporate bodies on those who protest against the impacts of commercial land use. Yet despite such obstacles, and seemingly more than other countries in the region, there is an active civil society voice that has been campaigning for many years in areas such as forestry rights, land tenure and community land titling. Even though this voice remains enthusiastic and committed, its overall success must be questioned, particularly in the present climate where gatherings of more than five people under political assembly have been outlawed.

Conclusion

It is true that when looking at the arrangements of land, Thailand is in many ways distinctive from its regional neighbours. An extensive titling programme has allowed rural farming families relatively secure tenure under freehold rights. Even many of those with leaseholds on state forest land have gained access to credit, and the bulk of the population has felt the influence of dynamic emerging land markets. This ties in with a modernised agricultural sector, fully integrated into global value chains, where Thailand projects an image as a kitchen of the world. Yet in spite of an agrarian transformation, the smallholder retains a core presence in the rural agricultural landscape. This can partially be explained through historical-political needs for the state to build loyalty in its subjects, these needs allowing space to provide significant land rights. In the present day, such arrangements strongly interlink with close relationships with bordering countries, as economic activity becomes regionalised. For while the country has not witnessed large-scale land acquisitions at home, it has looked across its borders for opportunities to capitalize on concessions of land among its near neighbors, becoming a leading investment country in Cambodia, Laos and Myanmar. In looking to the future, the persistence of political instability puts much of this fragile equilibrium between state and subject under the microscope. Following a suspension of democratic governance, powers have been imposed that override local rights, and potentially lean towards more large-scale commercial operations around the country. In particular, peripheral border areas are attracting new interest within regional economic corridors, most clearly seen in the establishment of SEZs. Thailand awaits new elections for a partial return to a democratic system of governance. It remains to be seen how this new transition will impact upon land arrangements, and the people who depend upon this access.

Teerayut Thaiturapaisan,
Assistant CFO at real estate company Apex Development Public Co. Ltd.

Perspectives: The Land and Buildings Tax

The Land and Building Tax Law will introduce two major changes to tax calculations, which are 1) A shift to a cost approach assessment and 2) Levying tax based on land use. Firstly, tax calculation using the cost approach under the new law is a transition from the previous income approach that heavily depended on officers' assessment views. Under the new scheme, tax determination is based on the appraised value of the property, calculated from the sum of standard land and building prices set by the Treasury Department. Secondly, land use categories will be considered under the new tax module. Land use purposes are defined into four categories: 1) Agriculture, 2) Residential, 3) Commercial and industrial, and 4) Un-utilized land. In sum, these adjustments to calculations will help standardize tax assessment procedures, whilst separate tax treatment for the different land use purposes will enhance the clarity and fairness of tax measures for both property owners and government.

Perspective abstracted from **"The impact of new Land and Building Tax Law on Thai property developers"** for Siam Commercial Bank (SCB) Economic Intelligence Center, 2017

References

1. Asian Development Bank (ADB). (2017). Asian Development Outlook 2017: Transcending the Middle-Income Challenge. Manila: ADB. Available at: https://www.adb.org/publications/asian-development-outlook-2017-middle-income-challenge [accessed 29th April 2018].
2. Asian Development Bank (ADB). (2016). The Role of Special Economic Zones in Improving Effectiveness of GMS Economic Corridors. Manila: ADB. Available at: https://www.adb.org/documents/special-economic-zones-gms-economic-corridors [accessed 29th April 2018].
3. Bowman, C. (2004). Thailand Land Titling Project. In Reducing Poverty Sustaining Growth Scaling Up Poverty Reduction. Proceedings of the conference A Global Learning Process and Conference, Shanghai, 25-27th May 2004. Washington, DC: The International Bank for Reconstruction and Development, The World Bank.
4. Chandler, A.T., Kalis, C.C., Gulthawatvichai, S. (2018). Thailand Mining [online]. Getting the Deal Through. Available at: https://gettingthedealthrough.com/area/22/jurisdiction/60/mining-thailand/ [accessed 15th March 2018].
5. Constitutional Drafting Assembly. (1997). Constitution of the Kingdom of Thailand (translation). Bangkok: Government Gazette.
6. Cramb, R., *et al*. (2017). Alternatives to land grabbing: exploring conditions for smallholder inclusion in agricultural commodity chains in Southeast Asia. Journal of Peasant Studies, 44(4), pp.939–967.
7. DPIM (2018). Department of Primary Industries and Mining [online]. Available at: http://www.dpim.go.th/ [accessed 15th March 2018].
8. FAO. (2018). Country Profiles: Thailand [online]. In FAO Gender and Land Rights Database. Available at: http://www.fao.org/gender-landrights-database/country-profiles/countries-list/general-introduction/en/?country_iso3=THA [accessed 16th March 2018].
9. FAO. (2016). AQUASTAT - FAO's Information System on Water and Agriculture [Online]. Available at: http://www.fao.org/nr/water/aquastat/main/index.stm [accessed 14th March 2018].
10. FAO. (2018). Food security indicators [online]. Available at: http://www.fao.org/economic/ess/ess-fs/ess-fadata/en/#.WqfohZNubOQ [accessed 13th March 2018].
11. Fernes, P., Gurney, M. (2017). New mining legislation in Thailand - Who will really benefit? [online]. The Isaan Record. Available at: https://isaanrecord.com/2017/08/09/new-mining-legislation-thailand-will-really-benefit/ [accessed 15th March 2018].
12. Fisher, R. (2011). Thailand's Forest Regulatory Framewok in Relation to the Rights and Livelihoods of Forest Dependent People. In H., Scheyvens (ed.). Critical Review of Selected Forest-Related Regulatory Initiatives. Kanagawa: Institute for Global Environmental Strategies (IGES), pp. 69-82.
13. FTA Watch, JPF, LWWG. (2015). UPR Stakeholder Joint Submission to Human Rights Council. Bangkok: FTA Watch, Justice for Peace Foundation, Land Watch Working Group. Available at: https://uprdoc.ohchr.org/uprweb/downloadfile.aspx?filename=2590&file=EnglishTranslation [accessed 29th April 2018].
14. Hall, D., Hirsch, P., and Li, T.M. (2011). Powers of Exclusion: Land Dilemmas in Southeast Asia. Honolulu: University of Hawaii Press.
15. Hayward, D. (2017). Community Land Titling in Thailand: The legal evolution and piloting of titling policy. Chiang Mai and Vientiane: RCSD-Mekong Land Research Forum and Mekong Region Land Governance. Available at: http://mrlg.org/wp-content/uploads/2017/10/Community-Land-Titling-in-Thailand_Final.pdf [accessed 29th April 2018].
16. Hirsch, P. (1990). Forests, Forest Reserve, and Forest Land in Thailand. The Geographical Journal, 156(2), pp. 166–174.
17. Hirsch, P., Scurrah, N. (2015). *The Political Economy of Land Governance in the Mekong Region*. Mekong Region Land Governance.
18. Hodal, K. (2014). Thailand army chief confirms military coup and suspends constitution [online]. The Guardian 22nd May. Available at: http://www.theguardian.com/world/2014/may/22/thailand-army-chief-announces-military-coup [accessed 29th April 2018].
19. International Organisation for Migration (IOM). (2017). IOM Thailand National Strategy (2017-2020). Available at: https://thailand.iom.int/iom-thailand-national-strategy-2017-2020 [accessed 29th April 2018].
20. International Organisation for Migration (IOM). (2011). Thailand Migration Report 2011 - Migration for development in Thailand: Overview and tools for policymakers. Available at: http://iom.int/jahia/webdav/shared/shared/mainsite/activities/countries/docs/thailand/TMR-2011.pdf [accessed 29th April 2018].
21. Laovakul, D. (2015). Concentration of Land and other Wealth in Thailand. In: P., Phongpaichit, C., Baker (eds.). Unequal Thailand: Aspects of Income, Wealth and Power. Singapore: NUS Press.
22. Larsson, T. (2012). Land and Loyalty: Security and the Development of Property Rights in Thailand. Ithaca: Cornell University Press.
23. Land Development Department (LDD). (2018). Land Use of Thailand [online]. Available at: http://www.ldd.go.th/www/lek_web/web.jsp?id=18671 [accessed 14th March 2018].
24. Mekong River Commission (MRC). (2014). Crop production for food security and rural poverty: Baseline and pilot modelling. Available at: http://www.mrcmekong.org/assets/Publications/basin-reports/AIP133-Report-Commented-CopyedV1306-20150807.pdf [accessed 29th April 2018].
25. Office of the National Economic and Social Development Board (NESDB). (2016). Special Economic Zones in Thailand. Strategic Planning and Development Office, Bangkok, Thailand. Available at: http://www.nesdb.go.th/ewt_dl_link.php?nid=5193 [accessed 29th April 2018].
26. National Statistical Office (NSO). (2018). Thaistat [online]. Available at: http://www.nso.go.th/sites/2014/ [accessed 14th March18].
27. National Statistical Office (NSO). (2016). Statistical Yearbook Thailand 2016 [online]. Available at: http://service.nso.go.th/nso/nsopublish/pubs/e-book/esyb59/files/assets/basic-html/index.html#1 [accessed 12th March 2018].
28. National Statistical Office (NSO) and Ministry of Information and Communication Technology (MICT). (2013). In 2013 Agricultural Census Whole Kingdom. Bangkok: NSO, MICT.
29. Office of Agricultural Economics (OAE). (2016). Agricultural Statistics of Thailand 2016. Bangkok: OAE. Available at: http://www.oae.go.th/download/download_journal/2560/yearbook59.pdf [accessed 29th April 2018]
30. OECD and FAO. (2017). OECD-FAO Agricultural Outlook 2017-2026 (Special Focus: Southeast Asia).

Paris: OECD and FAO. Available at: http://www.fao.org/3/a-i7465e.pdf [accessed 29th April 2018].
31. Pawakapan, P. (2015). Thai Junta Militarizes the Management of Natural Resources. Singapore: ISEAS Yusof Ishak Institute. Available at: https://www.iseas.edu.sg/images/pdf/ISEAS_Perspective_2015_47.pdf [accessed 29th April 2018].
32. Phongpaichit, P. *et al*. (2014). Middle-Income Trap: Economic Myth, Political Reality. Case studies from Malaysia and Thailand. Bangkok: The Asia Foundation. Available at: https://asiafoundation.org/resources/pdfs/MiddleIncomeTrap.pdf [accessed 29th April 2018].
33. Rattanabirabongse, V. *et al*. (1998). The Thailand land titling project-thirteen years of experience. Land Use Policy 15(1), pp.3–23.
34. RECOFTC (2017). Social forestry and climate change in the ASEAN region., Bangkok: RECOFTC - The Center for People and Forests. Available at: https://www.recoftc.org/reports/social-forestry-and-climate-change-asean-region [accessed 29th April 2018].
35. USAID. (2011). Property Rights and Resource Governance Country Profile: Thailand. Available at: https://www.land-links.org/wp-content/uploads/2016/09/USAID_Land_Tenure_Thailand_Profile.pdf [accessed 29th April 2018].
36. Wittayapak, C., Baird, I.G. (2018). Communal land titling dilemmas in northern Thailand: from community forestry to beneficial yet risky and uncertain options. Land Use Policy 71, pp. 320–328.
37. World Bank (2018). Thailand | Data [online]. Available at: https://data.worldbank.org/country/thailand?view=chart [accessed 12th March18]
38. World Population Review. (2018). Thailand Population 2018 [online]. Available at: http://worldpopulationreview.com/countries/thailand-population/ [accessed 12th March 2018].

©Justin Mott

State of Land in Vietnam: Land for livelihood or land for development?

State of Land in Vietnam: Land for livelihood or land for development?

Introduction

The current land governance regime in Vietnam is a product of institutional adaptation over time. Following the inauguration of Renovation [*Doi Moi*] in 1986, the first Land Law of 1987 has declared land as "the ownership of all the people" and "uniformly managed by the State". Individuals, households, and organizations may be granted user-right to the land. [68] Later revisions of the Land Law in 1993 and 2003 as well as amendments in 1998 and 2001 have further expanded and strengthened land-use right bundles for individuals, households, domestic and foreign organizations. The evolution of this institutional framework has since largely been driven by a developmental imperative that has been central to the performance legitimacy of the Vietnamese Party-State. Unequivocally, as stated in the Politburo Report (1995) at the 8th plenary session of the 7th National Congress of the Communist Party, "Industrialization, modernization of the country is the central mission of the period of transition [of Vietnam]."

At the same time, emerging challenges have placed Vietnam at an institutional crossroads. Increasing incidents of land disputes and contentious collective action caused by land acquisitions and conversions, especially from agricultural to non-agricultural land for "socio-economic development purposes," have been a persistent source of social and political instability in the country. Nearly 70 percent of protests and demonstrations reported in 2012 and 85 percent of civil complaints filed during 2003-2007 in Vietnam were land-related (Long 2010; Hung 2012). Against the pressures from rapid changes caused by the country's increased industrialization, urbanization, and the diminished significance of agriculture in the economy, rural and agricultural households also face imminent threats to the security of their livelihoods.

In light of these challenges, strengthening institutional reforms and mechanisms for effective implementation of existing laws and policies will be crucial for advancing public interests and improving the inclusion of marginalized populations in the country's continued path to development. Revisions adopted in the Land Law of 2013 signify, on the one hand, a notable effort and response by the Vietnamese State to address citizen grievances and issues on land governance. Yet, it is also evident that Vietnam must continue to balance economic growth with other imperatives based on a multidimensional view of what constitutes "development", which extends beyond annual growth in GDP and stresses the importance of equity, sustainability, and social stability.

This chapter provides an overview of the state of land in Vietnam. The first section below provides an overview of key demographic and socioeconomic conditions, and changes to these, surrounding the rural and agricultural population and its position within the national socio-economy. The second section follows with a descriptive analysis of the land resources base upon which this population depends, including land use and land cover, key crops, and recent changes in these. The third section describes the ways in which these land resources are distributed across society, with a particular focus on smallholders. The remaining two sections describe and assess the status of tenure security and conditions of governance that surround the broader land issue in Vietnam.

The Land and the People: An advanced demographic and agrarian transition

Demographics

Vietnam currently has a population of 92,695 million people in 2016 and a growth rate of 1.07 percent. This is nearly a 13 percent increase compared to the population of 82,392 million in the year of 2005. The disparity between male and female within the country's total population is low, ranging from 1.1 percent to 1.64 percent (Figure 38). The percentage of child population (persons aged 0-14) was 23 percent, whereas the percentage of the working-age population (persons aged 15-59) was nearly 66 percent in 2017. The elderly population (persons aged 60 and over) as a percentage of the total population reached 11 percent in 2017. This reflects the trends in the size and age structure of the Vietnamese population. As the United Nations Population Fund (2011) noted, during the period 1979-2009, the Vietnamese population experienced: (a) decreasing percentage of child population; (b) increasing percentage of the working-age population; and (d) increasing percentage of the elderly population.

[68] The principle of "ownership by all the people" had already been established prior to the 1980 Constitution and the first Land Law 1987. But prior to that, other forms of land ownership, including private ownership and collective ownership (ownership by cooperatives), were also recognized.

Figure 38: Sex Ratio and Age Class Distribution in Vietnam
Source: Population Pyramid https://www.population pyramid.net/viet-nam/2017/

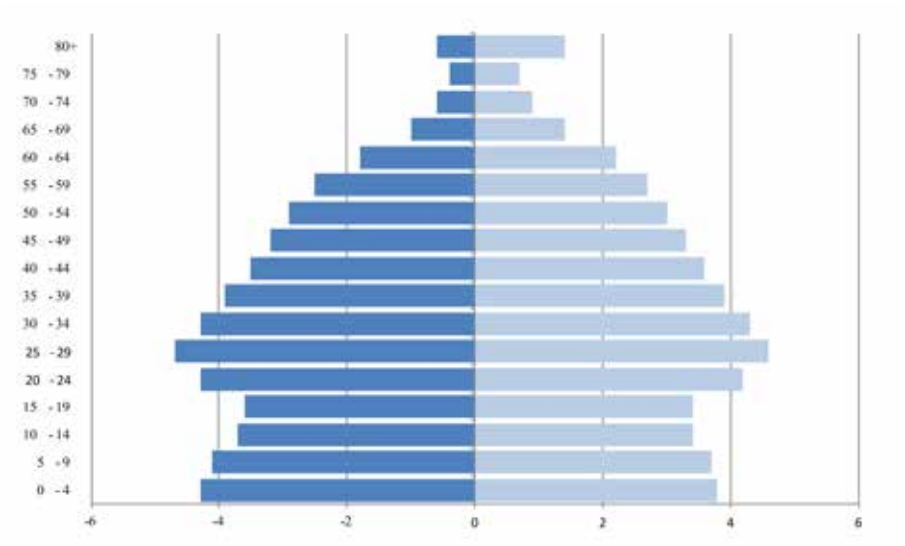
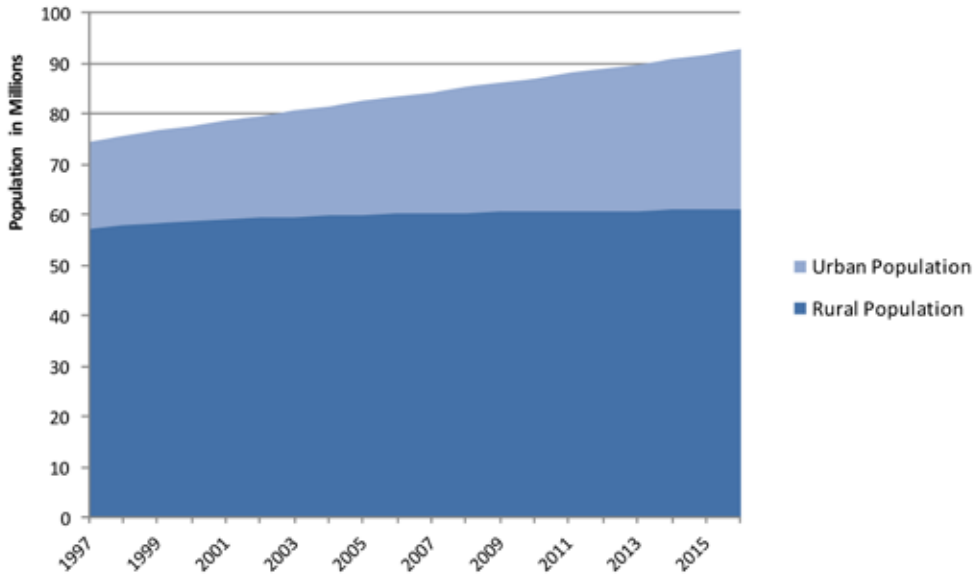


Figure 39: Urban and Rural Population in Vietnam, 1997-2016
*Source: World Bank Development Indicators.

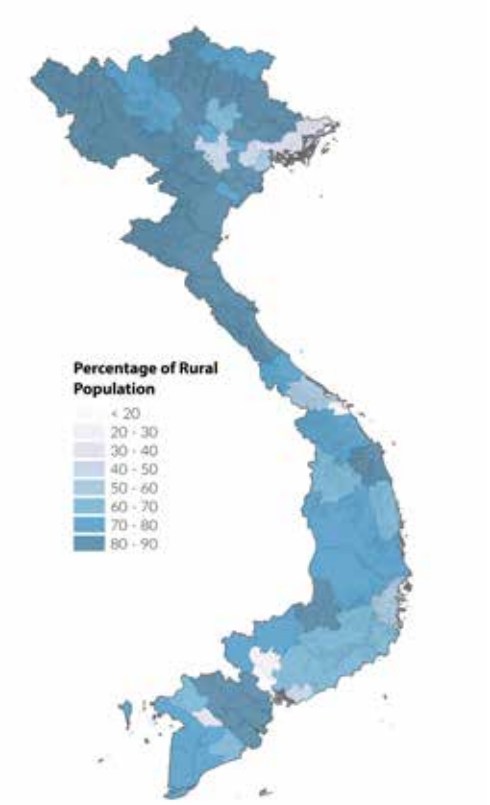


During the period from 2005 to 2016, the difference in the proportion of urban and rural population has become more acute (Figure 39). According to data from Statistical Yearbooks by the General Statistics Office (GSO) of Vietnam, the urban population has increased from 27.1 percent (22,332 million) in 2005 to 34.51 percent (31,986 million) in 2016. In contrast, in the same period, the rural population has declined from 72.9 percent (60,060 million) in 2005 to 65.49 percent (60,709.1 million) in 2016. As shown in Map 54, provinces with 80 to 90 percent of the rural population in 2016 mostly clustered in the Northern regions of the Red River Delta and the Northern Midlands and Mountain Areas. In these two regions, the provinces with 80 to 90 percent of rural population from the largest to the lowest values in 2016 were: Thái Bình (89.50 percent), Bắc Giang (88.61 percent), Hưng Yên (87.01 percent), Tuyên Quang (87.37 percent), Sơn La (86.36 percent), Hòa Bình (85.47 percent), Hà Giang (85.03 percent), Hà Nam (84.35 percent), Lai Châu (83 percent), Nam Định (82 percent), Phú Thọ (81 percent), Bắc Kạn (81 percent), Lạng Sơn (80 percent), and Yên Bái (80 percent).

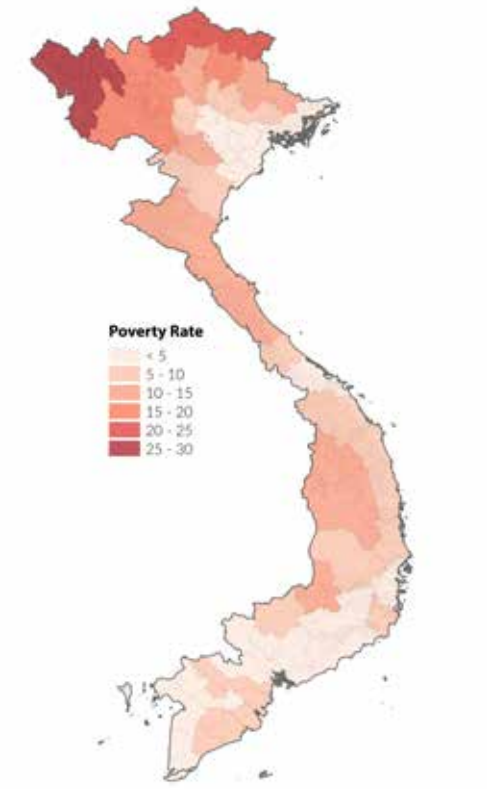
Population density, measured by the number of people per square km of land area, also increases over time during the period from 1961 to 2016. In 2016, there is an estimate of 299 people per square km of land area, compared to an estimate of 181 people per square km in 1986. This varies by province. Ho Chi Minh City and Hanoi have the highest population density. Population density is visibly lower in the Northern Midland and Mountain Areas, North Central and Central Coastal Areas, and Central Highlands, compared to the Red River Delta, which has one of the highest densities of agricultural land in the world, and in the most Northern region of the country and the Mekong Delta in the most Southern region of the country.

There is a steep decline in the total fertility rate per woman, falling from 6.35 births per woman in 1960 to 1.96 births in 2015. This can be attributed to rising income and educational levels as well as governmental efforts to promote a one-or-two child policy. According to a recent study by the World Bank (2015), the pace of population aging in Vietnam is expected

Map 54: Distribution of Rural Population, by Province, in Vietnam
*Source: Statistical Yearbook of Vietnam, GSO https://www.gso.gov.vn



Map 55: Incidence of poverty in provinces of Vietnam
*Source: Statistical Yearbook of Vietnam, GSO https://www.gso.gov.vn



to increase rapidly, which will result in a 5 percent decline in the working age population of Vietnam as a share of total population between 2016 and the early 2040s. This will have important implications for the projected change in the demographic structure of the country's future labor force and economy.

Socioeconomic Context

Since Vietnam adopted Renovation [*Doi Moi*] economic reforms in 1986, the country has experienced exponential economic growth. This is most evident when comparing change in the annual GDP growth during the period from 1986 to 2016. The annual GDP growth was at a low of 2.79 percent in 1986 before increasing to 9.54 percent in 1995, and 6.21 percent in 2016. Vietnam has also been elevated as a positive case of economic growth with greater equity compared to the Philippines and China (Kuhonta 2011; Malesky *et al*. 2011). According to data from Statistical Yearbooks based on nationally representative household surveys, the poverty rate in Vietnam has steadily declined from 15.5 percent in 2006 to 5.8 percent in 2016. The trend illustrated by the data is consistent with the characterization of Vietnam's economic achievements and notable progress on poverty reduction.

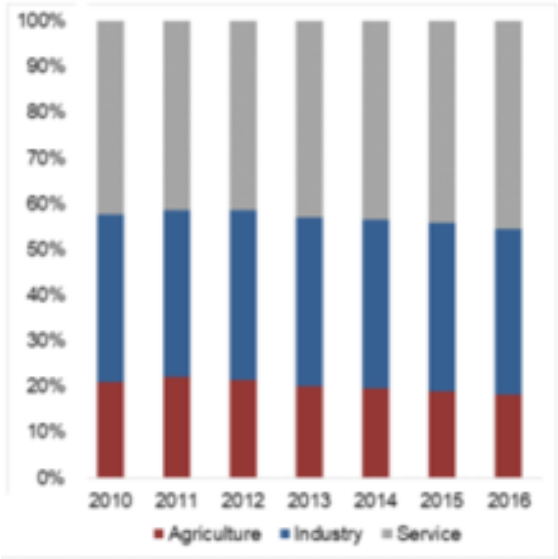
In spite of these achievements, closer analyses from other perspectives suggest that this buoyant characterization might overlook the emergence of other forms of poverty and disparities in Vietnamese society. As Map 55: Incidence of poverty in provinces of Vietnam illustrates, poverty incidence among population in Vietnam varies significantly across regions and provinces. [69]In particular, rural poverty remains substantially higher than the poverty rate in urban areas. In 2016, the urban poverty rate was 2 percent, compared with a poverty rate of 7.5 percent in rural areas of Vietnam (GSO 2016). The gap in absolute per capita income between urban and rural households has widened from VND 4,754,000 ($220) in 2004 to VDN 6,344,000 ($310) in 2014 (Nguyen 2017). The widening disparity between urban and rural areas thus remains a significant challenge that the Vietnamese State has to address in continuing reforms.

Closer analysis further shows that the underlying structure of the economy itself has changed significantly. The share of agricultural sector in the total GDP has declined from 22.10 percent in 2010 to 18.14 percent in 2016, whereas manufacturing, as well as services and others have continued to accelerate over time (see Figure 40). Consistent with the observable change in the structure of the country's economy, rural employment in agriculture, forestry and fishing (nông, lâm nghiệp và thuỷ sản) has also decreased over time. Data from Vietnam's Agrocensus Survey show that, the proportion of rural households engaged in agriculture, forestry, and fishing contracted from 71.06 percent in 2006 to 53.66 percent by 2016. Of this percentage, the number of households for whom the main source of livelihood is the cultivation of agricultural crops decreased from 66.45 percent of the country's rural employment in 2006 to 49 percent by 2016.

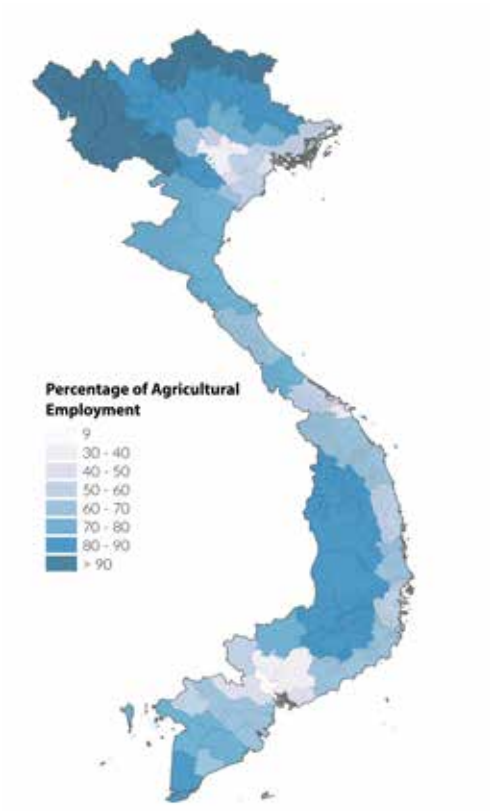
[69] Also see, World Bank Vietnam 2015.

At the sub-national level, there is high regional and provincial variance on the importance of agriculture, forestry and fishing relative to industry and construction, services, and other economic activities conducted by rural households. Using data from Vietnam's Agrocensus Survey in 2011, Map 56 below illustrates the proportion of rural households employed in agriculture, forestry and fishing within each province. According to this data, in the Central Highlands, 86.32 percent of rural households in the region was employed in agriculture, forestry and fishing in 2011. This is the highest percentage compared to the proportion of agriculture, forestry and fishing in Northern Midlands and Mountain Areas (81.22 percent), Northern Central and Central Coastal Areas (66.2 percent), the Mekong River Delta (65.58 percent), the Red River Delta (47.44 percent), and the South East (38.97 percent). Provinces in the Central Highlands, namely Kon Tum, Gia Lai, Đắk Lắk, Đắk Nông and Lâm Đồng, all fall under the range of 80 to 90 percent.

Figure 40: GDP Structure by Sectors in Vietnam, 2010-2016
*Source: World Bank Development Indicator



Map 56: Prevalence of employment in the agriculture, by province, in Vietnam
*Source: Vietnam Agrocencus Survey 2011. Data compiled and estimated by IPSARD



In contrast, the South East region displays the lowest proportion of rural households employed in agriculture, forestry and fishing. The five provinces with the lowest proportion of rural households employed in agriculture, forestry, and fishing in the country in 2011 were Hồ Chí Minh City (9.41 percent), Hà Nội (32.56 percent), Bắc Ninh (36.12 percent), Đồng Nai (36.46 percent), and Bình Dương (38.84 percent). Three of the five lowest provinces were in the South East region, namely Hồ Chí Minh City, Đồng Nai, and Bình Dương.

The Land Resource Base

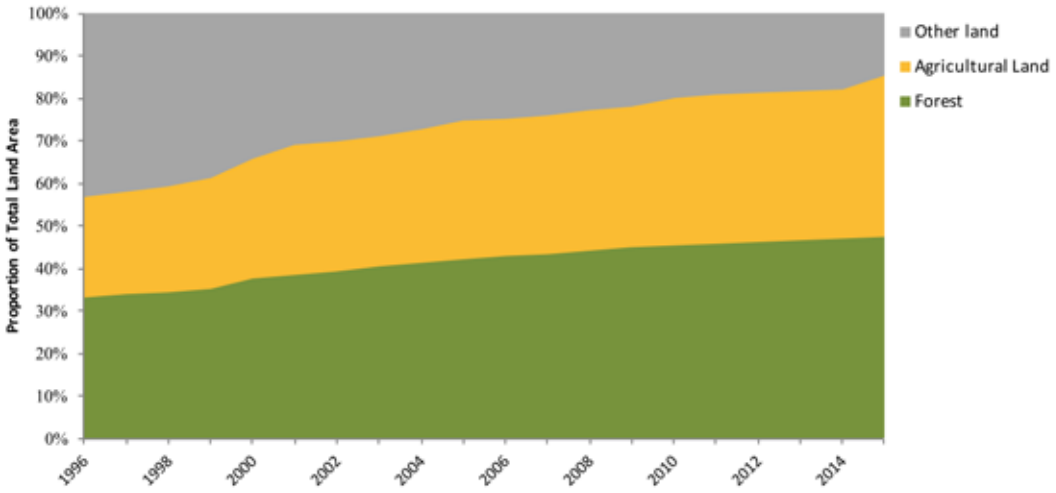
At first glance, agricultural area[70] in Vietnam has significantly increased over time (see Figure 41). There is a notable variation in the share of arable land and land for permanent crops particularly from 2006 to 2015. As data from the Food and Agriculture Organization Corporate Statistical Database (FAOSTAT) show, the proportion of land for permanent crops has increased from 30.64 percent in 2006 to 35.15 percent in 2015, whereas the proportion of arable land (or land under annual crops) has decreased from 62.99 percent in 2006 to 58.94 percent in 2015 (Figure 42 Map 57) This variation suggests that the purpose of land use has changed overall.

Land Use Land Cover

Agricultural land in Vietnam is disaggregated into: (a) Agricultural production land, which consists of annual crop land and perennial crop land (about 42 percent of the total agricultural land in 2015); (b) forest land (about 55 percent); (c) water surface land for fishing (about 3 percent); (d) land for salt production (0.06 percent); and (e) others (0.12 percent) (Statistical Yearbook 2016).

[70] The category of "agricultural area" used by FAOSTAT is the sum of areas under "Arable land", "Permanent crops" and "Permanent pastures" that excludes forest land (see, http://www.fao.org/faostat/en/#data/RL). This categorization is different from the categorization used in official data by the Vietnamese government. In Vietnam, the category of "agricultural land (đất nông nghiệp)" broadly includes: (a) agricultural production land (đất sản xuất nông nghiệp); (b) forest land (đất lâm nghiệp); (c) water surface land for fishing (đất nuôi trồng thủy sản); (d) land for salt production (đất làm muối); and (e) others (đất nông nghiệp khác).

Figure 41: Land Use Land Cover Change in Vietnam 1996-2015



Agricultural Production Land

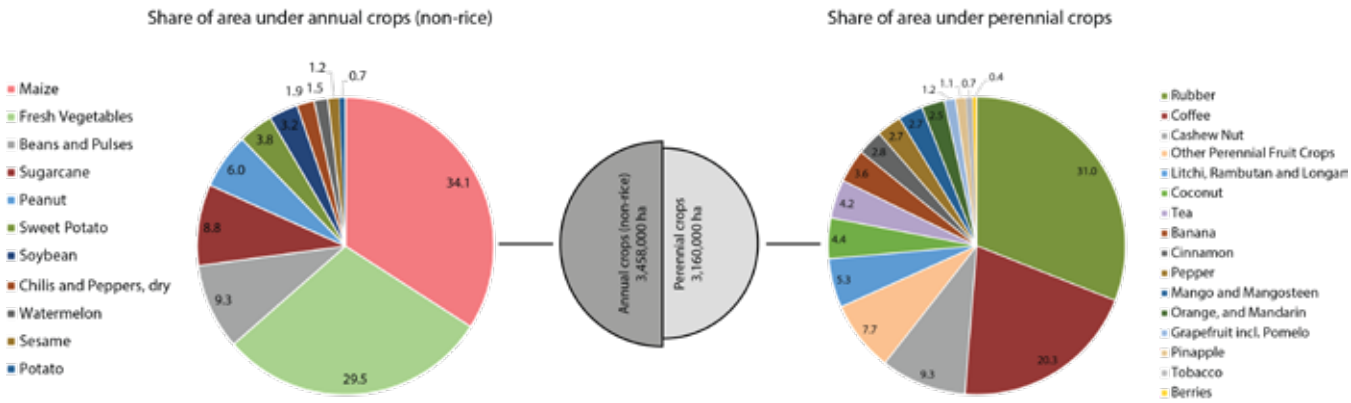
Of the total area of agricultural land, change in the proportion of agricultural production land has been most pronounced. Agricultural production land has increased by 1,387,349 hectares by 2014, averaging 277,500 hectares annually from 2010 to 2014 (GDLA 2014). This increase is especially attributed to land-use changes in both annual land and perennial land.

In 2014, the total area of land under annual crops has increased by 565,372 hectares compared to 2010 due to the conversions of forest land, unused land, and perennial land to annual land (GDLA 2014). In addition to rice, other annual crops planted in Vietnam are considerably diverse (see Figure 42). Main annual crops with relatively large planted areas according to data from the Statistical Yearbook 2014 were: paddy (7,816,200 hectares), maize (1,179,000 hectares), sugar-cane (305,000 hectares), peanut (208,700 hectares), and soya-bean (109,400 hectares).

Paddy land areas in particular has shown a total increase of 18,544 hectares nationwide over a five-year period from 2010 to 2014. Closer analysis of this increase, however, reflects a more complex story. Of the 63 provinces in the country, paddy land has increased in 31 provinces but shown relative decline in 32 provinces. The reasons for the increase were two-fold. One, the country's paddy land area in 2010 was under-estimated in the first place due to inaccuracies in land administration survey data inherited from former surveys prior to 2010 based on less precise methods (GDLA 2014). Second, the recognition of land types that was not previously verified as paddy land in some provinces such as Dien Bien, or conversions of forestry land or crop land to paddy land also accounted for the increase of paddy land in 31 provinces (GDLA 2014).

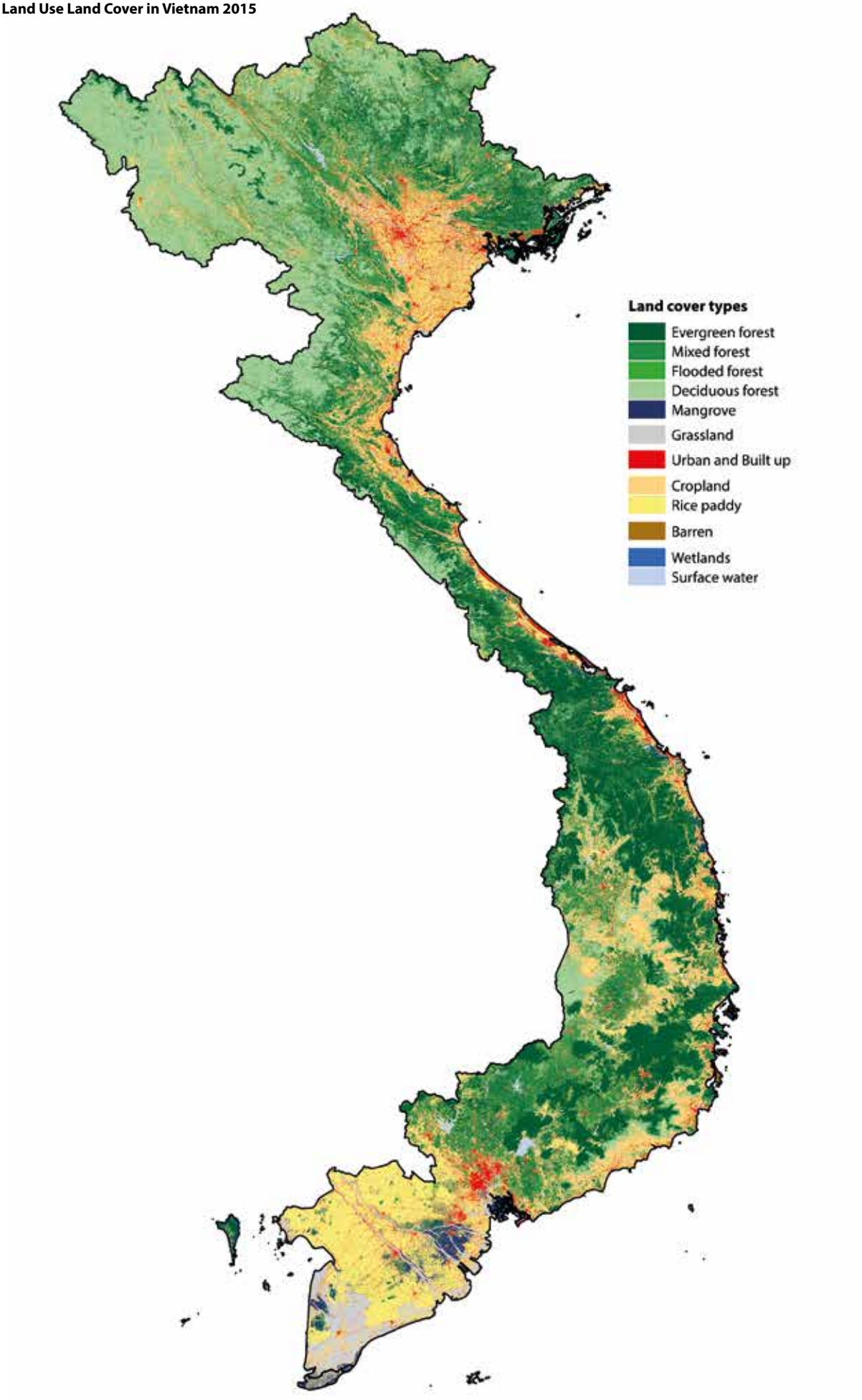
By contrast, from 2010 to 2014, paddy land area has significantly declined in 32 provinces, including Tien Giang (9.600 hectares), Ho Chi Minh City (9,100 hectares), Ben Tre (7,600 hectares), Tay Ninh (7,400 hectares), Dong Nai (7,100 hectares), Tra Vinh (6,800 hectares), Binh Duong (4,800 hectares), Hung Yen (4,400 hectares) (GDLA 2014). The primary reason for the decrease in the country's paddy land area is land acquisitions and conversions of land-use purposes from agricultural to non-agricultural (public projects, urban development and other rural residential areas or non-agricultural production and businesses) (GDLA 2014). In addition, there are other secondary reasons for this decrease, namely: the conversions of inefficient paddy land to other agricultural production land like perennial land for rubber trees and coffee in the South East region, bonsai trees, fruit trees and crops in the Delta region, and aquaculture; and inaccurate surveys of land–use data from prior years (GDLA 2014).

Figure 42: Distribution of main annual and perennial crop types in 2014
Source: Statistical Yearbook 2014; FAOSTAT 2014.



* Note: In order to provide a more comprehensive picture of the annual and perennial crops in Vietnam, the graph compiles and combines data from two sources. Data on the planted areas of (a) maize, (b) sugarcane, (c) peanut, (d) soybean, (e) rubber, (f) coffee, (g) cashew nut, (h) tea, (i) pepper, (j) litchi, rambutan and longan, and (k) orange and mandarin from the Statistical Yearbook of 2014. Data on other remaining categories are harvested areas of annual and perennial crops from FAOSTAT 2014.

Map 57: Land Use Land Cover in Vietnam 2015



The decrease in paddy land coincides with the relative increase in the non-agricultural land in the same period. The increase in the total area of specially used land by 32,860 hectares in the whole country from 2010 to 2014 was the largest increase among all of the non-agricultural land categories (GDLA 2014). This especially included land used for public purposes (đất có mục đích công cộng) as well as land used for non-agricultural production and businesses (đất sản xuất, kinh doanh phi nông nghiệp). Land used for public purposes increased primarily due to transport and irrigation projects. Land for non-agricultural production and businesses, on the other hand, was mostly used for the construction of industrial zones, tourism and services projects. It also included land areas that had been granted, leased, and approved for conversion to non-agricultural production and businesses but remained unused, reflecting the phenomenon commonly known as "*dự án treo*" ["hanging" or "pending" projects] in Vietnam.

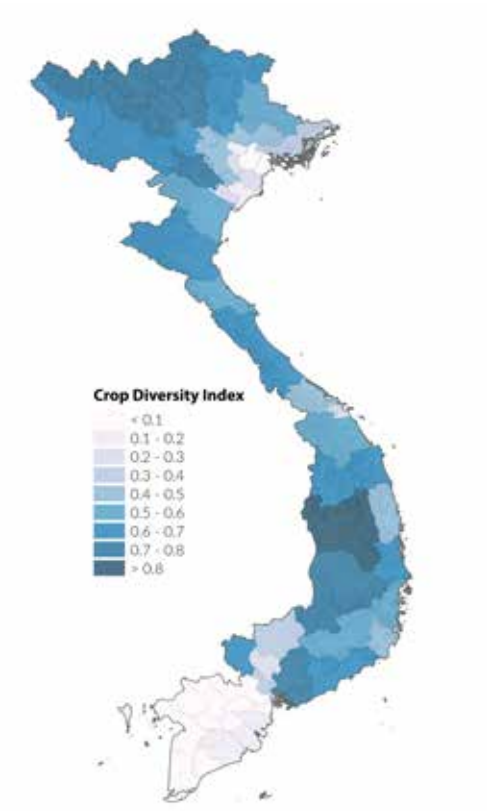
The fact that land acquisitions constitute one of the significant factor contributing to the loss of paddy land from 2010 to 2014 is a reason of concern. It is especially pertinent in light of the fact that the country's population remains predominantly rural and, often, the land in question is commonly the most fertile land area. At the same time, the percentage of the national annual employed population composed of skilled agricultural, forestry and fishery workers as well as the share of agricultural sector in the country's total GDP have both declined. This raises questions about the impact of land acquisitions and increased conversions of paddy land in particular and agricultural production land overall for non-agricultural purposes on rural populations, employment, and structure of the country's economy overall.

In the same period, perennial land area has significantly increased by 821,977 hectares from 2010 to 2014. As previously discussed, the conversion of ineffective annual land such as paddy land to fruit trees and other industrial trees such as rubber and coffee is one of the reasons for the increase. In addition, large areas of forest land have also been used for planting perennial industrial crops in mountainous provinces and the Central Highlands. According to data from the Statistical Yearbook, perennial industrial crops with large planted areas in 2014 were rubber (978,900 hectares), coffee (641,200 hectares), cashew nut (295,100 hectares), tea (132,600 hectares), and pepper (85,600 hectares) (see Figure 42). As one of the most agriculturally productive regions in the country, provinces in the Central Highlands, namely Kon Tum, Gia Lai, Đắk Lắk, Đắk Nông and Lâm Đồng, are known especially for their cultivation of crops like coffee, pepper, rubber, cashew and tea. For this reason, it is not surprising that agriculture occupies such a central importance in the region's economic activities.

Perennial fruit crops with large planted areas in 2014 included but were not limited to lychee and rambutan (92,700 hectares), mango (83,900 hectares), orange and mandarin (78,500 hectares), longan (75,500 hectares), and grape (1,100 hectares) (Statistical Yearbook 2014). While there is current effort to promote the plantation of fruit trees in Northern regions of Vietnam, a significant majority of current fruit crops come from Southern regions of Vietnam, particularly the Mekong Delta and the South East region. As of 2013, it was estimated that 21 provinces in the Mekong Delta and the South East Region produced nearly 57 percent of the country's fruit production (Nga 2013).

In contrast to specialization, a province's crop diversity reflects the extent to which local producers are able and likely to shift to alternative crops to take advantage of emerging opportunities as well as to adapt to unexpected events like external environmental shocks, market volatility, natural disasters, and so on. In other words, regions with high crop diversity are expected to have greater resilience than those with low crop diversity. In these terms, as shown in Map 58, provinces in the Central Highlands like Gia Laid and Đắk Lắk, and the Northern Midlands and Mountain Areas like Lai Châu, Lào Cai, Tuyên Quang and Hà Giang both displayed much higher crop diversity than others. Provinces highly specialized in rice and fruit crops in the Mekong Delta had much lower crop diversity index scores of less than 0.2.

Map 58: Crop Diversification Index in provinces of Vietnam



Forest Land

Agricultural production land and forest land in Vietnam is in tension. National goals for increasing agricultural productivity on the one hand while conserving forest resources on the other presents a number of difficulties. Historically, Vietnam's agricultural expansion has come at the expense of forest areas, not only with the visible conversion of forests to agricultural production but land but also the somewhat less-visible conversion of natural forests to tree plantations. These dynamics, together with the intensification of production within agriculture land have important implications for the sustainability of Vietnam's natural capital base. The country's total area of forest land in 2015 was 14,923.6 million hectares. Productive forest made up 50 percent of total forest land, whereas 35.4 percent was protective forest and 14.6 percent was specially used forest. In the Midland and Mountain Areas and the North Central and Central Coastal Areas, forest land coverage constituted 51.5 percent of the total land area in each region. 46.1 percent of the land area in the Central Highlands was forest land, followed by the Red River Delta (21.5 percent), the Southeast (19.9 percent) and the Mekong River Delta (5.6 percent).[71]

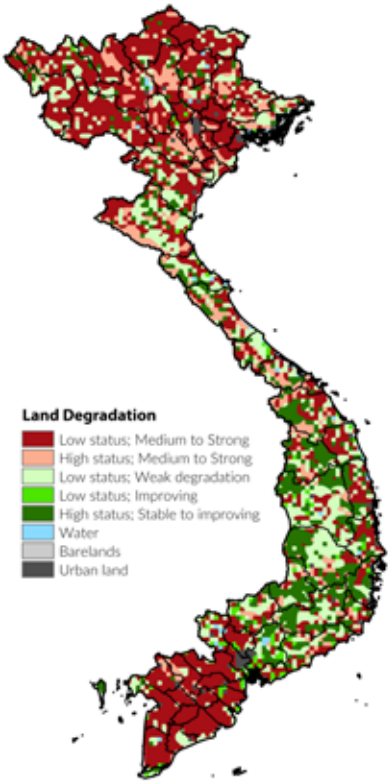
According FAOSTAT data, the proportion of primary forest [72] in the total forest area constitutes below 1 percent overall. More specifically, there has been a persistent decline in the actual percentage of primary forest from 0.64 percent in 2005 to 0.56 percent in 2015. Planted forest is the second highest category, whereas other naturally regenerated forest [73] has the largest proportion overall, ranging between 77.3 percent and 72.83 percent of the total forest area.

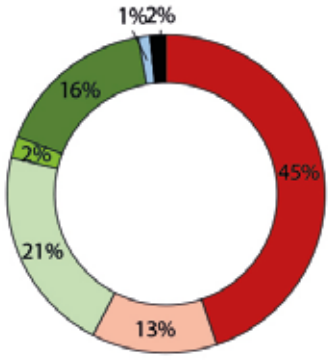
Since the mid-1950s, most forest land in Vietnam had been managed by State Forest Enterprises (SFEs) to the extent that an estimate of 90 percent of the country's forest land was managed by SFE in 1990. Under this management arrangement, forest cover significantly declined from 43 percent in 1943 to 27 percent in 1990 (Nguyen 2005). The Vietnamese government had implemented various programs and policies to provide incentives for SFEs to improve its management performance and reforestation. For instance, the Five Million Hectare Reforestation Program was introduced in 1998 with the aim of increasing forest cover to 43 percent of the national land area. At the same time, SFEs have also experienced numerous structural reforms since 1991. It was in this context that reallocations of forest land largely from SFEs to other state and non-state organizations, including forestry and agricultural companies, forest management boards, as well as households and communities, had taken place in Vietnam (Ironside 2017; To *et al*. 2013).

Land Degradation

Changes in demographic and economic factors have effectively contributed to land degradation in Vietnam. The Food and Agriculture Organization (FAO) adopts a definition that broadly defines "land degradation" as "the temporary or permanent lowering of the productive capacity of land" which covers "various forms of soil degradation, adverse human impacts on water resources, deforestation, and lowering of the productive capacity of rangelands" (FAO 1994). As the map (59) of the current status of degradation by the FAO-Global Land Degradation Information System (GLADIS) forewarns,

Map 59: Land Degradation in Vietnam
Source: FAO-Global Land Degradation Information System (GLADIS)





[71] See data from Statistical Yearbook of Vietnam, GSO https://www.gso.gov.vn
[72] FAO defines primary forest as "naturally regenerated forest of native species where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed." See, http://www.fao.org/docrep/017/ap862e/ap862e00.pdf
[73] FAO defines that is naturally regenerate forest as "naturally regenerated forests where there are clearly visible indications of human activities."

current areas in Vietnam with the highest levels of degradation shown in red are intensive cultivation areas, particularly Northern mountainous provinces of the Red River Delta region and the Mekong Delta. Assessment by FAO-GLADIS indicates that 44.8 percent of the country's land area has experienced medium to strong degradation. In contrast, only 16.3 percent has shown high stability or improvement. These provinces were again predominantly in the Central Highlands.

While environmental factors do contribute to land degradation, the prevailing causes of the degradation are anthropogenic (Vu *et al*. 2014). Vu *et al*. (2014) found in a comprehensive assessment of land degradation causes at the national level that demographic determinants, namely the increase in population density and especially rural population growth rate, had a positive and statistically significant effect on the extent of the country's land degradation. Second, an increase in annual agricultural gross product per capita also resulted in a likely increase in the area of land degradation in Vietnam (Vu *et al*. 2014). Consistent with these findings, analysis by Huu *et al*. (2016) indicated that resettlement and economic development policies, population growth and urbanization, as well as increasing reclamation of wetland for agriculture are among the primary drivers of wetland degradation in the Mekong Delta. Likewise, growing population pressures as well as the gradual transformation of forest regions into areas for extractive and agricultural production has also contributed to increasing forest degradation. According to Khuc *et al*. (2018), around 1.77 and 0.65 million hectares of forests were lost and degraded during 2000 and 2010, with the north-central region being the region with the largest area of deforestation and forest degradation, followed by the northeast, central highland, northwest, and southcentral regions.

The problems of land degradation especially have a direct and significant impact on individuals, households, and communities whose livelihoods depend on land productivity. The relationship between poverty and land degradation can be characterized as "a downward spiral" (Scherr 2000; Barbier 1997; von Braun *et al*. 2012). Poverty and economic marginalization can constrain farmers' ability to make decisions that minimize land degradation. Land degradation in turn can lead to further poverty and economic marginalization.

Distribution of the Land Resource Base

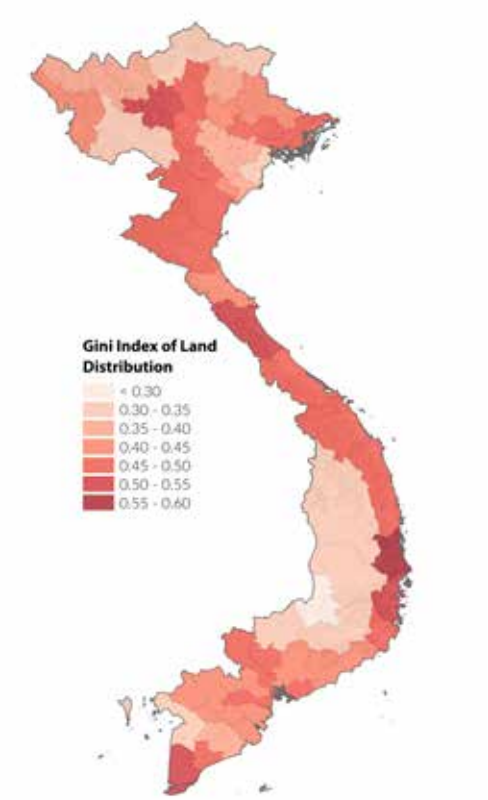
In the context of national industrialization and urbanization, land becomes increasingly more valuable and scarcer in Vietnam. Agricultural land has become the target of expropriation and conversion to non-agricultural land at a rapid pace. Nearly one million hectares of agricultural land had been expropriated between 2001 and 2010 alone (Embassy of Denmark *et al*. 2011; Vietnam Society of Soil Science 2012). Uses for non-agricultural land range widely from infrastructural construction, industrial parks, and special economic zones to private, commercial real estate and investment projects such as beach resorts, satellite cities, and new urban areas. Given the comparatively low price frames of compensation for agricultural land, real estate developers and investors have added incentives to acquire rural agricultural land from households and individuals through either voluntary market mechanisms or compulsory state acquisitions. There also exist incentives for local government authorities to expropriate and convert agricultural to non-agricultural land from households and individuals, then lease the land back to domestic and/or foreign investors in exchange for infrastructures, and/or to recruit investment in order to foster local economic development. The perception that "industrialization is happening on the backs of the people" (Wells-Dang 2013), particularly rural and agricultural households, underscores the deep discontent that continue to fuel widespread land-related protests, demonstrations, petitions and complaints. In some part, public dissatisfaction with land expropriations stems from the ambiguity surrounding many cases, wherein public purposes are used to justify projects that appear to benefit private interest.

Agricultural Land Distribution

The Land Law stipulates a limit on the maximum area of agricultural land that each household or individual can have. Article 129 in the Land Law of 2013 specifies that, the allocation quotas for annual crop land such as paddy land for each household or individual "directly engaged" in agricultural production must not exceed: 3 hectares for each type of land in the Southeast and the Mekong Delta regions; and 2 hectares for each type of land in the other regions. Perennial crop land, including fruit trees, coffee, tea, rubber and so on, must not exceed: 10 hectares for each household or individual in delta areas; and 30 hectares in midland mountainous areas. The allocation quota is an institutional feature that traces back to the country's political and ideological socialist root, whereby "land to the tiller (người cày có ruộng)," a slogan from the land reform campaign in the 1950s, remains a core platform of the Communist Party and State of Vietnam today. The quota, in other words, acts as a safeguard which aims to protect and ensure that "peasants" would not become landless, that land would be distributed widely among farmers whose livelihood relies on access to agricultural production land. This in turn will foster growth and development as well as preserve the country's social stability and political order.

As a whole, household holdings of agricultural production land are relatively small in size. Findings from the Agrocensus Survey show that there were nearly 12 million households using agricultural production land in 2011. Vietnam has the lowest average agricultural land holding size in the Mekong region. Of total agricultural households, 34.67 percent possessed under 0.2 hectares of agricultural production land, and 34.33 percent possessed between 0.2 hectares and 0.5 hectares. Only 6.18 percent possessed from 2 or more than 2 hectares. In terms of paddy land, according to the Agrocensus Survey, 50.04 percent of 9 million households with paddy land had an average size of under 0.2 hectares in 2011. Only 2.27 percent had 2 or more hectares of paddy land. Distribution of agricultural production land also varies across regions

Map 60: Gini Index on agricultural land distribution in provinces of Vietnam (2011)
*Source: Vietnam Agrocencus Survey 2011. Data compiled and estimated by IPSARD



in Vietnam. In the South and especially the Mekong Delta, where land consolidation policies have played a key role, agricultural land is generally less fragmented and plot sizes are larger than that of the North. The proportion of the average size of paddy land area per household from 0.5 hectares to under 2 hectares incrementally increases the further south one travels, from 2 percent in the Red River Delta to 48 percent in the Mekong Delta.

The Gini index below (Map 60) provides a closer illustration of the relationship between land holdings and equity at the provincial level in Vietnam. While Gini indexing is more commonly used to measure income equity, the index below ranges from 0 (complete equity) to 1 (complete inequity), and indicates the extent to which agricultural production land is equally distributed across society. The composite Gini score for Vietnam is 0.54, meaning that of land held by agricultural households, the top 10% of land holders have 37.5% of all agricultural land.

Across the regions in Vietnam, the Central Highlands had a noticeably low Gini index score in 2011 that fell less than 0.35 overall, suggesting that land holdings were more equally distributed across provinces in the region than others. In contrast, provinces in the Southern Central Coast and the Northern Central Coast displayed higher disparities, particularly Phú Yên and Quảng Trị.

A study by Martin Ravallion and Dominique Van de Walle (2008) found, on the one hand, that rural poverty reduction in Vietnam had generally been successful, and that rising rural "landlessness" in particular did not negatively affect rural poverty rates but may indicate movement away from agriculture toward alternative forms of rural livelihoods and the effectiveness of the Vietnamese decollectivization and agrarian land reform policies. This assumes that rural landlessness is voluntary where rural households and individuals choose to take advantage of available market opportunities. At the same time, increased landlessness and/or losses might also reflect the increasingly prevalent practice of compulsory land acquisitions by the State since Renovation.

Besides households and individuals, State Agricultural Enterprises and Forestry Enterprises had also historically managed agricultural production and forest land areas (see Table 7). Large forest land areas, in particular, had been managed by State Forestry Enterprises (SFEs) prior to 2004. These however had failed to demonstrate efficiency and effectiveness in land use and management. By the year of 2000, deliberation on SFE reform strategies had already been well underway. In 2003, the Politburo issued Resolution no. 28 calling for a review of land used by SFEs and reallocation of land currently used by SFEs ineffectively to local households, individuals and communities. The Government later issued Decree No. 200/2004/ND-CP on rearrangement, innovation and development of SFE to implement the Politburo's direction. In this context, the number of SFEs and their organizational structures have notably changed (see Table 8 below). Effectively, SFEs were converted into forestry companies, forestry management boards and/or liquidated. These entities have continued to manage and use large forest land areas in the Vietnam (see Table 7 below).

Table 7: Land Managed by Agricultural and Forestry Enterprises prior to 2004
*Source: Government Report No. 314/BC-CP on 06/25/2015 to the National Assembly on the current implementation of policies and laws on land use and management at State Agricultural and Forest Enterprises during 2004-2014.

	Total land area (ha)	Agricultural Enterprises (a)		Forestry Enterprises	
Year		Agricultural production land area (ha)	% of total land area	Forest land area (ha)	% of total land area
1986	7,500,000	1,200,000	16	6,300,000	84
1991	7,006,960	851,309	12.1	6,155,651	87.9
2000	5,637,574	636,780	11.29	5,000,794	88.71

© Phoung Nguyen

Table 8: Structural Reforms of State Forest Enterprises (SFEs)
Source: Government Report No. 314/BC-CP on 06/25/2015 to the National Assembly on the current implementation of policies and laws on land use and management at State Agricultural and Forest Enterprises during 2004-2014.

Structural reform of SFEs	2005	2012	Change (+ or –)	in	unit
State forest enterprises (lâm trường quốc doanh)	256	0	-256		
Conversion into one member company limited with state ownership (công ty TNHH MTV do nhà nước làm chủ sở hữu)	0	148	+148		
Conversion into joint-stock company (công ty cổ phần)	0	3	+3		
Conversion into forest management boards (ban quản lý rừng)	0	91	+91		
Liquidation (giải thể)	0	14	+14		

Ethnic minority households are especially vulnerable with regards to their access to land. The Vietnamese government has implemented a number of programs and policies aimed at addressing this disparity.[74] In spite of these efforts, statistics reported by provinces and municipalities to the National Assembly in 2014 show that the implementation of these initiatives remains insufficient to address the disparity and insecurity in land access experienced by ethnic minorities. A total of 206,454 ethnic minority households of those surveyed indicated that they did not possess the minimum area required for household agricultural production and/or housing in their respective provinces. The total land area reported is the difference between the land area currently possessed by ethnic minority households and the minimum land area required for these households to be self-sufficient.

Under the 2013 Land Law, land can be allocated to "communities" (Article 5), and the State has responsibilities to "adopt policies on residential land and land for community activities for ethnic minorities in conformity with their customs, practices and cultural identities," as well as to facilitate ethnic minorities to have access to land for agricultural production (Article 27). In particular, land with protective forest can be allocated to: (a) forest management organizations, which can in turn allocate the land under contracts to (b) households or individuals living in the protective forest area; (c) economic organizations; and (d) communities (Article 136). Actual implementation however had achieved limited results.

Access to communal land remains crucial to ethnic minority communities not only for their livelihoods but also for spiritual and religious practices. Despite legislative recognition of this importance, ethnic minority communities remain vulnerable to losses and encroachments of communal forest land.[75] Historically, the massive migration of ethnic Kinh into Vietnam's highlands has been a major driving force behind loss of land and resulting vulnerabilities. As the World Bank's Land Governance Assessment Framework of Vietnam found, Vietnam was highly evaluated with regards to its legislations and policies but poorly evaluated on the actual implementation of existing laws and policies. Pressures from in-migration and large-scale land appropriation by state and private sectors for "development", which include but are not limited to infrastructure development, natural resources extraction, and agribusiness explanation, continue to further threaten ethnic minority communities' access to forest land.

Land Leases and Concessions

First and foremost, public and systematic data on the annual total of land area expropriated over time, by land types, by purposes or project types, and by provinces is difficult to obtain. The lack of systematic and public data on land expropriation and conversion is a barrier especially for citizens to exercise their lawful rights to participation, monitoring and evaluation of land use planning, expropriation, and conversions in Vietnam.[76]

According to incomplete reports from 49 provinces and municipalities, from 2004 to 2009, a total of 750,000 hectares have been expropriated for 29,000 investment project. More than 80 percent of the total land area expropriated is agricultural land. Provinces which experienced high levels of market growth and economic development were identified as those which also experienced the largest area of expropriated agricultural land, namely: Tien Giang (20,300 hectares), Dong Nai (19,700 ha), Binh Duong (16,000 hectares),

[74] These include: Decision 132/2002/QĐ-TTg on addressing the problem of agricultural production and homestead land for ethnic minorities in the Central Highlands; Decision 134/2004/QĐ-TTg on subsidies programs to support agricultural production and homestead land, housing, and water for ethnic minorities with poverty; Decree 200/2004/NĐ-CP on structural reforms of State Forestry Enterprises; and Decision 146/2005/TTg on compulsory state acquisitions of agricultural production land from State Agricultural and Forestry Enterprises for purposes of reallocation to ethnic minority households.

[75] See, for example, land disputes regarding bauxite mining in the Central Highlands, plans to convert 10,000 hectares of forest land for hydropower in Tuyen Quang province, and dam construction on the Dong Nai River.

[76] See, Article 199, Land Law of 2013 on citizen right to monitor land use and management.

Professor Dang Hung Vo, Hanoi University, former Vice Minister of the Ministry of Natural Resources and Environment

Perspectives: Land expropriations and the land market

The most important land policies in Vietnam are always associated with Vietnam's transition from a State-subsidy economy to a market economy. Up to the present stage, all tools of land management including land legislation, land use planning, land finance and land administration, show the power of competent agencies of the State. People's participation in land management is provided for in legislation, but limited in practical implementation, undermining the effective control of corruption.

Ownership of land is legally defined by the Constitution as belonging to the people of Viet Nam. Instead of a land market as such, the market operates according to the exchange of the land use right in the market transaction. Therefore, the property of the land holder is the right to use the land, and to sell or inherit this right.

Land conversion has been mainly based on the mechanism of land acquisition by the State with compensation value based on land prices decided by relevant administrative agencies, leading to social dissatisfaction. In fact, people's complaints on land have accounted for 70% - 80% of the total complaints received throughout country.

The State has issued several policies to ensure the rights of land and benefits from land use for vulnerable groups such as women, poor people, small family farmers, and ethnic minority households. Since 2003, Land Use Right Certificates have been issued in the names of both wives and husbands. Since 2013, the recognition of land use right by the State for current land users has been provided with very low financial obligation for poor farmers. Since 2017, forests and forestland have legally been allocated by the State to local communities based on customary laws and local ethnic minority practices, though there remain weaknesses in implementation in some local areas.

Ha Noi (7,700 hectares), Vinh Phuc (5,500 hectares) (Mai 2009). The expropriation of agricultural land has an inevitable impact on the employment and livelihood of households and individuals. During 2003-2008, the Ministry of Agriculture and Rural Development found that 627,000 households which consisted of 2.5 million people and 950,000 labourer were affected by agricultural land expropriation. Despite the fact that there were compensation and resettlement policies to support households to change their means of livelihood, 67 percent of those working in agriculture did not switch to a new job or sector after losing their agricultural production land; 25-30 percent could not find employment or stable employment; and only 13 percent successfully transitioned to new jobs or professions (Huyen 2009).

The unprecedented scale and scope of land expropriation occurred after 2003 coincided with the intensification of the process of urbanization, industrialization, and marketization in Vietnam as the impact of Renovation economic reforms deepens. This unprecedented turn could also be viewed as the result of the broad expansion of the scope and discretion granted to government authorities on land expropriation. Under Article 40 of the 2003 Land Law, the State can "recover" land for "purposes of economic development in case of investment in the construction of industrial parks, high-tech parks, economic zones and big investment projects." [77] This was stipulated as a separate and distinct category from land expropriation for "purposes of defense, security, national or public interests". Decree 181/2004/ND-CP reiterated and expanded the scope of the provision to include: (a) Investment production, business, service or tourist projects of Group A under the provisions of the legislation on investment; (b) investment projects with sources of official development assistance capital; and (c) projects with 100 percent foreign investment capital.

It is not a coincidence that much of the focus during the revision of the 2003 Land Law centered on the issue of land acquisitions for purposes of socio-economic development. Article 16 of the 2013 Land Law states, the State shall decide to recover land "for the purpose of national defense or security; socio-economic development for the national or public interest" (emphasis added). Some argued that State land expropriation should only be for purposes of national or public interests and that the clause on socio-economic development should be removed altogether from the Land Law and related regulations. Others contested that, given the country's developmental imperative, it is simply impractical to deny the State the right to expropriate land for economic development projects. In conclusion, the Land Law 2013 adopts revisions that attempt to balance both interests by retaining the lawful scope for land expropriation for "socio-economic development" while also requiring that the projects must serve "national, public interests".

[77] See, Article 40, the Land Law of 2003.

Findings based on PAPI survey of citizen experiences in land acquisition show that, prior to the passage of the 2013 revised Land Law, the average percentage of citizens who report having had land taken from them in the previous year during the period of 2011-1013 is 9 percent. After 2013, the rate shows a slight decrease to 5.72 percent in 2014, 7.43 percent in 2015, and 6.82 percent in 2016 (PAPI 2016). This suggests that revisions adopted in the Land Law 2013 have had a positive effect by tightening the scope of governmental discretion on land expropriation. Ongoing monitoring and evaluation will be most necessary for further legislative improvement and effective implementation.

Economic Zones

According to a recent report by the Economic Zones Management Department of the Ministry of Planning and Investment, 325 industrial parks have been established in the country with a total area of 94.9 thousand hectares as of June 2017(Map 61). Of these, 220 industrial parks have been operating with a total area of 60.9 thousand hectares. 105 industrial parks were still in the process of completing land acquisitions and clearance, compensation, and constructing basic infrastructures (Nguyen 2017). Many of the industrial parks in the North are concentrated around the Hanoi, Haiphong, and Quang Ninh areas. In the South, areas with a particularly high concentration of industrial parks are Ho Chi Minh City, Dong Nai, Long An, Binh Duong, and Ba Ria-Vung Tau.

In addition, there are currently 18 economic zones in the country, which aim to attract foreign investment by providing preferential treatments, removing restrictions, and offering greater incentives through various exemptions and reductions of tariffs, taxes, land-related terms and fees. To further attract foreign investments, Vietnam is currently considering proposals to establish three special economic zones in Van Don (Quang Ninh Province), North Van Phong (Khanh Hoa Province), and Phu Quoc Island (Kien Giang Province). These SEZs would offer 99 year land lease for investors, personal individual income tax exemptions for five years, as well as corporate tax exemptions. The Ministry of Planning and Investment has drafted and submitted a Law on Special Administrative Economic Zones which currently awaits deliberation and review by the National Assembly, which aims to establish and clarify the institutional framework for regulating SEZs.

The State must often expropriate large land areas, especially agricultural production land, to establish and construct economic zones. The establishment of these economic zones promises to bring great benefits to national and local development by encouraging investment and providing employment opportunities for local population in the areas. However, in cases where these zones face difficulties attracting investment, it leaves individuals and households whose land has already been taken or awaiting to be taken for the purpose of constructing these economic zones in a limbo. They neither can continue to cultivate their agricultural land nor actually receive the benefits that the construction of the economic zones will supposedly bring.

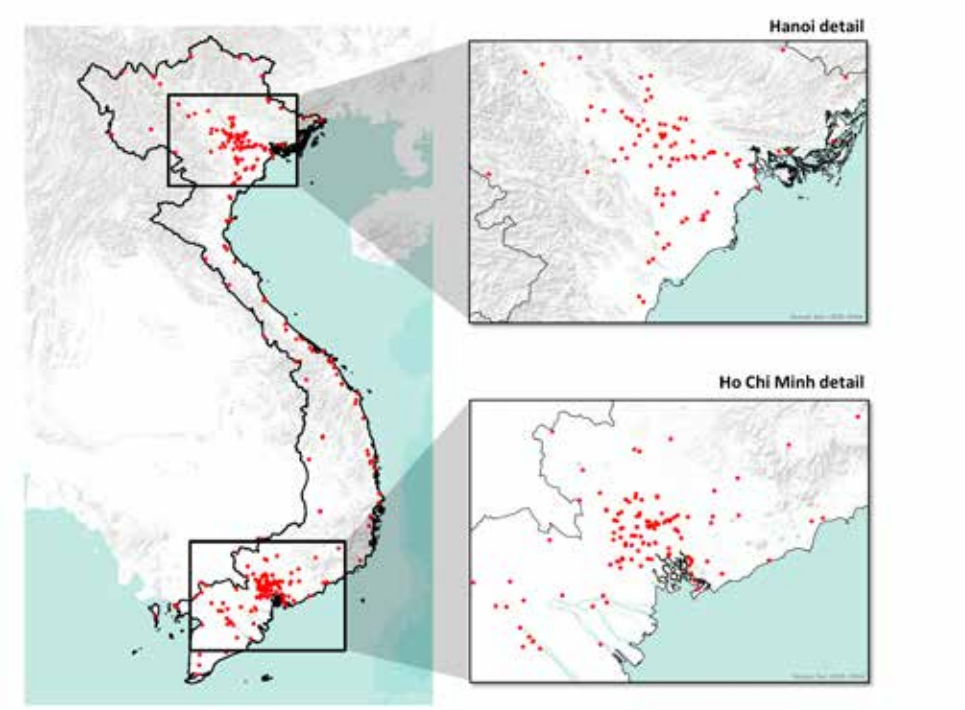
Andrew Wells-Dang,
Senior Governance Adviser, Oxfam in Vietnam

Perspectives: Citizen monitoring of land governance in Vietnam

Vietnam's 2013 Land Law contains several provisions for public supervision of land management and land use. Article 199 recognizes the right of citizens to monitor and report violations on topics including conversion of land use purposes, land acquisition by the state, compensation and resettlement, either through direct petitions or through representative organizations. However, like other legal rights, citizen monitoring will only become a common practice if it is used effectively by communities and civil society groups.

Oxfam has joined with members of the Vietnamese land policy coalition, LANDA to pilot citizen monitoring initiatives in multiple provinces, develop guidelines, and advocate for wider replication by governmental and social organizations. Supported by the Mekong Region Land Governance project since 2016, these efforts are also contributing to implement the Voluntary Guidelines on the Responsible Governance of Tenure (VGGT). Our challenge is to fulfill the potential for greater citizen involvement that the law offers in the face of countervailing pressures from rapid economic growth, urbanization and industry.

Map 61: Economic Zones in Vietnam, 2016
Source: ADB Environmental Operations Center, downloaded from Open Development Mekong in 2016.



Land Securitization

Land security for households and individuals directly engaged agricultural production has been progressively strengthened under the legislative framework of Vietnam. With regards to tenure security, the principle of "stable and long-term use" has been formally recognized as far back as the first Land Law of 1987, and is further specified in later revisions of the law. The lease term for annual and perennial crop land has both been extended to 50 years as of 2013, renewable at the end of the term pending approval from the State. Starting in 1993, the Land Law also stipulates that all households and individuals be granted Land Use Rights Certificates (LURCs), also commonly known as "red books". Possession of LURCs is a minimal condition required of households and individuals to exercise their extended rights. The 1993 Land Law first granted to households and individuals: the rights to transfer, exchange, inherit, lease, and mortgage. These rights have been expanded to also include the rights to sublease, donate, and contribute land use rights as capital. Under circumstances when the State expropriates land in accordance with the law, households and individuals are entitled to receive compensation for the land. Given the importance of these rights, those without LURCs may thus find themselves in disadvantaged and vulnerable positions.

Land Titling

Land titling program was first implemented following the passage of the 1993 Land Law. Study based on a survey of 1,527 agricultural households from 35 communes in the Mekong Delta and Red River Delta regions found that, three years after the implementation of the 1993 Land Law, 71.5 percent of households in the Mekong delta reported possession of LURCs while only 7.6 percent of households in the Red River Delta did (Hare 2008). The disparity suggests that, despite the provision specified in the law, results from the actual process of implementation varied widely due to multiple factors. In 2000, a reported estimate of 11 million land titles had been issued to rural households (Do and Iyer 2008). As of September 2016, according to data from the Ministry of Natural Resources and Environment (MoNRE), 90.1 percent of the total area of agricultural production land have been registered, and 20,178,450 LURCs have been issued nationwide (see Table 9). While there appears to be a substantial increase in the number of LURCs issued, the lack of systematic and publicly available data makes it difficult to comprehensively assess the extent and significance of this positive difference.

Table 9: Number of land-use titles issued as of September 2016
*Source: Ministry of Natural Resources and Environment. Data compiled and estimated by IPSARD.

Type	Number of land titles issued	Total land area registered (ha)	Percentage of land area registered (%)
Agriculture	20,178,450	8,843,980	90.1
Forest	1,971,820	12,268,740	98.1
Fishing	917,900	554,296	85.1
Housing land in rural	12,923,130	516,240	94.4
Housing land in urban	5,338,865	129,595	96.7
Specialized land	276,299	611,720	84.8
Religious land	19,000	-	81.1

What obstacles might households and individuals face when seeking to obtain LURCs? Cumbersome procedures and time-consuming processes, as well as added informal fees or bribes are some of the central factors that discourage land users from obtaining LURCs. To obtain a LURC, individuals must first submit an application to the District People's Committee; local authorities at the commune level then coordinate and conduct surveying, cadastral mapping, etc. to determine the number, areas, and boundaries of the plots, verify with the commune's land registry for accuracy, and resolve any disputes; after paying a required fee, households can receive the certificate. Although the formal fee required for a new LURC cannot exceed 100,000 VND (about $5 USD)[78], 23 percent of respondents in PAPI 2016 surveys who obtained LURCs said that they also needed to pay bribes for the service. While this figure reflects a decrease from 44 percent in 2015, the frequency of bribes and corruption presents an added constraint that can impede rural agricultural households from obtaining LURCs (PAPI 2016).

Recognition of Customary Tenure

Vietnam's legal framework generally recognizes customary tenure of agricultural and forest land, which is most prevalent among ethnic minority communities. Communities can also receive LURCs (Article 100), and land allocation or land use rights "to preserve national identities association with the traditions and customs of the people" (Article 131). Under the 2004 Law on Forest Protection and Development (Forestry Law), customary tenure also receives limited recognition, allowing communities to apply to District People's Committees for access to use and manage forests important to the preservation of customs and traditions of the communities (Article 29). In practice, however, protection for communities with customary tenure is relatively weak compared to other forms of land use and management, given the ambiguity in the law regarding the formal status of "communities" as distinct categories from other legal entities.

[78] See, Circular 02/2014/TT-BTC.

Luong Thi Truong,
Director, Center for Sustainable Development in Mountainous areas – CSDM

Perspectives:

Vietnam has made a number of achievements with regard to respecting the knowledge, rights and interests of ethnic minority people. Land plays a central role in this. Land and forest land is ethnic minorities' main source of living as they do not have as much access to non-agricultural job opportunities in industrial zones and urban areas as the lowland Kinh people have. As of 2011, 1.3 million households have rights over forestry land, accounting for 27% of all forest-dependent households in the mountainous areas, which are predominantly inhabited by ethnic minority peoples. Further, natural forest areas managed by households account for 18% of the total area of natural forest in Vietnam. There are still many problems. In many places, there is little or no land available to be allocated to the people while in others, reclaiming land requires huge investments. There are several causes of land insufficiency, such as infrastructure development on productive and residential land, and relocation and resettlement after infrastructure construction and mining projects that disregard the culture, customs and production conditions of affected people. Scattered land holdings and lack of water lead to inefficient production, undermining the development of ethnic minorities in the country, and so real solutions are needed. Among these, there is a need to take back uncultivated, inefficiently or improperly used land from state and private owned farms (which account for more than 4 million hectares) and re-allocate these to ethnic minority people. We suggest the government consider allocating land and forest to households, especially ethnic minorities (including production forests managed by state and private forest enterprises and communal People's Committees) and legalize customary and collective ownership of land and forests. In addition, the government should provide institutional, financial and technical support for communities to enable them to manage and benefit from the forests. This process should be considered in the upcoming Decree to guide the implementation of Land Law, and new Forestry Law.

Gender and Land

There exists a significant gender gap in access to land use rights certificates. Evidence from PAPI surveys of citizens in 2016 show that, of those who have LURCs, 13 percent more men have their names recorded on LURCs than women. Moreover, the gap between men and women widens in rural areas more than urban areas, where the difference is 19 percent in rural areas compared to 5.8 percent in urban areas.

Efforts have been made to address this gender gap. Article 48 of the 2003 Land Law required both the wife's and husband's names be included on LURCs when the land use right is a joint property of both. The stipulation is restated by Article 98 in the 2013 Land Law. [79]Some argue that this requirement may impose practical constraints, such as when husband and wives do not reside in the same location, and have a negative effect on economic efficiency since all land-related formal market transactions, land use decisions, and related activities would require approval signatures from both the husband and the wife. The aim of the provision, however, is to secure women rights and tenure security in the event of a husband's death, divorce, inheritance, disputes, etc. as well as to enable women to participate more actively in household economic decisions and production. Ethnic minority women are especially subject to precarious situations and violations of their rights to land access. Whether efforts to improve the disparity between men and women's access to land use rights certificates have significant positive impact is not entirely evident.

Land Governance

This section represents the most up-to-date expert assessment on the status of land governance in Vietnam. The assessment focuses on the issue of tenure security and access to agricultural land for smallholders, especially ethnic minorities and women, that takes into account both statutory rules and practice. A panel of 20 participants from a selected group of 29 highly qualified experts[80]on land issues from non-state sectors conducted an assessment of Vietnam's land governance framework in March 2018. The panel employed the Strategic Indicator Framework, an evaluation tool developed by MRLG and the VGGT-based assessment of appropriation and compensation by the Land Portal for Mekong countries. The framework consists of 12 indicators grouped under four dimensions of land governance. Land experts were asked to evaluate and assign a score using a five-point Likert scale from very poor to very good to each indicator along with participation in the consultation workshop to discuss and deliberate the results of their evaluation. (see Figure 43)

[79] According to Article 98, the Land Law of 2013, "In case land use rights, or land use rights and the ownership of houses and other land-attached assets, or the ownership of houses and other land-attached assets are the joint property of husband and wife, the full names of both husband and wife must be recorded in the certificate of land use rights and ownership of houses and other land-attached assets, unless husband and wife agree to record the full name of only one person."

[80] Experts were chosen largely from research institutions and universities, and domestic and international NGOs and donors operating in the land sector of Vietnam, excluding government officials. 70% of them have worked in land-related issues in Vietnam for more than 10 years. A half of them have a post-graduate degree and a fifth are female.

Table 10: Percentage of Men and Women with Names on Land Use Rights Certificate, 2016
*Source: PAPI 2016 Report.

Vietnam		Urban		Rural	
Male	Female	Male	Female	Male	Female
75.9 %	62.7%	73.1%	67.2%	73.1%	59.3%
13.2% Difference		5.8% Difference		18.6% Difference	

The concept of land governance has been taken into consideration by State authorities since 2010, and incorporated into Vietnam's land legislations step by step. Elements of good land governance such as transparency, people's participation and accountability are adopted in legal documents. They are, however, not necessarily implemented. For this reason, indicators of the land governance assessment might be weakly rated by some experts but strongly rated by others.

Overall, Vietnam's performance in land governance is assessed as moderate. The aggregate score assigned by land experts on the protection of smallholder tenure security and access to resources, especially in cases of competing claims, fraud, and disputes in practice, as well as the land tenure security of women and indigenous communities are moderate. Smallholders' ability to claim and defend their tenure and land use rights is the only land governance dimension that was evaluated as weak or poor compared to other dimensions of the country's land governance performance. More specifically, Vietnam performs relatively well with respects to its legal recognition of small holders' land tenure rights. However, land experts evaluated Vietnam's governance framework as poorer on its protection of land-users' tenure and rights, application of rights based approach, and support for civil society. Noticeably, recognition of indigenous status and practices or customs received the lowest score of the twelve indicators in the assessment.

The panel confirms the finding of the World Bank Land Governance Assessment Framework study in 2013 that one of the main land governance challenges faced by Vietnam is the wide gap between statutory rules and practice (Vo 2013). This has a particularly disproportionate effect on smallholders. For two thirds of the twelve indicators, there exists a sufficient legal, policy, institutional framework, but existing laws and policies have not been effectively put in practice. Thus, bridging this gap through more effective policy implementation is vital for Vietnam to improve its respective performance on land governance. The recognition of smallholders' land tenure rights in Vietnam is a strong case in point. Vietnam's recognition of smallholders' land tenure rights has improved significantly when clearer policies and institutional developments under the Land Law of 1987, 1993, 2003 and 2013 were accompanied with actual implementation, equitable allocation of cooperative land to farming households during 1986-mid-1990s, and land titling. For the remaining one third of the indicators, respective policies, legislations, and institution settings still need further elaboration or development, including those on land acquisition and compensation, and the recognition of civil society organizations, right-based approach, and indigenous status and cultural-specific practices.

Based on the assessment, it is evident that while the current framework extends some formal protections to smallholders, there are important areas for improvement. Smallhodlers and communities remain vulnerable in many regards. Land currently being managed by local communities based on customary practices and traditions still needs to be formally allocated to current users. The issuance of LURCs to communities and smallholders in the Central Highlands and other remote regions will be a critical task. The focus should also be given to updating LURCs for land used by households to also include women's names as individual or joint land user. The inclusion of provisions which strengthen communities' land tenure rights and access to land in the forthcoming revision of the 2013 Land Law will also be necessary for the formal recognition of and the improvement of smallholder tenure security.

The extent to which smallholders are better able to claim and defend their tenure rights also depends on prospects of continued legislative reforms as well as stronger recognition of the role of and support for civil society organizations in policy advocacy. In terms of legislative revisions, priority should be given to reviewing existing good experiences in fair compensation and alternatives to land recovery that can be scaled up and incorporated into State land acquisitions and compensation processes and guidelines. Moreover, further advocacy to narrow the scope of compulsory acquisition by the State, and to ensure fair compensation for expropriation is critical during the forthcoming review of and revision of the Land Law of 2013. Civil society organizations in Vietnam have actively contributed to many of these areas. They have done so through active participation in policy advocacy on the revision of the 2013 Land Law, implementing grassroots programs to strengthen the implementation of existing land law and regulations through participatory monitoring and evaluation by citizens, and providing legal supports to smallholders. Strengthen the participation of civil society organizations will thus also be imperative to enable them to extending continuing support to and improve the vulnerable positions of smallholders in Vietnam.

© Phoung Nguyen

Figure 43: Assessment of land governance in Vietnam

Conclusion

In this chapter, we have aimed to provide an overview and assessment of the current state of land governance in Vietnam as a basis for strengthening responsiveness by State institutions to societal interests and grievances. The high levels of economic growth achieved by Vietnam during the period of Renovation have been viewed as an important indicator of the positive performance that rejuvenates and contributes to the political legitimacy of the Vietnamese Party-State (Le 2012). In pursuit of the country's developmental imperatives, what matters in the long-term however is not only growth itself but also how Vietnam engages with the process of development.

As the chapter has shown, the country's rural population, agricultural land and sectors have been experiencing significant transformations. Vietnam is currently a country with increasing population densities and a rapidly growing urban population. Amid the country's continuing progress on its goal toward greater modernization, industrialization, and urbanization, 65.49% of the country's population in 2016 still live in rural areas. Yet, the percentage of the national annual population employed in agriculture, forestry and fishing as well as the share of agricultural sector in the country's total GDP have both declined. Moreover, on the one hand, land securitization for households and individuals directly engaged in agricultural production has been progressively strengthened under the legislative framework of Vietnam. For example, 90.1 percent of agricultural production land have been registered, and 20,178,450 LURCs have been issued nationwide as of September 2016. On the other hand, acquisitions of and conversions of agricultural land for non-agricultural purposes have also been increasingly prevalent, threatening farmers' access to agricultural land and giving rise to widespread contention and citizens' grievances. Recognition of customary rights and tenures of ethnic communities as well as the gap in women's access to LURCs remain weaknesses in Vietnam's governance of land. Famers, ethnic communities, and women remain relatively vulnerable to greater threats to their security and livelihoods. Despite significant developments in the country's legislative framework to address these shortcomings, it is thus imperative that the Vietnamese State proactively strengthens institutional reforms and enable mechanisms for civil society advocacy and citizen participation in policy formulation as well as monitoring and evaluation of grassroots implementation of existing laws and policies.

References

1. Barbier, E.B. (1997). The economic determinants of land degradation in developing countries. Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences, 352, pp. 891-899.
2. Do, Q. T. and Iyer, L. (2008). Land titling and rural transition in Vietnam. Economic Development and Cultural Change, 56 (3), pp. 531-579.
3. Do, T.B. and Hoang, T.S., 2005. Land management and using by women in ethnic minority group of Co Tu. Journal if Women in Science, 71(4).
4. Embassy of Denmark, World Bank, and Embassy of Sweden. (2011). Recognizing and reducing corruption risks in land management in Vietnam. Hanoi: National Political Publishing House.
5. FAO. (1994). Land degradation in south Asia: Its severity, causes and effects upon the people. Available at: http://www.fao.org/docrep/v4360e/V4360E00.htm#Contents [accessed 28th April 2018]
6. Government of Vietnam. (2015). Báo cáo số 314/BC-CP ngày 25/6/2015 của Chính phủ về tình hình thực hiện chính sách, pháp luật về quản lý, sử dụng đất tại các nông, lâm trường quốc doanh giai đoạn 2004-2014 [Report No. 314/BC-CP on 06/25/2015 to the National Assembly on the current implementation of policies and laws on land use and management at State Agricultural and Forest Enterprises during 2004-2014].
7. General Department of Land Management (GDLA). (2014). Báo cáo Tổng kết kiểm kê đất đai, lập bản đồ hiện trạng sử dụng đất năm 2014 [Report on land statistics and inventory, and mapping of current land use in 2014].
8. Hare, D. (2008). The Origins and Influence of Land Property Rights in Vietnam. Development Policy Review, 26(3), pp. 339-363.
9. Huyen N., 2009. Hàng triệu lao động bị ảnh hưởng bởi thu hồi đất [Millions of works affected by land expropriation]. VnEconomy. Available at: http://vneconomy.vn/dia-oc/hang-trieu-lao-dong-bi-anh-huong-boi-thu-hoi-dat-20090615035833755.htm [accessed 13th February 2018].
10. Ironside, J. (2017). The Recognition of Customary Tenure in Vietnam. Mekong Region Land Governance. Available at: http://mrlg.org/wp-content/uploads/2017/10/The-Recognition-of-Customary-Tenure-in-Vietnam_FINAL.pdf [accessed 28th April 2018].
11. Kuhonta E. (2011). The Institutional Imperative: The Politics of Equitable Development in Southeast Asia. Stanford: Stanford University Press.
12. Khuc, Q.V. *et al*. (2018). Drivers of deforestation and forest degradation in Vietnam: An exploratory analysis at the national level. Forest Policy and Economics, 90, pp. 128-141.
13. Le, H.H. (2012). Performance-Based Legitimacy: The Case of the Communist Party of Vietnam and *Doi Moi*. Contemporary Southeast Asia, 34(2), pp. 145-72.
14. Le, L.S. (2010). Anger on the Farm: The Displacement of Rural Vietnam. Global Asia. Available at: https://www.globalasia.org/bbs/board.php?bo_table=articles&wr_id=3777 [accessed 28th April 2018]
15. Mai, T. (2009). Về chuyển đổi cơ cấu lao động nông thôn sau thu hồi đất [The mechanism for the transformation of rural labor after land expropriations]. Tap Chi Cong San [Communist Magazine]. Available at: http://www.tapchicongsan.org.vn/Home/Nghiencuu-Trao-doi/2009/1003/Ve-chuyen-doi-co-cau-lao-dong-nong-thon-sau-thu-hoi.aspx [accessed 28th April 2018].
16. Malesky, E. *et al*. (2011). Institutions and Inequality in Single-Party Regimes: A Comparative Analysis of Vietnam and China. Comparative Politics, 43(4), pp. 401-419.
17. Nguyen, H. *et al*. (2016). A review of the drivers of 200 years of wetland degradation in the Mekong Delta of Vietnam. Regional Environmental Change, 16, pp. 2303-2315.
18. Nguyen, H. (2012). Kiến nghị không thu hồi đất của dân vì mục đích kinh tế [Petition on not expropriating land for purposes of economic development]. VNExpress.
19. Nguyen, S. (2017). Cả nước có 325 khu công nghiệp với tổng diện tích 94,9 nghìn ha [The whole country has 325 industrial zones with a total area of 92.9 thousand hectares]. Available at: http://trithucvn.net/kinh-te/kinh-doanh/ca-nuoc-co-325-khu-cong-nghiep-voi-tong-dien-tich-949-nghin-ha.html [accessed 28th April 2018].
20. Nguyen, T.L. (2017). Even It Up: How to tackle inequality in Vietnam. Hanoi: Oxfam. Available at: https://www.oxfam.org/en/research/even-it-how-tackle-inequality-vietnam [accessed 28th April 2018].
21. Nguyen, T. Q., 2005. Trends in forest ownership, forest resources tenure and institutional arrangements: Are they contributing to better forest management and poverty reduction? The case of Vietnam. Understanding Forest Tenure in South and Southeast Asia. Forestry Policy and Institutions Working Paper, FAO. Available at: http://www.fao.org/3/a-i0440f/j8167e13.pdf [accessed 28th April 2018].
22. PAPI. (2016). The Vietnam Provincial Governance and Public Administration Performance Index: Measuring citizens' experience. Available at: http://papi.org.vn/eng/wp-content/uploads/2017/04/PAPI2016_Report_Final_ENG-1.pdf [accessed 28th April 2018].
23. Politburo of the Central Committee of the Communist Party of Vietnam. (1995). Báo cáo của Bộ Chính trị tại Hội nghị lần thứ tám Ban Chấp hành Trung ương Đảng khóa VII: Một số định hướng lớn về công tác tư tưởng - lý luận trong tình hình hiện nay [Politburo report at the 8th plenary session of the 7th National Congress of the Communist Party of Vietnam: A few central directions regarding Party works on ideology-theory during the current situation].
24. Ravallion, M. and Van de Walle, D. (2008). Land and Poverty in Reforming East Asia. Finance and Development 45(3), pp. 38-41.
25. Scherr, S.J. (2000). A downward spiral? Research evidence on the relationship between poverty and natural resource degradation. Food Policy 25, pp. 479–498.
26. Statistical Yearbook of Vietnam. General Statistics Office (GSO). Available at: https://www.gso.gov.vn [accessed 28th April 2018].
27. To, P. X. *et al*. (2013). Forest Land Allocation in Vietnam: Implementation Processes and Results. Hanoi: Tropenbos International Vietnam.
28. Vietnam Society of Soil Sciences (VSS) [Hội Khoa học Đất]. (2012). Báo cáo Đề xuất chính sách đền bù giải toả khi thu hồi đất nông nghiệp [Report proposing compensation policies for agricultural land appropriation].
29. Von Braun, J. *et al*. (2012). The economics of land degradation. ZEF Working Paper Series, No. 109, ZEF, Available at: https://www.econstor.eu/bitstream/10419/88314/1/773398570.pdf
30. Vu, Q. M. *et al*. (2014). Socio-economic and biophysical determinants of land degradation in Vietnam: An integrated causal analysis at the national level. Land Use Policy, 36, pp. 605-617.
31. Wells-Dang, A. (2013). Promoting Land Rights in Vietnam: A Multi-Sector Advocacy Coalition Approach.

Paper presented at the Annual World Bank Conference on Land and Poverty, Washington DC 8-12th April.
32. World Bank. (2012). Well Begun, Not Yet Done: Vietnam's Remarkable Progress on Poverty Reduction and the Emerging Challenges. Available at: http://documents.worldbank.org/curated/en/563561468329654096/2012-Vietnam-poverty-assessment-well-begun-not-yet-done-Vietnams-remarkable-progress-on-poverty-reduction-and-the-emerging-challenges [accessed 28th April 2018].
33. World Bank Vietnam. (2015). Vietnam Systematic Country Diagnostic – Priorities for Poverty Reduction, Shared Prosperity and Sustainability. Available at: http://documents.worldbank.org/curated/en/334491474293198764/Vietnam-Systematic-Country-Diagnostic [accessed 28th April 2018].

©Micah Ingalls

Annex 1: Methods

ANNEX 1: METHODS

Gathering, collating and standardizing data on key indicators related to land is a core concern of the Mekong State of Land assessment and report. Data and information in the Mekong region is hampered by country- and sector-specific reporting, irregular production and release, and persistent issues non-transparency at multiple levels. Integrating information across countries and sectors, and harmonizing data involves a degree of selection, as does the treatment of that information in order to paint a clear, accurate and defensible picture of the land situation in the Mekong. This annex provides an overview of the choices that have been made during this process, and some qualifications of the data.

Sources of Data: Steering a middle course

The proliferation of data and information in recent years has not only raised hopes with regard to open and accountable future, but also concerns relating to its sources and reliability. Partly for this reason, the reflex-response in the Mekong region (and elsewhere) has been to trust and endorse only that data and information which is produced and disseminated through official sources. While this is in some sense a reasonable measure to mitigate the risks of inaccurate or misleading information, it is also used to delegitimize even accurate sources of information that might contradict official accounts or disclose information damaging to state agencies or high-ranking officials. The inability to accept information from non-official sources results also in unintended consequences. The production and release of official information from state agencies is typically a prolonged process, resulting in delays in the availability of data and information critical to the effective management of land resources. Further, the quality of official data is, much like non-official data, only as good as the entities that produce it. The State of Land report seeks not only to present key information on land resources, their distribution and the conditions governing these, it is also an overture to dialogue, collaboration, and exchange. These dual purposes guide the selection of data sources and how these sources are treated. In general, data from official and widely-recognized sources[81] forms the backbone of the assessment. Where such sources are insufficient, outdated or misleading, they are supplemented, updated, and either refuted or qualified with other reliable sources and, where needed, referenced in the text to allow the reader to assess their reliability.

Data Availability

The State of Land report seeks to bring together the most recent, reasonably-complete sets of information available, disaggregated to the lowest common level across the Mekong countries to facilitate cross-comparison through consistency. Typically, this included the most recent data from agriculture, population and other censuses. The resolution of this data varied greatly from disaggregated, household-level data and information in Lao PDR on one extreme to state- and regional-level data in Myanmar on the other. For consistency, data was disaggregated only to the level of the least refined set (Myanmar). Census data, even where accessible, is also limited by the census cycles. In Lao PDR, for example, carried out its last agricultural census in 2010-11, and thus much of its data is already 7 years old.

In the interest of achieving standardized measures across countries (see below), some preference was given to large global and regional data sources, such as the World Bank's data on GDP and population, FAO's data on land use and land cover, and various UN-related indices such as the Gender Inequality Index. While these sources provide fairly consistent data, they are often at coarse resolution (reflecting their global orientation) and often delayed in report. UN Comtrade data (the principal source of data for the assessment of land-intensive commodity flows) is typically delayed due to the lengthy reporting and collation process (2016 is the most recent year consistently available).

Other kinds of data critical to this assessment are not typically available in any form. In particular, information relating to land concessions is difficult for a variety of reasons, relating to the inability of institutional processes to keep pace with the rapid expansion of land investments since 2008, fractured reporting systems between local and central levels, between responsible government agencies as well as the politically-sensitive nature of land concessions and investment (see below).

Whatever the limitations and risks, rapid progress toward the realization of open data standards and full public transparency is essential to the equitable, sustainable management of land resources. It is also an essential foundation of accountability, not only the accountability of state authorities to their constituents, but also the accountability of the donor community, development agencies and international organizations to the beneficiaries of their interventions.

[81] Not only data produced by the member governments of the Mekong, but also from international organizations and entities (notably the World Bank, and FAO and other UN agencies)

Crop Diversity Index

The Crop Diversification Index (CDI) is adapted from the Simpson's Diversity Index (Help et al. 1998), which is a measure of biological diversity of a given area. It takes into account the number of crops cultivated in a given administrative or ecological area as well as the relative importance of each crop.

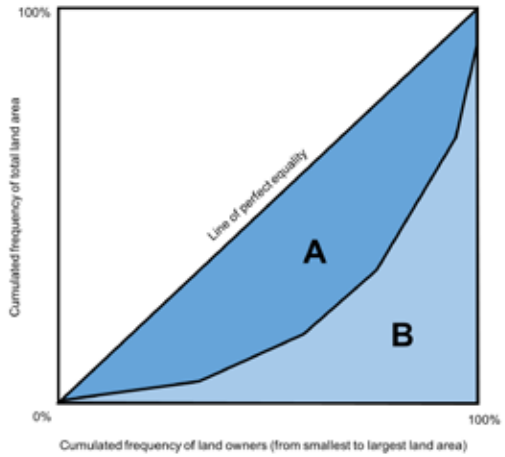
The CDI synthesizes the level of crop diversification in a single value ranging between 0 and 1. The formula of the index is: $1-\sum(\frac{n_i}{N})^2$, where ni is the cultivated area for crops i and N is the total cultivated area. When the number of crops and their relative importance increase, the value of the index increases towards 1. In reverse, a low diversification level is indicated by a value closer to 0 (Diepart et al. 2005).

To compute the index for each country, we computed the planted area of main or all crops depending on availability. The data were retrieved from official agricultural production statistics, either from recent agricultural census conducted in the country (e.g. Cambodia and Laos) or from relevant ministries (Myanmar, Viet Nam and Thailand). The data were processed and made consistent to provide a value of index at national as well as sub-national level.

Land Gini Index Method

The Gini index is a measure of concentration intended to represent the degree of equality in the distribution of income, land, wealth, etc. (Bellù and Liberati 2006). In this report, the Gini index is calculated to represent the degree of [in] equality in land distribution between land owners (smallholder farmers, entrepreneurs, concessionaires).

The calculation of the Gini index or Gini coefficient is based on the Lorenz curve that shows the proportion of overall land area owned by a certain percentage of land owners. Two cumulated frequencies series are needed to chart a Lorenz curve: the cumulated percentage of land owners (x-axis) and the cumulated percentage of land (y-axis). The line of perfect equality in land distribution (every land owner has exactly the same area) is depicted as the straight line y=x. In contrast, a perfectly unequal land distribution would be one in which one person or household owns all the land.



The Gini index is the ratio of the area between the line of perfect equality and the observed Lorenz curve (area A) - to the area between the line of perfect equality and the line of perfect inequality (area A+B). The index values range from 0 (perfect equality) to 1 (perfect inequality). The higher the value, the more unequal the distribution.

To compute the Gini index for each country, we computed statistics on land distribution from official sources, either from recent agricultural census conducted in the country (e.g. Cambodia and Laos) or from relevant ministries (Myanmar, Viet Nam and Thailand). The data available was the distribution of households for different size of land holding at national and provincial/region level. For each landholding size class, we approximate the total land area simply by multiplying the number of household by the mean value of the land size interval. Landless agricultural household were not always included in each country statistics, which limits the comparability of the indexes.

Concession data and inventory

In Cambodia, the inventory of land concession is derived from the Open Development (ODC) Portal that has been very active since 2011 in compiling and providing the public with up-to-date, accurate information about Cambodia and its economic and social development (https://opendevelopmentcambodia.net/).

The economic land concession (ELC) database of ODC differentiates between two sources of data. The so-called government brings information about concession that can be traced from government sources, whether complete or partial. The information compiled by the ODC team is collected from variety of public domain sources such as the government and company websites.

The dataset also includes other non-governmental data provided by other organization, research institutes or news reports. Even if they are not sourced in government document, we decided to keep them in our analysis because they indicate real agro-business operations on the ground. In addition to providing spatial and tabular information about ELCs, the ODC team has also endeavored to track all the adjustment to ELCs contracts as a result of the Order 01, starting in 2012, such as land cuts and cancellation of licenses.

We brought all these data together and information to produce a dataset that would provide as accurate as possible a picture of the evolution and current situation of Economic Land concession in Cambodia. Land concession inventory data in Laos was produced in cooperation with the Ministry of Planning and Investment, the Ministry of Agriculture and Forestry, the Ministry of Natural Resources and Environment, and the Ministry of Energy and Mines through the SDC-funded Lao DECIDE project supported by the Centre for Development and Environment at the University of Bern. Concession inventory work was carried out at the District level throughout Lao PDR between 2012 and 2017, including the collation of

concession data from government databases and other information sources at all levels of government, and the mapping of concession boundaries and used areas.

In Myanmar, land concession are granted by several ministries the information is not managed in a concerted manner. Aggregated data on agricultural large-scale land deals were primarily collected from different departments of the Ministry of Agriculture, Livestock and Irrigation (MoALI) as well as from the Forest Department of the Ministry of Natural Resources and Environmental Conservation (MoNREC). These datasets were processed and analyzed to identify the magnitude of large-scale land acquisition in Myanmar. A particularly detailed dataset of land deals on Vacant, Fallow and Virgin lands from 1991 to 2016 - probably the most up-to-date source of information currently available on LSLA in Myanmar - serves as the main data source for statistical and spatial analyses. The analysis of large-scale land acquisitions presented in the report is limited to VFV land deals higher than 50 acres. The choice of this threshold value is based on Article 10 of the VFV Land Law which allows rural farmers to acquire VFV land not exceeding 50 acres. We have also excluded the area of VFV land that was converted into farmland under current VFV Land Law.

The datasets put together with land deals on VFV land did not have any geographic attributes. The information available on the location of each case was limited to village tract name. In order to get the geo-referenced location of the confiscation, we lumped the total area of land deals in each village tract and represented it using the centroid of the village track boundary.

In Viet Nam, the data and information of agricultural and forestry concession were retrieved from the land matrix http://www.landmatrix.org/en/. The tabular data provided on the land matrix observatory only indicate the province where the concession is located. We dereferenced it simply by randomly selecting one point location chosen within the province boundary. We only represent the information for those deals that are on-going and not abandoned.

Land Governance Assessment Approach and Tool

The assessment of the land governance in each country was based on a strategic indicator framework developed by MRLG for the evaluation of policies, laws, institutions and practices related to securing access to and control over agricultural land for smallholders, especially women and indigenous people, in each of the Mekong countries. The framework applies to land rather than to the wider access to resources including forests and fisheries. It consists of 12 indicators that are classified in four broad themes, as follows:

1. Level of support to smallholder tenure security and access to resources provided by the country's regulatory framework
    - 1.1. Legal recognition of land tenure rights of smallholders
    - 1.2. Inclusiveness in decision making on policy or legislation that impacts on access to land
    - 1.3. Recognition of rights to farming practices associated with indigenous peoples
    - 1.4. Clarity of institutional mandates and practice concerning governance of the land sector
2. Strength of smallholders tenure and land use rights (in practice) to face competing claims, fraud and conflicts
    - 2.1. Protection of tenure and rights of smallholders
    - 2.2. Compensation paid for expropriation of property and resources access rights regardless of registration status
    - 2.3. Conflicts generated by land acquisitions
3. Strength of smallholders tenure and land use rights of women and IP (in policy and practice)
    - 3.1. Regime context and rights-based approach
    - 3.2. Avenues to lodge complaints against expropriation of land
    - 3.3. Civil society support
4. Smallholder ability to claim and defend their tenure right
    - 4.1. Women's rights recognized in practice by forma system
    - 4.2. Recognition of indigenous status and culturally-specific practices

In each country, the assessment was facilitated amongst a panel of land experts (10-15) representing a variety of state and non-state organizations and land-based sectors. The panel of expert was requested to assign a score on a five-point Likert scales that are easy to differentiate. The scoring is subjective on the part of the experts involved but the process was facilitated so that each expert could justify his choice, inform the group discussion and reach a reasonable, defensible and fair assessment of land governance conditions. The final score computed for each indicator is simply the mean value of each expert's score for that particular indicator.

References

1. Bellù, L. G. and Liberati, P. (2006) Inequality Analysis. The Gini Index. FAO-EASY. Roma, Italy: Food and Agricultural Organization.
2. Diepart, J.-C., Dogot, T., Ly, V., Loeung, C. and Bora, K. (2005) Le Monde Rural dans la Plaine Centrale du Cambodge. Analyse comparative à partir de cinq communes. Gembloux: Les Presses Agronomiques de Gembloux.
3. Help, C. H. R., Herman, P. M. J. and Soetaert, K. (1998) 'Indices of diversity and evenness', Oceanis, 24(4), pp. 61–87. doi: 10.1016/j.hal.2004.08.006.

Produced by:

With funding from:

Partner Organizations: