

Research Paper

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Improving Legality Among Small-Scale Forest Enterprises The Role of National-Level Indicators Within the Sustainable Development Goals

Summary

- The small-scale forest sector is booming in many countries and playing a crucial role in their rural economies. However, much of the activity in this sector is informal, owing to poorly designed policy frameworks and the lack of political support for small-scale operators.
- Research in Brazil, Ghana, Indonesia and Laos indicates that despite some success with initiatives aimed at formalizing small-scale enterprises, there has not yet been change on the scale required to establish a predominantly legal and well-governed small-scale forest sector in these countries. The main reasons are the lack of political support for the formalization of the sector and the tendency of these countries' governments to prioritize large-scale export-oriented forest activities in their development strategies.
- The UN Sustainable Development Goals provide an opportunity to change attitudes, both through helping to draw attention to the small-scale forest sector and by increasing the available resources that could be allocated to its development. A system of national-level indicators for the small-scale forest sector could serve both of those purposes. Such indicators would measure progress towards establishing an enabling environment for small and medium-sized forest enterprises and monitor the growth of the sector. Defining such indicators would have to be done through a process of national-level consultation.
- The development of a framework of indicators could provide an effective way of galvanizing political support and of driving progress towards establishing a legal and sustainable small-scale forest sector.

Introduction

Supporting small and medium-sized forest enterprises (SMFEs) is an effective means of establishing vibrant and sustainable rural economies. Evidence from around the world shows that a strong small-scale forest sector has positive economic, social and environmental impacts.¹

Those benefits can be particularly strong in developing countries, where a high proportion of economic activity is carried out by small and medium-sized enterprises, including in the forest sector. SMFEs support the livelihoods of hundreds of thousands of people, accounting for more than 50 per cent of forest sector employment in a large number of developing countries.² They also account for a sizable portion of timber production in many countries: it is estimated that in Cameroon, the Democratic Republic of the Congo (DRC), Ghana and Indonesia, at least half of national timber production comes from small-scale producers.³

Most of this small-scale activity, however, takes place outside the formal sector or – to put it more starkly – is illegal. The high level of illegality among SMFEs reduces their potential to make a positive contribution towards sustainable development; informal operations are often associated with poor labour standards, out-of-date technology, weak management systems and unsustainable use of resources. The scale of illegal logging by small-scale producers was highlighted in Chatham House's recent analysis of illegality in the forest sector: in Cameroon, at least half the country's timber production comes from informal chainsaw logging, while in the DRC the equivalent figure is about 90 per cent and in Ghana more than 60 per cent.⁴

The high level of illegality among SMFEs reflects the fact that the legal and policy frameworks that have been put in place are inappropriate for small-scale operators in many countries (described in more detail below). For this reason, law enforcement alone is not the solution. A strategic approach is required that takes into account how legal compliance can be encouraged and provides for various ways to establish legal livelihoods.

This paper outlines some of the challenges that are faced by SMFEs in meeting the requirements of the formal market and considers what should be done to improve legality within the small-scale sector. In particular, it focuses on the possible role that the UN Sustainable Development Goals (SDGs) could play in promoting reform. Data are drawn from the findings of two case studies

¹ Del Gatto, F. et al. (2014), *Taking Stock of Community-based Forest Enterprises Involved in Timber Commercialization in Latin America*, FAO and Forest Trends. Report from the workshop 'Creating an enabling environment for the commercialization of timber from community forests by community-based forest enterprises (CBFEs) in Latin America', 26–28 November 2014, Santiago, Chile; deMarsh, P. et al. (2014), *Making Change Happen. What can governments do to strengthen forest producer organizations?*, Forest and Farm Facility Working Paper, FAO; Elson, D. (2012), *Guide to investing in locally controlled forestry*, published by Growing Forest Partnerships in association with FAO, International Institute for Environment and Development (IIED), International Union for the Conservation of Nature (IUCN), The Forests Dialogue and the World Bank; and Macqueen, D. et al. (2014), *Prioritising support for locally controlled forest enterprises*, published by IIED, Forest Connect and Forest and Farm Facility.

² Macqueen, D. (2008), *Supporting small forest enterprises – A cross-sectoral review of best practice*, published by IIED.

³ For the estimates for these countries, see, respectively, Cerutti, P. O. and Lescuyer, G. (2011), *The domestic market for small-scale chainsaw milling in Cameroon: Present situation, opportunities and challenges*, CIFOR Occasional Paper No. 61; Lescuyer, G. et al. (2014), *The domestic market for small-scale chainsaw milling in the Democratic Republic of Congo: Present situation, opportunities and challenges*, CIFOR Occasional Paper No. 112; Marfo, E. (2010), *Chainsaw Milling in Ghana: Context, drivers and impacts*, published by Tropenbos International; and Hoare, A. (2014), *Illegal Logging and Related Trade: The Response in Ghana*, Chatham House Assessment, London: Royal Institute of International Affairs.

⁴ Hoare, A. (2015) *Tackling Illegal Logging and the Related Trade: What Progress and Where Next?*, Chatham House Report, London: Royal Institute of International Affairs.

commissioned by Chatham House in Brazil and Laos and from a review of the literature of the small-scale sector in Ghana and Indonesia.⁵

These four countries were selected from among the 19 countries included in Chatham House's 'indicators of illegal logging project', of which the research carried out for this paper was a part. They were chosen because they offer very different ecological, socio-political and economic contexts and thus illustrate the diverse nature of SMFEs around the world and the challenges they face. That diversity is apparent from the statistics presented below in Table 1 on the availability of forest resources, the contribution of the forest sector to the economy (in terms of export earnings, the local economy and job creation), the relative importance of the small-scale sector within this, levels of illegality, types of forest ownership and levels of governance.

Table 1: Summary statistics for the countries reviewed^a

	Brazil	Ghana	Indonesia	Laos
Forest area, million ha (% of total land area)	493.5 (59%)	9.3 (41%)	91.0 (53%)	18.8 (81%)
Deforestation 2010–15, million ha (average annual loss in %)	0.98 (0.2%)	0.03 (+0.3%)	0.68 (0.7)	0.19 (+1)
Human Development Index ranking, 2014 (out of 187 countries) ^b	75	140	110	141
World Bank 'Ease of Doing Business' ranking, 2015 (out of 189 countries) ^c	116	114	109	134
Forest ownership, 2010, % of non-state land	38%	0%	13%	0%
Contribution of forest sector to GDP, 2013, % ^d	1.4%	5.7%	1.3%	5.2%
Employment in forest sector, (year in which estimate made)	Formal sector: 700,000 (2012) ^e	Formal sector: 100,000; SMFE sector: 97,000 (2010) ^f	Both sectors: 3.8 million (2010) ^g ; SMFE sector: 1.5 million (2011) ^h	–
Estimated share of timber production from SMFEs, % of total	–	70% ⁱ	–	–
Estimated share of timber production that is exported, % of total ^j	5% ^k	30%	70%	80%
Estimated share of timber production that is illegal, % of total ^l	>50% ^k	70%	60%	80%

a Data are from the FAO's 2015 Global Forest Resources Assessment (FRA2015) unless otherwise stated. They are intended to give an indication of the size and importance of the forest sector, but it should be noted that the data – especially on deforestation – vary significantly as regards robustness. In particular, the estimate of deforestation in Laos is doubtful as it was based on extrapolating deforestation estimates for the period 2002–10.

b See <http://hdr.undp.org/sites/default/files/ranking.pdf>.

c See <http://www.doingbusiness.org/rankings>.

⁵ The research in Brazil was undertaken by the Earth Innovation Institute (EII). The report is available at: <http://earthinnovation.org/publications/legal-compliance-and-verification-of-small-scale-producers-in-brazils-forest-sector/> (accessed 9 Mar. 2016). The research in Laos was undertaken by Tina Schneider. The literature review was undertaken by IIED.

d See <http://data.worldbank.org/indicator/NY.GDP.FRST.RT.ZS>. Note that most GDP values under-represent the contribution of forests, in part owing to the high level of informality.

e See the Brazilian Forest Service's presentation on Brazil at the Expert Group Meeting: Modelling Approaches and Tools for Testing of the SEAA Experimental Ecosystem Accounting, 18–20 November 2013 at UN Headquarters, New York.

f Marfo (2010), Chainsaw Milling in Ghana.

g ITS Global (2011), The Economic Contribution of Indonesia's Forest-Based Industries, http://www.itsglobal.net/sites/default/files/itsglobal/ITS_Indoforest_Economic_Report.pdf.

h Obidzinski, K. et al. (2014), Timber legality verification and small-scale forestry enterprises in Indonesia. Lessons learned and policy options, CIFOR Info Brief No. 76.

i Analysis by Gene Birikorang for the Chatham House 'indicators of illegal logging project' (indicators.chathamhouse.org).

j See indicators.chathamhouse.org.

k For tropical timber only.

l See indicators.chathamhouse.org.

Characterizing SMFEs

The types of enterprise that can be defined as SMFEs are very diverse. They range from one-person operations or companies involving a few individuals to firms that can have as many as 100 employees. Some are run by a specific community or social group while others are purely enterprise-driven. SMFEs are involved in activities along the entire supply chain – from production and processing to manufacturing and retail.⁶ Given such diversity, it is clear that the characteristics of such enterprises are very varied; however, some generalizations can be made.

On the positive side, SMFEs are often flexible and have rapid decision-making processes, which means they are able to quickly respond to new opportunities and adapt to changing circumstances. They can be more socially appropriate – particularly in the case of community-driven enterprises – with regard to management structure, modes of employment and types of production, among other things. In addition, they can play an important role in empowering communities. Furthermore, a large share of SMFEs' profits tend to be reinvested in the local economy. As they tend to be more labour- than capital-intensive, SMFEs are an effective means of generating employment; and they can provide a broader national tax base for governments (rather than depending on a much smaller number of very large enterprises). And, finally, owing to their low capital intensity, they can have a relatively low environmental impact: for example, small-scale logging operations tend not to use heavy machinery. While the benefits of low-level mechanization can be outweighed by the numbers of people involved, there can be sufficient incentives for enterprises that are locally rooted and have secure tenure to encourage sustainable practices.⁷

However, on the negative side, the low capital intensity of such enterprises is often a reflection of limited access to finance or technical support. This means that many SMFEs are using old equipment, which may be inefficient and/or unsafe, and have limited ability to improve practices and progress to higher value-added production. Furthermore, they tend to have little capacity to keep up to date with changes in the legal framework or the market (including shifting demand for products or fluctuating prices). Owing to the high level of 'informality' among SMFEs, many of

⁶ Elson, D. (2008), *Linking FLEGT Voluntary Partnership Agreements to Jobs and Growth: Potential Challenges and Benefits for Small and Medium Sized Forest Enterprises*, Forest Trends; and Macqueen (2008), *Supporting small forest enterprises*, IIED.

⁷ See, for example, Porter-Bolland, L. et al. (2011), 'Community managed forests and forest protected areas: An assessment of their conservation effectiveness across the tropics', *Forest Ecology and Management*, 268: pp.6–17.

these enterprises are not contributing to tax revenues and are unable to access official sources of support, such as training and credit. Thus their activities are not monitored by governments, which undermines efforts to oversee and regulate forest activities.⁸

All too often, the view of SMFEs tends to highlight these negative characteristics. Not least, this is because of the high level of ‘informality’ in the sector. As a result, they are not recognized as making a significant contribution to local economies or as having potential to generate government revenues. And this, in turn, means that they are not prioritized for support and investment by governments. More fundamentally, governments tend to regard the small-scale sector as ‘backward’ and incompatible with their development strategies, which are frequently based on the expansion of large-scale, export-oriented businesses (in forestry, agriculture and mining).⁹ For these various reasons, SMFEs are often seen as a problem to be eliminated rather than as an opportunity to support sustainable and equitable development.

Introduction to the case studies

Small-scale timber production in Santarém, Pará state, Brazil

The case study undertaken in the Santarém region of Pará state focused on the challenges and potential for legal timber production within agrarian settlements.¹⁰ Pará is one of the main timber-producing states in the Legal Amazon; it accounted for one-third of Brazil’s tropical log production in 2011.¹¹ Small properties account for a significant proportion of such logs; in 2009 it was estimated that one-third of tropical timber production in the Amazon was from properties of less than 500 hectares (ha).¹²

Under Brazil’s new Forest Code (amended in 2012), all landholdings in the Legal Amazon need to maintain 80 per cent of their land area as a ‘legal forest reserve’ (although there are some exceptions to that ruling). Thus, there are two ways in which smallholders can log legally: either by clearing forest land for conversion to agriculture, for which a ‘forest suppression permit’ is required, or by harvesting timber from their ‘forest reserve’, for which a sustainable forest management plan and annual operating plan are needed. An analysis of timber transportation documents issued between 2007 and 2010 indicated that half the licensed timber production in the Legal Amazon was from deforestation permits and half from forest management.¹³

Smallholder forest management for timber production is possible on various categories of land: sustainable development reserves, extractive reserves, agrarian settlements and up to 20 per cent of national and state forests. Based on 2010 land distribution data, the total area available for

⁸ UN Global Compact (2014), ‘Localizing the Architecture of Business Engagement through Small and Medium-sized Enterprises: Implementing the Post-2015 Development Agenda’; and Elson (2008), *Linking FLEGT Voluntary Partnership Agreements*.

⁹ See, for example, Pokorny, B. et al. (2013), ‘From large to small: Reorienting rural development policies in response to climate change, food security and poverty’, *Forest Policy and Economics*, 36: pp. 52–59; Pokorny, B. and De Jong, W. (2015), ‘Smallholders and forest landscape transitions: locally devised development strategies of the tropical Americas’, *International Forestry Review* 17 (S1), 2015; Castella, J.-C. et al. (2012), ‘Effects of Landscape Segregation on Livelihood Vulnerability: Moving From Extensive Shifting Cultivation to Rotational Agriculture and Natural Forests in Northern Laos’, *Human Ecology*, 41 (1): 63–76.

¹⁰ The research, undertaken in 2014 by the Earth Innovation Institute (EII) entailed a literature review and interviews with key stakeholders, including smallholders, government agencies, forest product companies and NGOs.

¹¹ Serviço Florestal Brasileiro (SFB) (2013a), *Brazilian Forests in Summary – 2013: data from 2007 to 2012 (Florestas do Brasil em resumo – 2013: dados de 2007-2012)*, Brasília: Serviço Florestal Brasileiro.

¹² Pereira, D. et al. (2010), *Forestry Facts of the Amazon 2010 (Fatos Florestais da Amazônia 2010)*, Belém, Brazil: IMAZON.

¹³ SFB (2013a), *Brazilian Forests in Summary – 2013*.

smallholder timber extraction was estimated at nearly 60 per cent of the Legal Amazon.¹⁴ Agrarian settlements make up more than 5 per cent of the area of the Legal Amazon.¹⁵ They are the result of a massive resettlement programme that has been implemented in Brazil since the 1970s, under which more than 1.2 million people have been relocated, mainly into the Legal Amazon.¹⁶ The settlements have faced numerous challenges, most notably a lack of government resources to provide the necessary infrastructure and little support for establishing legal and sustainable land-use systems. This is a major reason for the involvement of logging companies in timber harvesting in settlements. Although such companies have brought benefits, including the construction of roads and the provision of much-needed capital, many of the agreements concluded between companies and smallholders have been exploitative or illegal. Consequently, these settlements have become a major source of illegal timber.

Over the years, a number of legal reforms have been made to try to address this problem, including the introduction in 2006 of a requirement whereby agrarian reform settlements had to obtain environmental licences prior to their forest management plans being approved. Furthermore, in 2010 the government changed its policy of encouraging company involvement in settlements, stating that, if possible, forest management should remain under the control of families. However, owing to the very limited capacity and resources among smallholders to obtain the necessary permits and implement forest management, both of these changes made legal timber production even more difficult. The requirement for environmental licences was revoked in 2013. Meanwhile, some of the reforms introduced under Brazil's 2012 Forest Code have the potential to improve regulation of the sector, but SMFEs still face significant hurdles in engaging in legal timber production, as explained below.

Plantation management in Bokeo and Luang Prabang provinces, Laos

The second case study was conducted in Laos, and focused on teak plantation management in the provinces of Bokeo and Luang Prabang.¹⁷ In Laos, smallholders and communities can be involved in forestry only through the management of tree plantations. Since 2001 there has been no legal basis for communities to undertake commercial timber harvesting in natural forest areas; as a result their involvement in these forests is limited to revenue-sharing and the management of non-timber forest products.

The government is supportive of smallholder plantations as part of its strategy to reduce shifting cultivation, increase forest cover and improve rural livelihoods. That support is reflected in the expansion of the area of smallholder plantations since the early 1990s.¹⁸ Data are limited, but in

¹⁴ Carneiro, M. et al. (2011), 'Public Policy and the Challenges to Consolidation of MFCF in Settlements and Conservation Areas in the Brazilian Amazon' (Políticas Públicas e os Desafios para Consolidação do MFCF em Assentamentos e Unidades de Conservação na Amazônia Brasileira), in Cruz, H., Sablayrolles, P., Kanashiro, M., Amaral, P. and Sist., M (eds) (2011), *Company | community relations in the context of community and family forest management: a contribution of the project Floresta em Pé (Relação empresa | comunidade no contexto do manejo florestal comunitário e familiar: uma contribuição do projeto Floresta em Pé)*, Brasília: Ibama, pp. 285–307.

¹⁵ Schneider, M. and Peres, C. A. (2015), 'Environmental Costs of Government-Sponsored Agrarian Settlements in Brazilian Amazonia', PLoS ONE, doi:10.1371/0134016; and SFB (2013a), *Brazilian Forests in Summary – 2013*. The other main land categories are: private lands (23 per cent), protected areas, including indigenous territories and conservation areas (44 per cent) and contested or undesignated areas (27 per cent) – see Pereira, et al. (2010), *Forestry Facts of the Amazon 2010*.

¹⁶ Schneider and Peres (2015), 'Environmental Costs'.

¹⁷ The research was undertaken in 2014 by Tina Schneider, an independent consultant, and entailed a literature review and interviews with key stakeholders, including smallholders, government agencies and NGOs.

¹⁸ Hansen, P. K. et al. (2007), 'Teak Production by Shifting Cultivators in Northern Lao PDR', in Cairns, M. (ed) (2007), *Voices from the Forest: Integrating Indigenous Knowledge into Sustainable Upland Farming*, Washington, D.C.: Resources for the Future, pp. 414–24; and Midgley, S. et al. (2007), *Towards improving profitability of teak in integrated smallholder farming systems in northern Laos*, ACIAR Technical Report No. 64, Canberra: Australian Centre for International Agricultural Research (ACIAR).

2005 smallholder plantations were estimated to cover 30 per cent of the country's total land area.¹⁹ Most of those plantations are for rubber production, while eucalyptus, acacia and teak accounts for the bulk of the remainder. Teak is grown mainly in the north of the country, particularly in Luang Prabang. Smallholders manage the vast majority of teak plantations: in 2011 it was reported that they accounted for 95 per cent of teak production.²⁰

The legal framework for plantations is unclear: there are inconsistencies between the land and forest laws over the categories of land that can be converted to plantations, and the tax regime is confusing. Furthermore, obtaining the necessary permits is a time-consuming and costly process. Plantations need to be registered with the government, for which the following documents must be submitted: proof of land use rights or ownership history, a land tax declaration and a certificate of residence. The district forestry office is then required to measure and verify the site itself before issuing a permit that gives timber rights for one rotation. In some cases, temporary land-use permits are applied for at the same time as plantation registration; after three years, an application can be made to convert the permit to permanent land title.²¹ Many smallholders reportedly want to establish plantations so that they can obtain land rights, based on the understanding that this will enable their application for permanent land title. However, the process for obtaining permanent land rights is opaque.

There are legal reforms under way, including revisions of the forest and land laws as well as the National Land Policy. The negotiation of a Forest Law Enforcement, Governance and Trade (FLEGT) Voluntary Partnership Agreement (VPA) with the EU is about to start – a process that will provide a framework for improving governance of the forest sector. However, the reform processes have been underway for many years and the VPA process has also been slow to advance. If the government does push ahead with these processes and if adequate consideration is given to the needs and priorities of the smallholder, there could be an opportunity to address some of the barriers to legal smallholder plantation management.

Ghana's small-scale forest sector

Chainsaw milling predominates in Ghana: it is estimated to account for nearly two-thirds of the country's timber production. Much of this is to supply the booming domestic market, which consumes more than twice as much timber as is exported. Chainsaw milling makes an important contribution to rural livelihoods, providing direct employment to nearly 100,000 people and supporting the livelihoods of about 700,000 people. However, it is illegal – chainsaw milling for commercial purposes was banned in 1998.²²

The need to control chainsaw milling and to find sustainable solutions for the domestic timber market has been recognised by the government and these issues are high on the political agenda. A multi-stakeholder process aimed at developing alternatives to chainsaw milling has been under way

¹⁹ Ministry of Agriculture and Forestry, Lao PDR (2005), 'Forestry Strategy to the year 2020 of the Lao PDR.'

²⁰ Responsible Asia Forests and Trade (RAFT) (2011), *RAFT Story of Change: A Brighter Future for Forests in the Lao PDR*, Washington, D.C.: The Nature Conservancy.

²¹ Smith, H. (2014), *Smallholder Teak Plantation Legality in Lao PDR: A study to assess the legal barriers to smallholder teak plantations and the associated timber value chain*, Canberra: ACIAR.

²² Marfo (2010), *Chainsaw milling in Ghana*; and Hoare (2014), *Illegal Logging and Related Trade*.

since 2008.²³ Ensuring supplies of legal timber for the domestic market is also a priority issue for implementation of the country's VPA with the EU. Under that agreement, the domestic market is to be included within a timber legality assurance system, which has been developed as part of the VPA process. Thus all timber sold both on the domestic market and for export will need to be licensed as legal once the system is in place.²⁴

In the meantime, chainsaw milling remains widespread, despite being illegal. This is because there are strong incentives for all those involved to continue. Removing those incentives will require reform of the tree tenure system and further improvements to governance of the sector.

Indonesia's small-scale forest sector

Indonesia has a thriving small-scale forest sector. There are estimated to be hundreds of thousands of small and medium-sized enterprises, employing as many as 1.5 million people. However, many of those enterprises are operating illegally owing to various factors, including complex legal requirements, weak enforcement of forest legislation, strong demand for timber and a limited supply of legal sources of timber.²⁵

This situation has been highlighted during the implementation of Indonesia's VPA with the EU and its timber legality verification system (SVLK). Under the SVLK, which was launched in 2010, the majority of forest enterprises need to be certified in order to operate legally. Once the SVLK has met all the requirements set out in the VPA, licences issued under this system will be required for imports of most timber products to the EU. While there has been considerable progress towards implementing this system across the country, a significant proportion of small-scale enterprises have yet to be certified.

Increasing legality in the small-scale sector

The reasons for the high level of illegality in the small-scale forest sector are well documented. They include inappropriate policy and institutional frameworks, limited incentives to operate legally (both because of weak enforcement of forest legislation and the absence of a market for legal timber) and insufficient financial and technical support. The solutions are equally well known: to improve the business environment and build the capacity of SMFEs, among other remedies.²⁶ Despite this understanding, the progress towards increasing legality among SMFEs has been patchy at best, as is illustrated by the target countries in this study.

²³ See <http://www.tropenbos.org/projects/addressing+chainsaw+milling+in+ghana+and+guyana+through+multi-stakeholder+dialogue>. (accessed 9 Mar. 2016)

²⁴ See <http://www.euflegt.efi.int/ghana>. (accessed 9 Mar. 2016)

²⁵ Obidzinski et al. (2014), 'Timber legality verification'.

²⁶ Cerutti, P. et al. (2014), *Policy options for improved integration of domestic timber markets under the voluntary partnership agreement (VPA) regime*, CIFOR Policy Brief No. 80; deMarsh et al. (2014), *Making Change Happen*; Macqueen et al. (2014), *Prioritising support*; Pokorny et al. (2013), 'From large to small'; Putzel, L. et al. (2014), *Formalization of natural resource access and trade: Insights from land tenure, mining, fisheries, and non-timber forest products*, published by CIFOR.; and Rights and Resources Initiative and RECOFTC, the Center for People and Forests (2013), *Enabling Forest Users to Exercise Their Rights: Rethinking regulatory barriers to communities and smallholders earning their living from timber*.

Improving the business environment

Policy and institutional framework for SMFEs

The policy and institutional framework often presents considerable challenges for SMFEs. First, the law may be unclear about the procedures that enterprises need to follow to obtain tenure or use rights – a situation that creates opportunities for corruption to flourish. Second, the requirements may be technically demanding, expensive and time-consuming to meet, often because the legal framework of many countries has not been designed specifically for SMFEs. And third, the growing demand for legality verification of timber to supply markets such as Europe and the United States has increased bureaucratic requirements and costs.

While it is often the case that these challenges are faced by all operators, regardless of their size, the limited capacity of SMFEs means that they are particularly affected: not only are they less able to navigate complex requirements; most have only limited ability to argue for legal reforms or to refuse to be involved in corrupt practices.

Such challenges are clearly illustrated by the case studies included in this paper. As highlighted above, the legal framework for smallholder plantations in Laos is complex and unclear, and the interpretation of the law differs both between provinces and districts. Furthermore, dissemination of the law is lacking, as a result of which smallholders have limited legal knowledge. The requirements are burdensome and costly, particularly given that many plantations are less than 1 ha in size; they include registration, pre-harvest assessment, development of a management plan and applying for harvest and transportation permits. No fewer than 30 different fees have been identified along the supply chain from production to export; if all are applicable (and it is unclear whether they are), the total amount to pay would be at least US\$700.²⁷ The over-regulation of smallholders is a direct consequence of many of the requirements having been designed with large-scale plantations and concessions in mind and thus being inappropriate for the scale of production of smallholdings and the low risk of negative environmental impacts they pose.²⁸

It is therefore not surprising that the vast majority of smallholders have not registered their plantations. According to a recent estimate, just 10 per cent of plantations in the province of Luang Prabang are registered; those that have done so have received external-support from NGOs.²⁹ The over-regulation of the plantation sector has been recognised by the government, however, and initiatives are under way to clarify and simplify the requirements, including those for smallholders.

The absence of land tenure documentation and complex permit requirements for forest management means that legal production remains beyond the reach of many SMFEs operating in natural forests in Brazil. The Brazilian government has devoted considerable resources to regularizing land use and ownership, but those funds have proved insufficient in light of the scale of the task; as a result, a large proportion of properties remain without titles or use permits. Obtaining approval for forest management activities is dependent on either having proof of land title or use

²⁷ This would be the total fee for 1600m² of plantation and 1m³ of harvested timber – see Smith (2014), *Smallholder Teak Plantation Legality*.

²⁸ See Smith, H. and Phengsopha, K. (2014), *Enhancing Key Elements of the Value Chain for Plantation Grown Wood in Lao PDR*. Policy Brief, July 2014. Canberra: ACIAR.

²⁹ Personal communication with staff of The Forest Trust and RECOFTC, the Center for People and Forests in 2014.

rights or, if such proof cannot be provided, receiving the consent of the relevant government agency.

Once such consent has been given, the forest management plan and first annual operating plan must be approved. This can take up to three years and be very expensive. In 2014 it was estimated that in the Santarem region, the cost for such plans and undertaking an inventory was US\$7,360 for enterprises with 60 ha.³⁰ According to another estimate, pre-harvest costs (including inventory and annual operating plans but excluding forest management plans) in the same region totalled US\$27,604 for 300 ha in 2008.³¹ Such amounts far exceed the annual income of many settlers in the region; the average total annual income for agricultural settlers in the late 1990s ranged from US\$520 to US\$11,590.³²

Attempts have been made to streamline the process over the years. For example, the requirements for smallholders to obtain a forest management plan were simplified in 2013, removing the obligation to have an environmental licence.³³ Furthermore, under the 2012 Forest Code, smallholders are required to register their landholding in the Rural Environmental Cadastre; and significant efforts are being made by the government to achieve this. Once there is widespread coverage in the cadastre, the process for regulating forest management will be simpler. However, achieving such coverage is a huge task: hundreds of thousands of smallholders have yet to be registered; and it is to be hoped that this new requirement will not become another bottleneck to smallholder involvement in forest management.

Similar challenges have been reported in other countries. For example, in Indonesia, SMFEs require a range of different permits and documents to be able to operate legally. Few enterprises have all the documents they require; indeed, in some parts of the country, just one-third of small timber enterprises were found to be legally registered.³⁴ Efforts have been made to improve compliance through the establishment of one-stop licensing units, where all necessary documents can be obtained at the same time; but such units have yet to be rolled out across the country. At the same time, concerns have been raised about the cost of certification under the SVLK – certification became mandatory for most timber product companies in January 2013 – which has been estimated at between US\$3,000 and US\$11,000.³⁵ The government has provided additional support for SMFEs to become certified and has been encouraging group certification, but there remains a huge task to certify the many thousands of SMFEs operating in the country.

Enforcement

Enforcement against the production and sale of illegal timber is often weak and so there are frequently few incentives to operate legally, particularly as this usually entails additional costs. At

³⁰ Personal communication with staff of the Instituto de Pesquisa Ambiental da Amazônia (IPAM) in 2014.

³¹ Humphries, S. et al. (2012), 'Are community-based forest enterprises in the tropics financially viable? Case studies from the Brazilian Amazon', *Ecological Economics*, 77: pp. 62–73.

³² Graffin, A. et al. (2011), 'Forestry Exploration Through Management: An Accessible and Profitable Activity for Communities in the Brazilian Amazon' (A Exploração Florestal a Partir de Manejo: Uma Atividade Acessível e Rentável para as Comunidades na Amazônia Brasileira?), in Cruz et al. (2011), *Company | community relations in the context of community and family forest management*, pp. 207–33.

³³ Resolution CONAMA No. 458/2013.

³⁴ Obidzinski, et al. (2014), 'Timber legality verification'.

³⁵ Obidzinski, K. et al. (2014a), 'Timber legality verification system and the Voluntary Partnership Agreement in Indonesia. The challenges of the small-scale forestry sector', CIFOR Working Paper 164, p. 31.

the same time, there may be little desire among SMFEs to operate legally – for example, if the law is regarded as unjust or if the government is not functioning effectively.

In Laos, enforcement is very weak in part owing to the limited capacity and resources of enforcement officials, who often have no budget for field inspections and thus have to depend on smallholders and the timber buyers to cover those costs. This means that there is little monitoring or enforcement activity beyond externally funded projects – such as undertaking pre-harvest inventories or supervising the transport of timber, as required by regulation.

In Brazil, considerable efforts have been made over the past decade to improve enforcement of land use, and in many areas they have been successful. Improved enforcement was a key factor in the country's dramatic reduction in deforestation rates achieved between 2004 and 2012.³⁶ However, these efforts have focused mainly on larger-scale operations; enforcement activities within agrarian reform settlements are reportedly rare.³⁷ As a result, the share of illegal logging taking place on smallholdings has grown in some parts of the country (including Pará).³⁸

Enforcement agencies in all four countries reviewed in this paper are under-resourced, and their efforts are further undermined by widespread corruption. This is partly a consequence of the lack of support for enforcement agencies (and government agencies more broadly), which frequently suffer from insufficient resources to cover salaries, transport costs and equipment. Furthermore, in a context of weak law enforcement, smallholders are often those least able to withstand pressure to engage in illegal or corrupt activities. In Brazil, for example, smallholders have been intimidated and threatened by companies wanting to log their forests.³⁹

Promoting a market for legal timber

SMFEs tend to supply the bulk of their products to local markets since these are the easiest to access – both physically and in terms of meeting market requirements. However, there is often little demand for legal timber on such markets, primarily because it tends to be more expensive. Furthermore, in many countries there is a lack of legal timber to supply the domestic market.⁴⁰

For example, in Ghana, strong domestic demand combined with limited sources of legal timber has created a booming illegal market. This is partly the result of a system of tree and land tenure whereby naturally grown trees are owned by the state, including those on private land; since landholders have few direct benefits from formal harvesting arrangements, there is little incentive either to support legal logging or to discourage illegal logging (from which they may benefit more). In addition, there has been an overemphasis on export markets in the allocation of timber resources, resulting in an insufficient supply of legal timber for the domestic market.

³⁶ Instituto Nacional de Pesquisas Espaciais (INPE) (2014), 'Prodes Project: Monitoring of the Brazilian Amazon by Satellite' (Projeto Prodes: Monitoramento Da Floresta Amazônica Brasileira Por Satélite), <http://www.obt.inpe.br/prodes/index.php> (accessed 9 Mar. 2016); Nepstad, D. et al. (2009), 'The End of Deforestation in the Brazilian Amazon', *Science*, 326 (5958), pp. 1350–51; and Nepstad, D. et al. (2014), 'Slowing Amazon deforestation through public policy and interventions in beef and soy supply chains', *ibid.*, 344 (6188), pp. 1118–23.

³⁷ Schneider and Peres (2015), 'Environmental Costs'.

³⁸ Assunção, J. et al. (2015), *Deforestation Scale and Farm Size: the Need for Tailoring Policy in Brazil*, Climate Policy Initiative Technical Paper, <http://climatepolicyinitiative.org/wp-content/uploads/2015/08/Deforestation-Scale-and-Farm-Size-the-Need-for-Tailoring-Policy-in-Brazil-%E2%80%93-Technical-Paper.pdf> (accessed 9 Mar. 2016)

³⁹ Personal communication with staff at the EII in 2014; and Global Witness (2014), *Deadly Environment: The dramatic rise in killings of environmental and land defenders*.

⁴⁰ Wit, M. and Van Dam, J. (eds) (2010), *Chainsaw milling: supplier to local markets*, Wageningen, the Netherlands: Tropenbos International.

There have been attempts to redress this situation, including increasing the proportion of production that sawmills are required to supply to the domestic market from 20 per cent to 40 per cent. In addition, artisanal milling has been piloted as a legal alternative to chainsaw milling: for example, agreements have been concluded between concession holders and artisanal millers whereby the former provide access to legal timber and the latter help to protect the concession against illegal logging. While this approach has considerable potential, it has yet to be widely implemented. Nor will it be sufficient in itself. More trees will need to be planted because of the dwindling forest resources in the country, and the legal framework for land and tree tenure will have to be reformed.⁴¹

Establishing a legal supply of timber must be done in parallel with efforts to create demand for legal timber. One approach being taken in Brazil is to bring together different stakeholders – government, civil society and industry (both large- and small-scale) – to find ways to work together to promote a legal market.⁴² Such cooperation may include organizing technical and financial assistance, providing market information and establishing company relationships (including the oversight of contracts concluded between SMFEs and large companies).

Public procurement policies can play a role, too. Experiences in Europe suggest that such policies can help to shift markets towards legal or sustainable timber;⁴³ however, they have not been used in many tropical forest countries to date. Ghana has drafted a policy for legal and sustainable timber, which is currently awaiting parliamentary approval, while Sao Paulo's state government in Brazil has a public procurement policy for legal timber. The introduction of procurement policies for large infrastructure and construction projects, in particular, has considerable potential for promoting legal timber because such projects often require large volumes of timber. For example, the Brazilian government is implementing a programme (called 'My house, my life') to support the construction of hundreds of thousands of houses as well as a large-scale 'Growth Acceleration Programme' to expand rural infrastructure. Procurement policies for such projects could stipulate the use of legal timber and preference for timber from smallholders, which would significantly increase demand for such timber.

Improving the capacity of SMFEs

Technical assistance and support services

As noted above, SMFEs typically have limited technical and management capabilities, which can be a major hindrance to their participation in legal forestry activities. The types of assistance that they need include technical support, management and business advice (on financing or contracts, for example), provision of information (on market prices and regulations, for instance) and access to funding and low-cost credit.

⁴¹ Parker, J. et al. (2015), *Providing alternatives to illegal chainsaw milling practices through the EU Chainsaw Milling Project*, Wageningen, the Netherlands: Tropenbos International.

⁴² See <http://raa.fgv.br/area-redonda-da-madeira> (accessed 9 Mar. 2016).

⁴³ Brack, D. (2014), *Promoting Legal and Sustainable Timber: Using Public Procurement Policy*, Chatham House Report, London: Royal Institute of International Affairs.

While extensive support services for smallholders have been provided in some parts of Brazil, most states in that country still do not offer such support on a regular basis. In addition, there is a major shortfall in capacity: very few forestry technicians are trained to work in small-scale forestry or with communities.⁴⁴ Because of the limited assistance available, many smallholders have relied on companies to help them obtain licences and sell timber, but often under exploitative or illegal terms. Thus, there is a particular need for advice on concluding and overseeing contracts with logging companies.

In Laos, support services for smallholders have been funded mainly by donors working through NGOs. Thus there is a risk that there may be no institutional buy-in from the government. Such was the case with a programme to develop community forestry in Laos in the 1990s. This was largely donor-driven, and towards the end of the decade the government revoked legislation on decentralized forest management and dissolved the Community Forestry Support Unit.⁴⁵

An institutional framework to support small and medium-sized enterprises in general (not just those in the forest sector) has been put in place in Ghana. This provides a range of support services: for example, there is a National Board for Small-scale Industry, while 'business advisory centres' have been set up in rural areas to advise on and support business registration and accessing finance, as have rural technology facilities to promote and transfer technologies.⁴⁶ These institutions have strengthened the country's small enterprises, in particular improving skills and access to technology and empowering trade organizations.⁴⁷

Establishing SMFE associations, platforms and networks

A particular challenge for many SMFEs is that they are often isolated: not only do they have little access to information and data; they also lack physical access to markets. Associations or networks can help overcome this isolation, enabling members to exchange expertise and knowledge. In addition, they give SMFEs a stronger negotiating voice, whether in political arenas or in the marketplace.⁴⁸

For example, in Brazil, forming forest enterprises has allowed families to cooperate and share costs and thus establish financially viable businesses.⁴⁹ In Ghana, meanwhile, there are a large number of associations for SMFEs, which have played an important role in providing training in both technical

⁴⁴ Carneiro et al. (2011), 'Public Policy and the Challenges to Consolidation of MFCF'; da Costa, S. R. et al. (2011), 'Analysis of Technical Guidelines and Institutional Aspects for the Licensing of Community and Family Forest Management Activities' (Análise das Diretrizes Técnicas e Aspectos Institucionais no Âmbito do Licenciamento das Atividades de Manejo Florestal Comunitário e Familiar), in Cruz et al. (2011), *Company | community relations in the context of community and family forest management*.

⁴⁵ Manivong, K. and Sophathilath, P. (2007), *Status of Community Based Forest Management in Lao PDR*, Vientiane, Lao PDR: National Agriculture and Forestry Research Institute.

⁴⁶ Osei-Tutu, P. et al. (2012), *Small and Medium Forest Enterprises in Ghana: Sourcebook on enterprise characteristics, activity centres, product markets, support institutions and service providers*, IIED Small and Medium Forest Enterprise Series No. 28, London: Tropenbos International and IIED.

⁴⁷ International Fund for Agricultural Development, Independent Office of Evaluation (2014), 'Project Completion Report Validation: Rural Enterprises Project - Phase Two (REP II)', http://www.ifad.org/evaluation/public_html/eksyst/doc/validation/2014/ghana_rep.pdf. (accessed 9 Mar. 2016)

⁴⁸ Macqueen, D. et al. (eds) (2015), *Democratising forest business: a compendium of successful locally controlled forest business organisations*, London: IIED, <http://pubs.iied.org/13581IIED>. (accessed 9 Mar. 2016)

⁴⁹ Humphries, S. et al. (2012) 'Are community-based forest enterprises in the tropics financially viable? Case studies from the Brazilian Amazon', *Ecological Economics*, 77: pp. 62–73.

and management-related skills as well as in engaging in policy discussions and providing a voice for their members.⁵⁰

By contrast, there are relatively few associations or cooperatives for timber producers in Laos. Constraints on forming such groups include the cost of establishing an association, which may outweigh the benefits for its members – for example, if sales are irregular or low in volume. Furthermore, a certain degree of social cohesion is required.⁵¹ While the formation of associations is in line with the government’s strategy for rural development, further legislation and guidance are needed for such associations to emerge and for extension services to be provided.⁵²

What progress has been made?

Looking across the four countries reviewed in this paper, it can be seen that progress towards improving legality among SMFEs has been slow. While there have been successful initiatives, these have not brought about the transformational change required to establish a predominantly legal and well-governed small-scale forest sector.

One reason for this failure is the lack of political support for the sector or, rather, for its formalization. The current systems of informal production and trade are deeply entrenched in most countries, providing a major source of income for stakeholders along the entire length of the supply chain – not just for the loggers, processors and traders but also for enforcement agents and forest officials, who profit from bribes and other informal payments. Corruption can be therefore a major factor in maintaining the status quo. For example, it was estimated in 2010 that in Ghana annual profits from chainsaw milling exceeded US\$26 million in 2010, while informal payments amounted to US\$24 million, of which at least half were paid to public officials.⁵³ Against this background, it is evident that achieving reform will require not only political will and a clear vision for the sector but also the removal of incentives that help to maintain the status quo.

Furthermore, as noted above, for many governments the development of a small-scale forest sector is not part of their vision for rural development. Rather, the focus is on the expansion of large-scale, export-oriented forest and agricultural businesses.⁵⁴ In such contexts, the prospects for small-scale producers and enterprises are dim. But this could change if opportunities for the participation of SMFEs in decision-making processes in some countries were to increase. Indeed, in Ghana and Indonesia, the VPA processes have enabled more diverse voices to be heard in policy discussions, including those of representatives of the small-scale sector. In order to bring about a change in the official approach to rural development, SMFEs will need to make a convincing case for the role that they can play in enabling sustainable rural development and helping governments to meet the growing challenges of climate change, environmental degradation and social change.

⁵⁰ Osei-Tutu et al. (2012), *Small and Medium Forest Enterprises in Ghana*.

⁵¹ Ling, S. et al. (2014), *The rationale for, and feasible approaches to, the development of growers groups: A report to ACIAR project Enhancing Value Chains for Plantation Grown Wood in Lao PDR*, ACIAR.

⁵² Smith and Phengsopha (2014), ‘Enhancing Key Elements of the Value Chain for Plantation Grown Wood in Lao PDR’.

⁵³ Marfo (2010), *Chainsaw Milling in Ghana*.

⁵⁴ Pokorny, B. and De Jong, W. (2015), ‘Smallholders and forest landscape transitions: locally devised development strategies of the tropical Americas’, *International Forestry Review*, 17 (S1); Castella, J-C. et al. (2013), ‘Effects of Landscape Segregation on Livelihood Vulnerability’; and Barney, K. (2009), ‘Laos and the making of a “relational” resource frontier’, *The Geographical Journal*, 175 (2): pp. 146–59.

The SDGs as a lever for change

The SDGs – like their predecessors, the millennium development goals (MDGs) – aim to promote action by countries towards achieving sustainable development. Under the SDGs, countries will receive support for such efforts through the provision of financial resources, capacity-building assistance and technology transfer. A major achievement of the MDGs was to mobilize both financial and political support for development – in both donor and developing countries. At the same time, they helped to increase cooperation between government, the private sector and civil society towards the same end.⁵⁵

It is hoped that the SDGs will play a similar role. Not least, they could lead to increased support for the small-scale forest sector. By focusing attention on this sector and increasing available resources, they could help to change some of the incentives, particularly for governments, that have resulted in the small-scale forest sector being neglected in many countries.

Agreed in September 2015, the SDGs comprise 17 goals and 169 targets.⁵⁶ Since they are cross-cutting in nature, many are relevant to the small-scale forest sector; those goals and targets that are most directly relevant are listed in Box 1 below. The progress towards achieving these goals and targets is to be monitored through a framework of indicators, and a global indicator framework was agreed in March 2016.⁵⁷ At the same time, countries can establish national-level indicators; and it will be the indicators established at this level that will be crucial for encouraging individual countries' engagement with the SDGs and thus driving progress towards those goals being achieved. Experience with the MDGs showed that developing indicators adapted to national priorities and circumstances played an important role in increasing national-level ownership of those goals.⁵⁸

Box 1: The SDGs of direct relevance to the small-scale forest sector

Goal 1: End poverty in all its forms everywhere

Target 1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

Relevance: Securing access to land, resources, technology and finance is crucial for small-scale forest enterprises to be able to thrive and thus generate jobs and income, which, in turn, will help reduce poverty.

⁵⁵ McArthur, J. (2013), 'Own the Goals: What the Millennium Development Goals Have Accomplished', <http://www.brookings.edu/research/articles/2013/02/21-millennium-dev-goals-mcarthur> (accessed 9 Mar. 2016); and Melamed, C. and Scott, L. (2011), 'After 2015: Progress and challenges for development', ODI. Background Note, <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7061.pdf>. (accessed 9 Mar. 2016)

⁵⁶ See <https://sustainabledevelopment.un.org/sdgs>. (accessed 9 Mar. 2016)

⁵⁷ At the 47th Session of the UN Statistical Commission, a list of 230 global indicators was approved and a workplan agreed for implementing the indicator framework. The indicators are listed in Annex IV, Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, Revision 1 (E/CN.3/2016/2/Rev1).

⁵⁸ See <http://www.unctf.org/gfld/docs/midpoint-mdg.pdf>. (accessed 9 Mar. 2016)

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target 2.3: By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

Target 2.a: Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

Relevance: Many agricultural systems are closely integrated with forest activities (as in the case of shifting agriculture or agroforestry systems) and many farmers and agricultural businesses could be defined as SMFEs; therefore establishing more productive, resilient and sustainable agricultural practices will entail the same outcomes for many SMFEs.

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Target 8.3: Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.

Target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead.

Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

Target 8.10: Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.

Relevance: Promoting economic growth and productive employment will directly benefit the hundreds of thousands of people employed by SMFEs and will help to establish a stronger small-scale forest sector – one that is growing, has a higher level of formalization, promotes environmental sustainability, provides decent jobs and can access financial services.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Target 9.3: Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

Target 9.b: Support domestic technology development, research and innovation in developing countries,

including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.

Target 9.c: Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

Relevance: Since an important challenge for SMFEs in many parts of the world is accessing finance, markets and technology, resilient infrastructure, sustainable industrialization and innovation are all crucial for enabling the development of those enterprises.

Goal 12: Ensure sustainable consumption and production patterns

Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources.

Target 12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

Relevance: Since small-scale producers manage a significant proportion of the world's forests, they play an important role in implementing sustainable production patterns. At the same time, ensuring sustainable consumption will help to promote a market for their products; public procurement policies are one means to encourage this, and such policies can also be used to give priority to SMFEs.

Goal 13: Take urgent action to combat climate change and its impacts

Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

Relevance: SMFEs are crucial for efforts to adapt to climate change because of the role they play in managing large areas of the world's forests.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Target 15.2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

Target 15.b: Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation.

Relevance: As in the case of Goals 12 and 13, SMFEs have a crucial role to play here because they manage large areas of the world's forests and can thus directly contribute to sustainable management, halting deforestation and reversing land degradation.

Source: UN Department of Economic and Social Affairs, 'Sustainable Development Goals' <https://sustainabledevelopment.un.org/sdgs>.

Developing indicators for the small-scale forest sector could be part of the process of establishing national-level indicators for the SDGs. Thus, those countries with a sizable small-scale forest sector or those wishing to establish one could develop indicators focused on this sector as a component of their strategy to establish sustainable economies and to contribute towards achieving the global SDGs. Such an approach, in turn, could help drive progress within these countries in two ways.

First, it would enable national governments to monitor progress and assess the effectiveness of its strategies and policies for the sector. Second, the generation of more information on the sector would help to raise its profile and thereby potentially increase political support for its development. Moreover, if national-level indicators were developed that could be compared across countries, progress could be assessed on a cross-country basis and experiences shared, potentially driving competition between those countries wishing to show leadership in this area.

National-level indicators could be used to measure progress towards establishing an enabling environment for SMFEs and also the growth of the sector. With regard to the first aspect, indicators could assess security of tenure, the existence of a clear and appropriate legal and policy framework, the availability of technical and administrative assistance, the state of physical infrastructure, access to information and finance as well as market access. With regard to the second use of national-level indicators, the focus could be on the size of the sector, the level of formality and the contribution to overall timber production and to the economy.

Table 2 below lists possible national-level indicators. Some are based on the global indicators and thus would require producing disaggregated data for the small-scale forest sector.⁵⁹ As is indicated in Table 2, the proposed national-level indicators relate to various SDGs and targets (see Annex 1 for a list of the possible national-level indicators organized by SDG and target), reflecting both the integrated nature of the SDGs and the fact that the activities of SMFEs are closely integrated with those of other sectors and have impacts beyond forests (many SMFEs do not operate solely in the forest sector but are engaged in a variety of economic activities, including mining).⁶⁰ Furthermore, SMFE activities have implications not only for sustainable forest management but also for economic growth, poverty reduction, fostering innovation, promoting inclusive industrialization and dealing with climate change, among other areas. For this reason, the proposed national-level indicators relate not only to SDG 15, which focuses on forests, but to all the goals listed in Box 1.

Table 2: Possible national-level indicators for a legal and sustainable small-scale forest sector

How indicators are linked to the conditions needed for a strong small-scale forest sector	Possible national-level indicators	Relevant global target of the SDGs
Indicators related to the business environment for SMFEs		
Policy and institutional framework for SMFEs	<ul style="list-style-type: none"> Percentage of women, men, indigenous peoples and local communities with secure tenure and/or use rights to individually or communally held land, property and/or natural resources Government oversight of forest-based permits and licences (measured by speed of processing and/or 	1.4; 2.3; 2.4; 13.1; 15.2 1.4; 12.2

⁵⁹ As reported by the UN Statistical Commission in Report E/CN.3/2016/2 of 17 December 2015 (available at <http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-IAEG-SDGs-E.pdf>). (accessed 9 Mar. 2016)

⁶⁰ Angelsen, A. et al. (2014), 'Environmental Income and Rural Livelihoods: A Global-Comparative Analysis', *World Development*, 64: pp. S12–S28.

	percentage of licences issued)	
	<ul style="list-style-type: none"> • Disclosure of natural resource rights holdings (including permits/licences for SMFEs) 	1.4; 12.2
Promoting a market for legal timber	<ul style="list-style-type: none"> • Public procurement policy:^a design (whether mandatory or voluntary; whether timber products that are legal, sustainable and/or sourced from SMFEs are required; number of products within scope) and implementation (number of government agencies implementing the policy and proportion of total government procurement that is compliant) • Private-sector procurement policies: number of companies with policies that require the purchase of timber products that are legal, sustainable and/or sourced from SMFEs and number of companies that are actively implementing those policies/proportion of company procurement estimated to be compliant 	12.6; 12.7 12.6

Indicators related to the capacity of SMFEs

Technical assistance and support services	<ul style="list-style-type: none"> • Government financial support for SMFEs as a proportion of the total for the entire forest sector • Provision of extension services for SMFEs (measured by government expenditure/number of extension workers per 1,000 SMFEs/proportion of SMFEs with access to extension programmes and services) • Proportion of SMFEs with access to credit and financial services^b • Proportion of SMFEs with access to mobile network or Internet^c 	2.a; 8.3; 9.b; 15.b 2.a; 9.b; 15.b 8.3; 8.10; 9.3 9.c
Establishing SMFE associations, platforms and networks	<ul style="list-style-type: none"> • Number of SMFE associations and cooperatives (or number or proportion of SMFEs that are members of associations and/or cooperatives) 	8.3

Indicators related to the size of the small-scale forest sector

Size of sector	<ul style="list-style-type: none"> • Forest cover under legal/certified sustainable management by SMFEs^d 	1.4; 2.3; 2.4; 12.2; 13.1; 15.2
Contribution to overall timber production and to the economy; and level of formality	<ul style="list-style-type: none"> • Shares of production from informal and formal SMFEs in total forest sector production, or percentage share of SMFE value-added in total forest industry value-added^e 	8.3; 9.3
Level of formality	<ul style="list-style-type: none"> • Share of informal employment in the small-scale sector and in overall forest sector, by sex^f 	8.3; 8.5

^a This national-level indicator would be a subset of SDG global indicator 12.7.1: Number of countries implementing sustainable public procurement policies and action plans.

^b This national-level indicator would be a subset of SDG global indicator 9.3.2: Proportion of small-scale industries with a loan or line of credit

^c This national-level indicator would be a subset of SDG global indicator 9.c.1: Percentage of population covered by a mobile network, by technology.

^d This national-level indicator would be a subset of SDG global indicator 15.2.1: Progress towards sustainable forest management.

^e This national-level indicator would be a subset of SDG global indicator 9.3.1: Proportion of small-scale industries in total industry value added

^f This national-level indicator would be a subset of SDG global indicator 8.3.1: Proportion of informal employment in non-agriculture employment, by sex.

It must be stressed that these indicators are illustrative only. Most important, they show that it is possible to develop a set of indicators that are relevant to both SDG delivery and improved legality among SMFEs. In order to identify indicators that are useful within a particular country context and can be monitored, it will be essential to establish national-level processes that allow for broad consultation on the selection of indicators. That consultation will need to involve not only policymakers and statisticians but also those directly involved in the sector – that is, both representatives of the SMFEs themselves and those who provide support and extension services to them. A basis on which to build is provided by the multi-stakeholder processes aimed at establishing a legal forest sector that have been established under the VPAs. Ideally, such processes would be coordinated between countries so that the data collected can be compared, allowing information exchanges to take place and lessons to be learned.

Conclusions

The small-scale forest sector plays a crucial role in the rural economies of many countries. If it were given the right support, it could play an even bigger role and make a significant contribution towards the achievement of countries' own targets for sustainable development as well as the global SDGs.

Through the elaboration of national-level indicators focused on the small-scale forest sector the SDGs could help to galvanize support within countries for the sector. Not only would this provide an opportunity to access funding from the international community to develop the sector; it could also allow for exchanges of information to take place between countries and lessons to be learned.

Since there is very little information available on most countries' small-scale forest sectors, considerable investment will be needed in the agencies and institutions that can help to evaluate and monitor the state of the sector. But at the same time countries will be able to access additional support under the SDG framework to help establish or strengthen statistical and monitoring agencies.

As a result, the SDGs could not only offer an opportunity for Brazil, Laos, Ghana, Indonesia and other countries to craft a strategy to develop their small-scale forest sectors but could also help to drive its implementation.

Annex 1: Possible national-level indicators organized by SDG and target

Goal 1: End poverty in all its forms everywhere

Target 1.4

By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance.

National-level indicators:

- a) Percentage of women, men, indigenous peoples and local communities with secure tenure and/or use rights to individually or communally held land, property and/or natural resources;
- b) Government oversight of forest-based permits and licences (measured by speed of processing and/or percentage of licences issued);
- c) Disclosure of natural resource rights holdings (including permits/licences for SMFEs); and
- d) Forest cover under legal/certified sustainable management by SMFEs.

Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Target 2.3

By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.

National-level indicators:

- a) Percentage of women, men, indigenous peoples and local communities with secure tenure and/or use rights to individually or communally held land, property and/or natural resources; and
- k) Forest cover under legal/certified sustainable management by SMFEs.

Target 2.4

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

National-level indicators:

- a) Percentage of women, men, indigenous peoples and local communities with secure tenure and/or use rights to individually or communally held land, property and/or natural resources; and
- k) Forest cover under legal/certified sustainable management by SMFEs.

Target 2.a

Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.

National-level indicators:

- f) Government financial support for SMFEs as a proportion of the total for the entire forest sector; and
- g) Provision of extension services for SMFEs (measured by government expenditure/number of extension workers per 1,000 SMFEs/proportion of SMFEs with access to extension programmes and services).

Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Target 8.3

Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services.

National-level indicators:

- f) Government financial support for SMFEs as a proportion of the total for the entire forest sector;
- h) Proportion of SMFEs with access to credit and financial services;
- j) Number of SMFE associations and cooperatives (or number or proportion of SMFEs that are members of associations and/or cooperatives); and
- l) Shares of production from informal and formal SMFEs in total forest sector production, or percentage share of SMFE value-added in total forest industry value-added.

Target 8.4

Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead.

National-level indicators:

l) Shares of production from informal and formal SMFEs in total forest sector production, or percentage share of SMFE value-added in total forest industry value-added.

Target 8.5

By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

National-level indicators:

m) Share of informal employment in the small-scale sector and in overall forest sector, by sex.

Target 8.10

Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all.

National-level indicators:

h) Proportion of SMFEs with access to credit and financial services.

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Target 9.3

Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets.

National-level indicators:

h) Proportion of SMFEs with access to credit and financial services; and

l) Shares of production from informal and formal SMFEs in total forest sector production, or percentage share of SMFE value-added in total forest industry value-added.

Target 9.b

Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities.

National-level indicators:

f) Government financial support for SMFEs as a proportion of the total for the entire forest sector; and

g) Provision of extension services for SMFEs (measured by government expenditure/number of extension workers per 1,000 SMFEs/proportion of SMFEs with access to extension programmes and services).

Target 9.c

Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

National-level indicators:

i) Proportion of SMFEs with access to a mobile network or Internet.

Goal 12: Ensure sustainable consumption and production patterns

Target 12.2

By 2030, achieve the sustainable management and efficient use of natural resources.

National-level indicators:

b) Government oversight of forest-based permits and licences (measured by speed of processing and/or percentage of licences issued);

c) Disclosure of natural resource rights holdings (including permits/licences for SMFEs); and

k) Forest cover under legal/certified sustainable management by SMFEs.

Target 12.6

Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

National-level indicators:

d) Public procurement policy: design (whether mandatory or voluntary; whether timber products that are legal, sustainable and/or sourced from SMFEs are required; number of products within scope) and implementation (number of government agencies implementing the policy and proportion of total government procurement that is compliant); and

e) Private-sector procurement policies: number of companies with policies that require the purchase of timber products that are legal, sustainable and/or sourced from SMFEs and number of companies that are actively implementing those policies/proportion of company procurement estimated to be compliant.

Target 12.7

Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

National-level indicators:

d) Public procurement policy: design (whether mandatory or voluntary; whether timber products that are legal, sustainable and/or sourced from SMFEs are required; number of products within scope) and implementation (number of government agencies implementing the policy and proportion of total government procurement that is compliant).

Goal 13: Take urgent action to combat climate change and its impacts

Target 13.1

Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

National-level indicators:

a) Percentage of women, men, indigenous peoples and local communities with secure tenure and/or use rights to individually or communally held land, property and/or natural resources; and

k) Forest cover under legal/certified sustainable management by SMFEs.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Target 15.2

By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.

National-level indicators:

a) Percentage of women, men, indigenous peoples and local communities with secure tenure and/or use rights to individually or communally held land, property and/or natural resources; and

k) Forest cover under legal/certified sustainable management by SMFEs.

Target 15.b

Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation.

National-level indicators:

f) Government financial support for SMFEs as a proportion of the total for the entire forest sector; and

g) Provision of extension services for SMFEs (measured by government expenditure/number of extension workers per 1,000 SMFEs/proportion of SMFEs with access to extension programmes and services).

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