

Brewery operated by SABMiller's Colombian subsidiary, Bavaria, in the Chingaza watershed outside Bogotá. Photo credit: Foto Rudolf, Bogotá



Kissinger, G., Moroge, M., & Noponen, M. (2015). Private sector investment in landscape approaches: the role of production standards and certification. In Minang, P. A., van Noordwijk, M., Freeman, O. E., Mbow, C., de Leeuw, J., & Catacutan, D. (Eds.) *Climate-Smart Landscapes: Multifunctionality in Practice*, 277-293. Nairobi, Kenya: World Agroforestry Centre (ICRAF).

Private sector investment in landscape approaches: the role of production standards and certification

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Highlights

- Production standards and certification can serve as stepping stones to an integrated landscape management (ILM) approach, by enabling companies to evaluate environmental or social interventions beyond the farm or production unit scale
- Certification has limitations for ILM implementation, however, as most systems limit their scope to the property boundaries and criteria, assessment of management beyond the production unit can be difficult to document and comply with
- Private sector investment in landscape initiatives can be leveraged if they are designed for compatibility with public sector ones
- New innovations are exploring how certification can serve public-private partnerships, low-carbon development plans and jurisdictional certification schemes

1. Introduction

The private sector is increasingly interested in integrated landscape management (ILM) as a means to mitigate risks, and address opportunities beyond the production unit. Scherr et al. (2013) define the key elements of ILM as: 1) shared or agreed management objectives that encompass multiple benefits from the landscape, 2) design of land management practices to contribute to multiple objectives, including human well-being, food and fibre production, climate resilience and conservation of biodiversity and ecosystem services, 3) interactions between ecological, social and economic interests are managed to realize positive synergies and to mitigate negative tradeoffs, 4) collaborative, community-engaged processes for dialogue, planning, negotiating and monitoring decisions, and 5) markets and public policies are shaped to achieve the diverse set of landscape objectives and institutional requirements. Water, climate, biodiversity and community risks are those that cannot be addressed solely at the farm- or concession-scale, and therefore

agribusinesses are increasingly applying landscape initiatives as a means to address these risks (Kissinger et al., 2013). Based on seven case studies, this chapter explores the motivations of companies pursuing landscape initiatives at the production level, and shares insights into the role of production standards and certification as a tool to implement ILM. This chapter further explores the interplay between certification standards and landscape approaches, methods and barriers to increase uptake and adoption, and whether these initiatives are a means to mainstream ILM in business operations. Although we recognise the importance of identifying ILM examples in the mining and extractive industries, we found limited evidence of those and therefore focus on agribusinesses and forestry.

1.1 Risks

Natural resource-dependent companies increasingly recognize that their future operating environment will differ from that of the past. Farms must increase productivity to produce more food, with nearly all of the additional food requirements occurring in developing countries. Furthermore, due to an estimated global population rising to at least 9 billion people by 2050 (FAO, 2009; Foresight, 2011), it is commonly accepted that the resources businesses depend on will be increasingly scarce in the future, and that this scarcity will increasingly reflect on company balance sheets. For example, by 2030, the global demand for freshwater will exceed supply by 40% (UNEP, 2011). There are also limits to future agricultural expansion, as the global supply of arable land becomes increasingly scarce. To avoid crop expansion, and just meet projected crop needs by increasing production, crop yields would need to increase by an estimated 32% more from 2006 to 2050 than they did from 1962 to 2006 (Searchinger et al., 2013). In the face of these constraints, agricultural production must increasingly shift to marginal and unconventional production conditions, which will decrease yields and increase susceptibility to production shortfalls (Lee et al., 2012), while perpetuating a cycle of environmental service degradation. The availability and price of agricultural commodities are also of increasing concern, and are highly impacted by climate change, resource depletion, and demographics (MSCI, 2012).

As such, companies seeking solutions to these challenges at the production level and throughout the supply chain cannot rely on markets alone to assess and respond to sustainability challenges (TEEB Foundations, 2010). Companies are increasingly identifying high-risk agricultural raw materials in their supply chains, setting time-bound targets for their sourcing and supply arrangements, and seeking certified products for assurance of production standards. For example, Unilever aims for 50% of its agricultural raw materials to be sustainably sourced by 2015 and 100% sustainably sourced by 2020 (Unilever, 2010). Similarly, Nestlé, Mars, Tesco, McDonald's, Walmart and other brand manufacturers and retailers have made sustainability purchasing commitments for agricultural products (Kissinger, 2012). Traceability is increasingly a valued attribute of certification, as a means to identify high-risk inputs (MSCI, 2012).¹ Other sectors similarly value certification as a means of demonstrating performance. For example, the Forest Stewardship Council (FSC) is investigating how its certification can reach beyond forests through "Forest Certification for Ecosystem Services". Similarly, the Initiative for Responsible Mining Assurance released a draft standard for responsible mining in 2014, which identifies social and environmental criteria, guidance on mine closure and reclamation and management systems.

1.2 Opportunities

Third-party production standards and certification regimes provide a means for companies to demonstrate to brand manufacturers and consumers that food and beverage commodities have been produced with sustainable practices. Examples of commonly used production standards include the Roundtables on Sustainable Palm Oil, Soy, Biofuels, and Bonsucro (sugar), the Sustainable Agriculture Network (SAN)/ Rainforest Alliance Certification², Fairtrade, UTZ, and others. Standards tend to focus on best practices related to social issues, land use, and agricultural production practices within the production unit (e.g., farm, concession and/or mill). However, some standards incorporate principles or criteria that stretch beyond the production unit in order to include biodiversity, livelihood, and/or ecosystem service considerations (these are explored further in the cases study section). In these contexts, standards can serve as stepping stones to a more ILM approach, by enabling companies to evaluate environmental or social interventions beyond the farm-scale, create partnerships for shared problem-solving, and pilot ILM concepts.

There is growing pressure from brand manufacturers and consumers on producers of raw materials to demonstrate sustainability through standards compliance, adherence to national regulations, and reduced greenhouse gas (GHG) emissions. One such example is the Consumer Goods Forum (CGF) which comprises of more than 400 retail and brand manufacturers globally with total combined sales of €2.5 trillion. The CGF Board pledged in 2010 to mobilize resources within member businesses to achieve zero net deforestation by 2020. The CGF seeks to achieve this goal through individual company initiatives and by working collectively in partnership with governments and NGOs, in order to address challenges in the sourcing of commodities such as palm oil, soy, beef, and paper and board (Consumer Goods Forum, 2014). Catalysed by the CGF, the Tropical Forest Alliance (TFA) 2020 formed as a public-private partnership with the Governments of the United States, United Kingdom, Norway and the Netherlands and numerous NGOs seeking to work with private sector actors to address deforestation pressures in four key commodity value chains of palm oil, soy, pulp and paper, and beef. Working at landscape scales will be essential in order to affect the TFA's goals related to tropical forest and ecosystem conservation and commodity production, including working with smallholder farmers and other producers on sustainable agricultural intensification, while promoting the rehabilitation of degraded lands and reforestation.

New approaches are being piloted in Brazil and elsewhere to develop jurisdictional approaches for measuring the environmental and social performance of land use practices. This can involve all major commodities in a region being produced under an umbrella standard (a regional or place-based standard).

2. Production standards and ILM case studies

Companies pursue integrated landscape initiatives due to operational and reputational risks, regulatory risks, and compliance with voluntary production standards, to attain greater supply chain efficiency, and as a means to capture market shares (Kissinger et al., 2013). This section explores seven examples of companies piloting ILM through production standards, which often seek identification of high conservation value (HCV) forests or identification of labour and livelihood concerns affecting the broader community.

2.1 The Rainforest Alliance and Olam in Ghana's Juabeso-Bia Region

The Rainforest Alliance worked with Olam in Ghana's Juabeso-Bia Region to apply an ILM approach with the aim of increasing economic opportunities for poor, marginalized farmers through application of sustainable agriculture and forest best management practices, for GHG emissions reductions and climate change adaptation. Olam International's involvement helped achieve the scale necessary, increase productivity and income for farmers, enhance resilience of their production systems, conserve biodiversity, and reduce supply chain risks. Thousands of cocoa farmers and community members were trained on climate-smart land-use practices for SAN certification and SAN Climate Module verification. A project design document was developed to demonstrate positive benefits according to the Climate, Community and Biodiversity Alliance (CCBA) standards. Reduced conversion of remaining forest to farmland is anticipated. It should be noted that Olam's investment in the landscape was complemented by funding from the Norwegian Agency for Development Cooperation (NORAD) and United States Agency for International Development (USAID), allowing for other activities that enhance the landscape approach, for example, reforestation of degraded areas, conservation of High Conservation Value (HCV) forest areas, alternative livelihood opportunities, capacity building for REDD+ readiness, improved governance, and the CCBA project design document.

2.2 The Wilmar pilot in West Kalimantan and Sumatra, Indonesia

The Wilmar pilot in West Kalimantan and Sumatra, Indonesia seeks to design and test guidelines and best management practices for implementing Roundtable on Sustainable Palm Oil (RSPO) principles and criteria related to biodiversity. The stated aim of the project is to provide better access to critical information, methods for integrating this information in plantation management, and technical guidelines. A second part of the project seeks to reduce or remove policy-related barriers to implementation of the RSPO biodiversity related principles and criteria. The solutions therefore bring multiple key actors and information sets together—plantation management, biodiversity interests, government and the RSPO—to enable conservation of HCV habitats.

2.3 Gebana and Solidaridad

Gebana is working with Solidaridad and partners such as the cooperative Central Association of Family Farmers (COOPAFI) and the Municipality of Capanema in Brazil, to enable the production and commercialization of Round Table for Responsible Soy (RTRS) certified soy produced by smallholders in the region. Certification was achieved in 2013. There are three areas of intervention: 1) a self-assessment toolkit to enable continuous improvement based on meeting existing Brazilian federal laws and the RTRS standard, 2) training and demonstration on better management practices for biodiversity friendly smallholder produced soy, and 3) methods to link biodiversity friendly RTRS certified soy production with frontrunner companies seeking certified products.

Trainings in best management practices and the Gebana zero-till system helped the Capanema municipality have the lowest use of agrochemicals in the region. While large companies such as Grupo Maggi, Los Grobo, and Ceagro have achieved RTRS certification, the 163 smallholders in Paraná state became the first family farmers to achieve this in Latin America. Solidaridad aims to have 400 smallholder soy family

farmers from the municipality of Capanema entering a preferential market for RTRS certified soy on 6,000 hectares with an extra added value (i.e., price premiums; IFC, 2014). The Body Shop has purchased soy oil from Gebana since 2006 for its skin care products.

2.4 Ethical Tea Partnership

The Ethical Tea Partnership (ETP) was formed as a means for tea purchasers to address tea supply chain challenges and operates in Kenya, India, Indonesia, Sri Lanka and China. The 36 member companies created the ETP Global Standard, which contains a set of principles and action steps to guide tea estates to adopt consistent practices around social issues, such as gender, harassment, wage levels, child labour as well as environmental management. Some environmental principles reach beyond the estate- or farm-scale to guide managers to include assessment or interventions in the areas of soil management, reduction in agrochemical use, waste management, ecosystem management, and provisions around the establishment of new production areas, which is only allowed if land use capacity studies demonstrate long-term production capacity is available (ETP Standard, 2013). The ETP standard helps producers attain international certifications such as Fairtrade, Rainforest Alliance and UTZ Certified. In Kenya, ETP is working with its members to address producer support and sustainability of the tea sector due to climate change impacts. ETP has also identified how to reduce deforestation pressures, as forests adjacent to tea plantations are often felled for fuelwood to heat kilns. By establishing eucalyptus plantations to supply fuel for kilns, fuelwood can be obtained without causing more deforestation (and this could link to Kenya's Reducing Emission from Deforestation and forest Degradation (REDD+) plans).

2.5 Solidaridad and the John Bitar Company

Solidaridad is working with the John Bitar Company and cocoa farmers in the southwest of Ghana towards the creation of biological corridors to link fragmented biodiversity hotspots in the cocoa growing frontiers and to enhance sustainable cocoa livelihoods and biodiversity conservation in and around the Suhuma and Krokosua Forest Reserves. By improving human capacity to tackle forested land degradation in the Western region of Ghana, there will be a direct contribution to the global objectives of the United Nations Convention to Combat Desertification (UNCCD), and other global environmental conventions that recognize the importance of addressing land degradation (Solidaridad, 2013).

2.6 Mondi's approach to ILM

Mondi's interest in ILM stemmed from its need to proactively address environmental and social challenges affecting its packaging and paper business and the urgency of global challenges such as climate change, water management and material consumption. Mondi sought to increase the eco-efficiency of products and reduce GHG emissions. As wood is a key raw material for Mondi's operations in 31 countries, the company sought to secure access to sustainable fibre in the short- to long-term to meet the needs of the business, recognizing increasingly constrained resources. Mondi also pursued a series of measures through its sustainable development plan to address the wellbeing of employees, secure key talent and skills, and maintaining its licence to trade by building strong community relationships. Mondi sought 100% FSC certification on 316,000 hectares of plantation forest it owns or leases in South Africa and on 2.1 million hectares of its leased or

managed boreal forests in Russia. Mondi's awareness of ecosystem stewardship may have been solidified through their operation-wide HCV assessments, which resulted in 638,810 hectares (26% of their operating base) being set-aside for conservation in Russia and South Africa (Mondi, 2013).

2.7 The Carbon-Coffee Project

Agroindustrias Unidas de México (AMSA), an Ecom Agroindustrial Corp (ECOM) Trading subsidiary, forms part of the Carbon-Coffee Project, an alliance between the coffee buyer, Negocios Sostenibles, a Mexican NGO who provides training and technical assistance on best practices in agricultural activities, the Rainforest Alliance, and UNECAFE, a smallholder coffee cooperative. These four partners joined forces for landscape restoration to enhance microclimatic stability of coffee production and enhance coffee productivity in four UNECAFE coffee producing communities in the coastal region of Oaxaca, Mexico. The project is an afforestation/reforestation (A/R) project under the Verified Carbon Standard (VCS) and will restore degraded lands, abandoned pastureland and enrich low-intensity coffee production areas through planting native tree species and citrus trees. To date, the project has planted over 25,000 trees with more planned over the next four years. Moreover, the projected revenues from the project will be invested in training, technical assistance and technologies necessary to enhance coffee productivity and quality, improving the profitability of coffee production. Financial support for the project has been provided at various stages from different donors, with exploratory/start-up funding provided by the International Finance Corporation Innovation Fund and other funding provided via the Z ZURICH Foundation, Fundacion ADO, and Fundacion Comunitaria Oaxaca. Current support is provided via Banamex-Fomento Ecologico, AMSA and in-kind resources from other project partners.

3. Methods for including landscape elements in certification standards

Standards commonly use process- and practice-based measures (best management practices), as opposed to the more costly and time-consuming outcome and impact assessment methods. A few newer standards require measurement of and compliance with various environmental outcomes. Some examples of this are Bonsucro's upper limits on GHG emissions per unit, or the Roundtable on Sustainable Biofuels assessment of soil organic matter and habitat connectivity (Milder et al., 2012). Based on the cases reviewed, the impacts of activities at landscape levels can be incorporated in certification principles and criteria through two ways: 1) principles or criteria clearly state exactly which elements are included and how performance is evaluated, or 2) through procedures and information sharing, which may be context specific, but lacks the consistency of the former.

The ETP standard provides a few principles that include landscape elements, such as determining land use capacity and production capacity before establishing new productions areas, avoiding collateral damage to ecosystems outside tea estate boundaries, and strong social provisions. Other standards, such as the Roundtable on Sustainable Palm Oil, rely on identification of HCV areas and seek plans for reduction of GHG emissions (RSPO, 2013). Identification of HCV areas can bridge to broader incorporation of ecological values in business operations, as in the example of FSC certification and

Table 19.1 Case study summary: production standards and ILM.

Initiative	Company/location	Certification standard	Landscape attributes in certification standard	How company is implementing landscape attribute	Results of landscape approach
1. Forest, Climate and Communities Alliance project to pilot field-level REDD+ implementation and community agroforestry applying sustainable cocoa practices in community forest areas as a tool for achieving biodiversity conservation outcomes and climate change adaptation	Olam/ Juabeso-Bia Region of Western Ghana	SAN, Rainforest Alliance Certification	SAN criteria for group certification on social and environmental standards to promote efficient agriculture, biodiversity conservation and sustainable community development.	Financing of: training on SAN standard and the voluntary SAN climate module; training to improve community knowledge to protect and improve tree-based ecosystems through application of climate-smart land-use practices; training to improve understanding of climate impacts and risks. Guaranteed premiums for certified cocoa.	<ul style="list-style-type: none"> • 2000 farmers on 6000 ha are certified • Increased revenue for farmers from increased yields due to climate-smart agricultural practices, plus an additional price premium based on quality and sustainability • Increased GHG mitigation; improved governance through the development of 12 cooperatives and a local authority for land management; REDD+ readiness capacity building

2. Pilot study increasing the effectiveness of biodiversity-related RSPO Principles and Criteria (2 phases with the second focused on HCV management and monitoring)	Wilmar International/Indonesia, West Kalimantan and Sumatra	Roundtable on Sustainable Palm Oil	RSPO principle 5.2 and criteria on HCV forests: provides guidance to avoid affects on HCV or 'Rare, Threatened, and Endangered' areas/species that could be significantly affected by the grower or miller. Principle 5.6 seeks GHG emission reduction. Principle 6.1 and 6.2 focus on social impact assessment and community relations.	RSPO compliance and management of HCV areas within concession	HCV Threat Monitoring Protocol for the oil palm sector developed based on pilot efforts in Kalimantan and Sumatra
3. Round Table on Responsible Soy (e.g., biodiversity-friendly smallholder-produced soy)	Gebana Capanema/State of Paraná, Brazil	Round Table on Responsible Soy	RTRS Section 4.4 on expansion of soy cultivation restricts expansion into native forests	A toolset for producers of agricultural commodities and preferential market access for RTRS certified smallholders	The majority of farmers protected riparian forest and legal reserve and used only land already cultivated and did not convert native vegetation after 2008

4. ETP	Twinings, Tetley Group, Marks and Spencer/ Kenya	ETP, Fairtrade, SAN/ Rainforest Alliance Certification, UTZ certified	ETP standard Principle 10.3 advises the establishment of new productions areas must be based on land use capacity studies that demonstrate long-term production capacity. Principle 10.4 advises that the tea estate avoids collateral damage to ecosystems outside of its boundaries. Principles on energy use, agrochemicals also look beyond the estate. Social provisions are strong.	Seeks to provide guidance for tea estates to adopt consistent practices around social and environmental issues and management	Engaged 10,000 smallholder farmers in Kenya on climate adaptation
5. Ensuring Best Practices in Cocoa-Agroforestry System for Improved Livelihood and Sustainable Environment	John Bitar Company Ltd/ Ghana	UTZ and FSC Certification	HCV identification, restricts expansion into primary forests	Sustainable cocoa livelihoods and biodiversity conservation, increased capacity to address land degradation	<ul style="list-style-type: none"> • 501 farmers were certified under the UTZ Certified standard over a total land area of 2476.2 acres • Area management plan created

6. Ecosystem stewardship in South Africa and Russia	Mondi/ South Africa and Russia	FSC and International Standards Organization (ISO)	HCV identification	FSC on 100% of managed lands; adopted Integrated Biodiversity Assessment Tool (IBAT) to map all biodiversity hotspots in their operations in 2013, then generated data and assessed results in 2014; implementing ecosystem management plans; controlling invasives and fire; valuation of ecosystem services, particularly riparian areas and wetlands (and assessing Mondi's impact on these).	<ul style="list-style-type: none"> • 26% of landholding set-aside for biodiversity, based on HCV assessments. • Commitment not to convert natural forests, riparian areas, wetlands or protected areas into plantations. • Conversion of grasslands or degraded agricultural lands pursued only with an environmental impact assessment and a national multi-stakeholder process.
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7. The Carbon – Coffee Project	AMSA (Ecom Coffee Subsidiary)/ Coastal region of Oaxaca, Mexico	VCS Standard (A/R), Rainforest Alliance Certification, Fairtrade, UTZ, Café Practices, Organic and other certifications	SAN criteria for group certification on social and environmental standards to promote efficient agriculture, biodiversity conservation and sustainable community development. VCS Standard promotes restoration and reforestation of degraded lands, abandoned pasturelands, and low-intensity shaded coffee plots.	Training and technical assistance on improved coffee production practices, reforestation, and compliance with multiple standards; support to community-based awareness raising on project model and climate change issues; marketing and sales support for transactions of credits and/or 'climate-friendly coffee'.	<ul style="list-style-type: none"> • Enhanced habitat connectivity in mosaics of degraded lands and secondary forests • Improved microclimate stability for coffee production • Increased investment in training and technical assistance on coffee productivity, quality and environmental conservation • Over 25,000 trees planted and 400 producers engaged • Grouped project model enables scaling over time
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New Generation Plantation principles on Mondi's commercial forest plantations in South Africa. The experience demonstrated to Mondi the value of ecological networks and ecosystem functionality to sustainability of its business operations in a production landscape (WBCSD, 2012). The Round Table on Responsible Soy contains a principle to limit expansion of soy cultivation into native forests, restrict drift of agrochemicals to neighbouring areas, and seek coexistence with neighbouring production systems (RTRS, 2013).

The Rainforest Alliance model seeks to create sustainable landscapes by focusing on value chains, and harnessing the transformative power of markets. Many of the SAN criteria necessary for certification promote this by looking beyond the farm gate and focusing on the agriculture-forest interface. As such, other landscape elements such as ecosystem conservation of surrounding forest areas and other natural habitat, wildlife conservation, water conservation, and community relations all form critical components in helping to formulate a basis for such an approach. The SAN standard incorporates training and technical assistance to identify priorities beyond the farm-scale such as restoring ecosystem function and addressing climate risks. The application of the SAN Standard and its voluntary climate module in the Juabeso-Bia region of Ghana provides an example of how this worked. Project activities geared towards sustainable development and enhanced livelihoods, improved institutional and community governance, capacity for REDD+ readiness and improved market linkages through a leading cocoa buyer, laid critical foundations.

Beyond the case studies, new innovations are exploring how certification can serve public-private partnerships, low-carbon development plans and jurisdictional certification schemes, such that certifiers verify municipal, local or regional government conservation and development programmes. The Brazilian state of Acre's jurisdictional approach is one example, which is developed in partnership with the VCS, to deliver compliance-grade REDD+ credits based on the VCS Jurisdictional Nesting REDD+ framework. Jurisdictional approaches have the benefit of bringing all key stakeholders together—including producers, commodity buyers, governments, and standards bodies—to define solutions, which could include definition of ILM at the outset. There may be advantages in creating economies of scale, better linking producers to incentives and markets, and better coordinating management interventions. Another innovation involves recognition as an eligible activity or priority activity under a low-emission development or REDD+ national programme. In these scenarios, the government may invest, up-front, resources to support producers up the transition phase to implement improved management practices and prepare for certification. Once certification is achieved, government investment may not be necessary as producers can maintain implementation as part of normal operating costs.

4. Barriers to increased uptake and adoption

While certification and compliance with standards can provide benefits for farmers via price premiums (in some cases), improvements in productivity, quality and yields, and negotiated supply agreements and market access, the capacity to complete necessary reporting and capital to cover the costs of certification can be an obstacle, especially for smallholder farmers. Standards have been criticized for marginalizing small producers

from horticultural export markets, due to costs associated with attaining the standard (Brenton et al., 2009). One risk is that smallholders may get squeezed out by larger producers that are more equipped to cover the costs and capacity needed. Certification systems must promote best practices and continuous improvement, but ensure that standards work for farmers, and do not create a disincentive to pursue certification.

Another barrier stems from the limitations in the boundaries of certification, as many systems limit their scope to the property boundaries of the producer or entity seeking certification. While criteria exist to promote collaboration and coordination beyond the scale of the farm and with the broader community, this is sometimes difficult to document and – more commonly – difficult for producers to comply with. Further consideration should be given to developing group certification systems that aggregate smallholders or small-scale activities into landscape-level certification schemes, similar to what has been achieved with FSC group certification for small woodlot owners or the SAN group certification that allows for expansion of participating members in a given landscape to join an existing group.

5. The business case for investment beyond the production unit

A major driver for investment by Olam in Juabeso-Bia was to reduce risk along their cocoa supply chain and threats to the stability of their production and supply. Some of the cases appear to demonstrate company interest for recognition as a first mover amongst peers in order to instigate market differentiation. While it is likely companies could achieve more efficient operations through value-chain and GHG emission reductions strategies across the landscapes they work in, more information is needed to test this hypothesis.

Working across landscapes enables companies to address a wider set of issues or limiting factors than those just at the farm level, such as working at the community-scale to improve malpractices rather than focusing on a limited number of scattered farms. Some businesses are motivated to reduce various forms of risk through their investment but also bring stability and quality to a valuable landscape, such as AMSA's engagement in Oaxaca. Landscape approaches can also lead to businesses contributing to a stakeholder platform, providing a means to better engage with local governments to influence decision-making. This also often leads to public-private partnerships and innovative co-financing options to spread the burden and risk.

Perhaps similar to Olam's motivations in Ghana, AMSA has assessed the long-term risks to securing coffee supplies in Oaxaca and identified growing threats from changing precipitation patterns and risks of extreme weather events, degraded forests, soils and waterways stressing coffee production, aged coffee bushes in need of replanting at scale, and a lack of access to technical inputs and training required to improve coffee production practices. Combined, these factors reduce profitability of coffee farming and drive producer out-migration to urban areas or foreign countries. Facing these threats has spurred AMSA to invest in and support initiatives like the carbon-coffee project, that go beyond coffee farm boundaries to improve ecosystem services provisioning and habitat quality, which they hope will contribute to revitalizing coffee production in the project area.

6. Opportunities to increase impact by linking to public sector priorities

Private sector investment in landscape initiatives can be leveraged if they are designed for compatibility with public sector ones. A notable example is Ghana, whose ER-PIN specifically focuses on cocoa mosaic forest landscapes and whose goal it is to reduce emissions driven by cocoa farming, "...in a manner that will secure the future of Ghana's forests, significantly improve livelihoods opportunities for farmers and forest users, and establish a results-based planning and implementation framework through which the government, the private sector, civil society, and local communities can collaborate" (Ghana Ministry of Forests, 2014). The cocoa sector also identified that yield decreases and lack of expansion opportunity put their sourcing at risk. This provides an opportunity to stack investment and resources (e.g., technical assistance, training) of public and private sectors to achieve a sustainably-intensified, forest-friendly cocoa sector. Doing so will also require the country's cocoa-sector strategy to be aligned with the national REDD+ strategy, which is still undetermined. Such alignment would require the agriculture and forestry sectors to work towards a harmonized approach, which could be generally defined at the national scale, but more closely coordinated in the landscapes. This could create the enabling conditions necessary to scale good management practices.

Certification can provide performance standards in contexts of weak environmental regulations or enforcement, providing a framework for key stakeholders and government to be informed and better link company objectives with public policy. For example, the Rainforest Alliance has achieved multi-stakeholder agreements and integration to policy platforms for the implementation of cropping and non-timber forest product systems based on FSC and SAN Standards in Ecuador and Peru. Such performance standards could be applied across whole jurisdictions, for purposes of 'landscape labelling' and/or raising production standards across more than one commodity being produced in the jurisdiction.

Certification systems can also provide guidance to producers on how to address demand-side concerns about beyond-the-farm sustainability concerns. For instance, the Round Table for Responsible Soy has created a RTRS Annex for Biofuels to assist certified entities to comply with the requirements concerning indirect land use change and traceability regulated under the European Commission's Renewable Energy Directive (EU-RED).

7. Conclusions

The case examples explored herein demonstrate business and private sector application of certification standards as one tool to apply while implementing landscape approaches. The standards themselves provide varying points of guidance to look beyond the production unit. However, the cases also demonstrate a willingness (or interest) by companies and their civil society or government partners to define project parameters that seek ILM. While private sector commitment to, and application of, integrated landscape initiatives appears to be increasing, more assessment is needed of the long-term benefits beyond the production unit and concession-scale, and whether companies stick to the commitments and invest over the long-term. Similarly, there is a need for more evidence of effective coordination between government and private sector actors to support long-

term commitment to landscape initiatives. More understanding is also needed of how certification bodies are incorporating a landscape lens into criteria and indicators for certification and measuring that performance over landscape spatial and temporal scales. This is particularly important for fast-expanding commodities such as oil palm, sugarcane, and soy, all of which can place strong pressures on land and water resources.

Endnotes

- 1 MSCI (2012) notes that 34% of companies surveyed have started to trace critical raw materials back to the farm to ensure that they come from sustainable sources.
- 2 The Sustainable Agriculture Network is a coalition of leading conservation groups that links responsible farmers with conscientious consumers by means of the Rainforest Alliance Certified™ seal of approval.

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