Farmers drying cacao beans in Southeast Sulawesi
Photo by World Agroforestry Centre/Noviana Khususiyah

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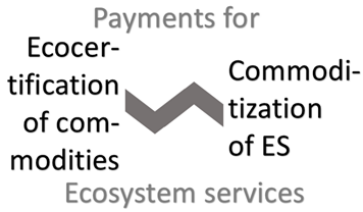
CHAPTER 15

Eco-certification and the commoditization of ecosystem services

Meine van Noordwijk and Beria Leimona

Highlights

- Eco-certification and its dynamics can be understood as arising from interactions between four groups: land users, government, corporate firms and consumers
- Voluntary standards for ES-friendly production can increase compliance with existing rules and lead to gradual increase in mandatory standards
- Premium-pricing for ecocertified products may be transient, other benefits more lasting
- An ES-friendly production system can, through generic co-investment, expect to achieve 80 percent of production potential
- Beyond that there is likely to be a stronger trade-off that can be influenced by economic incentives for certified producers, compensated for their 'opportunity costs'



15.1 Introduction

The environmental consequences of current land use include loss of healthy soils, water, landscapes and atmosphere[1]. Consequences for ecosystem services, however, vary widely depending on how commodities are produced[2,3]. This variation is represented in the 'management swing potential'[4] as the difference between 'best' and 'worst'. Negative side-effects on ecosystem services beyond those of direct relevance for the farm tend to be externalities to the decision making, as long as they are not priced in the farmgate price that a farmer receives.

As discussed in chapter 1[5], command-and-control is a classical government intervention to reduce externalities and reduce the expected benefit flows for modes of production that don't respect the rules—but only if rules are enforced or become internalized into norms of behaviour[6]. While there is likely to be public support for rules that prevent major disturbance of relevant ecosystem services in a country, a command-and-control system fails to incentivize producers who reduce negative (or contribute to positive) externalities beyond the legal requirements.

Various voluntary approaches have emerged to go beyond compliance of rules that avoid worst-case situations. Flexibility and self-regulatory schemes are key to voluntary agreements reached among and promoted by producers (or commodity farmers), corporate firms, industrial associations, (often not-for-profit) certifying agencies, and government to support its legitimacy[7]. As part of the voluntary arrangements, eco-certification has been introduced to secure ecological and social-responsibility qualities into agricultural and forestry commodities at the point of production and subsequent trade of these commodities[8]. Setting and ratcheting up towards more rigorous options of voluntary standards and certification systems are challenging tasks in a dynamic setting ('moving target'). When standards are too strict, too few producers qualify and the standard may fail to gain momentum even though the market is receptive. By trial and error and over time, the multiple competing standards, as intermediary between the response of practitioners and demand by consumers can approximate an optimized system of incentives[9]. There are at least three major ways[10,11] the concept of payment for ecosystems services (PES) can be operationalized:

Commoditization, using market mechanisms of price formation as a way to link supply to demand;

Compensation, imposing restrictions on land users for a common good, but compensating them for the foregone (legal) benefits ('opportunity costs');

Co-investment, combining resources (land, labour, capital, knowledge, rights) to move towards a more desirable configuration.

The three modalities appeal to different audiences, apply to different contexts and settings, and can be combined, especially across scales (e.g. commoditization at a national, compensation at a subnational, and coinvestment at a local scale[12]). A summary of current PES schemes in Southeast Asia[13] and Africa[5] shows that the coinvestment paradigm is the most common entry-level paradigm, as it can deal with situations where property rights are not clear, where existing environmental and social standards are not adhered to, and where collective action and trust deserve to be supported. However, eco-certification provides a new perspective on commoditization: aligning ES standards with existing commodities to increase ecosystem conditions and functions as a basis of future ES. Certification is thus a mirror image of commoditization of ES. It makes use of existing value chains and their organization, but adds to that an opportunity for end-of-chain consumers to take responsibility for what takes place at the farm.

Eco-certification tries to restore trust at the consumer level where this had been lost, often due to 'bad press' about the way goods or services—which in themselves are desirable—are produced. Eco-certification responds to feelings of guilt and peer pressure among consumers. Intermediaries can use it to segment a market by branding, and it is primarily of use to the small and medium enterprises that cannot afford large marketing campaigns. However, who can trust the certifiers? Once the idea of certification has caught on, more and more entities will enter this market and consumers may get confused about what certification means. Most of the action and associated transaction costs are in the middle and end of the value chain, while the net benefits at the farmgate remain small and diminish further, unless social standards are as important as the green ones in the eyes of the consumer.

Most progress in commoditization of ES has been made in the case of 'carbon markets'[14]. Units of 'credible emission reduction' could be defined, certified and traded as stand-alone entities produced in multiple sectors of the society and in multiple countries—at least in theory. In practice, the barriers and costs to creating trustable and tradable entities proved to be higher than expected, with 'transaction costs' becoming a major part of the price and intermediaries the primary beneficiary[15]. In addition, there are concerns that the trade in

emission rights cancels out local emission reduction, with zero (or even negative) net effects on the global climate[15]. In terms of motivation for local action forms of finance ('clean incentives') are preferred that are not based on 'continued emission rights' elsewhere[16].

An analysis[17] is under way of the parallels, similarities and contrasts between the various ways that issues of public concern led to eco-certification schemes in tropical timber, coffee, cacao, rubber and oil palm. In this chapter, we will review current understanding of eco-certification as a dynamic process, by considering the way it emerges in an arena with four types of actors: Producers (A) managing lands and producing goods that are in demand by consumers (C), usually after processing, transport and repackaging by a private sector (B), with all interactions influenced by a public sector (D). The two-way, triple and quadruple interactions between these four key players can be captured in a set of ten questions (Figure 15.1) that form the basis of the rest of this chapter.

Q1 (BC). Are consumer concerns addressed by self-regulation through eco-certification?

Q2 (AC). Which part of the ecological and social problems of producing and trading has to be addressed to satisfy consumers?

Q3 (AB). Do farmers benefit from obtaining ecocertification?

Q4 (BD). Who initiated and developed successful eco-certification standards?

Q5 (CD). Where does eco-certification require public control of the self-regulators?

Q6 (AD). How do voluntary eco-certification schemes relate to mandatory rules for land use?

Q7 (ABC). What fraction of goods and services is certified in different commodity markets?

Q8 (ABD). Are international agreements compatible with and supportive of voluntary standards?

Q9 (BCD). Can self-regulation stand in the way of national sovereignty?

Q10 (ABCD). Is eco-certification a fair and efficient form of PES?

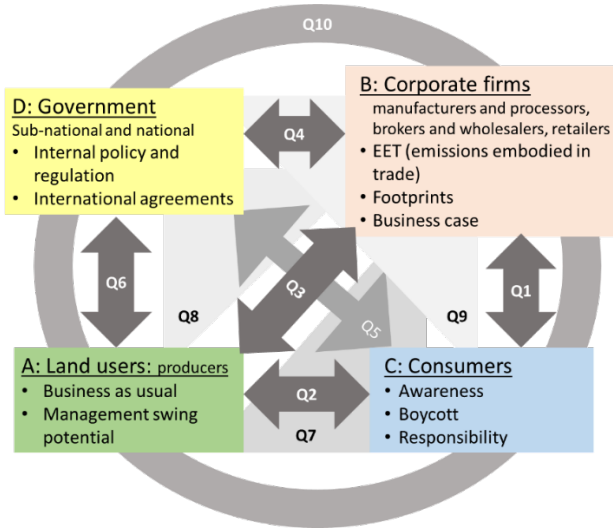


Figure 15.1 Schematic representation of the four key players (across scales) in issues of eco-certification, and of a set of questions that relates to their single or more complex interactions

Farmer harvesting coffee beans in a non-certified multi-strata coffee agroforestry with shade trees have better harvest result of coffee. Photo: World Agroforestry Centre/Arif Prasetyo

Q1. Are consumer-concerns addressed by self-regulation through eco-certification?

Related questions are what adoption of voluntary standards and systems means for changing actual practices and to what extent externally-monitored performance helps to regain consumers' trust? Most of the current eco-certification schemes started because bad press caused a loss of trust between consumers and the private sector through which they obtain goods and services. These issues generally vary from social (such as child labour), to economic (such as unfair farmgate prices) and environmental (such as loss of tropical forests, exacerbating climate change), and may include combinations of the above.

Typically, the problems start with public exposure of worst-case examples, to which the private sector responds in defence by highlighting best-case counter-examples. By the time it is clear that both the worst- and best-case examples actually exist, the management swing potential has been defined by its two extremes. This makes it relevant to seek a way of distinguishing the good from the bad practices. It is a matter of communication and branding whether or not the certification standard as such succeeds in re-establishing trust with consumers. In the competition for public attention, a single exposure of unjustified certification can spoil many years of building a positive image, so there is a strong incentive to self-regulate.

As it were, buyers of eco-certified products join a 'club' that provides actual ES benefits to all as public goods, but reduces the sense of private guilt for club members. Market receptivity, eco-sensitive awareness and movement from key players of voluntary standards and certification systems are enabling conditions to increase the standards for certified products.

We can understand and compare the multiple standards that exist, and continue to arise, as different ways of drawing a line between 'acceptable' (and thus 'certifiable') and non-acceptable, within the management swing potential.

Q2. Which part of the ecological and social problems of producing and trading has to be addressed to satisfy consumers?

While eco-certification primarily originates in the relationship between consumers and corporations, it is the underlying land-use issues (i.e. practices by primary producers) that need to be addressed. In most cases, however, the consumer barely knows where all the ingredients of the products they buy come from or where the processing is done, despite or due to the small print on the packaging. As consumers generally lack knowledge of (agricultural) production systems, there is little use in putting pressure to promote environmentally benign practices at the farm level. Certificate branding thus aims for maximum appeal rather than maximum clarity. This 'optimal fuzziness' means that the way consumers understand a concept does not stand in the way of flexible interpretation.

Maintaining market receptivity and keeping consumers willing to pay for certified products is an arduous process for producers and corporations, who at the same time need to keep up performance before the watchful eyes of consumers, government, environmentalist watchdogs, and journalists. In conclusion, wide gaps between consumer knowledge and the technicalities of how standards operationalize along the value chain, remain a challenge. There will be space for the more real concerns of environmental and social performance when consumers have better understanding of this issue.

Q3. Do farmers benefit from obtaining ecocertification?

Many impact studies have tried to answer the question about the net benefits for farmers participating in certification schemes (including eco-certification)[18]. Methodologically, this question is not easy, as differences between 'certified' and 'non-certified' groups could well have existed before the certification issue came along. In fact, we can expect that certification initially selects farmers who are different from the majority. Over time, the presence of certification options may actually induce change in practice by farmers, mostly those in the middle range of the management swing potential that can be pushed to reach above the standard. In those cases, there is a basic 'additionality' in the sense that the certification scheme reduces the severity of the issue that gave rise to it—at least on the margin. For farmers, however, the participation cost is often substantial, especially for smallholders as there are strong economies of scale at play in meeting the administrative side of the certification. Unless the participation and certification costs of small producers are supported by other parts of the value chain, for example because this itself enhances the public standing of the certificates, these transaction costs may exceed the 'premium price' paid at the farmgate for certified products. From the various impact evaluation studies it appears that expectations of direct financial benefits have not often been met, while indirect benefits through access to knowledge and farmer organizations tend to be underrated.

Q4. Who initiated and developed successful eco-certification standards?

Where self-regulation by the private sector receives positive press, governments—especially those of producing countries—start to develop a keen interest. Governments may be torn between two perspectives: on one hand, they are supportive of processes that reduce the risk that part of their export products are no longer accepted by key markets; on the other hand, they may feel bypassed and challenged in their role of protecting their citizens. The emergence of the Indonesian and Malaysian Sustainable Palm Oil standards, for example, occurred after the governments of the two countries responsible for 85% of global palm oil export saw progress in the Roundtable on Sustainable Palm Oil (RSPO).

These national standards primarily aim to reassert that existing rules are actually followed—and as such they can establish a legally-enforced bottom-line in the management swing potential that reduces the severity of many of the underlying issues. This allows a higher-level standard to operate at reduced transaction costs and addresses a voluntary segment of the market that wants to go further than the existing rules. On the other hand, government efforts are accompanied by public statements that question the motives of the private sector to self-regulate as undermining the national sovereignty of the producer country (See Q9). Such statements can be interpreted as a struggle for positive press in a strongly segmented world, where support on the home front is determined by very different norms and rules than support abroad.

Q5. To what extent do corporations applying voluntary standards and certification systems require public control for their roles as self-regulators?

Governments normally see it as their duty to protect their citizens (but less so those abroad) from false information, especially where there is a power asymmetry between citizens and corporations. Where product quality is of direct relevance to the health and wellbeing of the consumer, all governments, even those with the strongest verbal support for private-sector solutions, readily step in as regulators and anchors of trustable relations. Similarly, where there are social issues such as child labour and unfair competition, government regulations can count on wide public support.

For the relatively new issue of ecosystem services, however, public control of the self-regulators is still a subject of debate. In many situations, however, environmental impact is not restricted to the plot and farm scale for which land users can be primarily held responsible, and involves a wider group of stakeholders. Public control of certification standards is non-controversial where the branding involves geographical identities, with the brand including additional, self-regulated standards addressing environmental concerns.

Q6. How do voluntary eco-certification schemes relate to mandatory rules for land use?

In many countries, environmental legislation is substantially ahead of effective implementation and the political platform for enforcement is weak. This is especially true where legislation has been primarily informed by scandals abroad and public concern is not prevalent in the country of focus. Reduction the ecological footprint of production is initially often seen as a net cost. Where a change in practice towards reduced pollution actually increases the efficiency of resource use, however, it can be economically attractive. As way to support a pioneer group of farmers or land users interested in reducing the negative consequences of farming, certification can stimulate a public learning process that paves the way for enforcement and/or strong mandatory rules for land use, showing that it is possible to do so with positive economic returns.

Q7. What fraction of goods and services is certified in different commodity markets?

The State of Sustainability Initiatives (SSI) Review 2014[19] reported growth of voluntary sustainability standards across agriculture and forest commodity sectors[3]. Key findings of the Review include that standard-compliant production across all commodity sectors grew 41 percent on average in 2012, exceeding the 2 percent of conventional commodity markets. The palm oil sector, the strongest among the commodity sectors, accounted for 90 percent growth in compliant production. A constant trend in sustainable sourcing commitments by manufacturers resulted in significant market penetration in several commodity markets which was strongest in standard-compliant coffee with a 40-percent market share of global production in 2012.

Timber: globally, forest area under the Forest Stewardship Council (FSC) accounts for approximately 4.5 percent of the total forest area, while the forest area under the Programme for the Endorsement of Forest Certification (PEFC) forest area accounts for approximately 6 percent. The conservative estimation of certified forest area after accounting for double certification is about 9 percent of the total forest area. The certified area grew at an average annual rate of 6 percent between 2008 and 2013. The FSC and PEFC certifications are present in 80 countries, with a stronger presence in North America and Europe (88 percent) than in South America and Africa (6 percent). The premiums for certified logs range from 1 to 30 percent, or more for high-quality hardwood.

- *Palm oil*: approximately 8.2 million metric tonnes of palm oil were standard-compliant by 2012, equivalent to 15 percent of global palm oil production. Standard-compliant palm oil production grew at a compound annual growth rate of 87 percent from 2008 to 2012. Indonesia and Malaysia represent over 90 percent of total land area and production volumes of standard-compliant production. Premiums for sustainable palm oil certificates (RSPO) range from 1 to 6 percent.
- *Cocoa*: approximately 899,000 metric tonnes of cocoa production were standard-compliant in 2012, equivalent to 22 percent of global production. Sales of compliant cocoa accounted for 10 percent of exports. Standard-compliant cocoa production grew 69 percent per annum from 2008 to 2012. The most important producers of standard-compliant cocoa in 2012 were Cote d'Ivoire (50 percent), Ghana (17 percent) and the Dominican Republic (15 percent). Premiums for standard-compliant cocoa ranged from 5 percent to 18 percent.
- *Coffee*: approximately 3.3 million metric tonnes of standard-compliant coffee were produced in 2002, equivalent to 40 percent of global production. Sales of standard-compliant coffee reached 12 percent of exports. Standard-compliant coffee production grew 26 percent per annum from 2008 to 2012. Countries that contribute to share of the world's standard-compliant coffee are Brazil (40 percent), Columbia (17 percent) and Vietnam (15 percent). Premiums for standard-compliant sales have been reported at 1 to 30 percent over the 2011–2012 period.

Q8. Are international agreements compatible with and supportive of voluntary standards?

In the World Trade Organization (WTO), public subsidies for private-sector activities is a sensitive issue, as this is seen as distortion of markets that normally benefit from being competitive. In this light, it is important that countries can effectively protect their home producers, who have to follow domestic standards protecting social and environmental values, from competition by imported products that do not meet such standards, as the latter have been effectively subsidized by the destruction of natural and social capital in their countries of origin. By invoking this subsidy argument, there is a platform for a globally enforceable (at least for internationally-traded commodities) Good Agricultural Practice (GAP) standard. While such standards may operate in the lower part of the management swing potential, they can help 'lift the bottom'. Their effect may well be more substantive, at least in the short term, than efforts to 'promote the top' under voluntary eco-certification standards. Yet, in terms of learning curve, GAP and voluntary eco-certification can be mutually supportive. Jointly they may bring the goals of a less environmentally costly mode of production in reach of the average farmer.

Cocoa is one of the economic supporting commodities in Sulawesi. Around 2.2 million small-scale farmers grow cocoa on 1.5 million hectares of land, and account for 67% of Indonesia's total cocoa production. Photo: World Agroforestry Centre/Yusuf Ahmad

Q9. Can voluntary standards and certification systems stand in the way of national sovereignty?

Returning to the issue discussed in Q4, we may now consider the interaction between the public and private sector and consumers, especially where commodities target export markets. It clearly is a double-edged sword if countries (or spokespersons claiming to represent the national interest) defend the right of the country to apply what is seen elsewhere as low environmental standards, as part of a 'right to development' and its 'unavoidable' environmental consequences. Gaps in environmental and social awareness of the citizens that shape political platforms are undeniable, but the damage to a 'national brand' by asserting this 'right to pollute' is likely to be substantial. As complex as voluntary self-regulation is, governments of producing countries may do well to be careful in taking position in strongly polarized debates, such as those about oil palm in Southeast Asia and elsewhere in the humid tropics.

Q10. Is eco-certification a fair and efficient form of PES?

From the answers to the preceding questions it may be clear that effects of eco-certification on enhanced environmental wellbeing and ecosystem service production are not paralleled by direct economic benefits (payments) to the land users. At best, we may expect eco-certification rules to compensate farmers for voluntarily foregone opportunities of increased (but less ES-friendly) production. Benefits of participating in eco-certification schemes may be dominated by spillover effects on local ES supply: local community members may benefit from reduced water, soil and air pollution, and as such become less poor. Few impact studies of eco-certification have been able to satisfactorily assess these effects, as the landscapes where eco-certification takes off were probably different from the start from those where it does not, and there is no real option of randomized treatment application for interventions at this scale.

15.2 Discussion

Eco-certification can indeed be expected to support ES-friendly production systems by a specific form of commoditization. It can address some of the currently negative effects on ecosystem services of existing commodity supply systems with active global markets. Some adjustments to proposition C1 may be needed, however.

Where many production systems have low yields as well as substantial negative environmental effects, co-investment in defining and promoting 'good agricultural practice' can improve yields as well as reduce negative ES effects. The primary benefits for farmers can come from access to knowledge and supported local farmer organizations. If buyers of ecocertified products understand that they support such a process through the premium prices they pay, without much of the premium reaching farmers pockets directly, all parties can get some benefit. Once these opportunities for yield increase have been exploited, however, a less avoidable tradeoff between productivity increase and ES is likely to be reached.

As stated in proposition C1, beyond 80% of the 'standard' production modes, there is likely to be a stronger yield versus ES trade-off that needs to be reflected by economic incentives if voluntary participation in eco-certification schemes is to be income-neutral. Studies of 'organic farming' have established that total production per unit of land can be up to about 80% of what is achievable with less stringent environmental standards[20]. The specific value of 80% is, of course, open to further refinement and scrutiny. However, it helps to decide whether the specific form of eco-certification related to 'organic farming' requires premium prices for farmers to break even or to be a positive incentive for increased environmental services at farm level.

As a counterpoint, the ES footprint of production systems per traded unit of product may not differ as much as they appear to be from the effects per unit area[21]. Studies, mostly in Europe, found yield levels of existing organic farms to be only 50% of what is technically feasible within the limits of current regulations, with biodiversity benefits disappearing once they are expressed per unit product[22].

A recent survey of expert opinion on the primary causes of a gap between reality on the ground and official targets for 'greening' agriculture in Indonesia found three primary 'discourses'. Lack of performance can be attributed to a lack of (clarity on) rules, a lack of economic incentives and a lack of knowledge and effective extension services[23]. The way we understand it here, the existing process of developing ecocertification standards and institutions interacts with all three discourses, while the expectation that it provides economic incentives may well have been overrated.

Acknowledgements

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