



Sustainable Sector Transformation

How to drive sustainability performance in smallholder-dominated agricultural sectors?

2015

aidenvironment

 NewForesight

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About this project

This research forms part of a project funded by the International Finance Corporation, the Dutch Ministry of Foreign Affairs, SECO and IDH the sustainable trade initiative in which Aidenvironment, NewForesight and IIED sought to develop a holistic transformation model to scale sustainability in smallholder dominated agricultural commodity sectors.

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Introduction

Agriculture has performed well over the last 50 years, in both keeping pace with rapid population growth and in delivering food at progressively lower prices. Unfortunately this growth has led to overuse of natural resources and the release of greenhouse gases and other pollutants. In addition, many agricultural producers continue to live at or below the poverty line, and agricultural workers are often subject to unacceptable working conditions. Sustainable production of agricultural commodities is necessary to ensure food security, a healthy natural resource base and human wellbeing.

Addressing sustainability issues in agro-commodity sectors is challenging. The challenges for smallholder-dominated sectors relate to productivity and compliance with 'sustainability' systems and proof of that compliance. In the majority of these sectors, current transformation models, whether public or market driven, have only had limited success.

This paper presents a sustainable sector transformation model which takes a holistic approach to transformation. It begins with an explanation of some of the dynamics of sector transformation. It then presents the limits of purely public or market-driven models, before finally presenting the five building blocks that make up the model.

Understanding sector transformation

Experience from the last few decades has generated insights into the transition patterns of commodity markets towards more sustainable production systems. The transition of markets towards sustainability in individual countries follows a transformation curve (see Figure 1: The S-Curve of Market Transformation). As a sector moves through the various phases, the number of stakeholders who adopt sustainable practices in the sector increases, until sustainability becomes a requirement for market entry. There are four distinct phases in the transition towards sustainability. Each phase marks a new level of understanding of what sustainability means within a sector and what is required to achieve it. Each phase also sees the adoption of different approaches to sustainability, with sustainability increasingly entering the mainstream as one progresses along the curve. The transition from inception to institutionalisation generally involves:

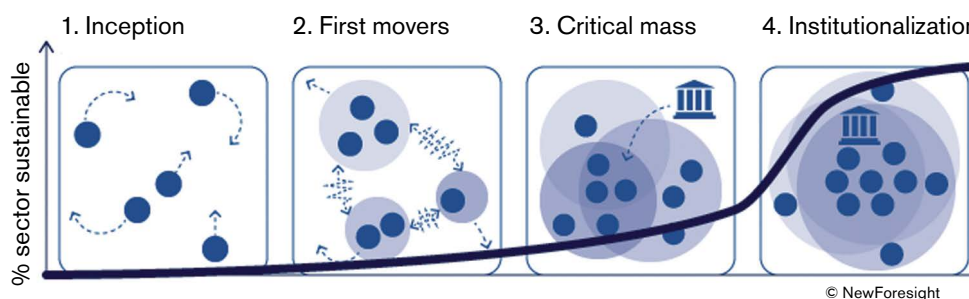
- increasing involvement of different stakeholder groups, with increased sector coordination;
- an increasing professionalisation of farming enterprises;

- a shift from project-based interventions, to programmes and market mechanisms that focus on structural change complemented with regulation to make sustainable practices the norm;
- mainstreaming sustainability until it becomes a licence to operate.

Several 'traditional' commodity sectors, having faced sustainability problems for over a decade, find themselves in 2015 at the beginning of the critical mass phase. Examples are:

- Coffee Vietnam: is 29 per cent certified and has seen significant investments in sustainability projects but sector coordination is still limited;
- Cocoa West Africa: is 20 per cent certified and has improved its coordination through several platforms and sector wide initiatives; large scale investments are geared towards a more sustainable sector but sustainability issues still persist;
- Cotton Mali: 25 per cent included in the Better Cotton Initiative system and increasing investments in addressing some persistent sustainability issues
- Palm oil Indonesia: 12 per cent RSPO certified, national compulsory sustainability standard rolled out, no-deforestation policies of majority of export markets

Figure 1: The S-Curve of Market Transformation



	1. Inception	2. First movers	3. Critical mass	4. Institutionalization
Driving commitment to sustainability	• Civil society	• Front runner companies and donors	• Follower companies and donors	• All, including government
Producers adopting sustainable practices	• Those involved in specific, niche projects.	• Early adopters, with existing sustainable capacity. • Better organized and capitalised farmers	• Late adopters, with sector-based support	• All
Intervention	• Projects	• Standards and certification	• Non-competitive investments	• Regulation and non-competitive investment
Market demand	• Niche	• Growing, but not yet mainstream	• Mainstream	• Licence to operate
Coordination	• None	• Competition	• Emerging alignment and collaboration	• Full alignment

Some sectors, despite high levels of awareness of sustainability issues, are still in a first mover phase. An example is soy in Brazil where only a limited amount is produced according to sustainability standards, but which does have a reasonably well-functioning moratorium on soy production in place, aimed at halting deforestation. In other sectors, such as rice and rubber, attention to sustainability is more recent and actors are still in an inception phase.

Sectors where institutionalisation of sustainability has taken place are still rare. Some coffee sectors in Latin America could be considered to have reached this stage (Costa Rica and to some extent Colombia), or the tea sector in Kenya. They all possess some (but not all) characteristics of institutionalised sustainability, but a number of sustainability issues persist.

Sector approaches versus market-led approaches

Until the 1990s efforts to reform agricultural sectors focused on sector governance models and building institutional capacity, for example of extension services or marketing boards. The results of these efforts have been mixed. Despite some successes, many lacked the required connection to the market to establish sustainable growth, and investments were often associated with mismanagement and very high and unsustainable costs.

Since the 1990s there has been increased concern about the social and ecological impacts of agricultural production. In that same period, agricultural interventions shifted to market oriented, company

and supply chain driven approaches. This created the space for civil society and the private sector to define collectively, or unilaterally, what sustainability is and how it should be achieved. Voluntary Sustainability Standards (VSS) rose to prominence as multi-stakeholder instruments to link market demand for sustainability with a supply of sustainably produced commodities. They have proved to be instrumental in:

- providing a common reference for sustainability by operationalising the concept of sustainability into practices and norms
- promoting transparency in supply chains combined with assurance and traceability to substantiate sustainability claims
- building consumer, industry and producer awareness of sustainability
- providing a platform for sector dialogue and governance
- mobilising market-driven incentives for sustainability
- mobilising investments in producer organisation and training.
- promoting transparency in supply chains combined with assurance and traceability to substantiate sustainability claims

In terms of market reach, VSS today cover between 20 per cent and 30 per cent of global production of some products, but in other sectors their reach is still limited. Overall it appears that market driven approaches, including VSS, face limits in terms of uptake and impact, especially in sectors dominated by unorganised smallholders (see Figure 2: Challenges of VSS Theory of Change). A white paper on the role of VSS in our sustainable transformation model is available at [\[link\]](#).

Figure 2: Challenges of VSS Theory of Change

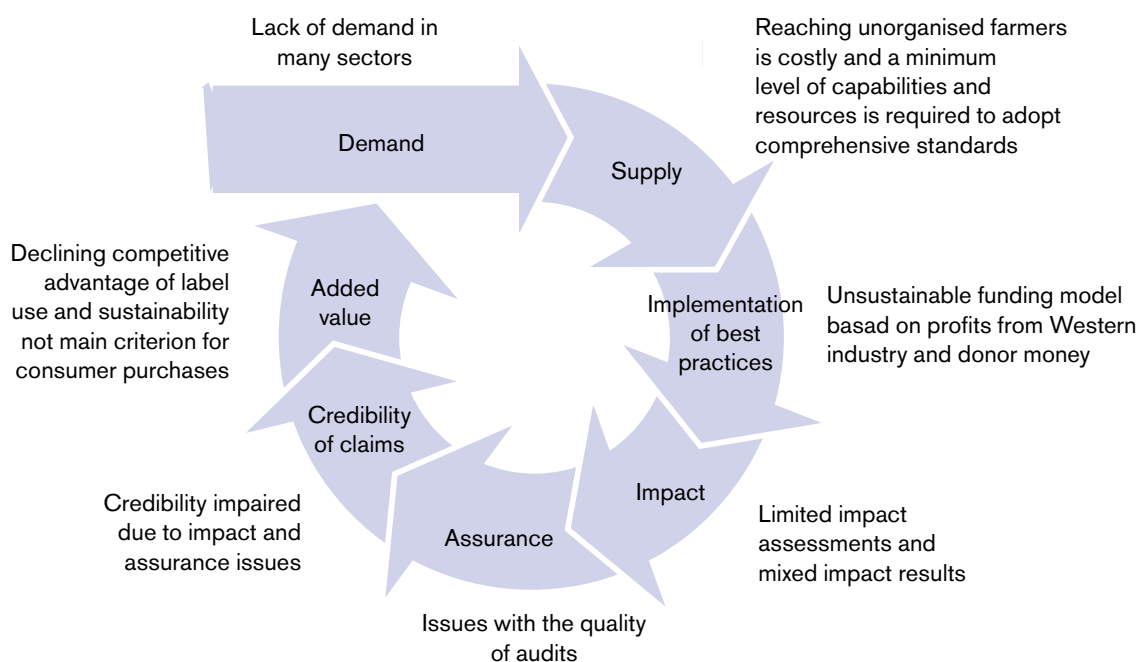
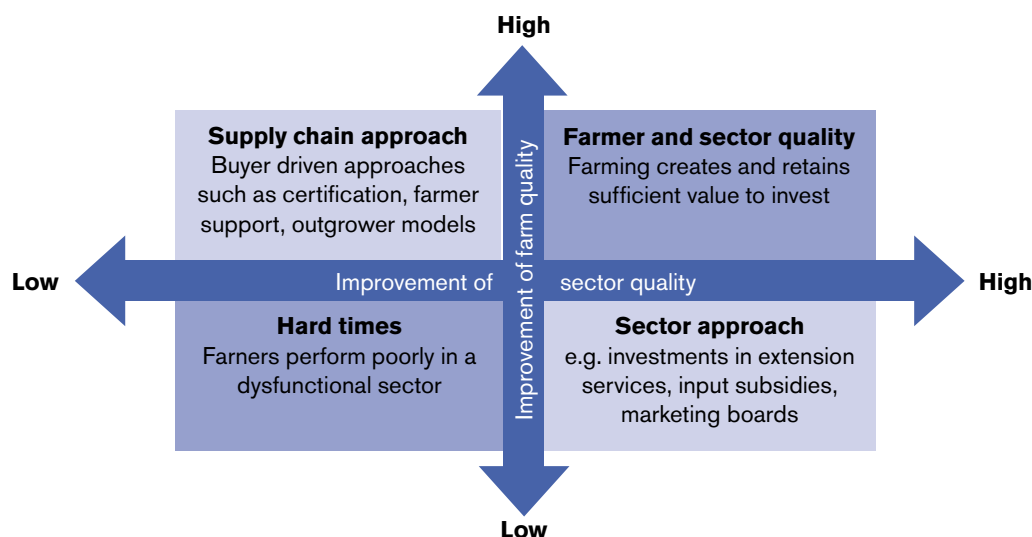


Figure 3: Sector Transformation Models



Sector transformation model	Sector approach	Supply chain approach	Farm and sector quality
Main driver	<ul style="list-style-type: none"> Public sector driven 	<ul style="list-style-type: none"> Buyer driven 	<ul style="list-style-type: none"> Both buyers and public sector
Examples	<ul style="list-style-type: none"> Extension services Input subsidies Marketing boards 	<ul style="list-style-type: none"> Certification Farmer support Outgrower models 	<ul style="list-style-type: none"> Functioning partnership platforms Demand-driven service sector Complementary sector-wide investments and regulation Sector-wide monitoring and learning
Challenges	<ul style="list-style-type: none"> Public extension services have often not been client-centred, and have been subject to political interference Very high cost of extension services and input subsidies – create entrenched vested interests Marketing boards block traceability and hence do not meet buyers' needs for quality and integrity. 	<ul style="list-style-type: none"> Scale and scope of impact restricted by demand Only reaches 'low-hanging fruit' Creates islands of sustainability Does not knit together farms, communities and landscapes 	<ul style="list-style-type: none"> Alignment of stakeholders Resource mobilisation Accountability Safeguarding a long-term strategy

Both market transformation approaches have introduced relevant instruments with some good results but also faced significant challenges which have been difficult to overcome. Recognising the strengths and limitations of past models, we therefore advocate for an approach where the investments needed to

achieve sector transformation are redesigned from the perspective of wide-scale transformation, and target both the farm level and sector level (see Figure 3: Sector Transformation Models).

Focus on farm and sector level

To promote sector-wide improvement in sustainability performance, a more holistic approach is needed. Public and private sector need to work together in a way that impacts the sector as a whole, with tailor-made approaches for different types of producer. In such an approach VSS are one instrument that can be used in the transformation, but they need to be complemented with other approaches and investments – both in the value chains and for the sector as a whole.

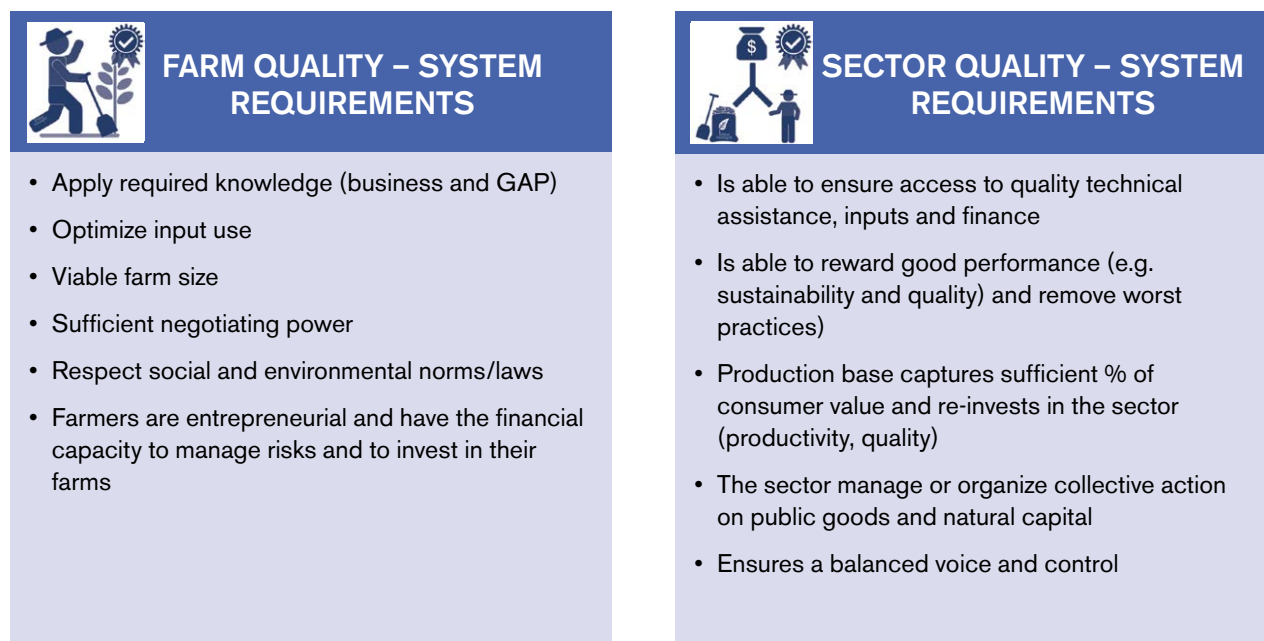
Such a collaboration starts with a joint vision of what a sustainable farm is. This 'farm quality' (FQ) is defined not only by its social and environmental performance but also by its capacity to be a viable business: its productivity, profitability and entrepreneurialism. At a macro level the different stakeholders need a

joint vision of what 'sector quality' is: the capacity of a sector to foster the growth of farm quality among its producers and to generate and retain an economic surplus reinvested in FQ. Again, this is a wider definition of sustainability than just social and ecological outcomes at a macro level and also includes economic competitiveness, resilience in the face of market and climatic volatility and the capacity to provide high quality services to farmers (see Figure 4: Farm & Sector Quality)

Farm and Sector Quality

To organise a sector around improving farm and sector quality requires acknowledgement of two principles. The first one establishes that transformation only occurs if the incentives in the market encourage continuous improvement. The second one is that there is sufficient value retention at the production base to re-invest in a sector with reduced external assistance.

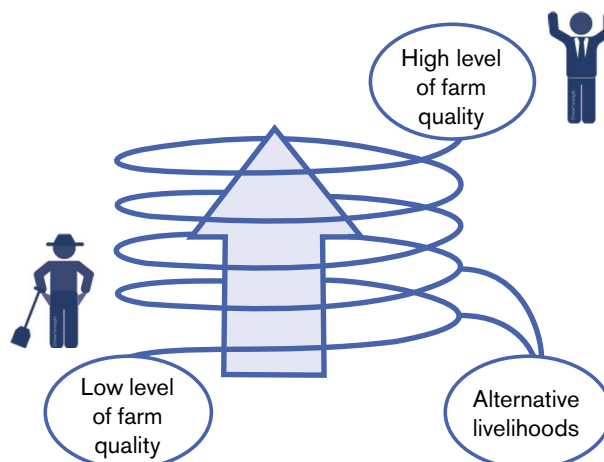
Figure 4: Farm and Sector Quality



Continuous improvement

Sector transformation is a step-wise process of improvement, which requires continuous rewarding of good performance and removal of worst practices. An intrinsic business case is needed for continuous improvement of farm quality and all farmers should get a fair chance to improve on farm quality (see Figure 5: Continuous improvement). It also implies that for those farmers who continue worst practices or are not willing to improve, alternative livelihoods should be considered and promoted. This can include the production of other crops or a shift to off-farm employment.

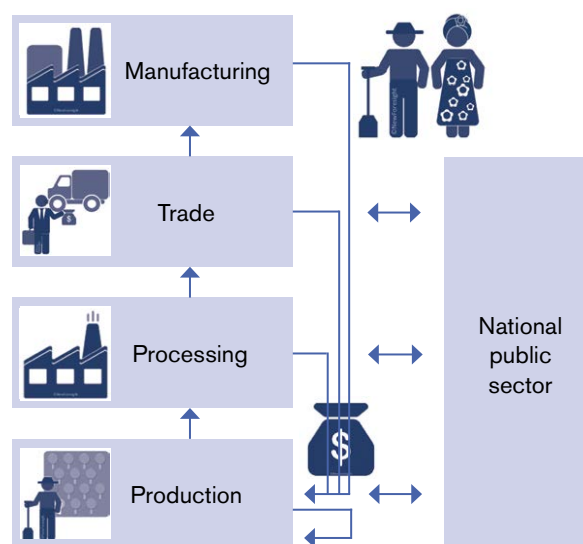
Figure 5: Continuous improvement



Value capture at the production base

The financing of sector transformation requires a differentiated funding base, which includes producers themselves, domestic industry, national governments, and the financial sector (see Figure 6: Value capturing at the production base). Current investments are primarily donor-driven, particularly from Northern donors, often complemented by investments from Northern-based multinationals. This is unlikely to be a sustainable funding model to achieve long-term sector transformation. Sector transformation should always lead to a state whereby the production base itself is able to finance its operations and the maintenance of sustainability.

Figure 6: Value capturing at the production base

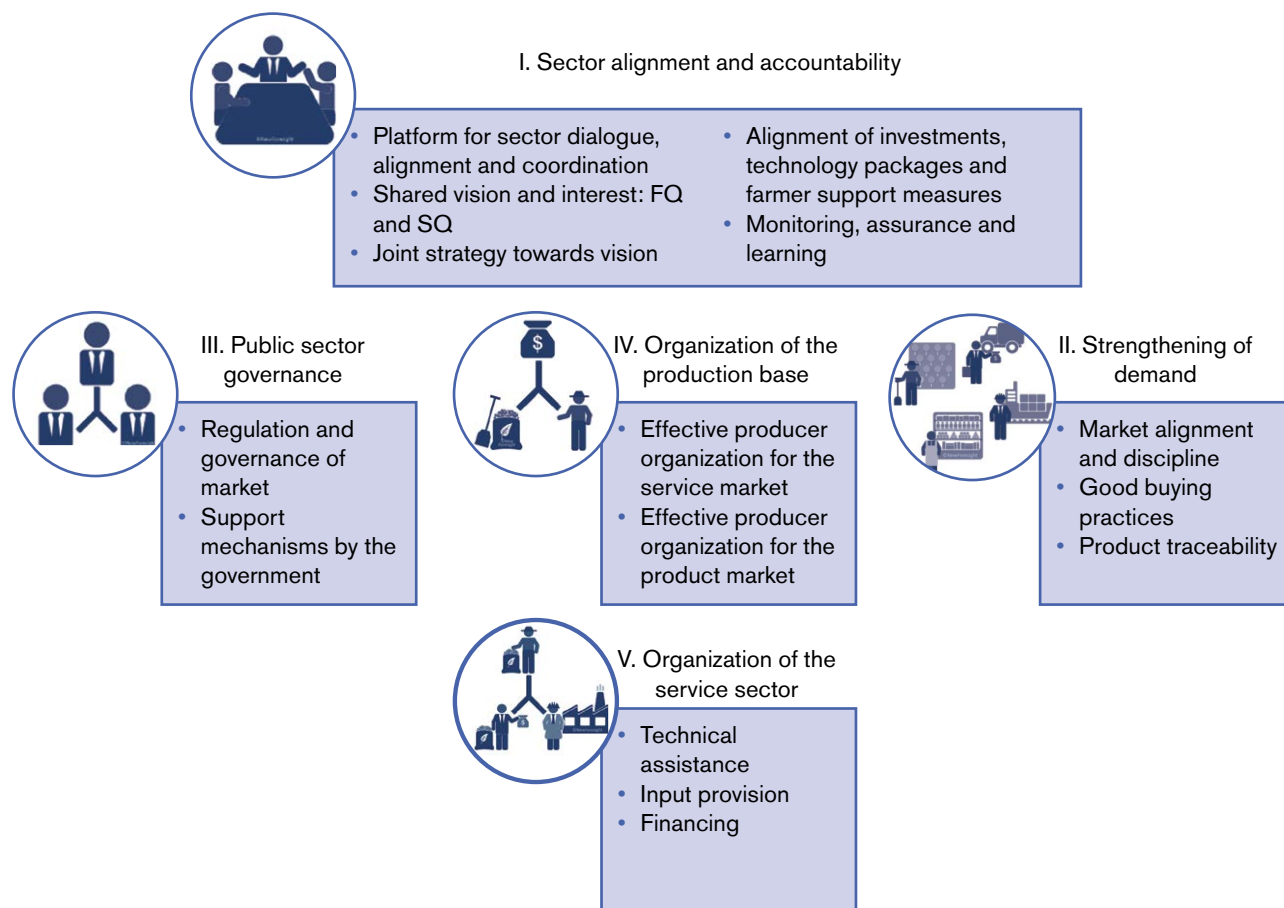


Sector transformation model – five building blocks

The model for sustainable sector transformation in smallholder-dominated agricultural sectors consists of five building blocks: I. Sector alignment and accountability, II. Strengthening of market demand, III. Public sector governance, IV. Organisation of the production base and V. Organisation of the service sector (see Figure 7: The five building blocks of sector transformation). Each of these building blocks is a condition for realising farm and sector quality. For an extensive report on the model and its building blocks see [link](#).

A brief description of each building block and an example from one of our cases are given below.

Figure 7: The five building blocks of sector transformation



Sector alignment & accountability

Crucial in this building block is the development of a vision on farm quality and sector quality, including the definition of a step-wise improvement path. This vision should be shared by all relevant stakeholders and translated into a strategy that clearly defines roles and responsibilities between stakeholders. Each stakeholder should be held accountable for key performance indicators (KPIs). Progress on the KPIs should be monitored and the monitoring data should be used to adopt the strategy and stimulate sector-wide learning.

Cocoa in Cote d'Ivoire

The desired level of sector alignment and accountability as described in our model is hard to find in a current sector. The cocoa sector in Cote d'Ivoire seems closest to getting there. The private sector has committed itself, through the CocoaAction initiative, to a vision for a sustainable cocoa sector. It has a joint set of goals and KPIs to which companies will hold each other accountable, while the strategies they use to reach these KPIs are competitive and vary from company to company. The next step will be to develop a functioning public-private partnership with the Conseil de Coffee Cocoa (CCC) to create alignment in vision, targets and shared accountability. For the complete case study see [link](#).¹

Strengthening market demand

The market should align behind the vision and organise its procurement practices in such way that it rewards improvement and excludes worst practices. This requires buyers to position themselves as preferred buyers to producers and possibly provide additional services such as capacity building or inputs.

Palm oil in Indonesia

In the Indonesian palm oil sector examples can be found where the lack of market alignment has a clear negative sustainability impact. In certain regions some crude palm oil mills refuse to buy from farms that are located on recently or illegally deforested land. However, multiple cases exist where these farmers can sell their produce to other CPO mills which do not have such policies in place. Consequently, palm oil farmers still have an incentive to deforest despite the efforts to remove these practices by some buyers. For the complete case study see [link](#).²

Public sector governance

The public sector has an important role to regulate and support sector transformation, particularly where the market fails. This includes enforcing social and environmental regulation (e.g. land tenure, labour, and conservation); providing investments (e.g. infrastructure, research, input subsidies); and governing the market to ensure effective quality differentiation and price transmissions, reduce price volatility and improve sector organisation (e.g. minimum prices, quality regulation, marketing boards). For a paper on sector governance see [link](#).³

Cocoa in Ghana

The government holds a tight grip on the Ghanaian cocoa sector, where COCOBOD plays a pivotal role. All export sales are successfully managed by the Cocoa Marketing Company. Experienced and knowledgeable traders are in place and Ghana has a good global reputation as a seller of high quality cocoa at premium prices. In theory the country should be able to finance its own sector transformation, through its investments in technical assistance, crop spraying, research, seed production, etc. But these schemes have been found to be patchy in coverage and inefficient. In addition social and environmental regulation properly enforced. The potential of COCOBOD seems underused. For the complete case study see [link](#).⁴

Organisation of the production base

Key for wide-scale promotion of sector quality is to organise producers around service delivery and the market. Organisation could be achieved in different ways, including through service provider networks, outgrower schemes, supply chain networks, cooperatives or sector-wide organisation. The organisation of the production base can enable the market to reward good performance and exclude worst practices.

Cotton in Mali

The cotton sector in Mali has a highly organised production base. All 167,000 farmers are members of cooperatives, which in turn are all members of the national union of cotton producers, UN-SCPC. This union partly owns the state-sanctioned monopolist cotton company CMDT. This organisational set-up enables CMDT to reach out to all farmers with inputs, credit and technical assistance, to procure the cotton and to collect farm-level data. Despite concerns about the balance of power, transparency and efficiency, this sector has good potential to promote sector-wide change. This will, however, require a clear vision on farm quality which is currently lacking. For the complete case study see [link](#).⁵

Organisation of the service sector

Services such as extension, inputs and finance need to be accessible, demand-driven, bundled where possible and of high quality. Ideally, services should be provided by a competitive market of service providers that treat farmers as clients and in which services are increasingly paid for by farmers themselves. Service delivery should also reward good performance and exclude worst practices. In the absence of a professional service sector, buyers or the public sector could organise rewarding good performance alongside the complementary – possibly non-competitive – investments to build a professional service sector. Small sector levies and taxes may offer potential for longer-term sector-wide financing of services. For a white paper on service delivery see [link](#).⁶

Coffee in Vietnam

Coffee yields in Vietnam are very high, demonstrating that the service sector is well organised for productivity. Yet the service sector is not organised for sustainability. Overuse of water and fertiliser is damaging the environment and leading to sub-optimal profits. The challenge is therefore not the provision of these inputs, but the optimisation of their use. Vietnam also demonstrates that even in a well-serviced environment, where farm-gate prices have reached the maximum attainable percentage of the FOB price, farmers have little access to capital. For the complete case study see [link](#).⁷

Organising the building blocks

The extent to which the above building blocks need to be strengthened is context specific, but a focus on only one or two dimensions is bound to lead to a failure to completely transform sectors where there are many unorganised smallholders. Each building block is a condition for effective sector transformation, but its importance may differ depending on the sector characteristics. This transformation is likely to be a process that takes a number of years and its pace very much depends on the time it takes to create alignment and how seriously each stakeholder takes their own role in the transformation. The required steps should follow a logical order in order to be most effective. It is hard to prescribe this in generic terms beyond the first steps. After that the steps become dependent on the specifics of the sector. Transformation will generally follow this track:

1. A group of stakeholders with critical weight in the sector take the initiative to transform the sector. The initiating group should engage the other major actors and develop a shared vision on farm and sector quality and the implications for the organisation of the production base and the organisation of the service sector.
2. The major actors align behind this vision, develop a strategy to realise the vision and agree on a monitoring and assurance mechanism. Accountability is key and requires a strategy that is measurable. Many of the failed transformation initiatives lack joint accountability.
3. The production base is reorganised effectively for the service and product market. Likewise, the service sector should cater effectively to the production base. This is not a matter of organising one before the other. It is about a stable symbiosis between service and production sectors, where producers can pay for services that will further their continuous improvement cycle.
4. Implementing the vision/strategy will require a combination of public and market-oriented measures, based on capacity and desire to implement change in the sector. If the dominant actor is the government, then the initial focus of the transformation should be on improving public sector governance. If the private sector is relatively concentrated and buying companies, traders or service providers have leverage over producers, then the role of the private sector in realising the transformation will likely be stronger. Both the public and private sector will always have to be involved in order to ensure consistent messages and incentives for farmers, whether via demand, service delivery or policy. In line with this thinking,

the public or private sector has an important role in building up a professional service sector.

Conclusion

Transforming a smallholder-dominated agricultural sector from 'hard times' to farm and sector quality (Figure 3) is not an easy task. Previous transformation models have either tried to use a supply chain or a sector approach. Despite considerable progress, these approaches have not yet led to the desired results. In this paper a new model is proposed. This sustainable sector transformation model is holistic and it consists of five major building blocks that are conditions for change. The model is guided by two principles. The first one establishes that transformation only occurs if the incentives in the market encourage continuous improvement. The second one is that there is sufficient value retention at the production base to re-invest in the sector with limited external assistance. The model can be used to guide sustainable transformation of a sector. Since this will be a long-term process, the focus of interventions may vary according to sector – as long as sector alignment and accountability function well. We have shown this by applying our model to five case studies.

Notes

- 1 <http://sectortransformation.com/wp-content/uploads/2015/03/cocoivorycoast.pdf>
- 2 <http://sectortransformation.com/wp-content/uploads/2015/03/palmoilindonesia.pdf>
- 3 <http://sectortransformation.com/wp-content/uploads/2015/03/sectorgovernance.pdf>
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- 7 <http://sectortransformation.com/wp-content/uploads/2015/03/coffeevietnam.pdf>

This paper presents a sustainable sector transformation model for smallholder dominated agricultural commodity sectors which seeks to take a holistic approach to transformation by combining supply chain and sector dynamics. Its five building blocks are explained using examples from different countries and sectors.

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