



Wettelijke Onderzoekstaken Natuur & Milieu

Upscaling sustainability initiatives in international commodity chains

Examples from cocoa, coffee and soy value chains in the Netherlands

| WOt-technical report 67

V.J. Ingram, L.O. Judge, M. Luskova, S. van Berkum & J. van den Berg



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Upscaling sustainability initiatives in international commodity chains

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This document contributes to the body of knowledge which will be incorporated in more policy-oriented publications such as the National Nature Outlook and Environmental Balance reports, and thematic assessments.

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Abstract

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This study reports on the extent to which sustainability initiatives in the cocoa, coffee and soy value chains have been scaled up by companies. We have investigated how the private sector can be further stimulated to engage in, sustain and increase their involvement in actions to increase the sustainability of commodity chains with links to the Netherlands. The report analyses the motives for companies to join sustainability initiatives and their reasons for not engaging. It concludes with several recommendations on how government and value-chain stakeholders could further stimulate the scaling up of sustainability initiatives.

Key words: value chains, soy, cocoa, coffee, policy, trade, development policy, sustainability, upscaling

Referaat

Ingram, V.J., L.O. Judge, M. Luskova, S. van Berkum & J. van den Berg (2016). *Opschaling van duurzaamheidsinitiatieven in internationale handelsketens; Voorbeelden van soja-, cacao- en koffie-waardeketens in Nederland*. WOT Natuur & Milieu, Wageningen UR. WOT-technical report 67. 125 p. 20 Figs.; 34 Tabs.; 122 Refs.

Deze studie laat zien op welke wijze bedrijven duurzaamheidsinitiatieven in de cacao-, koffie- en sojawaardeketens hebben uitgebreid. We hebben onderzocht hoe bedrijven verder kunnen worden gestimuleerd om hun betrokkenheid in de verduurzaming van internationale handelsketens te behouden en te vergroten. De motieven van bedrijven om al dan niet te verduurzamen zijn geanalyseerd. Ten slotte doen we aanbevelingen hoe de overheid en betrokkenen bij de waardeketens duurzaamheidsinitiatieven verder kunnen stimuleren.

Trefwoorden: handelsketen, soja, cacao, koffie, beleid, handel, ontwikkelingssamenwerking, duurzaamheid, opschalen

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LEI Wageningen UR

PO Box 29703, 2502 LS Den Haag

Phone: (070) 335 83 30; e-mail: informatie.lei@wur.nl

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Statutory Research Tasks Unit for Nature & the Environment, P.O. Box 47, NL-6700 AA Wageningen, The Netherlands

Phone: +31 317 48 54 71; e-mail: info.wnm@wur.nl; Internet: www.wageningenUR.nl/wotnatuurenmilieu

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Preface

We are grateful to and thank all the representatives of the companies, NGOs and the Dutch ministries who were contacted for this study and who shared their ideas and information.

We are highly appreciative of the collaboration with Mark van Oorschot of the Netherlands Environmental Assessment Agency (PBL) and guidance given by Frank Veeneklaas of WOT Natuur & Milieu - Wageningen UR, on this study.

Verina Ingram

Lucas Judge

Martina Luskova

Siemen van Berkum

Jolanda van den Berg

Contents

Preface	5
Abbreviations	9
Summary	11
1 Introduction	13
2 Conceptual approach and methods	17
2.1 Concepts	17
2.1.1 Upscaling	17
2.1.2 Market and chain transformation	20
2.1.3 Policy instruments	20
2.1.4 Value chains	21
2.1.5 Governance	22
2.2 Research methods	24
2.2.1 Case studies	24
2.2.2 Value chain analysis	24
2.2.3 Literature review	24
2.2.4 Structured interviews	24
2.2.5 Informal discussions and meetings	25
2.2.6 Verification meeting	25
3 The cocoa value chain	27
3.1 Value chain structure	27
3.1.1 Cocoa value chain context	27
3.1.2 The Netherlands and the cocoa value chain	28
3.1.3 Production	28
3.1.4 International trade	30
3.1.5 Stakeholders and chain consolidation	30
3.1.6 Asia and the cocoa value chain	31
3.2 Overview of sustainability initiatives	32
3.2.1 Platforms, networks and associations	33
3.2.2 Voluntary sustainability standards	34
3.2.3 Corporate initiatives	35
3.2.4 Interlinking initiatives	36
3.3 Motives to upscale	37
3.4 Policy instruments to increase value chain sustainability	39
4 The coffee value chain	43
4.1 Value chain structure	43
4.1.1 Coffee value chain context	43
4.1.2 Characteristics of the global coffee value chain	44
4.1.3 The Netherlands and the coffee value chain	46
4.2 Overview of sustainability initiatives	46
4.2.1 Introduction	46
4.2.2 Platforms, networks and associations	47
4.2.3 Voluntary sustainability standards	48
4.2.4 Corporate initiatives	49
4.2.5 Interlinking initiatives	50

4.3	Motives to upscale	51
4.4	Policy instruments to increase value chain sustainability	52
5	The soy value chain	55
5.1	Value chain structure	55
5.1.1	Soy value chain context	55
5.1.2	The Netherlands and the soy value chain	56
5.1.3	Production	56
5.1.4	International trade	57
5.1.5	Stakeholders and chain consolidation	58
5.1.6	China and the soy value chain	58
5.2	Overview of sustainability initiatives	59
5.2.1	Platforms, networks and associations	59
5.2.2	Voluntary sustainability standards	60
5.2.3	Corporate initiatives	61
5.2.4	Interlinking initiatives	62
5.3	Motives to upscale	63
5.4	Instruments to increase value chain sustainability	64
6	Synthesis of major findings	65
6.1	Value chain structure and (most important) players	65
6.2	Overview of sustainability initiatives	68
6.2.1	Platforms, networks and associations	68
6.2.2	Voluntary sustainability standards	70
6.2.3	Corporate initiatives	71
6.3	Motives to upscale	72
6.3.1	What explains the differences in the upscaling of sustainability initiatives?	72
6.3.2	Why do companies choose not to engage in sustainability initiatives?	75
6.4	Policy instruments to increase value chain sustainability	75
6.5	Medium-term expectations	77
6.6	Lessons and recommendations	79
6.7	Key findings summarised	81
6.7.1	Value chain structure and the upscaling of sustainability initiatives	81
6.7.2	Overview of sustainability initiatives	81
6.7.3	Motives to upscale	82
6.7.4	Instruments to increase value chain sustainability	83
6.7.5	Recommendations	84
7	References	87
8	Justification	93
Annex 1	Stakeholder questionnaire	95
Annex 2	Respondents	99
Annex 3	Sustainability initiatives in the cocoa value chain	100
Annex 4	Sustainability initiatives in the coffee value chain	107
Annex 5	Sustainability initiatives in the soy value chain	113

Abbreviations

ABIOVE	Brazilian Association of Vegetable and Oil Industries
CAOBISCO	Association of Chocolate, Biscuit and Confectionery Industries of Europe
CBI	Centre for the Promotion of Imports from Developing Countries
CBL	<i>Centraal Bureau Levensmiddelenhandel</i> /Dutch Food Retail Association
CEN	European Committee for Standardisation
CSO	Civil society organisations
DZ	<i>Duurzame Zuivelketen</i> / Sustainable Dairy Chain
ECA	European Cocoa Association
FAO	United Nations Food and Agriculture Organisation
FEFAC	European Feed Manufacturers Federation
FNV	<i>Federatie Nederlandse Vakbeweging</i> /Dutch Trade Union Federation
GAP	Good Agricultural Practice
GlobalGAP	Private sector voluntary standards setting body for certification of agricultural products
ICCO	International Cocoa Organisation
ICO	International Coffee Organisation
ICI	International Cocoa Initiative
ICRAF	World Agroforestry Center
IDH	<i>Initiatief Duurzaam Handel</i> / Sustainable Trade Initiative
IFOAM	International Foundation for Organic Agriculture
IITA	International Institute of Tropical Agriculture
ISO	International Standards Organisation
KNVKT	<i>Koninklijke Nederlandse Vereniging van Koffie en Thee</i> /Royal Dutch Coffee and Tea Association
LEI	Agricultural Economics Institute, Wageningen UR
NCN	Implementation Natural Capital Netherlands Agenda
NEN	Netherlands Norm organisation
NEVEDI	Dutch Feed Industry Association
PBL	<i>Planbureau voor de Leefomgeving</i> / Netherlands Environmental Assessment Agency
RA	Rainforest Alliance
RTRS	Round Table on Responsible Soy
SAN	Sustainable Agriculture Network
SKVS	<i>Stichting Ketentransitie Verantwoorde Soja</i> / Foundation for Chain Transition for Sustainable Soy
SME	Small and medium enterprises
TEEB	Economics of Ecosystems and Biodiversity
VBP/PBS	<i>Vereniging Biologische Producenten en Handel</i> /Organic Producers and Trade Association
VBZ	<i>Vereniging voor de Bakkerij- en Zoetwarenindustrie</i> /Dutch Association for the Bakery and Confectionery Industry
VNO/NCW	Confederation of Netherlands Industry and Employers
WCF	World Cocoa Foundation
Wot/KO	Statutory research task/Knowledge assignment
WTO	World Trade Organization
WWF	Worldwide Fund for Nature

Summary

This study reports on how sustainability initiatives in the cocoa, coffee and soy value chains have been scaled up by companies and how the private sector can be further stimulated to engage in, sustain and increase such initiatives. It also provides an input to two publications, the Assessment of the Dutch Human Environment (*Balans van de Leefomgeving*) and the Natural Capital Netherlands Agenda, and to policies concerning the sustainability of international value chains.

Sustainability initiatives in the cocoa, coffee and soy value chains have been replicated and extended (two terms used for 'doing the same thing at a greater scale') and horizontally and/or vertically scaled up (value-chain upscaling strategies). This has resulted in an increased number of private, public and civil society organisations adopting and supporting sustainability initiatives, as well as a considerable increase in the uptake of these initiatives expressed in terms of the market share of 'sustainably produced' products, production volumes, the numbers of farmers and their organisations producing products in a sustainable way, and the area under sustainable production. Sustainability initiatives have also resulted in an increase in the provision of technical information. The emphasis has been on disseminating good agricultural practices through farmer organisations, in particular in the cocoa and coffee value chains where traditional, small-scale farmers continue to play a critical role in producing the primary product.

The scaled up sustainability initiatives are classified into three types: (1) platforms, networks and associations that bring together organisations from different segments of the chain, encouraging them to collectively discuss and address sustainability issues; (2) voluntary, third party verified certification standards and schemes, sixteen of which have been increasingly adopted in the three chains, often with indirect government support; (3) individual corporate programmes and projects, often combined with certification, which have created changes in practices in the chain and enhanced consumer awareness of product origins and production processes.

Table S1 shows which types of upscaling are used in practice by these three types of value-chain sustainability initiatives. The table also lists the policy instruments used to encourage sustainable production. Policy instruments have traditionally focused on the regulation of technical standards, but the spectrum has broadened and now governments and intergovernmental bodies such as the EU are increasingly using a blend of instruments, including corporate self-regulation and semi-private and semi-public regulation. The overview shows that self-regulation and participation by the business community are the most common styles of policy governance for encouraging the upscaling of sustainability initiatives in commodity chains.

The differences in upscaling and timeframes between the three value chains are due to the structure of the chains and how they are governed, and to the differences between company motives and drivers for adopting sustainability initiatives. The cocoa and coffee value chains exhibit market-based characteristics combined with a growing element of relational governance. The soy chain has elements of captive and hierarchical governance. In all three value chains, the location and extent to which market and technical information is disseminated along the value chain has been a key element in determining the balance of power between actors based in the Netherlands and farmers and processors. In all three value chains, power is mostly concentrated among the large processors and traders.

The motives for companies to scale up their use of sustainability initiatives vary in each chain and the choice to which initiative and to what extent a company complies with an initiative depends on the importance placed upon the sustainability issues in that chain. Most initiatives focus on improving primary production by farmers, increasing market demand and stimulating consumer awareness. The uptake of initiatives by companies was initially driven by negative publicity and challenges by civil society organisations (CSOs) and non-governmental organisations (NGOs). Other factors that play a part are stimulation by the Dutch government (starting and implementing initiatives), corporate sustainability and social responsibility philosophies, learning from experiences of sustainability initiatives in other commodities chains (e.g. how to establish initiatives, how to create win-win

arrangements), and proactive voluntary sustainability certification and standards organisations. Major barriers to upscaling at the moment are the relatively high costs of participation and uncertainty over the level of return on investments in relationships with suppliers, traceability initiatives, monitoring and evaluation schemes, and voluntary certification standards.

Table S1
Overview of policy instruments, sustainability initiatives and types of upscaling in the cocoa, coffee and soy chains

Policy instrument & principle	Endorsing	Partnering	Facilitating	Mandating
	Corporate self-regulation	Semi-private regulation	Semi-public, interactive regulation	State regulation
Sustainability initiatives used in the chains	Voluntary sustainability standards (including labelling & reporting) Corporate initiatives (including support by civil society initiatives/ partners)	Platforms Public-private-partnerships (combining resources, dialogue, stakeholder engagement, incentives, subsidies & capacity building) Letters of Intent ('covenants')	Networks & associations Chain and sector associations and coalitions and strategic stakeholder dialogues	-
Interlinking initiatives				
Multi-stakeholder standard development (ISO)				
Types of upscaling used	Replication Horizontal Vertical	Extending Replication Horizontal	Vertical	Vertical

(in **bold** signifies most common use)

Instruments for increasing value-chain sustainability include the continued use and scaling out of voluntary certification standards and harmonisation of the proliferating number of standards. Public-private and research partnerships are seen as a vital tool in helping companies to start and scale up sustainability initiatives. Consumer awareness campaigns help stimulate demand for sustainable products. Fiscal and monetary instruments, such as lowering trade barriers and providing tax advantages for sourcing and supplying sustainable certified products, are little used. However, they are considered to be effective in stimulating further upscaling by reducing the barriers to participation in sustainability schemes posed by the high costs of participation and the uncertain level of return on investments. The complexities of current world trade agreements preclude the use of legislative instruments that favour importing sustainable commodities into the Netherlands, but instruments to create a more level playing field for importers and exporters could be used. A range of instruments can effectively contribute to upscaling, particularly those operating at global and European levels. Currently, standards and partnerships are limited mainly to the national level.

The Dutch government could further stimulate the transition towards sustainable production and consumption of sustainably produced products in five ways. First, the government could work more with the governments of cocoa, soy and coffee producing countries to develop, implement and enforce policies designed to stimulate sustainable production practices. Second, it could address the positions of other EU governments on sustainable production at a bilateral and EU level. Third, it could work with industry on efficient data collection to provide insights into the costs and benefits of complying with standards, and enable more robust impact assessments. Fourth, it could work with CSOs and knowledge institutes on increasing consumer awareness and the transparency and credibility of sustainability initiatives. Lastly, it could collaborate with standard/scheme owners and their organisations to harmonise existing standards to reduce consumer confusion and the costs of certification, paving the way for more robust monitoring and evaluation systems and generating increased demand for sustainable products.

1 Introduction

Background

The ecological footprint of Dutch consumers is estimated at an amount of land three times the surface area of the Netherlands and is one of the heaviest in Europe (WWF 2012). Our diet also has global impacts, not only on the environment but on the working and living conditions of people and organisations worldwide who are involved in producing the products we consume (Higgins and Prowse 2010, BASIC 2014). Our footprint has contributed to the trend of continuing land degradation and this, in combination with increasing competition for productive land and often weak land use governance, threaten the functioning of ecosystems upon which these production systems depend. The FAO predicts that continuing economic growth and a growing global population (expected to increase to around 9 billion by 2050) will result in a 70% increase in demand for food, feed, fuel and fibre. If the world population increases by 27% and wealth increases by 83% by 2030, the demand for agricultural production will be 50% higher than it is today. Even if agricultural productivity increases at current rates the global agricultural area needed would have to increase by about 10%, or 120 million hectares, to meet such demand, with the increase occurring mainly in sub-Saharan Africa and Latin America (European Environment Agency 2010, Asian Development Bank 2011).

The Dutch government's response to the Netherlands Scientific Council for Government Policy (WRR) advice on food policy (WRR 2015) was that "the sustainability of the food chain is necessary in view of the current effects of the food chain on biodiversity, greenhouse gas emissions and use of natural resources". The government also recognized that other instruments should be used, because "the scope of legal and financial instruments is limited." The urgency of increasing the sustainability of chains was also embedded in policy with the creation of a joint 'Sustainable Food Agenda 2013-2016' between the Alliance for Sustainable Food and the Ministry of Economic Affairs (EZ), (Alliantie Verduurzaming Voedsel and Ministerie van Economische Zaken 2013). As part of this agenda, voluntary agreements and declarations of intent (known as *convenanten* or *intentieverklaringen*) have been made between the Dutch government and organisations in the cocoa chain (2010), coffee (Koninklijke Nederlandse Vereniging voor Koffie en Thee 2010) and soy (Productschappen MVO 2011), as well as palm oil, aquaculture fish, fruit and vegetables, timber and cut flowers chains to increase the proportion of sustainable commodities sold in the Netherlands.

These policies for reducing the environmental and social effects of food consumed in the Netherlands focus on encouraging and stimulating sustainable trade. Activities to increase the sustainability of entire value chains, from producers to consumers, have been initiated in response to the abovementioned challenges. Such initiatives include encouraging sustainable land use practices at the farm, plantation and concession level, as well as focusing on the environmental and socio-economic impacts of activities and processes along the value chain such as processing, transport, packaging and retailing. A study on the sustainability of international commodity value chains with Dutch links (Oorschot *et al.* 2013) found that progress has been made in terms of the market share of sustainably produced and certified commodities.

As part of the Dutch Statutory research task program (*Wettelijke Onderzoekstaken*), several studies have explored options for and the effects of sustainable value chains on ecosystem services (tropical timber, soya, palm oil and cocoa) as part of the TEEB-NL Program on Natural Capital from 2012 to 2014. These include the innovative options available to stakeholders (government, businesses and farmers) to better integrate ecosystem services into 'sustainability thinking' and practices in the timber, cocoa, palm oil and soy value chains (Van den Berg *et al.* 2013, Van den Berg *et al.* 2014) (Arets and Veeneklaas 2014). These reports recommend to focus on ecosystem services impacted by commodity trade in all along the chain, and not *only* in the production stage. Especially activities taking place in the Netherlands provide a possibility for the Dutch government to exert more influence and the use of a wider range of facilitating and supporting policy tools. Also testing insights from theory to practice has been shown to be important (Smits *et al.* 2014). These studies highlighted

knowledge gaps in how sustainability initiatives could be upscaled, including the upscaling activities undertaken by frontrunners in relation to other companies in the chain. The 'Biodiversity and companies study' of Smits *et al.* (2016) looks at how companies engaged in the international trade of raw materials can be motivated to increase the sustainability of their activities. Whilst taking a Dutch perspective, the report highlights that the global nature of value chains need to be considered in policies. Challenges include the mapping of the international interdependence of companies and business processes and the policy options available to the Dutch government on a European level and globally, taking into account the World Trade Organisation (WTO) context. The international context calls for policies that motivate both frontrunners and laggards to adopt and maintain sustainable (re)production.

All these studies mentioned above underline that addressing sustainability issues in international commodity value chains has been progressively taken up by a number of businesses, many of which are actively engaged in government initiated or supported platforms. However these studies also indicate that not all stakeholders in the chains are involved or making efforts to source sustainably produced commodities.

Aim and research questions

This research project complements the WOt-project 'Biodiversity and companies, from frontrunners to mainstreaming'¹. The difference is that 'upscaling and transition' is a more complex and far-reaching process than 'mainstreaming'. Upscaling is not just about the way frontrunners implement sustainability initiatives. It is also about the different motivations and strategies employed by companies, which are to an extent dependent on where firms operate in the chain (e.g. firms that produce raw or semi-processed commodities, or consumer products), the nature of the product and the chain and the context in which they are operating.

This project focuses on the cocoa, coffee and soy value chains and explores the extent to which sustainability initiatives are implemented and are being upscaled, by what type of companies and how companies can be further stimulated to engage in, sustain and increase their involvement. It considers sustainability initiatives with Dutch links and addresses the following research questions:

- 1 How are the value chains structured? What are the segments and who are the (most important) players in the chains?
- 2 Which sustainability initiatives do Dutch-based companies in these chains use and to what extent and by what type of companies?
- 3 What are the underlying motives of businesses to engage (or not) in more sustainable business activities?
- 4 Which policy instruments can be used to promote sustainable value chains, for what type of companies and on which level?
- 5 What are conclusions from this analysis? What are the medium-term expectations? What can stakeholders and governments (national, EU) contribute to aid upscaling sustainable value chains?

Audience and knowledge requirements

The main target audience of this study is the Netherlands Environmental Assessment Agency (PBL) and the Dutch Ministry of Economic Affairs, in the framework of the work on the Assessment of the Dutch Human Environment (*Balans van de Leefomgeving*) and as input for policies concerning the sustainability of international value chains.

This study links to the Implementation Natural Capital Netherlands Agenda (NCN), which sets priorities for 'sustainable chains' and 'natural capital value'. This agenda is reflected in how the work clusters of Trade Chains and Sustainability are organised within the Dutch Directorate of Nature and Biodiversity. These clusters are responsible for the Ministry of Economic Affairs funded Green Deals, such as those on transparency and Natural Capital and Sustainable Forest Management.

¹ See <http://www.wageningenur.nl/en/project/Financiering-ecosysteemdiensten.htm> for details.

Others target groups for this study include organisations concerned with a transition to sustainable production, such as companies and their industry/sector related associations, NGOs and citizens as consumers.

Scope of the study

This study focuses on three global commodity chains in which there is a substantial Dutch commercial interest and/or where the activities of at least one of the main segments of the value chain takes place in the Netherlands. The opportunities in relation to the different roles of the government, available to policy makers to drive and support an increase in the sustainability of global value chains are proposed within the context of the Dutch political landscape.

Structure of the report

Chapter 2 presents the conceptual approach used in this study and the methods employed. Chapters 3-5 present the answers to research questions one to four for the cocoa, coffee and soy value chains respectively. Chapter 6 addresses research question number 5 and serves as a conclusion.

2 Conceptual approach and methods

This chapter outlines the main concepts and definitions drawn upon and describes the approaches used to collect and analyse the information to answer the research questions.

2.1 Concepts

As there are many definitions of scaling, some of which similar terms in different ways, the concepts and definitions of upscaling, chain and market transformation, value chains and governance used in this study are presented. These concepts provide the basis for the how the data was collected and analysed.

2.1.1 Upscaling

Scalability is defined as the properties of a system, a network, or a process that allow the system to accommodate changes in transaction volume without causing major changes to the system itself. Four types of 'upscaling' relevant to this study are identified:

1. The **replication** of a successful pilot on a larger scale (increased volume or number of participants, also known as 'quantitative scaling') with the principles of the original pilot remaining intact (Helmsing and Vellema 2011; Seelos and Mair 2010) and often involves a process of expansion, such as a pioneering firm, working with grassroots organisations and NGOs, working with many firms, supermarkets and large (groups of) producers. This may involve replicating an innovation developed in one country or region to another location (also known as 'geographical'² scaling up).
Example: Mars first introduced Cocoa Development Centres (CDCs) to 30 farmers in Sulawesi, Indonesia in 2005, where farmers were taught about new production techniques such as supplying grafted cocoa seedlings to other farmers and business skills through demonstrations. The success of CDCs led Mars replicate this to around 600 farmers in other areas of Indonesia ('Biodiversity in Good Company' Initiative e. V. 2011).
2. When a successful pilot is **extended**, becoming a source for sustainable system-wide impact (Van Tilburg *et al.* 2011). This is also referred to as 'quantitative scaling', 'out-scaling' or 'scaling-out': doing the same thing on a larger scale. It usually involves expansion within the same sector, with higher levels of connectivity and coordination.
Example: The CDCs were adapted slightly and extended to Côte d'Ivoire, working in collaboration with a new partner, the World Agroforestry Centre, and to Vietnam with small and medium enterprises and new partners ('Biodiversity in Good Company' Initiative e. V. 2011; Horne 2014; Van Grinsven 2011)
3. Horizontal integration is a value chain strategy where a company creates or acquires production units that may be either complementary or competitive. When referred to scaling, **horizontal scaling** (often used in IT) implies innovations are adopted (Pacico and Fujisaka 2004) and repeated in different locations; or where nodes or activities are added (sometimes termed functional scaling) such as when projects or programs are used to expand the types of activities (e.g. from agricultural activities to interventions in health, credit and training); or innovations are expanded to serve larger populations; and/or innovations are scaled to serve different categories of beneficiaries.
Example: The Mars Cocoa Development Centres were used in turn to support a network of Village Cocoa Clinics (CVCs). Owned and managed by local farmers 'cocoa doctors', the clinics provide improved planting material and grafting services to local farmers. Other products and services have also been provided by the enterprising farmers who run the CVCs, such as fertilisers and pruning. The CVCs enable a larger population of farmers (not just those supplying Mars) to be reached by innovations such as cocoa tree grafting. CVCs have also been adopted by development

² Some authors (e.g. Linn 2012, Gündel *et al.* 2001) also use the term horizontal scaling for replication from one geographical area to another.

organisations working in the cocoa sector, such as SwissContact and research organisations such as the World Agroforestry Centre (Pye-Smith 2011).

4. Vertical integration is a value chain strategy where companies acquire or invest in activities up and down a value chain. **Vertical scaling**, also known as political scaling when innovations are institutionalised through policy or legal action, is where systems and structures are adapted and resources distributed to make the increase in scale more enduring, when an innovation is multiplied at different scale levels (i.e. extension processes) and innovations are institutionalised along (both up and down) a value chain and supporting context, such going from local or voluntary practices to being embedded in legislation and in policy (Gündel *et al.* 2001; Pacico and Fujisaka 2004; Linn 2012).

Example: Voluntary sustainably certification schemes have become embedded and institutionalised in Dutch policy as a way to increase the sustainability of commodity value chains through voluntary Letters of Intent between the government, private sector and partners, for example for the 'cocoa letter of intent' (see also Chapter 3) (Van den Berg *et al.* 2014). Innovations in sustainable forest management and traceability introduced by voluntary standards for timber certification such as FSC and PEFC became part of Dutch law through the specifications for timber procurement by the Dutch government (Van den Berg *et al.* 2013).

Different types of upscaling can, and often are, combined together or used consecutively in time, as illustrated by the examples of the cocoa development centres and cocoa village clinics given above. Experiences indicate that different types of scaling, particularly horizontal and vertical, usually have to be combined to achieve success (Linn 2012).

Scalability therefore refers to both the scale of effect – such as the number of farmers reached by training on good agricultural practices – and the scale of the problem – such as plant diseases crossing boundaries of individual farms or plantations. Upscaling also refers to the scale of solutions to the problem – such as the extent to which the use of child labour is reduced or the rate of deforestation is avoided. It is critical to note the distinction between *upscaling an initiative* (i.e. the activities involved in a sustainability initiative) which is different from *upscaling the solution*, for example, that coffee production has a lower environmental footprint, or that cocoa farmers become richer.

Upscaling requires specific and explicit effort, as (i) what works successfully on a small-scale may not necessarily work on a larger scale; (ii) scaling up can occur in a number of different ways and (iii) scaling up is not simply about copying success, it is also about enabling high levels of innovation, experimentation and feedback (Woodhill *et al.* 2012). **Leverage points** for upscaling are the places and processes in a value chain where scale changes can be initiated and executed. This may be conducted by the companies in the chain, or indirect stakeholders such as public agencies, governmental institutions, civil society organisations, suppliers etc.

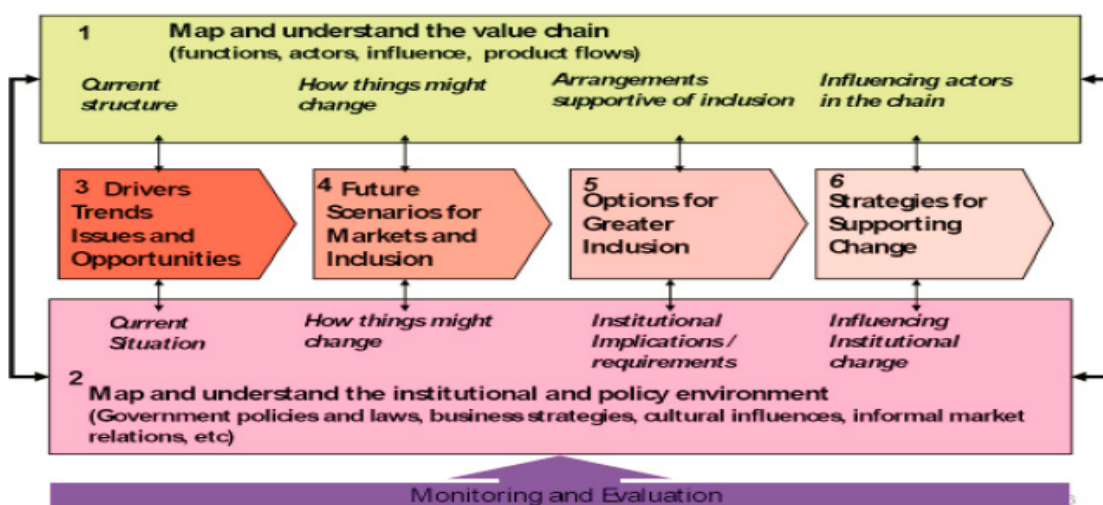


Figure 1 Chain wide learning to facilitate upscaling. Source: Proctor and Vorley 2008.

Glasbergen (2011) suggests that upscaling in general can be hindered by a lack of strategic links among partnerships, with excessive multiplicity and fragmentation. Upscaling is also constrained by the focus of many partnerships on certification and the use of projects within a limited timeframe (Bitzer 2012). Bitzer reports on experiences in the coffee, cocoa and cotton chains which indicate that partnerships incur high financial burdens for producer organisations. Also, often a comparatively small target group of farmers confines the capacity of partnerships to promote technological change and overlooks the importance of empowering producers and their organisations to act as self-determining chain actors to upscale partnership activities. Particularly in the coffee sector, local public agencies in producer countries were hardly involved in partnerships, limiting the ability of partnerships to institutionalize their changes in local practices. This problem is less pronounced in cocoa, where partnerships have more actively engaged with producer country governments initiatives. In non-standards based partnerships, such as in the cocoa sector on precompetitive sustainability challenges (child labour and poor production practices), upscaling occurred due to overlapping memberships of organisations and through institutional linkages between partnerships. These partnerships enabled the transfer of information (e.g. on agricultural production or farmer training), financial resources and services (e.g. providing training to farmers), which reinforced the capacity of individual partnerships and aid upscaling (Bitzer 2012). A review of interventions made during the 'Regoverning Markets' program³ to address sustainability, upscaling and replication in agri-food chains, concludes that chain wide learning – shown in Figure 1 – is critical in upscaling.

Based on experiences of the Dutch TransForum⁴ initiative, Blonk *et al.* (2010) propose that the possibilities for upscaling are influenced by the existence of knowledge dissemination mechanisms, the stability of the design of the scaling and the adaptive capacity of the entrepreneurs (or other key actors in the initiative). They noted that the scale of impacts can occur at a local level, related to the initiative or supply chain; a global level, related to the total product life cycle; and a system level related to the (change in) value of products.

In agri-food value chains upscaling can also mean the process of going from a niche market to a mainstream market, commonly known as '**mainstreaming**'. Mainstreaming commonly means involving other types of stakeholders in the various segments of the value chain. While a niche market is a small segment of a particular market, a mainstream market encompasses a sizeable, significant part of that market. Mainstreaming entails a vertical scaling up as mainstream markets comprise other stakeholders than niche markets. Mainstreaming can also be achieved by horizontal scaling up through all vertical layers (from producers to retailers). Upscaling also usually involves other, or at least additional, stakeholders than those involved in the initial phase. It may increase or reduce the inclusiveness of the chain, as meeting the requirements of more mainstream stakeholders usually requires both large volumes and high quality, which small producers by definition typically find difficult. Mainstreaming can therefore further stimulate the dominance of a market by a few large firms (Klooster 2005).

The challenge surrounding '**inclusion**' and the inclusiveness of value chains, defined as the extent to which all relevant stakeholders genuinely participate in setting up and implementing specific activities in response to societal expectations (Knorringa *et al.* 2011), is particularly relevant for voluntary initiatives in value chains where the most marginalised in society (i.e. the poor, the small-scale farmers, women, specific ethnic groups etc.) are direct stakeholders in a chain. Inclusion is therefore high on the agenda of policymakers', NGOs and activists in these value chains. Addressing upscaling and inclusion issues prompted Knorringa and colleagues to develop a typology of voluntary market based governance initiatives, shown in Figure 2.

³ The Regoverning Markets program (2005–2008) was a multi-partner international research and outreach program funded by the UK Department for International Development (DFID), the International Development Research Centre (IDRC), the Canadian International Development Agency (CIDA), Interchurch Organisation for Development Co-operation (ICCO), Cordaid, and the US Agency for International Development (USAID), see www.regoverningmarkets.org

⁴ TransForum was a process orientated Dutch public organisation that promoted innovation and develops knowledge for sustainable agriculture and rural areas in the Netherlands. It seeks to understand sustainable metropolitan agriculture by learning from innovative, multi-stakeholder project development. Between 2005 and 2010 it participated in over thirty projects to improve the sustainability of agro-production, see <http://www.transforum.nl>

		Inclusion	
		Low	High
Upscaling	Low	Emerging initiative	Value creation initiative
	High	Risk minimization initiative	Mature initiative

Source: adapted from (Knorringa *et al.* 2011).

Figure 1 Typology of initiatives

- 'Risk minimization' initiatives are characterized by high levels of upscaling, or mainstreaming, involving all of the major (branded) players in the sector (Knorringa *et al.* 2011). These may be seen as 'shallow', because they do not succeed in involving marginalized stakeholders nor are the longer term interests of stakeholders included in the initiative's core strategy. Examples of risk minimization initiatives are the Round Table on Responsible Soy (RTRS) and the Roundtable on Sustainable Palm Oil (RSPO).
- In contrast, some 'value creation' initiatives have been more successful in including marginalized stakeholders, but remain locally restricted as they are 'niche' activities that are difficult to be upscaled, partly because of their high levels of inclusion and their locally embedded practices with a longer term perspective. The Forest Stewardship Council (FSC) and the Ethical Trading Initiative (ETI) are examples of value creation initiatives.
- Mature initiatives that combine high levels of inclusion with high levels of upscaling do not seem to exist. Given the different corporate strategies involved in risk minimization versus value creation, Knorringa and colleagues believe it is difficult to envisage a trajectory from either risk minimization or value creation towards a maturity, but indicate that the typology helps to systematically identify the underlying tensions. While risk minimization initiatives such as RTRS and RSPO are expected to be strong on upscaling, they are expected to be inherently weaker when it comes to inclusion. In contrast, value creation initiatives are expected to develop convincing inclusion strategies, but struggle with upscaling (Knorringa *et al.* 2011). However, the short timescale of many of these initiatives mean that maturity is difficult to gauge.

2.1.2 Market and chain transformation

Market transformation can be a policy objective and process to promote the value and self-sustaining process of getting new products (or the same products using different i.e. sustainable processes) to a wider audience. Transformation aims to remove barriers and exploit opportunities to mainstream a product. Transformation can also be seen as a regime change (Seelos and Mair 2010), where the context, mechanisms and outcomes are considered:

- *Context*
 - What is it about the context that makes the intervention scalable?
 - Institutions in business system where intervention touches down.
 - Social embedding in existing forms of social organisations.
- *Mechanisms*
 - What is it about the intervention (i.e. the mechanisms) that makes it scalable?
 - Points of intervention in a system i.e. leverage.
- *Outcomes*
 - What are the implications of the processes of scaling for how (desired) outcomes emerge?
What is the scale of the problem?
 - The outcomes are contingent on the processes underlying scalability and on navigation in the context.
 - For whom does it work?

2.1.3 Policy instruments

Policy instruments refer to the techniques or means through which states attempt to attain their goals (Linder and Peters 1990). They affect agenda setting, the process of policy formulation as well policy implementation and evaluation (Howlett 2009). Policy instruments have traditionally focused on the regulation of technical standards. In the last decades, the spectrum of instruments has broadened, in

recognition that there is no single universal policy tool that can provide a solution to all problems. Governments and inter-governmental bodies such as the EU are therefore increasingly using a blend of instruments such as legal requirements ('command and control' measures), technology transfer, market-based instruments, research, environmental liability provisions, public procurement and voluntary schemes and agreements. Studies on the effectiveness of environmental policy⁵ show that the institutional setup can be as important as the design of the policy itself. Four main types of policy instruments are and can be used to influence business and value chain activities, shown in Table 1.

Table 1
Types of policy instruments

Instrument	Endorsing	Partnering	Facilitating	Mandating
Level of dependence from the state	Dependent	Interdependent		Independent
Principle	Corporate self-regulation	Semi-private regulation	Semi-public, interactive regulation	State regulation
Interventions	Political support; publicity and praise; labelling; support civil society initiatives; publishing 'best practices'; supporting voluntary labelling	Combining resources; stakeholder engagement; Dialogue; Public Private Partnerships; covenants	'Enabling legislation'; Strategic stakeholder dialogue; awareness raising; incentives, subsidies, tax rebates; procurement policies; capacity building; supporting spread of labels; self-governing agencies	Coercion, 'Command and control' legislation; regulators and inspectors; legal and fiscal penalties and payments e.g. transfer payments, grants tax regimes; public labels and safety standards; anti-trust rules; policies in education, military, direct action, infrastructure.
Corporate governance/codes	Own responsibility: CSO and market initiated, voluntary codes and report-ting; peer re-views/pressure	Multi-stakeholder code development; Shared monitoring, Govt. or market/CSO initiated, shared incentives	Implementing international principles; reporting stimuli/guidelines, internalisation, incentives	Stock exchange regulations and codes; company law ; mandatory reporting and disclosure rules

Source: (Van den Berg *et al.* 2013; Van den Berg *et al.* 2014) inspired by Van Tulder (2008) and Vermeulen and Kok (2012).

2.1.4 Value chains

The concept of **value chains** (also known as market or supply chain, production to consumption system, production system and *filière*) has a long tradition, especially in economics and industrial production and has been used to analyse the dynamics of markets. The value chain concept is useful to understand when trying to understand the activities – termed segments - involved in bringing a product from its origins (hence the term origin or production stage or country), whether farmed or natural, through processing and production, to delivery to final consumers (referred to as the end or consumer stage) and ultimately disposal (Kaplinsky and Morris 2000). Value chains are diverse and can be locally, nationally or internationally oriented and can include a range of activities such as harvesting, cleaning, transport, design, processing, production, transformation, packaging, marketing, distribution and support services. This range of activities may be implemented by various stakeholders, from primary producers, harvesters, processors, traders, service providers and

⁵ See for example the EEA.

upstream suppliers, and may be referred to as a value system. The term 'value' makes explicit the series of value-generating activities in a chain as raw products are transformed into consumer goods. Products embody multiple relations of value – often explicitly economic but also social, cultural and environmental. Value chains can also be used to investigate governance, particularly the interactions, relationships and power between value chain stakeholders (Humphrey and Schmitz 2001).

Value chain analysis is a conceptual framework for mapping and categorizing the economic, social and environmental processes in product value chains, helping to create a better understanding of how and where enterprises and organisations are positioned in chains and identifying opportunities and possible leverage points for interventions, such as upgrading. It encompasses the structure of the chain (how the chain is organised and coordinated, including main activities or segments; issues of equity and power relationships and where these are concentrated and linked; major players and the where power is concentrated) and the value chain is governed (what role do the different stakeholders play) (Helmsing and Vellema 2011, Asamoah and Annan 2012). Taking a value chain approach helps to direct policy makers (intervention thinking) towards an innovation system approach.

2.1.5 Governance

The concept of '**governance**' is central to the value chain approach and refers to the relationships and institutional mechanisms through which activities are coordinated in a chain (Humphrey and Schmitz 2001). Coordination occurs through setting and enforcing the product and process parameters to be met by stakeholders in a chain. In global value chains, buyers often play an important role in setting and enforcing these parameters, because of the (perceived) risk of producer failure. Transformations in the role of the state have challenged conventional ideas of democratic accountability and of the role of the state and firms in decision-making, corporate social responsibility, producer responsibility and in the transparency and sustainability of value chain management. Humphrey and Schmitz (2001) propose that as external parameter setting and enforcement develop and gain credibility, the need for governance by buyers within a chain declines.

Governance arrangements run along a continuum of styles depending upon the public goals, from:

- Government regulation, where public goals are the main focus, to
- Closed co-governance, where a coalition adopts public goals, to
- Open governance, where public goals are negotiated, to
- Market governance, where public aims are coupled with business interests, to
- Self-governance, where common goals are scaled up to public goals or linked to them (Arts 2002, Arnouts *et al.* 2012).

New and hybrid forms of governance can occur as alliances between public, private and civil society stakeholders occur. Power relations in value chains (Gereffi *et al.* 2005, ILO 2006), can be viewed along a continuum, as shown in Figure 3, with five types of value chain governance defined:

1. Market based governance is where enterprises deal with each other in 'at-arms-length' exchange transactions, there are many customers and suppliers, repeat product transactions are possible, information flows are limited and there is no technical assistance.
2. In modular value chains suppliers often make products to a customer's specifications. When providing 'turn-key services' suppliers take full responsibility for competencies surrounding process technology, use generic machinery that limits transaction-specific investments, and make capital outlays for components and materials on behalf of customers.
3. Relational chain governance involves complex interactions between buyers and sellers, which often creates mutual dependence and high levels of asset specificity. This may be managed through reputation, trust, family and ethnic ties.
4. Captive chain governance is characterized by a high degree of monitoring and control by lead firms. Small suppliers are transactionally dependent on much larger buyers, and switching buyers incurs then significant costs, meaning they are 'captive'.
5. Hierarchical governance is characterized by vertical integration, based on managerial control, flowing from managers to subordinates, or from headquarters to subsidiaries and affiliates.

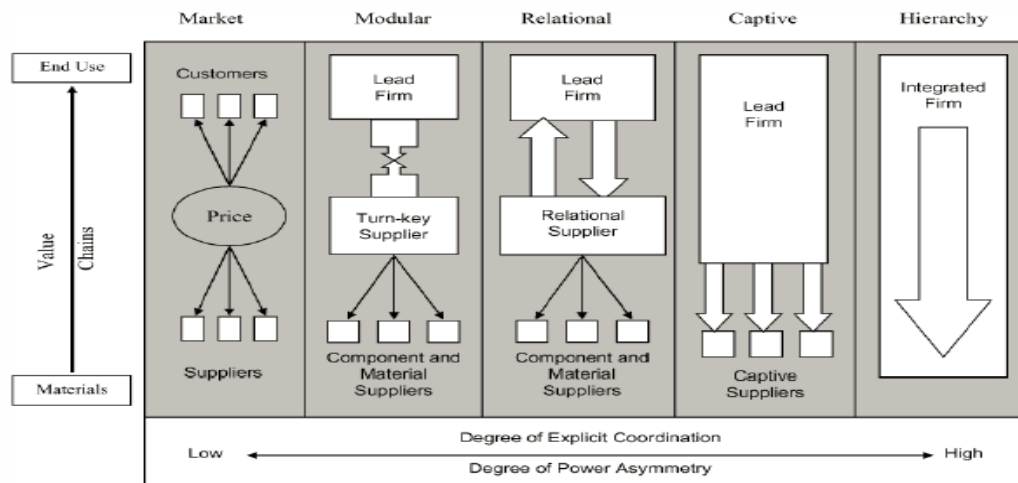


Figure 2 Types of value chain governance. Source: Gereffi et al. (2005)

Gereffi et al. 2005 further specify that **balanced chain governance** is where enterprises form networks in which no one exercises undue control over others, suppliers have various customers, there is an intense information flow in both directions, and both sides have capabilities and commitment to solve problems through negotiation. In **directed chain governance**, enterprises form networks directed by a lead enterprise (for example a buyer-driven chain with one major buyer with at least 50% of output), the customer defines the product and provides technical assistance, and there is imbalance of information. **Hierarchical chain governance** implies that firms are vertically integrated and the parent company controls its subsidiaries who have limited autonomy to take decisions. In captive networks, small suppliers are transactionally dependent on much larger buyers. Suppliers face significant switching costs and are, therefore, 'captive'. Such chains are frequently characterized by a high degree of monitoring and control by lead firms. Highly governed chains can reduce production costs, increase quality and production speed and provide information to improve skills and production flows (ILO 2006). They may not however be equitable. Chain governance arrangements can be changed by identifying opportunities, entrance and leverage points, and using change agents to influence external and internal (product-specific) factors in time and space, processing and management (Kaplinsky and Morris 2000; Keane 2008). Inclusion and/or exclusion conditions (Bush and Oosterveer 2007; Smith 2009) determine whether actors who wish to participate and benefit from a chain can do so. Changes can improve the distribution of profits along the chain (Humphrey and Schmitz 2001).

As result of changes in political and consumer ideologies about value chain governance, public-private partnerships and interventions on a global, national and regional and level have emerged, promoting more sustainable value chains, development and trade goals, sometimes concurrently. Such multi-stakeholder platforms have been seen as a way of democratizing the governance of international chains, being more inclusive and giving a voice to those with traditionally less power. However critics indicate that public-private partnerships fall short on their deliberative democracy in terms of inclusiveness (of stakeholders and discourses) and consequentiality (Schouten et al. 2012). The sometimes limited role of governments in some partnerships has led to debates on the effectiveness, transparency and legitimacy of these forms of self-governance, on the appropriate role for (national) governments and on the effectiveness of possible government interventions (Vermeulen and Kok 2012, Ministerie van Buitenlandse Zaken 2014).

2.2 Research methods

2.2.1 Case studies

The main method used is case studies, which are qualitative and interpretative in nature. Using cases as the main primary method of data collection has its strengths and weaknesses in terms of the validity of conclusions that can be drawn (Devaux *et al.* 2009). The three cases were selected based on information-oriented sampling, using the research team and PBL's knowledge of international value chains with Dutch links. When case studies are used an average case is often not the richest in information, Yin (2009) notes that extreme and different cases can be more revealing. For this reason, different types of commodities and value chains were chosen, shown in Table 2, based on the following criteria:

1. The three value chain cases illustrate different levels of value chain segmentation and varying levels of company integration in the different activities in a chain.
2. The value chains have a substantial Dutch commercial interest and/or activities take place in the Netherlands in at least one of the main segment of the value chain.
3. The chains include business-to-business (B2B) and business-to-consumer (B2C) transactions.

Table 2

Selected value chains: cocoa, coffee and soy

Value chain	Segmentation	Dutch role	End consumer
Cocoa	Highly segmented, dominated by multinational manufacturers, some examples of integration with small bean to bar companies	Import and export, processing consumption	B2B and B2C
Coffee	Segmented, dominated by multinational manufacturers, some small to medium-sized integrated companies	Import and export, processing consumption	Mainly B2C, some B2C
Soy	Segmented, dominated by multinationals (traders and food manufacturers)	Import and export, Processing (primary and secondary), consumption	B2B, some B2C

2.2.2 Value chain analysis

For each of the selected value chains, an analysis of the organisations with Dutch links and commercial interests was conducted based on a review of the literature (grey and peer-reviewed) and an analysis of trade data (FAOSTAT and CBS). From this an initial list of organisations and sustainability initiatives was compiled with companies active in one or more of the chains which have sought to upscale sustainability initiatives (either their own corporate activities or initiatives they are engaged in) identified, and companies who do not appear to be involved in, or have their own, sustainability initiatives. The sustainability initiatives revealed by the research were then grouped into three types: (1) Platforms, networks and associations, (2) Voluntary sustainability standards and (3) Individual corporate initiatives.

2.2.3 Literature review

Additional data and information regarding research questions one to four was collected by way of a literature review. Grey literature including policy documents, websites, databases, media and press releases was also considered.

2.2.4 Structured interviews

From the long list of organisations, 45 organisations were approached. 16 organisations (consisting mainly of small and medium-sized traders, retailers and two NGO/service providers) declined an interview, were not available within the time-frame or did not respond to the request. The reasons given for not wanting to participate were mainly due to the commercial confidentiality of upscaling initiatives. The companies approached who did not appear to be involved in, or have their own corporate sustainability initiatives, were the most difficult to engage and none responded to our

request for an interview. In total, 29 interviews were held between June and December 2015, either in person, by phone or skype. Annexes 1 and 2 contain the questionnaire and list of respondents respectively. The number and type of stakeholders interviewed involved a balance between data quality, cost and time restraints and willingness to participate. The small number of organisations interviewed is a limitation of the study and does not claim to represent all parties involved in the three value chains, but the opinions of those interviewed. It is for this reason that the results of the interviews in the following sections are anonymous.

2.2.5 Informal discussions and meetings

The research team participated in a number of meetings, workshops, seminars and platforms in the period from January to November 2015, which included:

- NEN/CEN/ISO Sustainable Cocoa Standard meetings April, May and December 2015.
- Cocoa meeting and advisory committee meetings, January, February and March 2015, January 2016.
- CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS) with cocoa and coffee companies and certification organisations September 2015.
- ISEAL Alliance Global Sustainability Standards Conference, May 2015.
- 'Choco Werk Groep' meeting, Den Haag September 2015.
- The Hague Centre of Expertise on Resources Breakfast session 'Soy supply security: Anticipating future global challenges through strategic responses', May 2015.

Participation in these activities provided contextual data on companies and sustainability initiatives in the three chains.

2.2.6 Verification meeting

In March 2016 a meeting was held with organisations (in)directly involved in the three selected value chains and included representatives from IUCN, WWF, EZ and PBL. The preliminary results of the study were presented and participants reflected with the research team on both research question number four, concerning the policy instruments currently being used and the potential instruments that could be used to achieve more sustainable value chains, and on research question five, the conclusions and recommendations going forward.

3 The cocoa value chain

This chapter starts by introducing the results of the research on the cocoa value chain. It uses the methods and concepts introduced in Chapters 1 and 2 to answer the research questions one to four. The analysis is focused on understanding which sustainability initiatives are being used by whom, and which initiatives are being upscaled within the cocoa value chain.

3.1 Value chain structure

3.1.1 Cocoa value chain context

Seeds of the *Theobroma cacao* tree are a perennial tropical cash crop, used to make cocoa powder, butter and liquor, the main constituents of chocolate. The cocoa value chain has been well documented showing the key role that the Dutch private, public and non-profit sectors play (Beukering *et al.* 2013). As shown in Table 3, 66% of cocoa originating from Africa (mainly West Africa in Ivory Coast and Ghana), 12% from South America and 17% from Asia (particularly Indonesia). The market has grown since the 1960s, when 1,002,000 tons was produced, doubling to 2,331,000 in 1990 and 3,941,000 tons in 2011 (Cocoa Barometer 2012). The total area harvested in 2013 was approximately 10 million hectares with Ivory Coast (27%), Indonesia (17%) and Ghana (16%) the leaders in terms of land being used for cocoa production.

Table 3

Cocoa bean production and area harvested 2013

	Production (1,000 tons)	Production (% of total)		Area harvested (1,000 ha)	Area harvested (% of total)
Ivory Coast	1449.0	31.6%	Ivory Coast	2500.0	25.0%
Ghana	835.5	18.2%	Indonesia	1774.5	17.7%
Indonesia	777.5	17.0%	Ghana	1600.3	16.0%
Nigeria	367.0	8.0%	Nigeria	1200	12.0%
Cameroon	275.0	6.0%	Brazil	689.3	6.9%
Brazil	256.3	5.6%	Cameroon	670.0	6.7%
Total	4585.6	100	Total	10012.3	100

Source: FAOSTAT, 2015.

In 2011 the main consumption regions were Europe (1,795,000 tons), North America (912,000 tons), South America (342,000 tons), Asia including India (283,000 tons), Japan (155,000 tons), and Australia (65,000 tons). Average annual consumption in Europe is 2.3 kg per capita, topped by the Germans, British and Swiss consuming an average of 11kg annually⁶, with the Dutch consuming on average 2.18 kg per person 2010/2011 (ICCO 2012). The strongest consumption growth (7% - 10% per annum) is in developing countries and in emerging economies such as Indonesia, India and China. Consumption has declined in some European countries, especially Italy by 2.6% (Naprtá 2015). The U.S leads chocolate production with nearly 1.8 million tons produced in 2013, followed by Russia and Germany (see Figure 4).

⁶ <http://thecnnfreedomproject.blogs.cnn.com/2012/01/17/who-consumes-the-most-chocolate/>. Retrieved 1 March 2014.

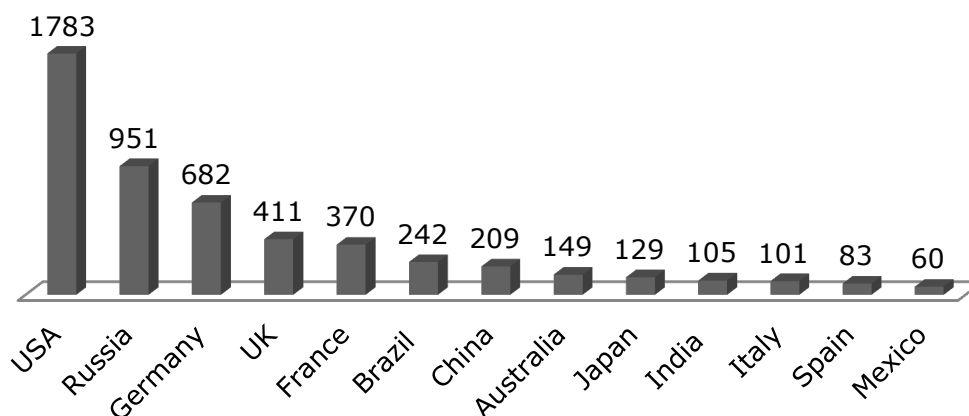


Figure 3 Chocolate confectionery market volume 2013 (x1000 tons). Source: Naprta (2015)

3.1.2 The Netherlands and the cocoa value chain

The biggest importers of cocoa beans are the Netherlands (0.68 million tons) and the U.S. (0.41 million tons). The Netherlands imported approximately 28% of all cocoa beans traded internationally in 2012 and has increased its imports by 38% over the last ten years. Over 25% of the global cocoa processing industry is based in the Netherlands (Laven and Pelders 2010), home to two of the biggest grinders, ADM and Cargill (Felperlaan *et al.* 2010) and others such as Dutch Cocoa/ECOM and Jan Schoemaker B.V. About 75% of all cocoa beans imported in the Netherlands are processed into butter, powder, cake, paste and liquor.

The Netherlands is also one of the global leaders in exporting cocoa beans, with 6.1% of all global exports, mainly due to its re-export of imported cocoa beans – playing a large warehousing and storage function. Competitors for this function are however increasing, with companies and governments in Ivory Coast and Malaysia recently investing substantially in warehousing and processing. In 2010 over 25% of the global production was exported via Amsterdam (Laven and Pelders 2010), with most trading-storing-grinding occurring in the Zaanstreek, near Amsterdam. Around 25% of these beans are re-exported to Germany, Austria, France, UK, Belgium and other countries. The Netherlands therefore has an interest and position to play an innovative role in sustainably producing this key raw material.

3.1.3 Production

The majority of cocoa is produced on small farms with the average farm size varying from 2.8 ha (Alonghi 2011) to 3.7 ha (KPMG 2012). An estimated 20% of farmers are members of associations or cooperatives (ICCO 2014). Farms generally have low and/or decreasing productivity rates of 300 to 500 kg per ha (Ruf 2007; Mejia 2011; KPMG 2012). Decades of work on breeding and developing high yielding, disease and pest resistant and climate proof varieties, replacing old trees and providing more appropriate farm inputs (fertilisers and crop protection products) has resulted in only marginal yield improvements, particularly in the main African producing countries (Wessel and Quist-Wessel 2015). Farm to market infrastructure is generally weak, as is finance for inputs and support for higher-yielding, disease resistance varieties for replanting and regenerating of cocoa trees.

The cocoa value chain is characterised by generally small-scale farmers selling to individual traders or cooperatives, who sell to traders and major exporters (detailed in Section 3.1.4). These then sell to major confectionary and production companies such as Mars, Mondelez and Nestlé which are further processed into food and cosmetic products (Abbott *et al.* 2005), shown in Figure 5. Farm gate prices are generally low compared to the value-adding process and profits made on semi-processed and final products.

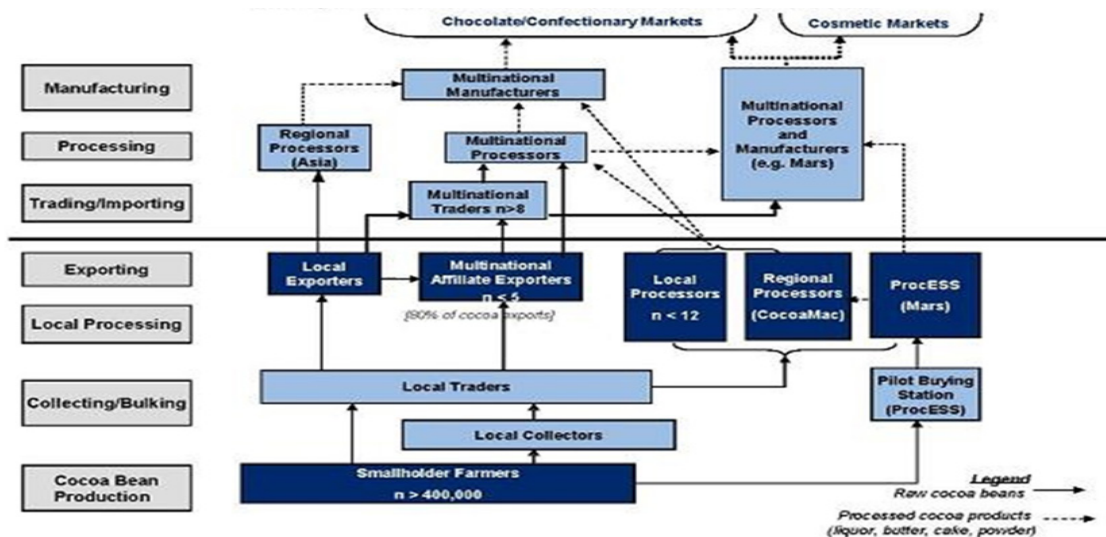


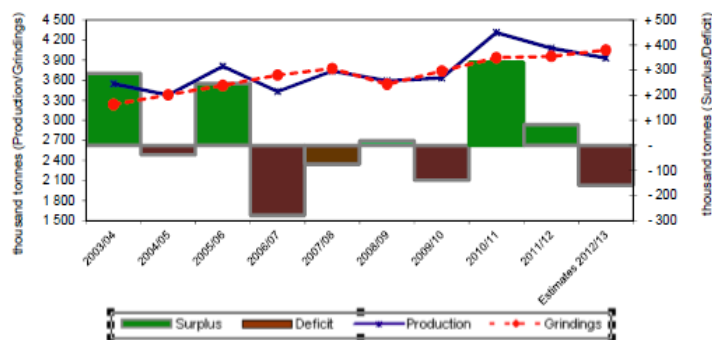
Figure 4 Outline of the cocoa value chain. Source: Adapted from Panlibuton and Lusby (2006)

In the past the governance of production and quality aspects, input credit and supply, extension services and market infrastructure has often been state-controlled in the cocoa producing countries. Public bodies in producer countries used globally recognised quality standards and territorial (ecological and technically based) reputations to enhance their position in the global market. However, producing country governments have disengaged from managing the international cocoa market and changed how they shape their domestic supply. Since the late 1990's, failed cocoa harvests and pressure from the World Bank and IMF for economic structural adjustment led to a break down in the national institutions controlling prices, providing inputs and extension services in many of the main producer countries. This creates room for private sector –based governance and price negotiation systems to develop.

Many of the major foreign companies detailed in Section 3.1.4 used this change to increase investments and strengthen their position in the chain, often by horizontally and vertically integrating their operations. Exporters (including major trading houses such as Cargill, Barry Callebaut, Olam and Armajaro) then were able to buy and sell based on London market price. There have been changes in virtually every dimension of international cocoa value chains (Wilcox and Abbott 2004). In major producing countries such as Ivory Coast, Ghana, Indonesia and Cameroon until 1990 exports, market power and price setting was shared between exporters and the government (Ton *et al.* 2008). Providing credit to farmers, farm gate pricing and consumer behaviour are now largely determined by the private sector. The liberalised system has been criticised as leaving farmers exposed to fluctuating international cocoa prices. This resulted in reforms to the sector in Ghana and Ivory Coast in 1999 and 2012 respectively, including regulating and privatising buying agents and setting minimum export prices. These institutional changes have created space for innovation and learning, particularly different relationships among organisations in the chain.

Although numerous producer country and international programmes and company initiatives have resulted in an overall 10% increase in production from 2003 to 2013 (ICCO 2013), shown in Figure 6, sufficient quality supply has increasingly become an issue due to increasing demand (FAO 2007, Eberhard Krain 2011)⁷. Supply variability is due to large annual fluctuations, caused by multiple factors (aging trees and farms with low yields, diseases, climatic changes, and natural weather fluctuations). Quality has generally been increasing, due to farmer training and increasing use of drying equipment often linked to certification and corporate schemes, and market and regulatory standards.

⁷ See for example <http://www.cocoa-solidaridad.org/scarcity>, <http://www.nbcnews.com/business/warning-cocoa-shortage-rising-prices-threaten-chocolate-bars-8C11418435>, <http://www.eufic.org/article/en/food-safety-quality/farm-to-fork/artid/sustainable-future-cocoa/>. Retrieved 1 March 2014.



Source: ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XXXIX, No. 4, Cocoa year 2012/13

Figure 5 Global supply and demand: cocoa production and grindings 2003-2013. Source: ICCO (2013)

3.1.4 International trade

Global demand is expected to increase with world population growth and increasing wealth. Amid concerns that demand may outstrip supply, grinders and confectionary companies operate in a strongly competitive market for beans. In 2012 the volume of global; cocoa bean exports reached 2.98 million tons, 0.5 million tons (22%) above the 2002 level. The leader in cocoa bean export is the Ivory Coast with 1.01 million tons representing 34% of global export quantity and Ghana the second most important exporter with 0.59 million tons (see Table 4). The Ivory Coast has consistently been the world’s largest cocoa exporter since 1980s and has produced between 41% to 60% world supply in the last three years (ICCO 2013). This generates 15% of GDP (Gross Domestic Product) and 30% of national export revenues. However supply shortages are apparent due to a combination of factors such as decreased productivity due to the old age of the majority of West African trees, declining farmer populations, pests and diseases, and climate change (Cocoa Barometer 2012).

Table 4
Global cocoa bean exports and imports 2012

Export:	x 1,000 tons	% of Total	Import:	x 1,000 tons	% of Total
Ivory Coast	1011.6	34.0%	Netherlands	682.5	21.8%
Ghana	585.9	19.7%	United States	409.7	13.1%
Nigeria	199.8	6.7%	Germany	369.4	11.8%
Netherlands	181.7	6.1%	Malaysia	339.0	10.8%
Cameroon	173.8	5.8%	Belgium	197.9	6.3%
Indonesia	163.5	5.5%	France	126.1	4.0%
Total	2978.5	100%	Total	3130.5	100%

Source: FAOSTAT (2015)

3.1.5 Stakeholders and chain consolidation

In the global cocoa supply chain an increasing trend towards concentration (i.e. towards the hierarchical model shown in Figure 3) can be observed in the last decade. Many of the cocoa and chocolate companies have merged and been taken over by competitors operating both vertically and horizontally in the chain (see Section 2.1.1). The strongest concentration has occurred in the processing of beans to ingredients for chocolate (butter, powder and liquor). Two processors Barry Callebaut and Cargill (after Cargill’s merger with ADM) now account for 70% to 80% of cocoa processing worldwide. Other processors dominating the processing sector industry are Blommer, Ecom, Armajaro, Olam and Petra Foods. Globally between 60% to 80% of cocoa is in hands of eight traders and grinders (Barry Callebaut, ADM, Cargill, Olam, Ecom, Touton, Blommer, Continaf). The six biggest chocolate manufacturers transform 40% of worldwide chocolate products (see Table 5). This market concentration by buyers, processors and manufacturers can be seen to weakens the positions of largely unorganised farmers (Fountain and Hutz-Adams 2015).

Table 5

Major global cocoa manufacturers 2013

Manufacturer	Cocoa processed x 1000 tons
Mondelez	450
Nestlé	430
Mars	390
Hersheys	200
Ferrero	120
Lindt & Sprüngli	100

Source: TCC Cocoa Barometer (2015)

3.1.6 Asia and the cocoa value chain

Cocoa production and consumption has been increasing in Asia (ICCO 2012; ICCO 2014). Indonesia is a leader in cocoa beans exports in Asia, 163.5 thousand tons (equivalent to 76.3% of total in Asia) followed by Malaysia accounting for 22.3% of total volume on Asian continent in 2012 (see Table 6). The biggest Asian cocoa bean importer is Malaysia with 339 thousand tons (49.6% of total in Asia). In 2012 China imported 33.7 thousand tons (4.9%) and India 26.6 thousand tons (3.9%). In 2012 China was the third biggest exporter of chocolate products in Asia with 60.8 thousand tons, 11.3% of total share in Asia. In 2012 China was the second highest importer of chocolate products with 93.5 thousand tons (10.4% of total volume in Asia), after Japan (19%).

Processing facilities in Asia have increased as production increases. Grindings in Indonesia jumped by almost 70% in three years to 2013-2014. Processing plants operated by ADM and Olam have been joined by Barry Callebaut doubling its capacity since 2009, and Cargill constructed a 70,000 ton plant in Indonesia in 2014, with newcomers such as BT cocoa, JB Cocoa and Guangchong.

Table 6

2012 Cocoa bean exports and imports in Asia

<i>Export:</i>	x 1,000 tons	% of Total in Asia	<i>Import:</i>	x 1,000 tons	% of Total in Asia
Indonesia	163.5	76.3%	Malaysia	339.0	49.6%
Malaysia	47.7	22.3%	Singapore	84.0	12.3%
Singapore	1.4	0.6%	Turkey	81.7	11.9%
Thailand	0.6	0.3%	Japan	51.1	7.5%
Turkey	0.5	0.2%	China	33.7	4.9%
Philippines	0.3	0.1%	India	26.6	3.9%

Source: FAOSTAT (2015)

China is the eighteenth largest importer of cocoa beans in the world. A slight growth in cocoa bean imports of 0.2% was recorded between 2001 and 2010 (see Table 7). Even though cocoa bean production is insignificant in global terms, chocolate production in China shows a growing trend, in part due to an expanding domestic chocolate processing and exports of approximately 49.2 million tons of chocolate products.

Shown in Table 8, China is the largest chocolate product manufacturer in Asia with sales of cocoa ingredients (liquor, butter and powder) accounting for 40% of volume sales in 2013 in the Asia Pacific region, and India the second largest with 11% of trade. Both of these countries show a strong increase in cocoa ingredient exports in recent years. This trend is driven by different consumption trends. In India, cocoa liquor represents 43% of total cocoa volumes (37% of global share), cocoa butter 29% (33%) and cocoa powder 27% (30%). In China, cocoa liquor accounts for 23%, cocoa butter 17% and cocoa powder 60% (Reavell 2014). In 2011 China was the ninth largest importer of cocoa paste, cocoa powder and cake imports.

Table 7

Cocoa bean and chocolate production in China

	2001		2011	
	x 1,000 tons	Global share (%)	x 1,000 tons	Global share (%)
Production cocoa beans	-	-	-	-
Food supply cocoa beans	47884.91	1.5%	75750.42	1.7%
Import cocoa beans	21134	0.7%	38952	0.9%
Export cocoa beans	-	-	-	-
Import chocolate products	40240	1.5%	84931	1.8%
Export chocolate products	16271	0.6%	49276	1.0%

Source: FAOSTAT (2015)

Table 8

Chocolate product exports and imports to Asia 2013

<i>Export:</i>	x 1,000 tons	% of Total in Asia	<i>Import:</i>	x 1,000 tons	% of Total in Asia
Turkey	157.3	29.2%	Japan	170.5	19.0%
Singapore	104.3	19.4%	China	93.5	10.4%
China	60.8	11.3%	Saudi Arabia	86.0	9.6%
UAE	44.5	8.3%	Kazakhstan	58.7	6.5%
Malaysia	41.7	7.8%	Korea	44.6	5.0%
Korea	26.3	4.9%	UAE	43.3	5.0%

Source: FAOSTAT (2015)

In both countries the main driver of demand is a growing middle class. On the Chinese market, cocoa is used for chocolate and chocolate-flavoured products such as pastries and flavoured milk drinks (World Cocoa Foundation 2014). The Chinese pastry market is around 4 million tons, 2.5 times larger than the US and is the largest global market for flavoured milk drinks, with sales of over 5 billion litres, four times more than in the US. Even though chocolate is not the main milk drink flavour, it is likely that sales will increase as Chinese tastes change. In India demand is driven by chocolate confectionery, which is predicted to be behind 58% of absolute volume growth of cocoa ingredients in the period 2013 to 2018. This is attributed to the increased availability of chocolate confectionery, especially in rural areas and smaller towns, and the growing activities of major players such as Cadbury India to increase distribution of smaller low- priced products including sweet biscuits (Reavell 2014).

3.2 Overview of sustainability initiatives

As mentioned in Section 2.2.2 the sustainability initiatives considered in this study are classified into four main types. Detailed information on the initiatives is provided in Tables 26-28 in Annex 3. As Figure 7 shows, the majority of initiatives started in the mid-2000s and have upscaled significantly mainly by replication of similar projects and initiatives by different companies, NGOs and service providers, and outscaling into more cocoa producing communities and countries since 2008. Precise figures of the numbers of farmers and cooperatives participating and volumes produced however are not available, as farmers participate in more than one trader's initiative and in several voluntary certification schemes at one time. Corporate data is not comparable as definitions of throughput volumes and particular, farmers and producer organisations participating in initiatives differ widely, and data are not available and comparable for given years nor for specific geographic locations.

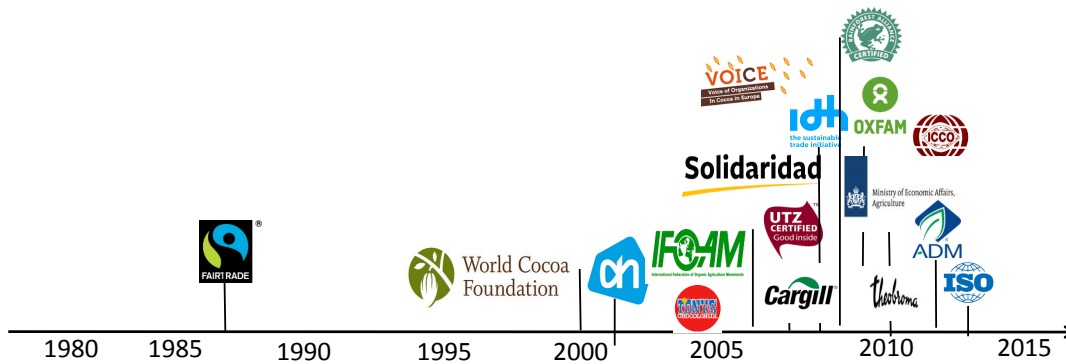


Figure 6 Cocoa sustainability initiatives timeline

3.2.1 Platforms, networks and associations

Detailed in Table 25 in Annex 3, three main Dutch based platforms have emerged through which sustainability initiatives have been developed, promoted and supported, both technically and financially. These are:

1. The Sustainable Trade Initiative (IDH).
2. The Choco Working Group which supports the 2010 Letter of Intent for sustainable cocoa.
3. The Association for Bakery and Confectionary Industry (*Vereniging voor de Bakkerij- en Zoetwarenindustrie* (VBZ)).

IDH is a government financed initiative which accelerates and upscales sustainable trade by building and co-funding impact-oriented coalitions and activities with companies, civil society organisations, governments and other stakeholders towards millennium development goals (MDGs). Adopting and upscaling activities around (UTZ) certification have been at the core of its two cocoa programs from 2008 to 2015. These programs targeted the largest, major processing companies active in the Dutch (and therefore) global cocoa and chocolate markets, responsible for an estimated 30% of global market.

The Choco Working Group includes companies, trade unions, NGOs and governmental bodies which signed a declaration of intent stating that by 2025 all chocolate sold in the Netherlands will be sustainable. The group comprises many of the cocoa processing companies involved in the IDH cocoa programs, and major food producers and retailers, certification standards, trade associations, NGOs, knowledge and research organisations. The definition of sustainability adopted by the declaration includes voluntary certification standards and has thus been a major incentive pushing the adoption of certification as the main demonstration of sustainability in the chain. The working group meets on an ad-hoc basis to discuss opportunities, barriers and progress towards meeting the voluntary declaration. The declaration appears on its way to being met and shows the extent to upscaling (replication), with an estimated 25% of chocolate and cocoa products sold in 2012 being certified (Logatcheva 2014; Logatcheva and Ingram 2014) and in 2014, 58% of chocolate and cocoa products sold in Dutch supermarkets (no other retail outlets) being certified⁸. However, the actual extent of the upscaling which the Letter of Intent and IDH have contributed to is unclear for two reasons. First is that the overlaps between corporate initiatives, the demand creation activities by certification organisations and platform and networks make it very difficult to disentangle which initiatives have been responsible for the extent of upscaling. Second is that actual measurement is very difficult and severely hampered on both a Dutch level and internationally due to the lack of a Harmonized Commodity Description and Coding System (HS) for certified sustainable products.

The VBZ has made corporate social responsibility a priority for manufacturers of cookies, candy and chocolate, focusing on the raw material supply chain, innovation and employees and has been supporting its members to adopt sustainable practices.

⁸<http://www.cbs.nl/nl-NL/menu/themas/landbouw/publicaties/monitor-duurzame-agro-grondstoffen+2015/cacao/cacao-da-homepage.htm>

Vertical upscaling has occurred as projects have become institutionalised as corporate and sector wide programs and standard practices for both the Dutch importers, processors, manufactures and retailing companies and their farmer suppliers.

3.2.2 Voluntary sustainability standards

Detailed in Table 26 in Annex 3, four standards (UTZ Certified, Rainforest Alliance, Fairtrade and Organic) have increasingly been adopted by Dutch based companies as a way to achieve more sustainable practices in their operations and their supply chains.. One new standard, the Sustainable Cocoa Standard is currently being developed concurrently by the Dutch Norm Organisation (NEN), European Committee for Standardisation (CEN) and International Standards Organisation (ISO).

The following trends can be seen in how standards are used:

- Out-scaling is demonstrated by the increase in the number of certification schemes for cocoa over time, since Fairtrade began with cocoa in 1987 (see timeline in Figure 7). Three certification schemes (UTZ, Fairtrade and Rainforest Alliance) now dominate the voluntary standards adhered to in the Dutch market in terms of volumes produced and numbers of farmers covered, with a fourth standard (ISO-CEN) currently in development.
- The organisations who initiated voluntary certification approaches, such as UTZ, were smaller companies and NGOs, such as Rainforest Alliance translated experiences from timber, coffee and banana to cocoa, and Fairtrade/Max Havelaar which also grew from working with coffee farmers. The Dutch government has participated in the member NEN meetings. The current standards in operation have been set without any direct role of the Dutch or other governments, founded largely by NGOs, with some business interests, detailed in Table 26.
- Initially the four main schemes in Netherlands had different focuses on environmental and social issues i.e. Fairtrade on ethical issues, Rainforest Alliance on deforestation, IFOAM Organic on pesticide free farming and UTZ on mainstreaming sustainability in farming practices. A comparison in 2014 of the main certification schemes globally standards shows more harmonisation, with 47% of the 15 main environmental, social and economic issues and 27% of the 346 criteria commonly shared (ICCO 2014). The revisions to UTZ and Rainforest Alliance standards in 2014, and the draft ISO/CEN/NEN standard, show that harmonisation towards an even more common framework has further increased, with the ISO standard promoting itself as 'one standard to bind them'⁹.
- Most of the major traders/exporters and processors have now adopted existing certification schemes, indicative of replication scaling among stakeholders in the chain.
- Small-scale, speciality, fine flavour cocoa and chocolate produces have been less involved in certification schemes.
- All of the four main standards used in the Netherlands have a strong focus on farmer practices, with chain of custody approaches, traceability and transparency also playing an important role, reflecting concerns by consumers and NGOs about how the chain is governed.
- Complaints by industry, farmers and support organisations about the complexity and proliferation of certification standards have also led different platform organisations in the chain (such as ISEAL Alliance¹⁰ and ICCO) to understand differences and complementarities between standards, and harmonise requirements such as auditing and data provision to reduce the cost and time of certification (KPMG 2012; RESOLVE Inc. 2012; ICCO 2014).
- The approach of the vocal social and environmental movement to cocoa – exemplified by NGOs such as Oxfam Novib, Solidaridad, the Tropical Commodity Coalition (TCC), Voice Network and trade unions (such as FNV) has changed. From using traditional opposition and campaigning to highlight critical issues such as labour conditions, environmental awareness and living wages, they now tend to take a more partnering approach to exert more influence within the cocoa chain and to mainstream sustainable cocoa initiatives.

Vertical upscaling has occurred as certification has become mainstreamed and institutionalised as standard practices for the cocoa chain from Dutch importers, processors, manufactures and retailing companies to their farmer suppliers, shown in Figure 8.

⁹ <http://www.confectionerynews.com/Commodities/ISO-CEN-sustainable-cocoa-standard-due-for-2016>

¹⁰ http://www.isealliance.org/sites/default/files/ISEAL100_web.pdf

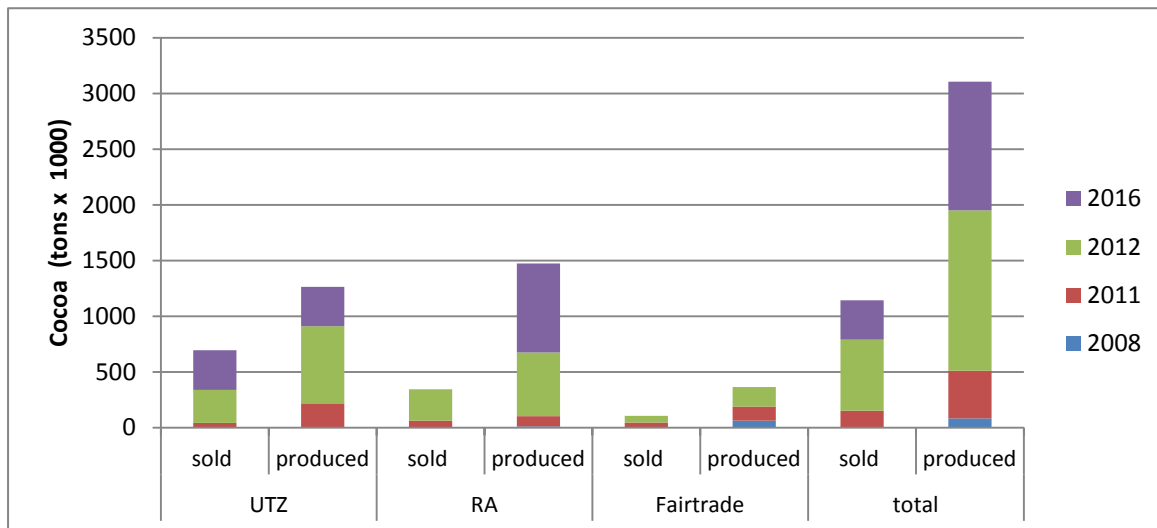


Figure 7 Scaling up of certified cocoa production and sales globally 2008 to 2016. Source: Fountain and Hutz-Adams (2015)

3.2.3 Corporate initiatives

There are at least 12 corporate initiatives by Dutch companies in the cocoa value chain, as well as by three NGOs who work in partnership with companies. These are detailed in Table 27 in Annex 3. Many of the early corporate frontrunners were also involved in setting up certification schemes e.g. PUK and UTZ, often in partnerships with CSOs. Since 2008 the government, via namely IDH, but also schemes such as Centre for the Promotion of Imports from Developing Countries (CBI), the Dutch Senior Expert program (PUM) - two Dutch government funded agencies, and indirectly via grants to Dutch based CSOs such as Solidaridad, Oxfam Novib and Louis Bolk. CSOs have also been involved in a private sector partnerships with traders such as Cargill (Solidaridad), Continaf, Ferrero and Petra Foods (Oxfam). Dutch based companies have also partnered with international NGOs (for example Care International and VSO) and local NGOs in origin countries, as well as with national governments (such as Cocobod and extension services in Ghana, the Conseil du Café Cacao in Ivory Coast). Many of the initiatives by the large companies were noted to have been supported by the Dutch government, particularly IDH, and stimulated by the Letter of Intent. Some initiatives by smaller (non-Dutch) companies linked to Dutch importers and processors, particularly in Latin and Central America have been supported by the CBI, with few apparent overlaps. Most initiatives focus on 'sustainable cocoa farming', a wide-ranging term, which intertwines disseminating techniques (through classroom and field training, demonstration plots and pilots) to raise productivity via good agricultural practices (GAP) and quality.

The initiatives have the following characteristics in common:

- Most have been implemented or scaled up horizontally and vertically significantly, doubling or trebling the number of farmers included in programs and the financial costs of providing services) in the period from 2007 to 2010 to date. Although a few of initiatives existed prior to 2007, they were much smaller and seen mainly as ad-hoc activities, than the sustainability programs they are today, shown in Table 27. Obtaining concrete figures about actual numbers of farmers, the organisations, activities and costs of these programs is difficult, and financial data on activities tends to be reported in global terms in corporate reports and not broken down per farmer or producer organisation, or compared over time. For example, Mondelēz Cocoa Life program started in 2012, building on support to farmers commencing in 2008 in Ghana and growing from 38,000 farmers in 2014 in six countries, and aims to reach 200,000 farmers in the six countries by 2022. Cargill's 2012 Cocoa Promise program developed from activities in Ghana and Ivory Coast dating back to 2003, with 60,000 farmers supported in the Ivory Coast in 2008, growing to 115,000 farmers in three countries in 2014. One of the problems in quantifying upscaling is accurately identifying the number of farmers to which initiatives have been upscaled is that the initiatives change over time (from training in farmer field schools and introducing certification to activities that help farmers maintain certification, work with cooperatives and female farmers).

- The majority of the initiatives have used and scaled up activities by supporting certification schemes at farmer group level since 2007, often this has meant also supporting farmers to organisation into groups, and providing support to develop the management, business and organisational skills of farmer groups.
- Many corporate initiatives have recently slowed down on scaling up and turned to scaling out and horizontal scaling; increasing the types of services and support provided to farmers and producer organisations.
- Most initiatives have involved significantly scaling up (extending and replicating) the support provided by Dutch based traders, processors and buyers to small-scale cocoa farmers, almost exclusively via their producer organisations (cooperatives and unions).
- In the last four years, certification GAP based initiatives have increasingly been accompanied and combined with the vertical scaling up of access for farmer organisations to (directly or via providers) inputs such as approved fertilizers, pesticides and credit.
- Initiatives have out-scaled in the last two years to include not just GAP but also management, and organisational aspects of producer organisations.
- Increasingly companies have been vertically and horizontally scaling up and replicating their sustainability initiatives with support of public sector – in the Netherlands via IDH, and internationally via ICCO and through making more direct contact at farmer level with producer country governments – for example contracting government agencies in Ghana and Ivory coast to provide training to farmers.
- Many of the initiatives by the large companies were noted to have been supported by the Dutch government, particularly IDH, and stimulated by the Letter of Intent. Some initiatives by smaller (non-Dutch) companies linked to Dutch importers and processors, particularly in Latin and Central America have been supported by the CBI, with few apparent overlaps.

3.2.4 Interlinking initiatives

Figure 9 shows the high degree of interlinkages between sustainability initiatives in the cocoa value chain. Initiatives that combine different types of sustainability initiatives are shown where the circles overlap. Platforms, networks and associations have been intensely used to both launch initiatives and to support the implementation and replication upscaling of corporate and voluntary certification, for example:

- Certification standards partnering with traders and international NGOs, service providers and consultants – for example Cargill, Solidaridad, UTZ and IDH.
- Traders collaborating with certifiers e.g. Cargill with UTZ and Rainforest Alliance.
- Private sector companies partnering with research organisations, such as The Sustainability Consortium (TSC) and the community of practice learning group financed by IDH.



Figure 8 Interlinking sustainability initiatives in the Dutch linked cocoa value chain

3.3 Motives to upscale

Motives for the corporate sector to improve the sustainability of the cocoa value chain have centred on overcoming the most pressing issues in the sector. The different motives of companies and civil society organisations (CSOs) often purporting to represent consumers and farmers to address these issues are explained in Table 9.

Table 9

Environmental and social issues in the cocoa chain

Environmental issues	Social issues
Climate change & CO ₂ emissions	Better smallholder livelihoods
Impact on biodiversity and ecosystem services (deforestation, land, soil and forest degradation)	Gendered exclusion and benefits
Land use change	Farmer freedom of association and collective bargaining
Non-renewable resource depletion	Child and forced Labour
Primary cumulative energy demand	Fair Salary
	Working hours
	Equal opportunities and discrimination
	Health and Safety
	Gendered exclusion and benefits
	Farmer Education and training
	Labour laws and conventions
	Access to material resources
	Poverty
	Community engagement

Security of supply

A major motive for companies to upscale initiatives has been to ensure a secure, long-term supply of cocoa, and often also specific quality. Predictions of scarcity and growing global demand have created a strong economic justification to engage downstream in value chains, combined with the pressing environmental and social concerns that emerged in the chain in the late 1990s. Fears of scarcity are caused by a combination of a decreasing number of aging farmers, trees and farms, decreased interest by young farmers, low productivity, persistent problems of disease and fears of climatic changes affecting production. Many companies engaged in sustainability initiatives to overcome these problems by supporting farmers and their cooperatives and associations, with improved technical farming practices, and enabling access to finance, equipment and agricultural inputs. Community development projects have been seen as a way also to secure relationships with traders and therefore supply.

Reputational risk

Corporate reputation was reported as a strong motivation for companies to engage in and then upscale sustainability initiatives. Sustainability initiatives provided companies with a 'licence to operate' in response to citizen concerns. The negative publicity and campaigns about child and slave labour related to cocoa production, mainly in West Africa, in the early 2000 was a 'wake-up call' for many companies into the impact of practices in their supply chain. This attention has since broadened to address wider social problems experienced by cocoa farmers, and environmental issues such as deforestation and land degradation. The issues shown in Table 9 are reflected in the topics covered by sector-wide agendas for action such as the 2001 Harkin Engel Protocol, and the results of the World Cocoa Conferences – the Abidjan declaration in 2012 and Amsterdam declaration in 2014. Whilst civil society pressure on companies was not perceived as being high as it was in 2000, consumer and other stakeholder's pressure and perceptions were reported as an important aspect in adopting and then upscaling (particularly replication of success pilots and horizontal upscaling of sustainability initiatives within the sector. Some multinational companies indicated that (re)gaining consumer trust, improving their practices and image to improve their reputations have been an important factor in upscaling initiatives.

Given the large concentration of companies in the Netherlands, the wide reaching nature and extent and geographical spread of many of the environmental and social issues, which were often beyond the direct span on influence and control of individual companies, NGOs and of consumer country governments, many respondents indicated this created pressure to respond collectively as a sector and take a value chain approach. The drive to initially engage in and then upscale initiatives was seen to be mainly come from the major companies in retail and processors. In the early years that sustainably initiatives were started up, the drive came initially externally from NGOs and consumer organisations. NGOs, such as WWF and Oxfam Novib have continued to indirectly drive such initiatives, becoming partners rather than watchdogs, agitators and critics as in the early phases. Government support, such as platforms and indirectly via IDH, were also seen as creating a major push to upscale initiatives.

Commercial interests

Most companies indicated that commercial, economic reasons were not the major motive to engage in sustainability initiatives or upscale them. Reputation and corporate philosophy were perceived to be the main drivers. However, companies noted that many of the sustainability initiatives they have engaged in, whilst having significant (generally unquantifiable) costs, have also had positive economic implications and created different market opportunities. This ranged from securing supply by having more direct contacts and developing stronger relationships with (organised) farmers groups, also from the focus on quality and productivity resulting in higher quality beans and more secure supplies from farmer groups. A third benefit was using sustainability, particularly certification as a market strategy and branding tool to demonstrate to business and end-consumers responsible corporate behaviour. Whilst upscaling sustainability initiatives have resulted in costs i.e. separate warehousing to meet chain of custody requirements, investments in monitoring and control schemes - these have also had economic returns for companies, also not quantified. This includes new knowledge gained returns from introducing detailed databases of suppliers related to certification requirements.

Business strategy

The company's business strategy, history and ownership characteristics was reported as playing a major role in upscaling sustainability initiatives. This included companies which started as family concerns, those with philanthropic interests, and those for whom end-consumer branding is critical to their business model. In the increasingly competitive cocoa market, building up trust and long-term relations with clients and suppliers through a value chain approach, which is employed in certification schemes was also a factor making certification one of the most popular initiatives.

However, all respondents indicated that certification needed to be combined with other approaches to meet their business strategies. Therefore, an increasing focus has been made on supporting farmer to organise and manage their associations better – through financial, management and technical training and provision of equipment through farmer extension services and linking farmers (organisations) to organisations providing farm inputs, credit and equipment. Community initiatives continued to be used on a small-scale; whilst companies indicated the limits to the extent of impact and that they felt they were often stepping out of their direct influence into the sphere of services generally provided by governments.

A number of companies indicated that their leading market position was also a factor motivating them to lead the sector and chain in terms of responding to environmental and social issues and hotspots in their chain. Most companies interviewed believed that they were playing a leading role in developing and upscaling their initiatives, rather than their suppliers.

Whilst all of the largest processing and trading companies with Dutch links have adopted corporate sustainability initiatives and certification as a dual strategy, and also are active members of platforms, not all companies active on the Dutch market have taken the same strategy. Many smaller companies in the processing and retail segments in a value have corporate initiatives but are not members of platforms and have not adopted voluntary certification standards (Van der Linden 2012; De Ridder *et al.* 2013; Matti 2015). Based on secondary data and informal discussions, the main reasons companies have *not* committed to sustainability initiatives are discussed in Box 1.

Box 1 Why companies do not engage or upscale certification and platform sustainability initiatives

An estimated 5% to 20% of chocolate sold in Europe is sold as high quality, specialty, and fine flavour products (CBI 2013). The import of cocoa beans for fine flavour, specialty chocolate accounts for around 33% of all cocoa bean imports to the EU (CBI 2013). A new 'middle market' is emerging between conventional and conventional certified low price, and high price, fine flavour chocolate products.

Many of Dutch based companies in this middle market are small medium-sized enterprises, such as Tony's Choclonely, Chocolate Makers, Chocolate Explorers, Original Beans, Metropolitan Chocolates, El-Sauco Worldwide Food Specialties, Daarnhouwer & Co. BV and ChocoWeb. These companies tend to engage far less in certification and in platforms and associations, compared to the larger traders in conventional chocolate products, although many have their own initiatives, which often include different emphasis and focus on sustainability. Their branding strategy and business models tend to be based on 'own' sustainability initiatives rather than third party certification (Matti 2015). The reasons why companies engaging in the middle and high do not engage in certification and platforms that support upscaling include:

1. High costs of third party certification schemes for small companies.
2. Lack of conviction of impacts of third party certification schemes.
3. Use of different business models (such as bean to bar) with higher levels of contact and attention to sustainability with stakeholders and activities in the chain than the conventional, large-scale traders and processors. Companies engaging in this model claim to have higher levels of impact and a high level of commitment to partners in the chain.
4. Primary focus on bean quality and origin - which may address differing elements of sustainability - rather than on third party certification.
5. The smaller companies have not been engaged by IDH and Letter of intent and ChocoWerkGroep or Dutch associations which focus on the companies with large market shares and turnover, allowing them to more quickly achieve the goals.
6. The origin countries where Dutch government support has been focused (via IDH, grants to CSOs such as Solidaridad and Dutch embassy programs) have primarily focused on the major production countries (IDH 2010), rather than fine flavour and specialty producing smaller countries which constitute the majority of fine flavour exporters (CBI 2013), this is changing with more focus of for example, CBI and Ministry of economic affairs on smaller origin countries.

These companies have however engaged in scaling up their own company corporate responsibility initiatives, for example directly supporting producer organisations, taking arranging more sustainable transport and lower energy use equipment in the supply chain, and introducing transparency and traceability by sharing information about production and product origins on their websites.

3.4 Policy instruments to increase value chain sustainability

In the cocoa chain, two of the four types of policy instrument available (see Table 1), endorsing though encouraging corporate self-regulation and partnering, are currently used by the Dutch government to stimulate sustainability initiatives. These can be increased and scaled out to companies not currently involved in such initiatives. Interviewees noted that mandating and facilitating instruments also have the potential to increase the sustainability of the chain. The following instruments could be (further) used by the Dutch government the cocoa value chain.

Endorsing instruments

Voluntary standards certification

1. Continued support and promotion of third party, verified certification standards, particularly focusing on the hotspots where certification leads to positive impacts for cocoa farmers, their organisations and communities. What can the Dutch government do?
2. Increased 'certification plus' away from certification as the end goals towards impact orientated initiatives by coupling certification with a range of complementary initiatives e.g. producer group strengthening; business and farm training; community development; targeting specific producer types such as women and youths; cocoa seedlings, credit and input supplies, and linking to service providers.

Partnering instruments

Partnerships

3. Increasing the partnerships between (Dutch and local) service providers such as NGOs and researchers, who can aid Dutch companies to implement sustainability initiatives with farmers and their producer organisations, particularly for activities outside of the expertise of traders and processors.
4. Increasing partnerships between companies (e.g. traders, processors) and producer country governments, and their implementing, extension agencies and research organisations.
5. Continue to use value chain approach innovatively partnering between traders with new partners with new partnerships focusing on solutions to outstanding problems i.e. indirect service providers and organisations in the chain delivering services to farmers; enabling services such as credit, farm inputs etc.; continuing services such as GAP training and certification; producer organisation strengthening; and climate smart, disease resilient improved varieties of cocoa.
6. Re-focus partnerships towards partners 'beyond projects' i.e. not NGOs and CSOs reliant on project funding but service providers such as credit providers and banks, equipment and fertiliser companies, and transporters.

Facilitating instruments

Campaigns

7. Given the effectiveness of lobbies to raise awareness of hotspots and key issues and make consumers aware of the provenance and activities behind the foods they consume – targeted campaigns particularly by civil society and non-government organisations have value in pressuring multi-stakeholder coalitions of chain actors to take specific actions. Government support to ensure campaigns are evidence based is an option.
8. Increasing consumer awareness on a pan-European level of the societal and environmental benefits of sustainable cocoa.

Government to government (G2G) aid

9. Government (Dutch and or/with other leading European governments notably UK, Netherlands, Belgium, Denmark, Germany and Switzerland) support for sustainability initiatives to producer country governments to create more enabling environments for sustainable production and trade and address issues which certification alone cannot (i.e. productivity and farmers' livelihoods, legislation, pricing, farmer education and farmer service delivery. A focus on hotspots such as working conditions, prices and adapting (Arabica and varieties) to better withstand climate change.
10. Working with producer country governments to develop and implement legislation that supports sustainable production (i.e. avoiding deforestation, living incomes, and environmental protection) such that national governments take more responsibility.
11. Engaging with processing companies and retailers currently not in platforms and sustainability initiatives i.e. speciality and fine flavour chocolate sector, non-supermarket retailers.
12. Focus on emerging market consumer countries about the societal and environmental benefits of sustainable cocoa.

Demand stimulating measures for sustainable cocoa

13. Increased harmonisation to aid consumer awareness of sustainable products, promotion of sustainably produced products at business users and end-consumers.

Development and trade aid and grants

14. Short-term projects in specific countries (starting in the poorest and largest producer countries) addressing priority issues:
 - living incomes;
 - reducing business costs and increasing corporate incentives to engage in certification;
 - climate smart, disease resilient improved varieties of cocoa;
 - fertiliser formulas adapted to local soil conditions;
 - farmer and farmer organisation capacity building;
 - truck leasing projects;
 - farm rehabilitation;
 - farmer education on best practices;
 - evidence based demonstration of impacts of initiatives, particularly certification.

Mandating instruments

Fiscal and monetary instruments

15. Setting a level playing field promoting sustainable cocoa trade at EU and global level by removing or lowering trade barriers, and lowering export tariffs or preferential tariffs for demonstrated, verifiably produced sustainable cocoa at a national or EU level.
16. Preferential tax treatment and incentives for certified cocoa at production and retail (consumer) level on national and EU level.
17. Stimulating investment (i.e. investors, banks, credit organisations) in sustainably produced cocoa in producing countries.
18. Whilst recognised by many respondents as a highly controversial policy measure, prices for cocoa and coffee are currently set both through market mechanisms and by some governments at farm gate and export level. However prices remain insufficient to provide a living wage for many farmers in many production countries – despite export price setting by governments such as Ghana and Ivory Coast and certifications premiums. More collaboration is required between producer, processing and consumer country governments to determine prices that cover the externalities and true costs of sustainable produced commodities. Examples of true pricing, for example the work of Tony Choclonely (Ingram 2015) and living incomes and wages provide inspiration, such as currently being addressed by the Global Living Wage Coalition.

Legislative instruments

19. Although recognised by many respondents as a controversial, legislation could be developed that prohibits products produced illegal i.e. those based on slave or child labour) along the lines of how another commodity, timber has been dealt with, inspired by the U.S. Lacey Act and the European Union's Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan, the EU Timber Regulation and the Voluntary Partnership Agreements (VPAs) between the EU and timber-producing countries.
20. Introducing legislation on national and European level which clarifies the extent to which retailers and manufacturers are responsible for the environmental and social implications of products they produce and sell.

The organisations interviewed expressed their preference for the following instruments aimed at increasing the sustainability of the coffee value chain:

- Focus more on the Netherlands and not only on the international level (e.g. support sustainable consumption, and innovative, demonstration projects).
- Promote independent monitoring instruments to measure the impact of corporate initiatives.
- Broaden the current focus from voluntary certification to upscaling corporate programmes which are most impactful.
- Organize dialogues between different sector roundtables to learn from each other.
- Support small and medium-sized innovative companies and initiatives in producing countries which contribute to upscaling.
- Further build networks and platforms between Dutch companies and networks with producer countries.
- Support for extension services in producer countries.
- Examine how companies can be held responsible for environmental and social damage in producing countries.

Suggestions for changes to current instruments used include stopping or changing the nature of financial support by the Dutch government towards smaller companies, due to the creation of (perceived unfair advantage for major players which exaggerates their position in the chain, particularly from the perspective of smaller companies.

4 The coffee value chain

This chapter starts by introducing the results of the research on the coffee value chain. It uses the methods and concepts introduced in Chapters 1 and 2 to answer the research questions to answer the research questions one to four. The analysis is focused on understanding the sustainability initiatives and companies using them and how they are being upscaled within the coffee chain.

4.1 Value chain structure

4.1.1 Coffee value chain context

Coffee is a drink prepared from the roasted seeds of the *Coffea* genus, a bushy shrub originating in the Eastern African highlands. Coffee has been grown since 1700s in many tropical and subtropical countries around the world. The most common varieties grown worldwide are *Coffea arabica* and *Coffea robusta* (Potts *et al.* 2014). Robusta coffee is grown at lower altitudes and arabica at higher altitudes. Robusta has less refined flavour, but greater strength. There are large variations in the quality of arabica coffee, and it is more difficult and costly to grow than robusta (FAO 2008). Arabica formed approximately 61% of world coffee production in the crop year 2012/13 with robusta accounting for around 39%. The production of robusta beans has been increasing since the 1990s (ICO 2014). In 2013, 8.9 million tons of coffee was produced globally, 44% originating from South America (mainly from Brazil and Colombia), 32.2% from Asia, (particularly Vietnam and Indonesia), 11% from Africa and 10.8% from Central America. The biggest coffee producing country was Brazil, followed by Vietnam, Indonesia and Colombia (see Table 10). Global coffee production has grown strongly since 1995, when approximately 5.5 million tons of green beans were produced.

Table 10
Global coffee production and area harvested 2013

Coffee, green beans					
Production	(x 1,000 tons)	% of Total	Area harvested	(x 1,000 ha)	% of Total
Brazil	2964.5	33.2%	Brazil	2085.5	20.6%
Vietnam	1461.0	16.4%	Indonesia	1240.9	12.2%
Indonesia	698.9	7.8%	Colombia	771.7	7.6%
Colombia	653.2	7.3%	Mexico	700.1	6.9%
India	318.2	3.6%	Vietnam	584.6	5.8%
Honduras	273.5	3.1%	Ethiopia	520.0	5.1%
Total	8920.0	100%	Total	10142.8	100%

Source: FAOSTAT, 2015

In 2014 world coffee consumption was 149.3 million bags (1 bag is equal to 60 kilograms) with an average annual growth rate of 2.3% over the last four years. Since 2011 the biggest increase in consumption (4.6%) has been in emerging markets, especially in Africa and Asia (Russia, South Korea, Algeria and Turkey), albeit from a relatively low base (ICO 2015a). In the last 50 years the consumption of coffee has had a constant increasing trend. A strong increase of 855.1% was recorded between 1964 and 2012. It is predicted that emerging markets will continue to be the main driver of growth in global consumption over the next few years (ICO 2014). Brazil is the biggest coffee consumer among the coffee exporting countries with 20.8 million bags in 2014, followed by Indonesia (4.2 million), Ethiopia (3.7 million) and Mexico (2.4 million). Traditional consumer markets such as the EU, USA and Japan represent over 50% of demand globally. The shift towards specialty coffee consumption and single-serve machines has increased the value of demand more than the volume (ICO 2015a).

In 2012, global coffee exports reached 7.1 million tons. In 2012, the two biggest global coffee exporters were Vietnam with 1.7 million tons accounting for 24.2% of global export and Brazil with 1.5 million tons (21% of global share), see Table 11. Brazil led coffee exports from 1987 to 2011 reaching a peak of 1.7 million tons. Arabica production accounts for around three quarters of Brazil's output (ICO 2014). Vietnam has had continuous and significant growth in coffee production over the last 30 years. The third most important exporter - Indonesia - has much lower exports (0.4 million tons, 6.3% of global share) than both Vietnam and Brazil. The two major coffee importing countries are the U.S. (1.4 million tons) and Germany (1.1 million tons). Italy is the third biggest importer however it imports significantly less than Germany (0.5 million tons).

Germany is the fifth largest global exporter of green coffee beans however this is mainly due to re-exports. Germany on average re-exports 6.6 million bags a year, representing 27% of the total value of re-exports by all importing countries. The second biggest re-exporter is Belgium accounting for 9.9% of the total re-exported volume. Re-exporting activities by importers have shown continuous growth over the last 50 years. All three forms of coffee, namely green coffee, roasted coffee and soluble coffee are re-exported. Green coffee dominates exports by Germany and Belgium, while roasted coffee dominates in Italy, Poland, Sweden and the United States. Soluble coffee is mainly re-exported by Japan, Spain and the United Kingdom (ICO 2014)

Table 11
Global coffee exports and imports 2012

Coffee, green beans					
Exports	(x 1,000 tons)	% of Total	Imports	(x 1,000 tons)	% of Total
Vietnam	1732.1	24.2%	USA	1371.3	20.9%
Brazil	1503.7	21.0%	Germany	1141.1	17.4%
Indonesia	447.1	6.3%	Italy	497.3	7.6%
Colombia	396.4	5.5%	Japan	380.0	5.8%
Germany	370.9	5.2%	Belgium	292.6	4.5%
Honduras	317.2	4.4%	Spain	267.9	4.1%
Total	7146.8	100%	Total	6573.6	100%

Source: FAOSTAT, 2015

4.1.2 Characteristics of the global coffee value chain

Coffee bushes are grown in estates (large plantations) in Latin America and Kenya. In other countries in Africa and South East Asia, production is mostly by smallholder farmers (FAO 2008), typically on farms of 0.1-5.0 hectares. An estimated 100 million coffee farmers produce and process coffee, 25 million being smallholder farmers (Wegner 2012), with decreasing production and productivity a major problem for African farmers. While Brazil is expanding coffee production and Vietnam is stable, many African countries have experienced reduced production (Wegner 2012) which may decrease further, particularly in the case of arabica beans, as a result of climatic changes (Pierrot *et al.* 2010). Developing high yielding, disease and pest resistant and climate proof varieties, replacing old trees and providing more specific farm inputs has only resulted in marginal coffee yield improvements (International Coffee Organization (ICO) 2013).

Farmers harvest the coffee beans, known as cherries, and process them (pulped, washed in water and then dried (by sun or artificially), resulted dried parchment is hulled from the green bean) before selling them to traders as green beans. Farmers generally sort and grade coffee beans according to size and quality. Traders generally buy coffee either at farm gate or at a local warehouse. Traders sometimes transport the beans over significant distances before selling to exporters. Farmer cooperatives are common intermediaries that also buy and process coffee (LMC International 2006), selling to traders and independent exporters, or exporters owned or controlled by multinational coffee and commodity companies, see Figure 10. In some Latin American countries, such as Colombia, parastatal roasters compete with multinational roasters. Parastatals also compete by selling directly to supermarkets and specialised outlets. In some East African countries, such as Kenya and Tanzania,

almost all exports flow via national coffee auctions. Brazil is both a coffee producing and coffee consuming country, therefore domestic consumption is included in the supply chain. Coffee is also traded on futures markets, with arabica coffee futures traded on the New York Board of Trade and robusta futures in London on the Euronext-LIFFE market (FAO 2008).

Processors (known as roasters) directly sell coffee to retailers: supermarkets, bars and restaurants. Coffee is generally sold to consumers in the form of roasted coffee (beans or ground coffee) and soluble, instant coffee. Two technologies, spray and freeze-drying are used in soluble coffee production. Spray drying is lower cost but generally diminishes taste, whereas freeze drying conserves flavour but is more costly and requires access to specific technologies (FAO 2008).

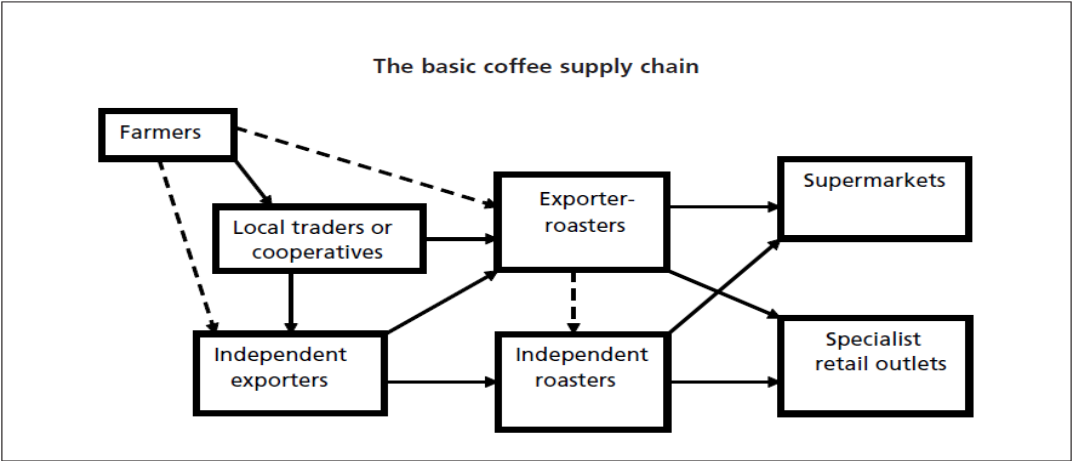


Figure 9 Outline of coffee value chain. Source: Panlibuton and Lusby (2006)

There has been an increasing level of vertical integration in the global coffee value chain, in particular between exporters and roasters and between coffee exporters and converters (FAO 2008). The ten largest roasters process almost 40% of all the coffee consumed worldwide. Three big transnationals (Nestlé, Mondelez (previously Kraft Foods) dominated the roasting market in the period 2013 to 2015. Smaller roasters such as Smucker’s (which merged with Procter & Gamble’s in 2008), Strauss, Starbucks and Tchibo) are also present (see Table 12)(Wegner 2012, Panhuysen and Pierrot 2015).

Table 12 Global roasters and total coffee sales in 2005, 2010 and 2014 (x 1,000 tons)

Roasters	2005	2010	2014	2014*
Nestlé	780	870	860	200
JDE/Mondelez/ Kraft Foods	780	700	860	321
Sara Lee	600	450	-	-
Smucker’s/Procter & Gamble)	288	250	300	6
Strauss		215	300	-
Tchibo	204	173	180	171
Lavazza		140	-	-
Starbucks	142	135	209	199
UCC			177	25
Aldi	-	120	-	-
Keurig Green Mountain	-	103	98	30

Source: (Wegner 2012, Panhuysen and Pierrot 2015). *sustainable(certified) coffee volume – no data

The July 2015 merger of Mondelez International and D.E Master Blenders 1753 means that the new company, JDE, based in the Netherlands, now has most of the world's leading coffee brands, such as Jacobs, Tassimo, Moccona, Senseo, L'OR, Douwe Egberts, Kenco, Pilão and Gevalia. D.E Master Blenders 1753 acquired the international beverage and bakery businesses of the Sara Lee Corporation,

an American company, in 2012. The Swiss trader ECOM bought Armajaro in 2013, becoming one of the world's largest biggest cacao and coffee dealer (CBI 2015). Coffee roasting is strongly affected by branding. The many coffee varieties and origins enable roasters to produce a large range of products targeted at diverse tastes in specific markets and specific market sectors (FAO 2008). The biggest roasters generally do not source coffee directly from producers or producer unions but purchase from traders. Three large trading companies (Neumann Gruppe (Germany), Volcafé (Switzerland) and ECOM (Switzerland)) together control 50% of the world's green coffee beans (Wegner 2012).

4.1.3 The Netherlands and the coffee value chain

Coffee is the most popular warm beverage in the Netherlands, accounting for more than a quarter of all consumed drinks. In 2013 coffee bean consumption reached 67 thousand tons, accounting for 3% of EU consumption (CBI 2015). Annually the Dutch consume an average of 6.3 kg per person. Roasted coffee represents 85.1% of total consumption, compared to 14.9% of soluble coffee. Generally, the consumption of soluble coffee is declining (ICO 2012). In the Netherlands the main focus is on the consistency of taste and quality, rather than on only quality (CBI 2015).

In 2012, 79.7 thousand tons of green coffee was imported to the Netherlands. The quantity of roasted coffee imports of 46.8 thousand tons reflects the long-term trend of increasing roasted coffee imports. Approximately 70% of unprocessed beans were imported from producing countries, while 99% of all processed coffee beans were imported from roasters in other EU countries. In 2013, the main origins of imported coffee were Belgium (26%), Germany (22%), Brazil (15%), Vietnam (11%) and Honduras (5%). Imports from Vietnam are exclusively robusta beans (CBI 2015).

Green coffee exports into the Netherlands reached nearly 13 thousand tons and exports of roasted coffee nearly 51 thousand tons. In other words almost three quarters of exported coffee beans were roasted. Since 2009 coffee exports have increased by an average of 1.5% annually. 5% of coffee beans were re-exported to developing countries and 88% of beans were re-exported to countries within the EU. In 2013 the top six destination countries of Dutch exports were Germany (14%), United Kingdom (10%), France (10%), Sweden (10%), Finland (9%) and Belgium (5%)(CBI 2015).

The Dutch coffee chain flows from production country exporters via agents (mediators between developing country exporter and importer), importers, re-exporters, roasters, distributors and packagers. In 2014 the major producer was Douwe Egberts. Senseo (Douwe Egberts' soft pod brand) was particularly under increasing pressure from competitors such as Nespresso and Tassimo. Consumers buy roasted and ground beans from retailers – generally supermarkets and speciality shops, and prepared coffee in shops and coffee bars. The Dutch food retail market is strongly concentrated, with three major retailers: Albert Heijn, Superunie and Jumbo Groep controlling around 80% of the market. Albert Heijn has its own coffee roasting plant, the Ahold Coffee Company. The Netherlands is one of the leading coffee markets for certified coffee with nearly half of the coffee consumed in 2013 being certified in 2013 (CBI 2015).

4.2 Overview of sustainability initiatives

4.2.1 Introduction

As mentioned in Section 2.2.2 the sustainability initiatives considered in this study are classified into three main types. Detailed information on the initiatives is provided in Tables 29-31 in Annex 4. As Figure 11 shows, the earliest sustainability initiatives in the coffee value chain started in the mid-1960s, with growth in the number of initiatives occurring in the mid-1980s and again in the early 2000's, when significant upscaling occurred through the replication and scaling out of sustainability initiatives, including more farmers in schemes and horizontal scaling with initiatives covering more segments of a value chain. Upscaling included both of the number of initiatives addressing sustainability and the coverage of initiatives, in terms of the volume of coffee beans sustainably produced and the numbers of coffee farmers participating in initiatives. However, precise figures are not available, as farmers participate in more than one trader's initiative and in several voluntary

certification schemes at one time. Corporate data is not comparable as definitions of throughput volumes and particular, farmers and producer organisations participating in initiatives differ widely, and information provided on websites, corporate reports and interviews is not comparable, either for given years or for geographic locations.

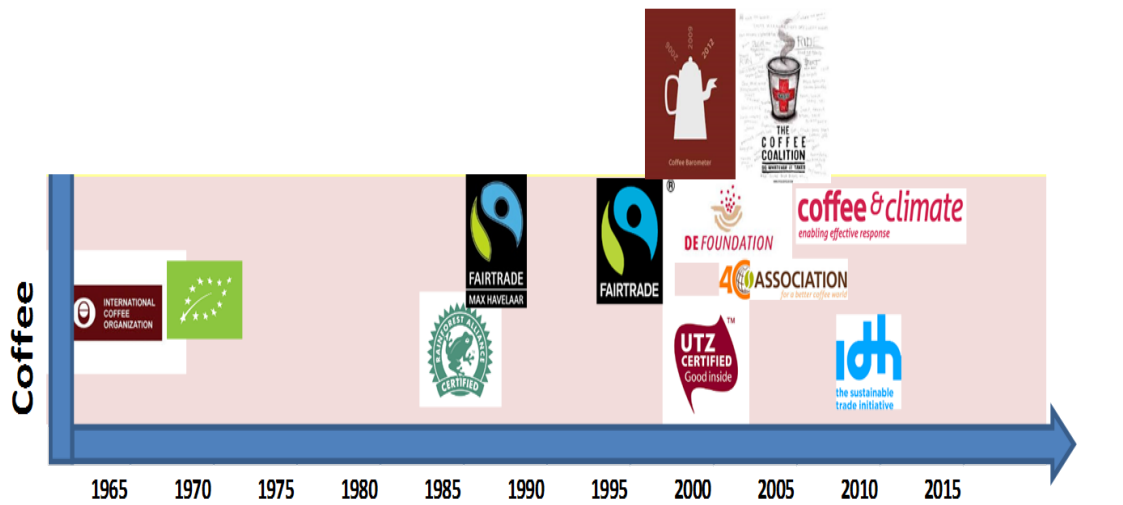


Figure 10 Coffee sustainability initiatives timeline

4.2.2 Platforms, networks and associations

Three Dutch based platforms have emerged through which sustainability initiatives have been developed, promoted and supported, both technically and financially, and upscaled through replication and extension, and then institutionalised vertically. These are:

1. The Sustainable Trade Initiative (IDH).
2. The Royal Dutch Coffee and Tea Association (KNVKT) which supports the 2010 Letter of Intent for sustainable coffee.
3. Dutch Coffee Coalition.

Sustainable Trade Initiative

IDH is a government financed initiative which accelerates and upscales sustainable trade by building and co-funding impact-oriented coalitions and activities with companies, civil society organisations, governments and other stakeholders towards millennium development goals (MDGs). Adopting and upscaling activities service delivery to enable farmers to sustainability produce coffee, have been at the core of its Sustainable Coffee Programs from 2008 to date. These programs often adopt 4C standards and have involved the largest, major processing companies active in the Dutch and global coffee market, which dominate the global roasting and manufacturing segments of the chain. See for further details in Table 28, Annex 4.

Royal Dutch Coffee and Tea Association

Royal Dutch Coffee and Tea Association (KNVKT) represents nearly all companies in the Dutch coffee sector. On behalf of its 54 members, the KNVKT and NGOs signed a Declaration of Intent with the Dutch government in 2010 stating that by 2015 75% of coffee sold in the Netherlands would be sustainable. The group comprises many of the same companies as are involved in the IDH coffee program, as well as major food producers and retailers, certification standards, trade associations, NGOs, knowledge and research organisations. The definition of sustainable adopted by the declaration includes voluntary certification standards and has thus been a major incentive pushing the adoption of certification as the main demonstration of sustainability in the chain. The declaration shows the extent to upscaling, with 40% of the coffee sold in 2011 and in 2012 being certified (CBS 2013, Logatcheva 2014, Logatcheva and Ingram 2014)¹¹.

¹¹ <http://www.cbs.nl/nl-NL/menu/themas/landbouw/publicaties/monitor-duurzame-agro-grondstoffen+2015/cacao/cacao-da-homepage.htm>

The KNVKT defines coffee as sustainable when it is certified according to Max Havelaar, Biologisch, UTZ Certified, Rainforest Alliance or under one of the ISEAL Alliance members. However, the actual extent of the replication upscaling which the Letter of Intent and IDH have contributed to is unclear for two reasons. First is as overlaps between corporate initiatives, the demand creation activities by certification organisations and platform and networks make it very difficult to disentangle which initiatives have been responsible for the extent of upscaling. Second is that actual measurement is very difficult and severely hampered on both a Dutch level and internationally due to the lack of a Harmonized Commodity Description and Coding System (HS) for certified sustainable products. Vertical upscaling does appear to have occurred as projects have become institutionalised as corporate programs and standard practices for both the Dutch grinding and retailing companies and their farmer suppliers. See for further details Table 28, Annex 4.

Dutch Coffee Coalition

The Dutch Coffee Coalition was founded in 2003, with Oxfam Novib a founding member. This platform of trade unions and social movements advocated for better working and living conditions in the coffee sector, focussing on increasing farmer prices for coffee; adult and child labour and conditions and exposure to pesticides. It does not include corporate members but has collaborated with and campaigned against, private sector practices. In 2003 the Coffee Coalition conducted a public campaign to make coffee roasters, including Douwe Egberts, accept their responsibility for these bad conditions in the coffee sector. After five years it was seen as having largely fulfilled its aims in coffee and was extended to tea and cocoa, under a new name: the Dutch Tropical Commodity Coalition (TCC), with twelve Dutch CSO members¹². The aim is to improve the social, environmental and economic conditions at the beginning of the coffee, tea and cocoa value chains. The Coffee Barometer, a bi-annual overview and watchdog publication of sustainability and other developments in the sector has been published by members of the TCC since 2006. Some of the TCC members, were also instrumental in the international Common Code for the Coffee Community (4C Association), a roundtable with all the stakeholders in the coffee industry, aiming to create a more level playing field for all parties. The platform was set up with support from the German Ministry for Economic Cooperation and Development (BMZ), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the German Coffee Association (DKV). They were joined by the Swiss State Secretariat for Economic Affairs (SECO), the British Development Cooperation and the European Coffee Federation (ECF). Now more than 70 representatives from over 20 countries – mostly representatives of coffee producers, as well as key industry and trade representatives, NGOs and governmental organisations – are included in the dialogue about strategies and measures to address key issues and develop a common understanding about 'sustainability' for the mainstream coffee sector.

4.2.3 Voluntary sustainability standards

The five main voluntary certification schemes operating in the Dutch market have different focuses both on the sustainability issues addressed, mainly at producer level, and according to where their consumers focus is. Max Havelaar focuses on social issues at farmer level and workers on farmers. UTZ address environmental, social and environmental issues, and aims to be useable as a consumer label and business to business model. One of the founders was AHold, who with coffee producers, developed the UTZ Certified coffee programme. The focus of UTZ is on Dutch and increasingly European consumers. Rainforest Alliance first started with a focus on the US market and is entering Europe. It is a consumer label focus on mainly on environmental issues. Organic (IFOAM) is applied differently in each country, depending on local differences, and focusing on environmental aspects. It is global, although most consumers are European and North American. 4C was established by multinational companies and governments, and does not have direct communication i.e. via a label, with the consumers but does involve all other stakeholders in the chain. However, there is a considerable overlap as all standards address many of the same environmental and socio-economic issues, according to the ITC's comparison tool, shown for four of the standards in Figure 12.

¹² HIVOS, Oxfam Novib, Solidardiad, Okios, Somo, Fairfood, India committee of the Netherlands, both ends, geode Waar & co, Stop the traffic and 2 trade unions FNV Bondgenoten and CNV BedrijvenBond,

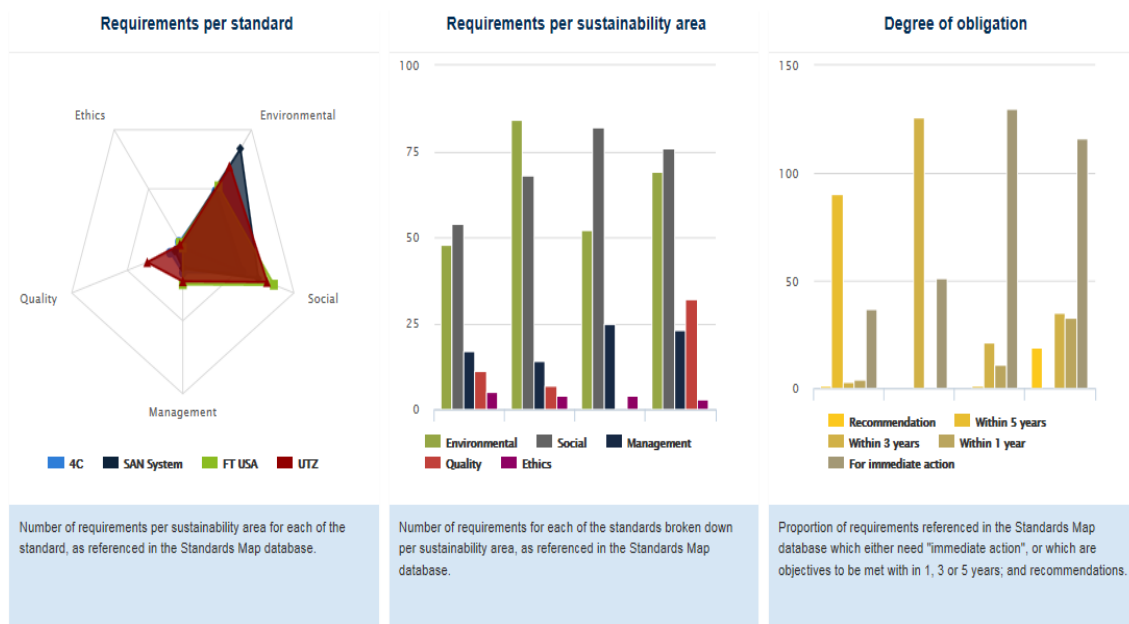


Figure 11 Sustainability standards in coffee. Source: ITC (2015)

Vertical upscaling has occurred as certification has become mainstreamed and institutionalised as standard practices for the cocoa chain from Dutch importers, processors, manufactures and retailing companies to their farmer suppliers.

The interviews indicated a general consensus that voluntary certification standards are not the silver bullet for solving all sustainability issues, for example tackling yields and all diseases, but that they have been very important tools in creating a more sustainable chain. Many issues covered by certification remain pertinent and unsolved, particularly working and labour conditions, wages, buying prices which do not cover externalities and the environmental footprint of the lifecycle in the coffee chain, and a need to plan to respond to climate change. It was also emphasised that certification is not just a process, and traceability tool, but has a dual role, sometimes conflicting, as standards provide a competitive marketing tool. The misbalance between supply and demand for certified coffee has highlighted, coupled with the slow growth in the certified market. The economic model of certification was strongly questioned, particularly the dependency of voluntary certification bodies on external funding to enable farmers and their organisations to become certified. A 'certification fatigue' and confusion was noted, both among companies and consumers are tired of multiple and new certification schemes. At the same time, there is both increasing competition between certification schemes, and enhanced collaboration – for example through the ISEAL Alliance. It was also noted that current certification schemes do not necessarily ensure or guarantee coffee quality.

4.2.4 Corporate initiatives

Most of the corporate initiatives in the coffee value chain have been implemented or scaled up considerably through replication and extension (doubling or trebling in terms of the number of farmers engaged and the financial cost to companies) from the mid-1980s to the early 2000's. The earliest initiatives relate to the adoption of the voluntary certification schemes Fairtrade and Rainforest Alliance, dating from the mid-1980s. These labels and practices have gradually have been mainstreamed into coffee production such that they are now recognisable on the high street and have been adopted by the major roasters and producers operating in the Dutch market (Douwe Egberts, Nestle, Mondelez, Sara Lee, Aldi and Starbucks), and by smaller companies, such as Simon Levelt, as well as new companies such as Moyee Coffee and Dutch Coffee.

Shown in Table 30, the focus of corporate schemes has been mainly on certification and farmer organisations. A small number of companies have developed community development programmes –

providing services which are often provided in absence of state provision- such as education, farmer schooling and village infrastructure, to coffee growing communities. A minority have helped set up and strengthen farmer organisations. Several of these have collaborated with local or international NGOs, bilateral development aid and producer country governments to build the capacity of farmer's organisations and create stronger, more direct links between roasters, processors and importers- bypassing agents and intermediaries, Starbucks and Moyee Coffee for example all cite this as an important part of their business model (see websites in the References section). A smaller number of companies reported supported inputs and the renewal of coffee farms through improved varieties and access to seedlings or grafting. Several companies reported that that are engaged in sustainability actions all along the chain, such as reducing energy and water use in production especially roasting and transport, reducing packaging and making packaging materials more environmentally friendly. Several of the newer companies, such as Moyee Coffee, have strongly promoted their fair trade and environmental sustainability, but also larger companies such as Ahold and Starbucks place a lot of emphasis on their business models based on buying direct from smaller farmers, implying higher value adding and profits.

Smaller companies reported that certification is now an easy to implement instrument and one that is easily added as a logo to demonstrate corporate credentials. Voluntary certification schemes were noted as being expensive to maintain for all companies, and particularly for coffee farmers. Certification was preferred by smaller companies to developing their own projects. For the large companies and transnationals, certification is also important but is generally complemented with sustainability projects. These were seen as adding value, providing a focus for the company and sector and setting global agendas. Many of these corporate initiatives arose as companies experienced limits of certification – that their certified farmer partners and traders could not change certain conditions in the producing countries.

4.2.5 Interlinking initiatives

Figure 13 shows the interlinkages between three types of initiatives in the coffee value chain with Dutch links. Initiatives that combine different types of sustainability initiatives are shown where the circles overlap. There is a high degree of overlap between the three types of initiatives, partly explained by the long history of sustainability in the sector, and the small number of large companies. Many corporate initiatives started and continue to focus on implementing and upscaling (replication and extension) through certification as the main route to sustainability. Companies not engaging in voluntary schemes often have corporate schemes which cover similar issues to those covered in the five main certification standards.

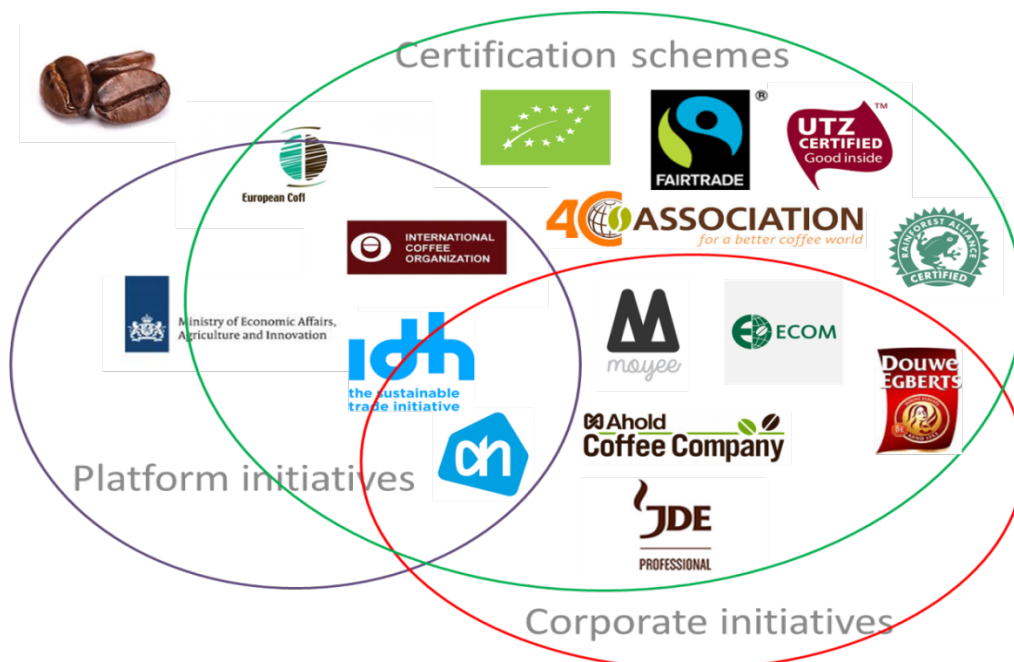


Figure 12 Interlinking initiatives in the Dutch linked coffee value chain

Vertical scaling and institutionalisation occurred as retailers and traders set up certification standards, such as Ahold Coffee company and Douwe Egberts with UTZ Certified. Replication and extension of initiatives was achieved through certification standards partnering with traders and international NGOs, service providers and consultants – such as Ahold, Ecom, Moyee Coffee and Douwe Egberts (now Jacobs Douwe Egberts, JDE). Also due to strong NGO/CSO lobby, such as the TCC, which pushed many companies to work together and created amino for changes on a sector wide level, such as the KNVKT leading the 2010 Letter of Intent. Private sector companies partnering with research organisations, such as The Sustainability Consortium (TSC) and IDH.

4.3 Motives to upscale

Motives for the private sector to improve the sustainability of the coffee value chain have centred on trying to overcome the most pressing issues in the sector, listed in Table 13. Companies and civil society organisations (CSOs) often purporting to represent consumers and farmers to address these issues tended to have different motives, explained below.

Table 13
Environmental and social issues in coffee value chain

Environmental issues	Social issues
Climate change & CO ₂ emissions	Poverty
Impact on biodiversity and ecosystem services	Health and Safety
Land use change	Gendered exclusion and benefits
Non-renewable resource depletion	Education and Training
Primary cumulative energy demand	
Acidification potential	
Freshwater consumption	

Security of supply

A major incentive for companies to upscale sustainability initiatives has been the result of both increasing demand and predictions of decreasing supply. While primarily an economic concern securing supply is tied in with both environmental and social concerns which both have an influence on the long-term viability of coffee production. Various factors are at play including a decreasing number of coffee producers, decreasing level of interest in the coffee farming business by younger generations, low/decreasing productivity, aging trees and climatic changes that are influencing the area suitable for coffee production. In Latin America for example, coffee producers struggle to maintain food security, which affects their ability and willingness to grow coffee as a sole form of income. Companies have engaged in sustainability initiatives in an effort to overcome these supply problems. These initiatives mostly involve assisting farmers to grow different varieties and employ different production techniques in the hope of achieving higher yields and quality.

Reputational risk

Obtaining and maintaining a good reputation remains a strong incentive for private companies in the coffee sector. Nevertheless, reputational risk was seen as lower in the coffee chain than it has been in the past decade. Sustainability initiatives have a long history in the value chain and several organisations indicated that this has resulted in sustainability now having a lower priority and urgency. This translates into less pressure from NGOs. Consumer interest however has remained high and gaining consumer trust is still seen as an important incentive for the uptake of sustainability initiatives, particularly certification. A solid corporate image is now seen as closely connected with a company’s social and environment credentials.

Commercial interests

Some companies consider sustainability to be a long term market opportunity. (Multiple) certification has been used to gain market share, recoup costs and differentiate products from competitors. Upscaling sustainability initiatives in any way was perceived as a way to obtain economic returns in

the long run, although they were not quantified. Roasters for example decreased costs by using new environmentally friendly technologies for roasting that saves energy.

Business strategies

The companies interviewed indicated that history and ownership characteristics played an important role in decisions to adopt and upscale sustainability initiatives. The segmented chain and the importance of both quality and the security of supply means that trust has become important again. Sustainability initiatives are seen as a way of building long-lasting relationships with business partners and as a return to 'traditional' values. As one respondent noted, 'we want to reconnect'. Actively participating in sustainability initiatives was also seen as being part of an organisations' identity which makes employees proud of the company they work for.

4.4 Policy instruments to increase value chain sustainability

In the coffee chain, two of the four types of policy instrument available (see Table 1) are predominantly used: endorsing though encouraging corporate self-regulation and partnering, used by the Dutch government to stimulate sustainability initiatives. These can be increased and scaled out to companies not currently involved in such initiatives. Mandating and facilitating instruments also have the potential to increase the sustainability of the chain, according to interviewees. The following instruments could be (further) used by the Dutch government to increase the sustainability of the coffee chain.

Endorsing instruments

Voluntary standards certification

1. Continued support and promotion of third party, verified certification standards, particularly focusing on the hotspots where certification leads to positive impacts.

Partnering instruments

Partnerships

2. Increasing partnerships between (Dutch and local) service providers such as NGOs and researchers.
3. Increasing partnerships between companies (e.g. traders, processors) and producer country governments, and their implementing, extension agencies and research organisations.
4. Re-focus partnerships towards partner's service providers such as credit providers and banks, equipment and fertiliser companies, and transporters.
5. Support innovative small and medium-sized companies and initiatives in producing countries which contribute to upscaling.
6. Broaden the current focus from voluntary certification to upscaling corporate programmes which are most impactful.

Facilitating instruments

Campaigns

7. Focus more on the Netherlands and not only on the international level (e.g. support sustainable consumption, make consumers aware of coffee provenance and innovative, demonstration projects).
8. Increasing consumer awareness on a pan-European level of the societal and environmental benefits of sustainable coffee.

Government to government (G2G) aid

9. Government (Dutch and or/with other leading European governments notably UK, Netherlands, Belgium, Denmark, Germany and Switzerland) support for sustainability initiatives to producer country governments to create more enabling environments for sustainable production and trade and address issues which certification alone has not been able to focus.
10. Further build networks and platforms between Dutch companies and networks with producer countries.

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11. Working with producer country governments to develop and implement legislation that supports sustainable production (i.e. avoiding deforestation, living incomes, and environmental protection) such that national governments take more responsibility.
 12. Focus on emerging market consumer countries about the societal and environmental benefits of sustainable coffee.
 13. Support for extension services in producer countries.

Demand stimulating measures for sustainable coffee

14. Increased harmonisation to aid consumer awareness of sustainable products, promotion of sustainably produced products at business users and end-consumers.

Development and trade aid and grants

15. Short-term projects in specific countries (starting in the poorest and largest producer countries) addressing priority issues:
 - living incomes;
 - reducing business costs and increasing corporate incentives to engage in certification;
 - climate smart, disease resilient improved varieties of coffee;
 - evidence based demonstration of impacts of initiatives, particularly certification.

Mandating instruments

Fiscal and monetary instruments

16. Organize dialogues between different sector roundtables to learn from each other.
17. Setting a level playing field promoting sustainable coffee trade at EU and global level by removing or lowering trade barriers, and lowering export tariffs or preferential tariffs for demonstrated, verifiably produced sustainable coffee at a national or EU level.
18. Preferential tax treatment and incentives for certified coffee at production and retail (consumer) level on national and EU level.
19. Stimulating the investment climate for sustainably produced coffee in producing countries.
20. More collaboration between producer, processing and consumer country governments to determine prices that cover the externalities and true costs of sustainable produced commodities.

Legislative instruments

21. Legislation on national and European level which clarifies the extent to which retailers and manufacturers are responsible for the environmental and social implications and damage created by coffee trade.

Suggestions for changes to current instruments used include stopping or changing the nature of financial support to large companies and multinationals, due to the creation of (perceived unfair advantage for major players which exaggerates their position in the chain, particularly from the perspective of smaller companies.

5 The soy value chain

This chapter starts by introducing the results of the research on the soy value chain. It uses the methods and concepts introduced in Chapters 1 and 2 to answer the research questions to answer the research questions one to four. The analysis is focused on understanding the sustainability initiatives used and by whom and how they are being upscaled.

5.1 Value chain structure

5.1.1 Soy value chain context

Soy is an annual crop grown in temperate, subtropical and tropical climates that yields an edible bean with a high protein and oil content (Van Berkum & Bindraban 2008). It yields more protein per hectare than almost any other crop (Van Gelder and Kuepper 2012) and has the potential to play a key role in addressing the challenge of global food security (WWF 2014), especially as global demand for protein is expected to steadily increase as the world's population gets larger and wealthier (KPMG 2013).

Raw soybeans are hardly found in supermarkets but whole soybeans are used to produce a variety of foodstuffs (e.g. soy milk, tofu, soy sauce, tempeh, and miso). Around three-quarters of the world's soybeans are crushed to produce protein rich soybean meal and –oil (WWF 2014). Soybean meal is primarily used to produce animal feed and increasing demand from the animal feed sector, as a result of increasing meat, dairy and egg consumption globally, has been a key driver of the expansion of soy production in recent years (KPMG 2013). The other by-product from the crushing process, soybean oil, is used to produce a wide range of products including foodstuffs (e.g. mayonnaise, margarine, sauces, ready-made meals, cereal products, cookies, candy and ice cream), cosmetics, detergents and industrial products. Soybean oil is also used in the production of biodiesel, particularly in the United States (MVO 2011). An additional by-product from the crushing process is soy lecithin which is an effective emulsifying agent used in food products such as chocolate, peanut butter and coffee creamer as well as in cosmetics, textiles, paints, coatings and waxes (Van Gelder *et al.* 2014).

The production of soybeans has increased rapidly, from approximately 27 million tons in 1961 to 308 million tons in 2014¹³, with the majority (approximately 93%) coming from the six largest producers, namely: the United States of America, Brazil, Argentina, China, India and Paraguay (Table 14). In spite of productivity gains the large increase in production has mostly been realised through a rapid expansion of the area devoted to soy cultivation (Nassar & Antoniazzi 2011).

The area under soy cultivation globally has risen from 23.8 million hectares in 1961 to 117.7 million hectares in 2014¹⁴. Since 1970, the area of land devoted to cultivating soy has more than tripled. The largest increases in production have occurred in South America, where production grew by 123% between 1996 and 2004 (WWF 2014). In Brazil for example 10 million additional hectares of land was added for soy production between 2000 and 2010, an increase of 73% (KPMG 2013). In Brazil and Argentina almost all soy is grown on extensive, medium to large scale professional farms (medium farms 200 - 2,000 ha, large farms 2,000 - 30,000 ha with a small number of farms in excess of 100,000 ha) run by or with a direct link to some of the world's major agribusinesses. In contrast soy in China, India and Paraguay is mainly produced by small- to medium-holder farmers: 44% of the soy produced in Paraguay for example is grown on less than 1,000 ha while in China (40 million) and India (5 million) smallholders grow soy on between 0.5-2ha of land (WWF 2014).

¹³ Source FAOSTAT database (<http://faostat.fao.org>) on 05-01-2016

¹⁴ Source FAOSTAT database (<http://faostat.fao.org>) on 05-01-2016

Table 14

Soybean production and area harvested in 2014

Production	(million tons)	% of global total	Area harvested	(million ha)	% of global total
US	108.0	35.0	US	33.6	28.5
Brazil	86.8	28.2	Brazil	30.3	25.7
Argentina	53.4	17.3	Argentina	19.3	16.4
China	12.2	4.0	India	10.9	9.3
India	10.5	3.4	China	6.7	5.7

Source: FAOSTAT

5.1.2 The Netherlands and the soy value chain

The Netherlands is a key player in the soy value chain. Although soy production in the Netherlands is negligible, it is one of the leading importers and exporters of soybean products, particularly soybeans and soybean meal. In 2013 the Netherlands imported approximately 3.1 million tonnes of soybeans, 4.7 million tonnes of soybean meal and 38,000 tonnes of soybean oil, accounting for roughly 23%, 27% and 12% of the total EU import of soybeans, -meal and -oil respectively. A large percentage of the total Dutch imports of soybeans, soybean meal and soybean oil are re-exported to neighbouring countries directly, or after further processing in the Netherlands into animal feed products (Hoste & Bolhuis, 2010). This means that the Netherlands acts as a major 'gateway' into the European market.

Dutch imports of soybeans come from Brazil with some coming from the US and Paraguay while the soybean meal is imported mainly from Brazil and Argentina. Soybean oil is mostly imported from other European countries. In 2009, an area roughly one-third of the total Dutch land area (80% of its cultivated area) was estimated to be in production in Brazil for export to the Netherlands (Hoste & Bolhuis, 2010). The European animal feed industry plays an important role in the soy value chain and the sector consists of a large number of companies that are active on a national, European and/or global level. In the Netherlands there are more than 100¹⁵ animal feed companies which means that the Netherlands also plays an important role in additional processing (primary and secondary) segments of the soy value chain.

5.1.3 Production

The most important segments of the soy value chain are soybean production (including inputs), primary processing or crushing (pre- and post- export/import), secondary processing (pre- and post-export/import - by the animal feed industry in particular) and retail (see Figure 14).

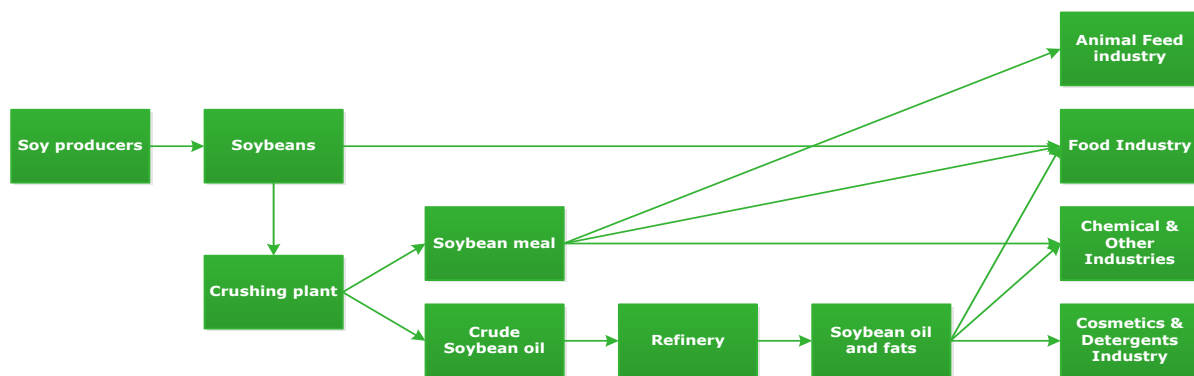


Figure 13 Outline of the soy supply chain. Source: adapted from Kamphuis et al. (2011)

¹⁵ Nederlands Sojacoalitie, Soja Barometer 2014.

The soy value chain is globally oriented, with the dynamics influenced by a range of factors including local/regional preferences (e.g. whether the soybeans are allowed to be genetically-modified (GM) or not), trade restrictions and barriers, government policy, sustainability standards and transport and logistics considerations. As a result, different stakeholders are involved in different segments of the value chain to varying degrees with noticeable differences between regions and countries. Brazil and the US for example export large quantities of whole soybeans to China where they are crushed locally while Argentina has a well-developed crushing sector and exports large amounts of soybean meal and soybean oil to the EU.

The secondary processing segment of the value chain involves the soybean meal and/or –oil being used as an ingredient in the production of other products. For this reason the soy value chain is inextricably linked with the value chains of the products for which soy is used an input. As mentioned above this predominantly sees soybean meal used as an ingredient in compound animal feed. As a result this report focuses predominantly on the use of soy in the agro-food sector and leaves the use of soy in the industrial and biofuel sectors to one side. Soybean meal is combined with other ingredients in specific ratios, depending on the type of feed, which is used to produce meat (beef, pork, poultry, etc.), dairy and eggs which are either directly sold to consumers through a variety of retail businesses (including supermarkets) or to food manufacturing companies for use in the production of a variety of other food products which are then sold to consumers through the same retail outlets. Large retailers form the direct link to the consumer and play an important role in communicating the preferences of consumers to and setting demands upon their suppliers in terms of the sourcing of the soy that is used in consumer products.

The development of certification programmes for non-GM and/or sustainably produced soybeans, mainly under pressure from European consumers and environmental NGOs and lobby groups, has created a differentiated soybean market that offers producers a premium if they can verify that their product meets the certification criteria.

5.1.4 International trade

International trade in soybeans includes the import and export of its two main derivatives, soybean meal and soybean oil. Around two-thirds of the global soybean harvest – 173 of the 276 million tons in 2013 - is exported along with the addition trade of around 60 million tons of soybean meal and 10 million tons of soybean oil (Van Gelder *et al.* 2014). The most important exporters of soybeans, soybean meal and soybean oil are the United States of America (USA), Brazil and Argentina (see Table 15). The US and Brazil export mainly soybeans, while Argentina exports mainly soybean meal and soybean oil. Soybean exports from Brazil have however been increasing rapidly in recent times. China and the EU are by far the most prominent importers of soy (see Table 16). China imports more than half of the total global imports of soybeans (Dutch Soy Coalition, 2012) while the EU is the most important market for soybean meal. Soybean oil is imported in small amounts by a larger number of countries.

Table 15
Soybean, -meal and -oil export 2013 (x 1,000 tons)

Country	Soybeans	Soybean meal	Soybean oil	Total
Brazil	42,796	13,334	1,363	57,492
USA	39,176	10,309	816	50,301
Argentina	7,777	24,801	4,361	36,938
Paraguay	5,082	1,945	515	7,542
Uruguay	3,176	-	-	3,176
(Global) Total	104,177	58,853	9,649	172,680

Source: Van Gelder *et al.*(2014)

Table 16

Soybean, -meal and -oil imports 2013 (x 1000 tons)

Country	Soybeans	Soybean meal	Soybean oil	Total
China	63,405	17	1,158	64,579
EU-28	13,514	17,557	322	31,393
(Global) Total	101,570	58,268	9,506	169,344

Source: Van Gelder *et al.* 2014

5.1.5 Stakeholders and chain consolidation

A general trend of consolidation is apparent in the soy value chain, as the various segments of the chain becoming increasingly dominated by a handful of multinationals, some of which display an increasing degree of vertical integration. Seed and agrochemical suppliers Monsanto, Du Pont and Syngenta are dominant players in the market with GM soybeans carrying Monsanto's Roundup Ready trait almost exclusively used in many places. Up to 77% of global soy production in 2009 was estimated to be from GM seed (WWF 2014), while in Paraguay up to 98% of the soybeans produced are believed to be Roundup Ready. Soybean production in Brazil, Argentina and Paraguay is increasingly taking place on industrial sized farms which have increasing links to businesses in other segments of the value chain. Four companies dominate the worldwide trade in and processing of soybeans, soybean meal and soybean oil. These companies (ADM, Bunge, Cargill and Louis Dreyfus) are often referred to as the ABCD companies and together they account for between 75% and 90% of the global grain trade (Lawrence 2011). They own and operate a hard-to-duplicate infrastructure network of storage facilities, ports, ships and oilseed processing facilities in addition to having strategic alliances and joint ventures with the largest seed and agrochemical companies. That said, many companies in the soy value chain are internationally active. Take the US-based farmer cooperative AG Processing Inc (AGP) for example. While it is the largest cooperative soybean processing company in the world it is also active in Canada (through its animal nutrition subsidiary Masterfeeds) and in Venezuela through the poultry company Protinal/Proagro (AGP 2014).

Consolidation is also taking place further up the value chain as meat companies, food service and consumer good companies and retailers grow in size and influence. In the food service industry companies such as Unilever, Danone, Procter & Gamble, Kraft and Nestle play a major role. The retail sectors in many regions/countries are becoming increasingly dominated by a handful of companies who influence does not go unnoticed in the soy value chain. In the USA for example, Wal-Mart reports annual sales of more than USD 400bn while in Europe, Carrefour and Tesco generate around EUR 100bn in annual revenues and companies such as Casino, Unilever and Ahold have annual revenues of EUR 50bn. These companies all have (expanding) multi-sector interests and have an interest in and are dependent on the commodities markets, including soy.

5.1.6 China and the soy value chain

China was once the top soybean exporter however in 1995 increased demand for soy combined with decreased production led to China becoming a net soy importer. By the year 2000 China had become the main global importer and consumer of soy (TNC 2013). In 2011, China imported approximately 60% of the total global imports of soybeans, which is almost twice as much as in 2001 (see Table 17). The main countries importing soybeans to China are the US, Brazil and Argentina (TNC 2013).

The increasing dependence of China on imported soy is mainly the result of skyrocketing demand. The rate of population and economic growth coupled with changing dietary preferences, has seen the demand for meat increase dramatically. China is now for example the largest pork producer and consumer in the world (TNC 2013). Increased demand for meat has seen rapid development of the Chinese livestock industry which has resulted in increased demand for soybean meal.

Table 17

Soybean production and demand in China

	2011		2001	
	x 1,000 tons	Global Share %	x 1,000 tons	Global Share %
Production	14485	5.5	15407	8.6
Food supply	5488	54.3	5345	62.7
Import	54834	60.1	16421	28.6
Export	219	0.2	264	0.5

Source: FAOSTAT

Soy imported by China is mostly imported in the form of whole soybeans which are processed by the domestic soy crushing industry. China actively supports its crushing industry by imposing a 9% import tariff on soybean oil, a 5% tariff on soybean meal and a 9% tariff on soybean flour compared to a 3% tariff on whole soybeans (TNC 2013). The Chinese government effectively banned the import of soybean meal and placed restrictions on the imports of soybean oil, particularly from Argentina, to stimulate its domestic crushing sector. While Brazil and the USA have benefited from increased Chinese demand for soybeans the Chinese position has led to increased domestic crushing profit margins and significantly higher soybean meal costs for the Chinese meat industry.

Increasing demand from China has led to large companies servicing the Chinese market becoming more active in the chain. This has resulted in the ABCD companies mentioned earlier facing increasing competition from large Chinese/Japanese trading houses, companies and processors such as COFCO (China), Wilmar (Singapore), Marubeni (Japan) and Itochu (Japan). To circumnavigate the infrastructure of the ABCD companies, Chinese companies and those servicing the Chinese market have been acquiring foreign companies, taking stakes in foreign companies and/or entering into strategic alliances, partnerships and agreements with foreign companies in an attempt to secure their supply of soybeans and/or soybean meal.

China does not yet place the same sustainability standards/requirements on the soy that it imports/purchases. Chinese consumers have not yet shown the same level of interest or concern as their European counterparts which does have an effect on the dynamics of the value chain globally. Progress is being made however the future participation of China and Chinese stakeholders in the discussion on sustainable soy will become more important in the future as food security becomes more of an issue.

5.2 Overview of sustainability initiatives

As mentioned in Section 2.2.2 the sustainability initiatives considered in this study are classified into three main types. Detailed information on the initiatives is provided in Tables 32-35 in Annex 5. The majority of sustainability initiatives in the soy value chain started in the mid-2000s.

5.2.1 Platforms, networks and associations

Detailed in Table 32 in Annex 5, six main platforms, networks and associations have emerged in the soy value chain with Dutch links. These are:

1. The Sustainable Trade Initiative (IDH) Soy Fast Track Fund (SFTF).
2. European Feed Manufacturers' Federation (FEFAC).
3. Foundation Chain Transition Responsible Soy.
4. Sustainable Dairy chain
5. Dutch Feed Industry Association (NEVEDI).
6. Brazilian Association of Vegetable and Oil industries (ABIOVE).

IDH's Soy Fast Track Fund

IDH's Soy Fast Track Fund (SFTF) is a government financed sustainability initiative which aims to accelerate and upscale sustainable trade by building and co-funding impact-oriented coalitions and activities between companies, civil society organisations, governments and other stakeholders. The SFTF began in 2011 with an intended duration of 5 years. The fund is managed by Solidaridad Latin America who are responsible for supplying chain actors to define relevant projects. The SFTF aims to leverage investments of producers, processors and/or buyers to increase volumes of responsible soy. The driving mechanism of the SFTF is requiring supply chain players to co-finance a minimum of 50% of project costs.

European Feed Manufacturers' Federation

The European Feed Manufacturers' Federation (FEFAC) consists of 25 national associations in 24 EU Member States as full members and Associations from Switzerland, Turkey, Norway, Serbia and Russia with observer/associate member status. The FEFAC sourcing guidelines are designed to support FEFAC members in their transition towards sourcing responsibly sourced soy. The guidelines define a baseline criteria for soy imported into the European market. Via an online tool, a joint initiative between FEFAC and the International Trade Centre (ITC), standard or programme owners can apply for a formal benchmark against the FEFAC guidelines. The logos of recognised compliant standards or programmes appear on the website.

Foundation Chain Transition Responsible Soy

The '*Stichting Ketentransitie Verantwoorde Soja*' (Foundation Chain Transition Responsible Soy) was established in 2012 by various soy value chain stakeholders and ran for three years. It was designed to manage the process of achieving the sectors goal of realising 100% responsible soy (RTRS certified or equivalent) by 2015.

Sustainable Dairy Chain

Duurzame Zuivelketen (Sustainable Dairy Chain) is part of ZuivelNL, the trade association for the Dutch Dairy sector and is a joint initiative between the Dutch Dairy Association (NZO) and LTO Netherlands. Combined, the 13 dairy companies that are members of the NZO process 98% of all milk made in the Netherlands and LTO Netherlands represents approximately 70% of the 18,000 Dutch dairy farmers. The Sustainable Dairy Chain set the target of having Dutch dairy farmers only use RTRS certified soy – around 300,000 tons annually – as of the 1st January 2015.

Dutch Feed Industry Association

The Dutch Feed Industry Association (NEVEDI) was a member of the *Stichting Ketentransitie Verantwoorde Soja*, however since its abolishment NEVEDI has established its own monitoring program. NEVEDI members are required to fill a survey four times per year in which they note the volumes of soy that have been purchased and against which standards. The monitoring system started in the third quarter of 2015.

Brazilian Association of Vegetable and Oil industries

The Brazilian Association of Vegetable and Oil industries (ABIOVE) is included because as although it is a Brazilian association, it is relevant to the Dutch soy value chain due to the importance of soy imported from Brazil. Companies that play an important role in the Dutch soy value chain, such as ADM and Cargill, are associates of ABIOVE.

5.2.2 Voluntary sustainability standards

The sustainability standards most relevant to the Dutch soy value chain are:

- The Roundtable on Responsible Soy (RTRS) is an international voluntary multi-stakeholder initiative that began in 2004 as the Responsible Soy Forum. In 2006 the RTRS Association was created together with original organising committee, consisting of Grupo Maggi, Cordaid, COOP, WWF, Fetrauf-Sul and Unilever. The participating members of the RTRS are represented in the General Assembly in three chambers, each with an equal number of votes: Producers; Industry, Trade & Finance; and Civil Society. Government bodies and research agencies, consultants and certification bodies can apply to be observing members. In 2010 the first version of the RTRS

standard was launched and in 2011 the first RTRS certified soy became available. In 2012 the second version of the RTRS standard was released.

- The ProTerra standard was established in 2006 and is based on the Basel Criteria for Responsible Soy which was created by Coop Switzerland and WWF. The initial ProTerra Standard was developed through an informal, but broad multi-stakeholder process, that engaged industry stakeholders, trade organisations, government and civil society. Today the standard is applicable to all sectors of the food and agricultural system worldwide and to all segments of the food chain. In 2012 Global-ID transferred ownership and responsibility for the ProTerra standard to the ProTerra Foundation.
- GMP+ is a certification scheme for animal feed that began in 1992. It now has over 13,400 participating companies in more than 70 countries including the Netherlands.
- The International Sustainability and Carbon certification (ISCC) standard is a multi-stakeholder initiative governed by an association with currently more than 80 members. The standard covers the entire value chain and all kinds of bio-based feedstocks and renewables are eligible. It aims to protect high conservation value areas (HCVAs) and land with high carbon stock. A number of companies active in the Netherlands hold ISCC certification for their soy activities, including ADM, Cargill and Glencore Grain.
- Non-GMO Certification is offered by SGS, an audit company, the Non-GMO Supply Chain Standard helps organisations, irrespective of type or size, to supply verifiably non-GMO product. The scope of certification can extend from a single actor in the supply chain, a few or even the whole production process.
- Soya can be labelled as certified 'organic' when it has followed and complied with the specific rules for organic farming as set down in the different regulations recognised by the international community such as the EU's Regulation (EC) No 834/2007 and implementing regulations (EC) No 889/2008 and No 1235/2008 and national or private specifications approved by member states; the United States: NOP (National Organic Program) regulations; JAS (Japanese Agricultural Standard) regulations and other national regulations from China, Colombia, India, South Korea, Turkey, etc.. To achieve this, producers must undertake to be inspected by an independent accredited third party in accordance with the ISO 65 guide standards.
- The Ecosocial certification standard was developed in 2004 by Instituto Biodinâmico (IBD), a Brazilian organisation for rural development. It is exclusively applicable to products and processes certified as organic, including soy. Dutch importers of Ecosocial certified soy include DO-IT (Dutch Organic International Trade), GFI (Greenfood International) and Provamel (the company behind the brand Alpro). Volumes produced are small and no information about certified volumes is available (Van Gelder *et al.* 2014).

More detailed information on the above standards is provided in Table 33 in Annex 5. It is important to note that some sustainability initiatives, such as the FEFAC sourcing guidelines and the NEVEDI covenant mentioned in Section 5.2.1 are aimed at benchmarking existing sustainability schemes and standards including the nine listed here. Vertical upscaling appears to be commencing as certification becomes more common in the soy chain.

5.2.3 Corporate initiatives

There are a wide range of ways in which companies in the soy value chain participate in sustainability initiatives. Some companies participate in and/or support existing initiatives either individually or as a member of a trade association while others (also) have their own initiatives. These initiatives come in many forms and include project based support to farmers and farmer organisations, the adoption of sourcing guidelines and the requirement that soy be certified according to a specific standard or scheme along with the establishment of company owned certification schemes. Those schemes supported by the front runners in the soy value chain have gradually become more accepted and have been adopted by the major traders and processors operating in the Dutch market. The focus of corporate schemes has been on certification (either directly through company owned schemes or

through sourcing guidelines which stipulate which schemes are accepted) and project based support to sector and farmer organisations. It is through the support to both sector and farmer organisations that large companies contribute to community development programmes and on-farm improvement programmes. This support usually goes hand-in-hand with collaboration NGOs and both local and foreign governments. Those interviewed cited this contribution to the development of the value chain as being part of the company's 'license to operate'.

For example, Cargill introduced Triple S Certification and through ABIOVE is helping farmers to obtain CAR registration and ensure on continual improvement on sustainability issues. It has committed to not buying beans from farmers who are not CAR registered by April/May 2016. Convincing especially small farmers to adhere to the RTRS has been less successful, due to difficult and expense of the annual audits. This is reflected in the small volumes (1 million tonnes certified) remaining stable over the last few years. Large farmers however are more able to cover the certification costs. ADM has introduced the Responsible Soy Standard and Cefetra developed the Certified Responsible Soy (CRS) standard in 2006 in cooperation with Control Union. Increasingly these companies have been horizontally and vertically scaling up their own corporate initiatives with support of the public sector – in the Netherlands via IDH, and internationally via platforms such as ABIOVE.

5.2.4 Interlinking initiatives

Figure 15 shows the interlinks between three types of initiatives in the soy value chain with Dutch links. Initiatives that combine different types of sustainability initiatives are shown where the circles overlap. For example:

- Sustainability standards owned and operated by companies can also be considered to be corporate initiatives such as those run by Cargill, Cefetra and ADM.
- Industry associations can be considered to be sustainability initiatives in the form of platforms or networks but often act on behalf of companies. Companies may also choose to use an industry/trade association as the spokesperson for a corporate initiative, albeit a corporate initiative together with other businesses from the same sector.

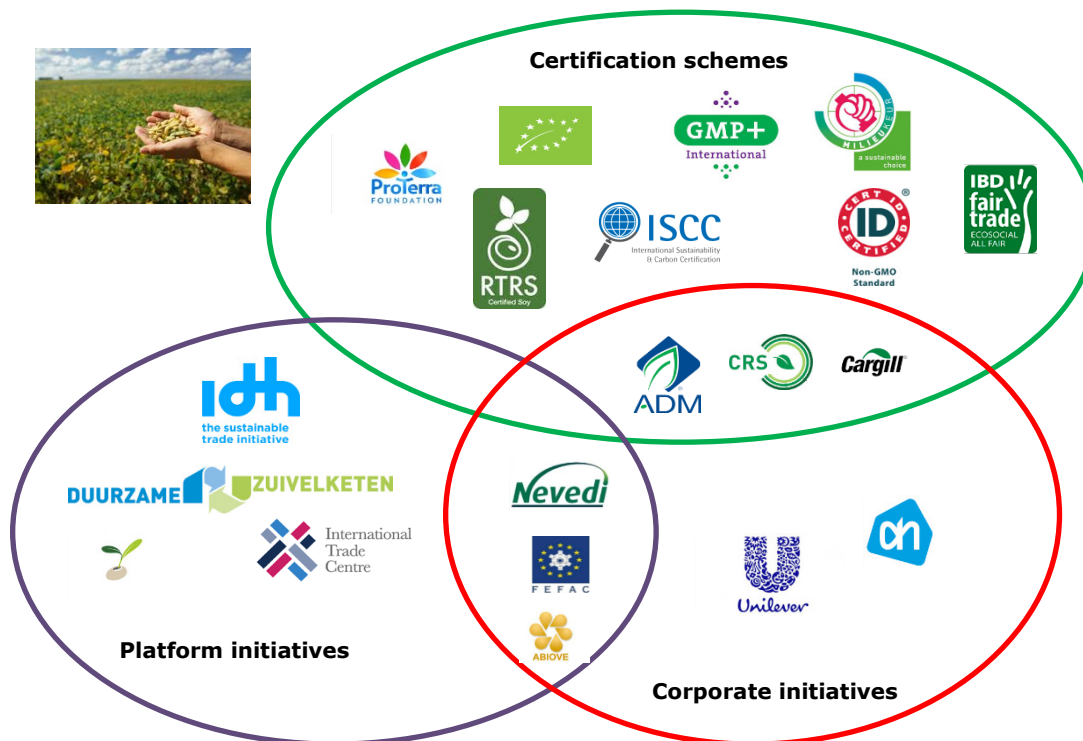


Figure 14 Interlinking initiatives in the Dutch soy value chain

5.3 Motives to upscale

Motives for the private sector to improve the sustainability of the soy value chain are centred around trying to overcome the most pressing issues in the sector, listed in Table 18. Different motives for wanting to address these issues are explained in more detail below.

Table 18

Environmental and social issues in the soy value chain

Environmental issues	Social issues
Deforestation	Delocalization and migration
Climate change & CO2 emissions	Respect of indigenous rights
Impact on biodiversity and ecosystem services	Cultural Heritage
Land use change	Community engagement
Non-renewable resource depletion	Animal welfare
Primary cumulative energy demand	
Toxicity, cancer & non-cancerous (input use)	
Freshwater consumption	

Security of supply

A major incentive for companies to upscale sustainability initiatives both horizontally and vertically in the soy value chain has been the result of an extended period of increasing demand and the resulting desire to secure supply. One challenge that those in production countries are facing is that the majority of their customers are not Europeans which means that the effort and cost of sustainability initiatives is only being recouped from a small number of customers.

Reputational risk

Obtaining and maintaining a good reputation in terms of support for sustainable soy is growing in importance for European based companies and those companies that service the European market. Pressure from NGOs has grown in recent years, especially given the EU stance on GM soy and its preference for soy sourced from South America, where deforestation in particular has gained a lot of attention. This increased pressure has raised the level of consumer interest and awareness which has forced companies to expand their social responsibility credentials to include soy.

Commercial interests

Sustainability is increasingly being seen as a long-term investment. Frontrunners want to maintain their position and they are therefore interested in all issues surrounding efficient and effective supply chain management. Cargill for example is interested in how it can influence change on the ground. The company has been working intensively for more than 10 years on sustainability issues see their added value as acting as a link between farmers and consumers. Ensuring that parties have the right incentives to engage with each other is a challenge, therefore Multi-stakeholder dialogue is important.

Business strategies

An organisation's business strategy, history and ownership characteristics are important part of their motives to develop or participate in sustainability initiatives. Some but not all large companies are committed to address these issues. Whilst the RTRS has been accepted by the an international end of the chain, it has been less successfully scaled at farmer level, particularly small farmers, due to the high audit costs. A different approach, taken by Cargill's Triple S, is to promote continual improvement in farming practices, focusing on learning and innovation that aim to link business and sustainability win-wins. The fragmented soy chain means that the chain of custody for certification is complex and compliance requirements are can be difficult. Making requirements more clear has helped upscale sustainability certification.

5.4 Instruments to increase value chain sustainability

In the soy, two of the four types of policy instrument available (see Table 1), endorsing though encouraging corporate self-regulation and partnering, are most commonly used by the Dutch government to stimulate sustainability initiatives. These can be increased and scaled out to companies not currently involved in such initiatives. Mandating and facilitating instruments also have the potential to increase the sustainability of the chain, with interviewees expressing a preference for the following instruments aimed at increasing the sustainability of the soy value chain:

Endorsing instruments

- Awareness creation and buy-in at the European level.
- Promote the work done by the most pro-active businesses and best performers to reward and stimulate good behaviour, promoting replication scaling of sustainability initiatives.

Partnering instruments

- Increasing the demand for certified soy, particularly B2B.

Facilitating instruments

- EU wide harmonisation of sustainability standards
- Increased support for the policies of producing country governments, such as the Brazilian government's attempts to with the implement and enforce its new forest code.

Mandating instruments

- Legislative action could be an option to be used cautiously to stimulate demand. Preferably it should be developed together with stakeholders based on agreements on minimum requirements.

6 Synthesis of major findings

This study explored sustainability initiatives in the cocoa, coffee and soy value chains and the extent to which they have been and are being upscaled, and the companies doing so, and how companies in these value chains can be (further) stimulated by the Dutch government to engage in, sustain and/or increase their involvement in sustainability initiatives. In this chapter, the findings from each of the value chains, discussed in Chapters 3 to 5, are synthesized. In Section 6.5 an overview of expectations for the medium-term are presented and in Section 6.6, recommendations for the actions the Dutch government can take to achieve its sustainability goals made, to meet the targets of the Dutch Alliance for Sustainable Food (*Agenda Verduurzaming Voedsel*) (2013).

6.1 Value chain structure and (most important) players

The cacao, coffee and soy value chains each have a different structure, with different levels of value chain segmentation. Each chain has different players which are most important in directing power and information, particularly related to sustainability initiatives the chain. Using the typology of value chain governance (Gereffi *et al.* 2005) shown in Figure 3, governance arrangements in the three chains are illustrated in Figure 16.

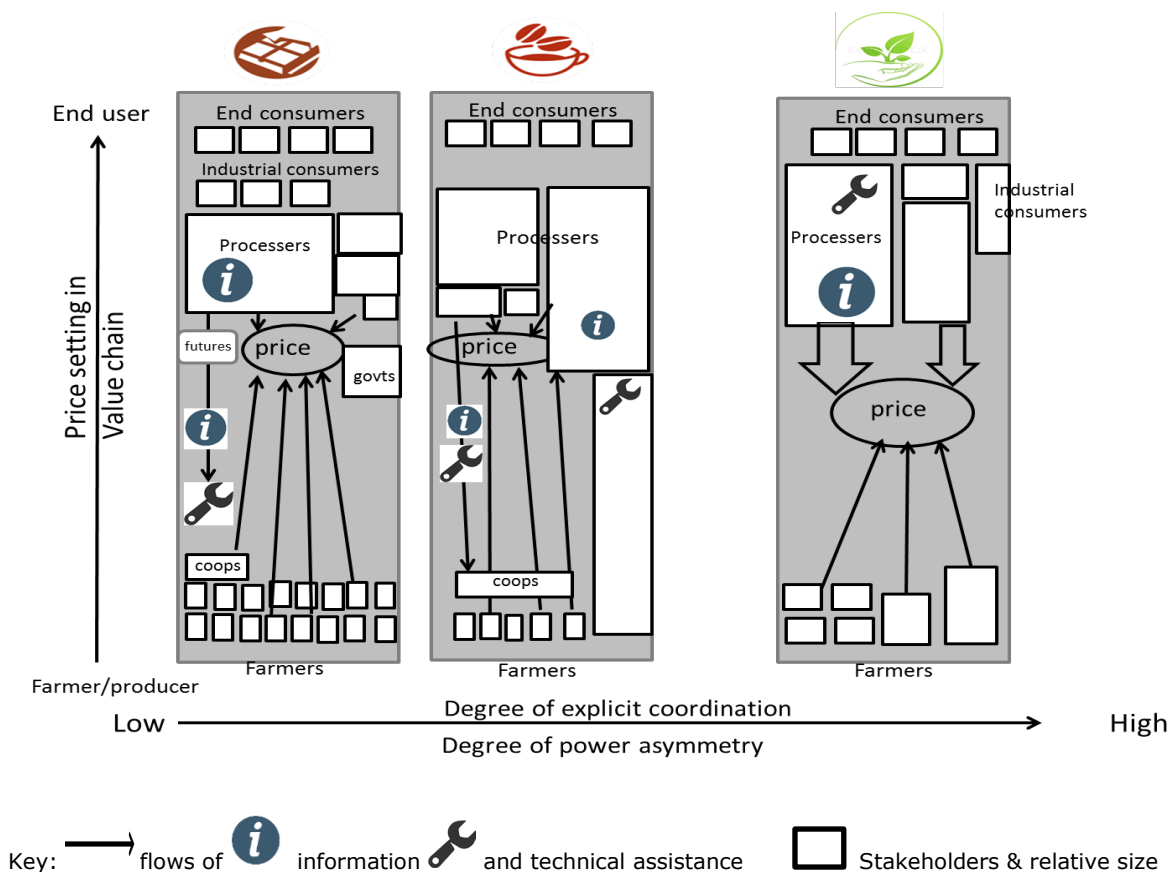


Figure 15 Governance, power and segmentation in the coffee, cocoa and soy chains

Figure 16 illustrates how the cocoa and coffee value chains exhibit a mixture of market based characteristics. There are many (often small-scale) farmer suppliers, repeat product transactions are possible, information flows are limited and there used to be little technical assistance (see Section 2.1.5). Many of the sustainably initiatives however have changed this towards a more relational governance value chain structure, with technical information (such as on good agricultural practices and labour, as well as social aspects such as HIV), and quality specifications for cocoa and coffee beans provided. Farmer suppliers are becoming more locked in - by using certification and corporate initiatives and longer term contracts - with more repeat transactions with agreements with traders become increasingly common way to secure quality supplies of sustainable produced coffee and cocoa beans. The power in both cocoa and coffee chains is situated more with the larger stakeholders: processors, grinders and manufacturers. Prices are determined through a combination of global commodities trading on the world market and the price (including certification premiums) these players are willing to pay. The processor and manufacturing stakeholders have been largely responsible for both initiating sustainability initiatives at farmer level, and scaling them up. In the soy chain it is most concentrated in the processor segment with a number of large scale secondary processing by importer-processor-exporters, such that the soy chain has elements of captive and hierarchical governance. In all three value chains, the location and extent to which market and technical information is disseminated along the value chain is a key element in determining the power balance. This mirrors the results of other studies about soy (OSAS 2015; IUCN Netherlands 2015).

Figure 16 also visualises how power in all three value chains is mostly concentrated among the large processors and traders, and as detailed in Chapters 4, 5 and 6, has become increasingly concentrated through consolidation in recent years, in the coffee and cocoa chains in particular. The highest profits are generated in these secondary processing phases, where companies active in the Netherlands play a major role in all three value chains. Controlling these phases enables companies to exert more control over prices, quality and production processes. In the soy chain, multinationals have become increasingly vertically integrated – taking over segments of the chain such as large farms; seed supply; storage, transport and distribution infrastructure, particularly integrating activities downstream in the value chains towards the end users. In coffee and cocoa vertical integration has taken place but not to the same degree, with none of the large processors owning farms, and mainly only small bean to bar speciality and fine flavour chocolate and coffee companies active in many or all stages of their chains. Instead of engaging themselves in vertical integration, the cases show that companies in the chains have often formed partnerships with for example, government extension agencies, NGOs, CSOs and farmer’s organisations (sometimes supporting farmers to create and work in groups) to initiate and then scale up sustainability initiatives.

Sustainability initiatives in the coffee, cocoa and soy value chains have resulted in an increase in the provision of technical information with a focus on good agricultural practices and production techniques, including primary processing (such as fermenting and drying cocoa and coffee beans), farmer organisation and how farmer groups, such as cooperatives of cocoa and coffee farmers, can operate more professionally, to enhance the implementation and scaling of sustainability initiatives, as well as ways to produce more efficiently. This has also resulted in farmers gaining more access to information on both market prices and the cost of inputs.

Figure 17 shows the structure of the coffee, cocoa and soy value chains and compares the different segments in the chains. Coffee is a relatively short value chain, with fewer actors engaged in the main activities and coffee beans being the highest volume end-product. The chain structure has changed as consolidation has meant a smaller number of larger companies now dominate, with a similar changes also evident in the cocoa chain. This contrasts with the soy value chain which is much longer and complex, the result of soy being both a product in itself as well as being a product that once processed, is used as an ingredient in a wide range of other (processed) products. The soy value chain is more integrated, especially downstream with stakeholders engaged in multiple segments of the chain. Cocoa falls in between coffee and soy, with cocoa processed into cocoa powder, butter and liquor, which are used as the main ingredients for chocolate as well as being used in the production of a wide variety of confectionary, food stuffs and cosmetics.

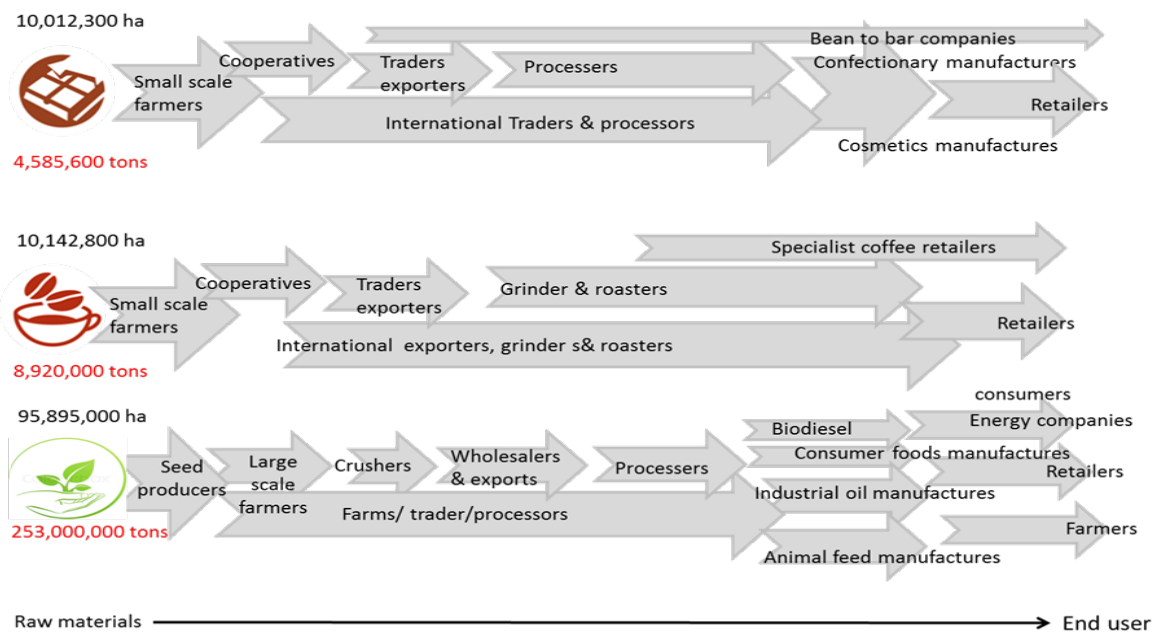


Figure 16 Major segments in the cocoa, coffee and soy value chains

Notes:

In blue: Approximate areas in hectares (ha) under sustainability initiatives

in red: Estimated volume (tons) of commodity produced under sustainability initiatives

Arrow sizes indicates segments in the value chains and types of players

In the last decade there has been substantial market consolidation by major multinationals in the processing and trading segments of all three value chains, resulting in a smaller number of very large companies dominating each chain. Upscaling of sustainability initiatives, using all four upscaling approaches, has played an important role in attempts by the multinationals to secure supply, minimise costs and improve quality and to bring major manufacturers and processors closer to farmers and primary processors- often farmer organisations such as cooperatives and local traders.

In the cocoa and coffee value chains, traditional small holder producers continue to play a critical role in the production of the primary product. The millions of small holder farmers responsible for the overwhelming majority of coffee and cocoa production globally have seen relatively little change in their standard of living and average productivity (kg/ha) has either decreased or remained unchanged for a significant proportion. Farmers have started cultivating both crops in new or alternative areas, notably in Indonesia (cocoa and coffee), Brazil and Vietnam (coffee). In contrast, both large scale professional farmers and small holders are engaged in soy production, with the mix depending on the region and country in question. There has been an increase in soy productivity, particularly on large scale farms, due to a much higher use of improved seeds and farming technologies, and a higher of inputs than in coffee and cocoa.

Figure 18 shows that all three chains involve the export of both raw and processed commodities from mainly tropical areas although there are large differences in the volumes traded, the stakeholders involved and in the main production and consumption countries. These variations affect how and why some sustainability initiatives are supported and upscaled and others are not. Platforms have been a way to vertically scale up and institutional changes. Certification and corporate programs have mainly helped scaling through extension and replication. NGOs and consumers of cocoa and coffee in Europe and to a much smaller extent in North America have highlighted sustainability issues in the three value chains and are constantly trying to pressure companies, and indirectly governments in countries where consumers and processors and traders are based, to respond to these issues. Stakeholders in the soy value chain, with a much larger proportion of B2B activity and a lower level of consumer awareness, have until recently not faced the same pressure to respond to sustainability issues as those in the coffee and cocoa value chains.

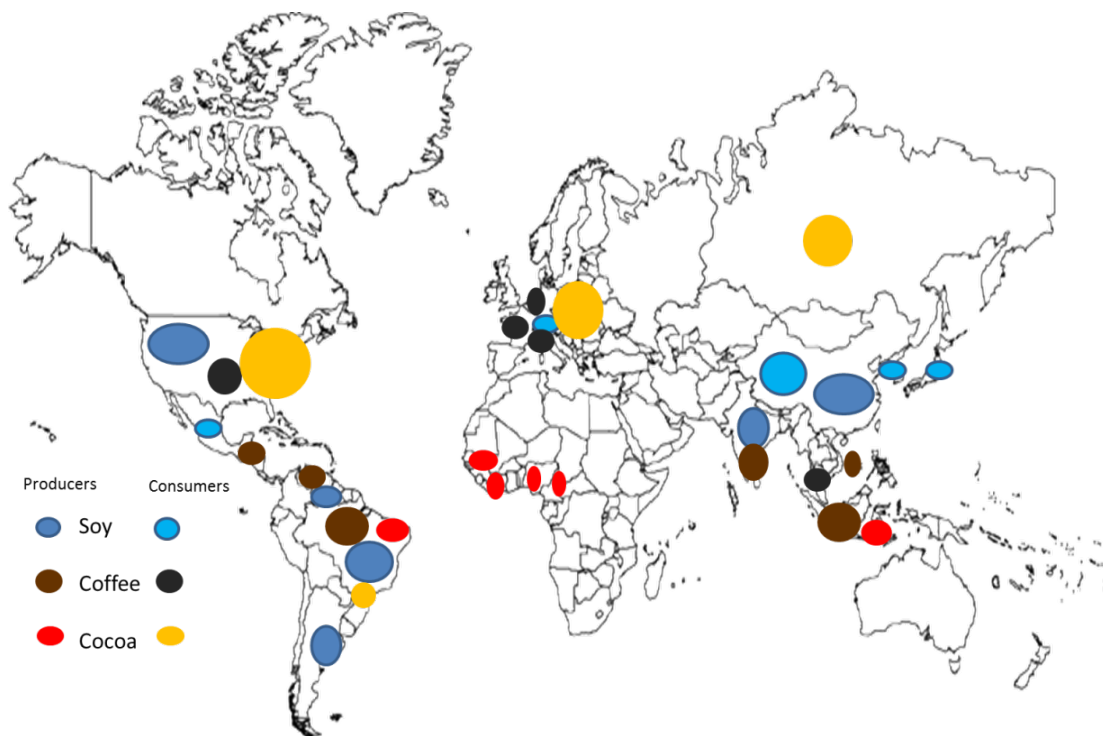


Figure 17 Major production and consumption markets in the cocoa, coffee and soy value chains
 Circle size indicates relative size of volumes consumed and produced. *Source: FAOStat data*

In all three value chains, production has increased and attempts are being made to open up new wholesale and consumer markets (e.g. Brazil, China, India and other emerging economies). This is a challenge for both value chain stakeholders and the Dutch government as sustainability issues are not always considered as important as they are in the EU. Sustainability initiatives are therefore mainly directed at those producer countries that supply the European market. These producers then have to deal with the different requirements placed upon them by the different markets they supply to.

6.2 Overview of sustainability initiatives

This section summarises the sustainability initiatives identified in each of the three value chains.

6.2.1 Platforms, networks and associations

Platforms, networks and associations refer to formal and informal, temporary and permanent initiatives which involve more than one organisation and in which sustainability issues are discussed, promoted or supported and may lead to joint actions. An overview of the seventeen platforms discussed in the value chain chapters is provided in Table 19. More detailed information on the initiatives is given in Annexes 3, 4 and 5.

Platforms, networks and associations were the most common format to promote upscaling of sustainability initiatives in all three value chains. Platforms have been created to bring together organisations from different segments of the value chain to as a way of encouraging them to collectively address the various sustainability issues that the value chain is facing. International trade associations and intergovernmental organisations have offered their support to sustainability initiatives. In recent years this support has most been translated into support for the introduction and upscaling of voluntary certification schemes and standards. Many of the platforms and networks share similar aims and objectives. This is not surprising given that many of the same organisations (e.g. Dutch Ministry of Foreign Affairs (either directly or via IDH), Solidaridad, WWF and Unilever) have played a role in the establishment of multiple sustainability initiatives and remain active as members of many of the major platforms in the cocoa, coffee and soy value chains.

Table 19

Platforms, networks and associations in the cocoa, coffee and soy value chains

	Standard or Initiative	Type of initiative	Commodity		
			Cocoa	Coffee	Soy
1	International Coffee Organisation (ICO)	International trade association		√	
2	Association for Bakery and Confectionary Industry (VBZ)	Dutch trade association	√		
3	Royal Dutch Coffee and Tea Association (KNVKT)	Dutch trade association		√	
4	International Coffee Organization (ICO)	Intergovernmental body of coffee exporting and importing countries			
5	International Cocoa Organisation (ICCO)	Intergovernmental body of cocoa exporting and importing countries	√		
6	World Cocoa Foundation (WCF)	International business association	√		
7	Association of Chocolate, Biscuit and Confectionery Industries of Europe (CAOBISCO)	European trade association	√		
8	European Cocoa Association (ECA)	European trade association	√		
9	Chocolate Working Group	Dutch platform	√		
10	Sustainable Trade Initiative (IDH)	Dutch government initiative	√	√	√
11	European Feed Manufacturers' Federation (FEFAC)	European trade association			√
12	Stichting Ketentransitie Verantwoorde Soja (SKVS)	Dutch platform			√
13	Duurzame Zuivelketen (Sustainable Dairy chain)	Dutch platform			√
14	Dutch Feed Industry Association (NEVEDI)	Dutch trade association			√
15	Brazilian Association of Vegetable and Oil Industries (ABIOVE)	Brazilian trade association			√
16	Confederation of Netherlands Industry and Employers VNO/NCW	Dutch trade association	√	√	√
17	Sustainable Agriculture Network (SAN)	International association	√	√	

Networks have often been the cradle and source of inspiration for setting up voluntary standards and for the creation of new platforms and associations with more specific tasks. Examples of this include the involvement of Solidaridad and Oxfam in the establishment of IDH, 4C and UTZ, as well as their contribution to international initiatives such as the Roundtable for a Sustainable Cocoa Economy (now under ICCO) while WWF and Unilever contributed significantly to the formation of the RTRS. The rapid growth of certification has resulted in the supply of certified produce outweighing the demand in many sectors, including in cocoa, coffee and soy however this there is some correlation with when 'certification' was introduced to the sector.

In cocoa and coffee in particular, the number of sustainability standards has led to confusion and calls for harmonisation in an attempt to lower the cost of holding multiple certificates and the associated costs of the audit process. This is often quoted as being particularly burdensome for smallholder farmers in the three value chains. A number of platforms, including ICO, ICCO, the ISEAL Alliance are currently focused on harmonisation. In soy, calls for harmonisation exist but to a lesser extent than in cocoa and coffee. One example of a harmonisation initiative in Soy is the joint project between FEFAC and the ITC which allows the owners of voluntary standards and certification schemes to compare their own standard against the FEFAC sourcing guidelines, a minimum list of requirements for 'responsibly' sourced Soy. A list of accepted or compliant standards is published on the website and made available to the public.

6.2.2 Voluntary sustainability standards

This type of sustainability initiative refers to voluntary, third party verified certification standards and/or schemes. Standards relevant to each value chain in the Netherlands were identified by way of the ITC Standards map and through stakeholder interviews. An overview of the sixteen identified standards/schemes is provided in Table 20.

Table 20

Voluntary certification standards in the cocoa, coffee and soy value chains

	Standard or Initiative	Commodity		
		Cocoa	Coffee	Soy
1	Fairtrade	✓	✓	✓
2	Organic (inc. IFOAM and EU)	✓	✓	✓
3	Rainforest Alliance (RA)	✓	✓	
4	GlobalGAP	✓	✓	
5	UTZ Certification	✓	✓	
6	ISCC (International Sustainability & Carbon certification)		✓	✓
7	4C		✓	
8	ISO/CEN/NEN TC standard	✓		
9	Gold Standard Label (carbon)	✓		
10	Round Table on Responsible Soy (RTRS)			✓
11	ProTerra			✓
12	EcoSocial			✓
13	Triple S (Cargill)			✓
14	Certified Responsible Soy (CRS)			✓
15	CERT-ID (non-GM)			✓

The upscaling of voluntary certification schemes/standards relates to both upscaling – through replication and extension - the number of certification schemes/standards as well as to the number of organisations who have adopted the standards and to the coverage of the standards, in terms of the market share of certified products the production volumes and the area under certified production – see Figure 19 and Figure 20). Upscaling has been driven by many of the stakeholders mentioned earlier who have an active role in the standards/schemes themselves. In the Netherlands the cocoa value chain has the largest number of sustainability initiatives, with many overlaps and different configurations of public-private partnerships. This may be due to the large influence of Dutch-based players in the cocoa value chain and their increasingly high level of consolidation.

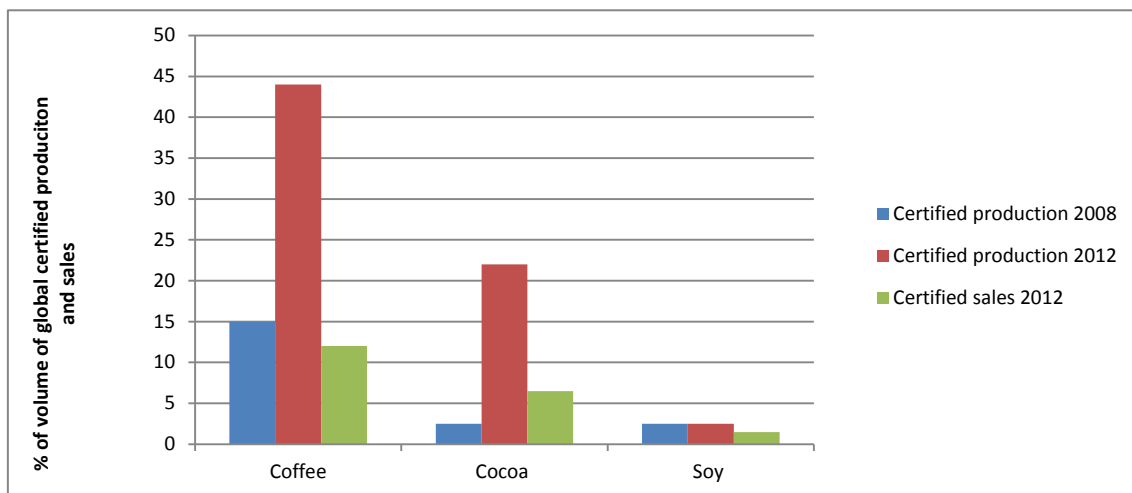


Figure 18 Growth in global certified production of soy, cocoa and coffee. Source: Potts et al. (2014)

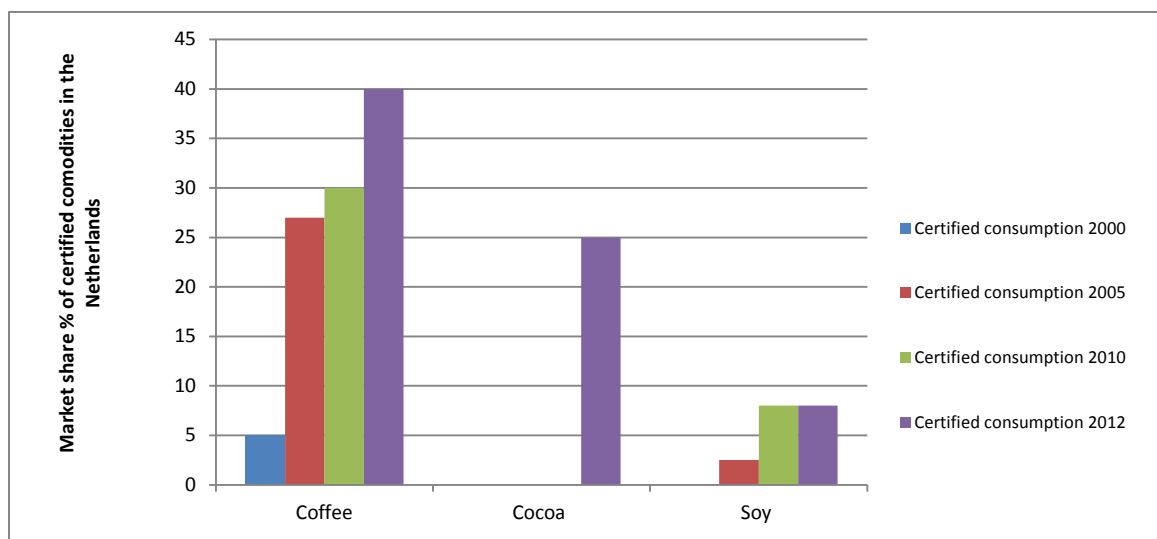


Figure 19 Growth in Dutch consumption of certified production of soy, cocoa and coffee. Source: CBS (2013) and Logatcheva (2014)

6.2.3 Corporate initiatives

This type of sustainability initiatives refers to those that have been established by the private sector. An overview of a number of corporate initiatives in the cocoa, coffee and soy value chains in the Netherlands identified in the value chain chapters is provided in Table 21. This is not intended as a comprehensive list, but to provide an impression of how some of the major and innovative companies in the chains have their own initiatives. More detailed information on the results of upscaling in each chain is included in Annexes 3 to 5.

Table 21
Corporate initiatives in the cocoa, coffee and soy value chains

	Enterprise	Commodity		
		Cocoa	Coffee	Soy
1	Unilever			✓
2	Ahold			✓
3	Cargill	✓		✓
4	ADM	✓		✓
5	Cefetra	✓		✓
6	Barry Callebaut	✓		
7	BT Cocoa	✓		
8	Continaf	✓		
9	Ecom	✓		
10	Mars	✓		
11	Mondelēz	✓		✓
12	Olam	✓		
13	Solidaridad	✓		
14	Theobroma	✓		
15	Tony's Chokoloney	✓		
16	Smit & Dorlas Koffiebranders		✓	
17	VOLCAFE		✓	
18	ECOM		✓	
19	Nestle		✓	
20	Douwe Egberts		✓	
21	Moyee coffee		✓	

In all three value chains all of the major importers, processors and retailers are members of the main multi-stakeholder platforms and voluntary certification schemes. That said, there are more corporate-based sustainability initiatives (own brands and programs) in cocoa and coffee compared to soy, due to the more direct relationship between producers and consumers.

The most varied group of sustainability initiatives are individual corporate programmes and projects. Companies have demonstrated their commitment to address sustainability and scale up their initiatives in different ways - often combining corporate programs with certification, using one or multiple third party voluntary certification schemes to demonstrate their own practices and those of their suppliers. Extension, replication, horizontal and vertical scaling approaches have all been used. Many of the corporate cocoa and coffee initiatives have used 'certification plus' to increase and secure both supply and quality. In cocoa and coffee corporate schemes have only recently begun to focus on quality with new brands emerging during the last two years in cocoa and the last four years in coffee (Matti *et al.* 2015); Levy *et al.* 2015) as companies seek to differentiate their products. In soy there has also been an increase in the level of corporate attention for 'sustainable' soy in response to increasing consumer awareness.

In both cocoa and coffee many of the smaller Dutch based companies are not involved in platforms such as IDH, or certification standards but some smaller companies are involved with professional trade associations. A common reason for this, according to those interviewed, is that the Letters of Intent and IDH programs are focused on companies which account for a large proportion of market share, which has meant that they have worked primarily with the largest companies only. This upscaling has generated high levels of consumption of certified product within short- to medium-term of three to five years. Smaller 'bean-to-bar' and 'bean-to-cup' and speciality cocoa and coffee producers however have largely not been involved in these platforms and certification initiatives, instead opting for branding and their own value chain initiatives. In the cocoa chain, corporate sustainability initiatives have focused on creating relationships with farmers cooperatives, emulating the longer history of integration with producer organisation in the coffee chain.

In soy the major corporate initiatives have evolved around standard setting and compliance. Companies such as Cargill, ADM and Cefetra, have developed their own certification standards in an attempt to increase possibilities for compliance at a lower cost while protecting their own corporate interests. Large multinationals such as Unilever and Ahold have set their own sourcing guidelines which place requirements on their suppliers. In both cases this has involved requiring that all soy purchased is certified according to a specific standard. Cargill is also an active member of ABIOVE which claims to have contributed significantly to reducing the annual rate of deforestation in Brazil from 2006-2014. An extension of Cargill's involvement in ABIOVE is its support of the Soja Plus initiative in which industry work directly with farmers. Soja plus is also supported by IDH.

There are differences in the links between types of sustainability initiatives between the value chains. In cocoa and coffee, the long history of pressures initiatives has led to higher levels of interactions between stakeholders in the chains and more concerted actions, with different initiatives reinforcing each other - shown by the higher level of interlinkages between company based initiatives, certification schemes and company involvement in platforms.

6.3 Motives to upscale

6.3.1 What explains the differences in the upscaling of sustainability initiatives?

The sustainability initiatives that have been upscaled focused on different sustainability issues relevant to each value chain. The main issues identified in the value chain chapters are summarised in Table 22. In the cocoa and coffee there is a focus on similar issues occurring at the production and end consumers segments on the chains. In soy, both different environmental and social issues are recognised as hotspots, and occur at different segments of the chain.

Table 22

Overview of sustainability issues in the cocoa, coffee and soy value chains

Issue	Commodity		
	Cocoa	Coffee	Soy
ECONOMIC			
Increasing demand for sustainable products	✓	✓	✓
Increasing demand	✓	✓	✓
Security of supply	✓		
Quality	✓		
SOCIO-ECONOMIC			
Hired Labour			
Freedom of association/collective bargaining	✓	✓	
Child & forced labour	✓		
Fair salary	✓	✓	
Working hours	✓	✓	
Gender, equal opportunities	✓	✓	
Health and safety	✓	✓	✓
Education and training	✓	✓	
Labour laws and conventions	✓		✓
Local Community			
Access to material resources	✓		
Delocalization and migration			✓
Respect of indigenous rights			✓
Poverty	✓	✓	✓
Cultural heritage			✓
Community engagement	✓		✓
Society			
Gender equity	✓		
Animal welfare			
ENVIRONMENTAL			
Climate			
Global climate change/CO2 emissions	✓	✓	✓
Ecosystems			
Acidification potential	✓		
Biodiversity and ecosystem Services	✓	✓	✓
Land use (transformation and occupation, deforestation/degradation)	✓	✓	✓
Resources			
Non-renewable resource depletion	✓		✓
Primary cumulative energy demand	✓	✓	✓
Freshwater consumption		✓	✓
Humans			
Toxicity, cancer & non-cancerous (input use)			✓

Source: Interviews and literature

The motivation of different stakeholders to address the issues identified above includes the following.

CSO and NGO push

Activists, CSOs and NGOs have played an important role in highlighting the main sustainability issues in all three value chains. They have accomplished this through targeted public campaigns directed at both consumers and companies. Examples of such reports such the 1995 US State Department and ILO, and news items by the BBC and CNN, and subsequent campaigns regarding slave and child labour in the cocoa sector dating from the mid-1990s; Oxfam's 2002 and 2005 coffee crisis campaigns;

GreenBiz's revealing insights into practices in the coffee chain and among producers including Starbucks in 2008; Oxfam's 'chocolate letter' campaign in 2009 and WWF's campaign on soy in 2011 and 2014, and. The creation, intensification and/or upscaling of sustainability initiatives shows a degree of correlation with consumer awareness campaigns, with coffee having some of the earliest initiatives and soy the most recent. CSOs are of the opinion that industry crises caused by campaigns and negative press coverage (such as child labour, the 'green Sint'), generate consumer awareness which results in pressure to transition to more sustainable supply strategies.

Dutch government stimulation

The Dutch commitments included in the 2010 Letters of intent appeared to be instrumental in bringing together multiple stakeholders and stimulating them to both adopt certification and examine other ways of making international commodity value chains more sustainable. The Dutch 'consensus based' approach, particularly in the form of voluntary agreements such as the Declarations of Intent. Covenants have been common approach in environmental policy making during the last two decades to improve the sustainability of international commodity value chains. The government has not used regulation as a policy instrument or been directly involved in learning platforms in soy, such as RSPO and RTRS. Whilst the upscaling of certification is easier to measure than the indirect effects of the networks and meetings surrounding the letters of intent, a number of stakeholders mentioned learning from the experiences of others as a valuable outcome.

Business strategies regarding social responsibility

Corporate perceptions of sustainability differ between the three value chains studied. In the cocoa and coffee, certification is often talked about as a pre-competitive issue while in soy it remains competitive in nature. Mars for example took a relatively low profile approach to the use of certification logos on its products. It started buying certified cocoa in 2009 yet the UTZ Certified logo only appeared on its products in 2012¹⁶. However, in the cocoa and coffee value chains, where consumer orientated end products dominate, sustainability is also used as a branding and marketing tool to create economic and competitive advantage, and stimulate innovation in the chains and/products. Some large companies, such as Ahold, introduced their own 'house' standards and brands in an attempt to cater to all segments of the market however this was short lived. The recent trend has been back in the direction of independent brands supported by third party certification. In response to this trend by the small, speciality companies servicing niche segments of the market have emerged who are avoiding certification, either in an attempt to lower costs or because of lack of belief in the concept, and are focusing on effective branding to sell their sustainability story.

Large multinationals particularly in cocoa and coffee, are increasingly seeing sustainability initiatives as a way of securing supply, both in terms of quantity and quality. With western markets saturated multinationals are being forced to explore and penetrate new markets.

Increasing support for sustainability initiatives is also the result of B2B pressure being placed on those upstream in the value chain by large retail companies who are responding to increasing consumer awareness of sustainability issues. Consumer awareness about the sustainability issues in the Soy value chain is increasing and this is causing large companies downstream in the value chain to place a higher level of compliance criteria on their suppliers.

In all three value chains a diversification of sustainability initiatives is taking place. These initiatives include the corporate certification schemes such as ADM, Cargill and Cefetra in the soy chain, the ISO/CEN/NEN Sustainable cocoa standard and new chocolate brands from both large (i.e. Albert Heijn Excellent range, Tony's Chocoloney range of new flavours, Nestlé's Bros Tablet) and small companies (i.e. in the Netherlands this includes Cocoa Runners, Original Beans, Chocolate Makers and Metropolitan among other bean to bar brands). This diversification of initiatives has also been caused by the narrow approach and focus of the first initiatives. The diversification in all three value chains has however reached a point where calls for harmonisation are now being heard.

¹⁶ <https://utzcertified.org/nb/newsroom/utz-in-the-news/2347-mars-bar-goes-utz?offset=5> and <http://www.treehugger.com/corporate-responsibility/the-sweeter-side-of-sustainability-an-interview-with-mars.html>

Cross value chain learning

Experience from early innovations in value chains, such as in coffee, has been translated into lessons for the establishment of sustainability initiatives in more complex value chains such as cocoa and soy and to other value chains with a predominantly B2B focus. NGOs are now increasingly becoming interested in the more complex value chains and the overlap between sectors on common socio-economic and environmental issues.

Push from certification organisations

Additional standards e.g. ISO NEN, FORCES, landscape, carbon – have recently sprung up in and have had the effect of mainstreaming the concept of certifying ecosystem goods and services (especially carbon) in the value chains where sustainability already has a high profile i.e. coffee and cocoa. Certification organisations are busy expanding initiatives to cover additional countries/regions. The experiences of certification organisations in up and outscaling to additional countries/region has been a valuable learning tool for companies, NGOs and government organisations

6.3.2 Why do companies choose not to engage in sustainability initiatives?

Companies choose not to engage in sustainability initiatives for a number of reasons.

The high costs of participation and uncertain level of return

This is particularly relevant for investments made in relationships with suppliers, traceability initiatives, monitoring and evaluation schemes and voluntary certification standards. A number of studies highlight the complexity and high costs of certification, see Kessler *et al.* (2012), KPMG (2012), IDH (2013) & RESOLVE Inc. (2012). High certification costs have however been a stimulating factor for some companies (i.e. Cerfetra and Cargill) and sectors (ISO/CEN/NEN) to create alternative, step-up standards which supporters say raise the bar while remaining accessible, thereby providing those that cannot comply with the toughest standards with the motivation to take a step in the right direction (this also happened in the timber chain with PEFC as an alternative to FSC).

Urgency to participate is dependent on the nature of the chain

There are far less incentives for companies involved in predominantly B2B products to participate in sustainability initiatives. This is due to less consumer awareness about sustainability issues and less pressure from NGOs on companies to adopt sustainable practices.

6.4 Policy instruments to increase value chain sustainability

Although Dutch based companies play an important role in the soy value chain, the soy chain has less of a 'Dutch' feel than the cocoa and coffee value chains. This is because of the long history (particularly in coffee) of Dutch based importers, traders and processors and the support of the Dutch government and CSOs. This has led to a higher degree of consensus among value chain stakeholders on how sustainability initiatives should be addressed and what action should be taken. Europe is still an important market in all three value chains, despite Asia becoming increasingly important consumer market. The lack of coordination among the different European member state governments hinders the promotion of sustainable value chains and creates an uneven playing field for the major players and their suppliers.

Those interviewed stressed that increasing value chain sustainability is dependent on the intrinsic motivation of stakeholders and that without it external pressure would have little longer term effect. Working under the assumption that stakeholders are intrinsically motivated to address the various sustainability issues of the three value chains studied, those interviewed suggested a range of policy instruments that could push things in the right direction. An overview of these instruments is provided in Table 23 and a brief description of each instrument is provided below.

Table 23

Policy instruments for sustainable value chain upscaling

Instrument	Commodity		
	Cocoa	Coffee	Soy
Voluntary certification standards	✓		✓
Harmonisation of sustainability schemes/standards	✓	✓	✓
Government to Government support of producing country policy initiatives aimed at improving the enabling environment	✓	✓	✓
Partnership creation/support	✓	✓	✓
Consumer awareness campaigns designed to stimulate demand	✓	✓	✓
Fiscal and monetary instruments	✓	✓	✓
Legislative instruments	✓	✓	✓
Targeted development aid	✓	✓	

Voluntary certification standards

Although many respondents recognized the limits of certification, the instrument it is still seen as having added value due to its market based nature and its high degree of recognition among consumers. The costs of certification, particularly in the cocoa and coffee value chains are prohibitive to some stakeholders, particularly the harder to reach farmers and cooperatives in producing countries and smaller Dutch based companies. It is imperative that ways are found to improve the certification business model so that it becomes more accessible to more stakeholders. Dutch trade associations, working groups and IDH have been involved in the expansion of certification initiatives and can continue to play an important role to play, as well other Dutch government agencies such as CBI. Support helps offset some of the investment costs in certification, provide capacity development to aid learning and fund research into improving the certification business model with the option of coupling certification to other complementary initiatives. Support to encourage the harmonisation of voluntary certification schemes, to reduce costs for enterprise (i.e. auditing) and particularly to aid retailers and consumer organisations to inform consumers and reduce confusion, could also be a way forward.

Government to Government support of producing country policy initiatives aimed at improving the enabling environment

Support from governments in consumer countries to producer country governments to implement sustainability initiatives is vital if the initiatives are to be accepted and enforced. Governments need to cooperate on the development of policy that supports sustainable production practices. An example is the Rural Environmental Registration (CAR) initiative in Brazil (see www.car.gov.br) where the Brazilian government is mapping land use to support enforcement of the new forest code.

Partnership creation/support

Platforms and networks focused on the creation of public-private partnerships - such as IDH – were repeatedly mentioned as a vital tool in helping those companies that are willing but perhaps unable to trial, invest and upscale their participation in sustainability initiatives to do so. Those interviewed were however critical of the current focus of supporting companies with a major share of the market, warning that it was in effect subsidising companies who are in the position to invest in sustainability anyway. Other forms of partnership creation mentioned by those interviewed included:

- Increasing the level of cooperation between Dutch and local service providers (e.g. NGOs and knowledge institutes).
- Increasing the level of cooperation between companies (e.g. traders, processors) and producer country governments and agencies.
- Continue to use a value chain approach innovatively stimulating cooperation between stakeholders from different segments of the value chain.
- Stimulate moves towards business-minded partnerships instead of project-based cooperation that are reliant on external funding.

Consumer awareness campaigns designed to stimulate demand

- Raise awareness of hotspots and key issues and make consumers aware of the provenance and activities behind the products. Increased harmonisation to aid consumer awareness of sustainable products, promotion of sustainably produced products at business users and end-consumers.

Fiscal and monetary instruments

A range of fiscal and monetary instruments were suggested by those interviewed. These included:

- Removing or lowering trade barriers.
- Lowering export tariffs or introducing preferential tariffs at either national and/or EU level for products that are certified as being sustainably produced.
- Tax advantages for businesses sourcing and supplying products certified as sustainable.
- Stimulating investment in producing countries for the production of sustainably produced products.
- Making stakeholders in the chain aware and then adjusting prices so that external (environmental and social) costs are included in the price of both consumer products and traded commodities.

Legislative instruments

- Although the legal options to favour the import of only sustainable commodities into the Netherlands are difficult due world trade agreements, respondents noted the possibility to create a more level playing field for importers and exporters that support sustainable production. Examples from the timber chain (Van den Berg *et al.* 2014) indicate that public procurement guidelines can be useful in setting an example.
- Legislation prohibiting products produced illegally (i.e. with child or slave labour), following the example of the US Lacey Act.
- Legislation on national and European level clarifying the extent to which retailers and manufacturers are responsible for the environmental and social implications of products they produce and sell.

Targeted development aid

- Short-term projects in specific countries aimed at stimulating investment in long-term solutions to pressing sustainability issues.

The instruments identified above can be applied at three different levels. These are at global level, European level and national level. The global level involves engagement and cooperation between the governments of both producing and consuming countries and the participation of governments in inter-governmental organisations such as the WTO. International platforms, networks and associations are also important tools for achieving change internationally. At the European level harmonisation of policies as well as of sustainability schemes and standards is key to creating a level playing field for producers and importers and for the promotion of sustainable consumption. The Transatlantic Trade and Investment Partnership (TTIP) a bi-lateral trade agreement negotiations between the EU and US, aiming to reduce the regulatory barriers to trade and harmonise food safety, environmental and banking regulations is an example of this, although has been strongly criticised for not being transparent.

6.5 Medium-term expectations

As part of the interviews, respondents to the questionnaire were invited to share their expectations for upscaling of initiatives in the three value chains over the medium-term (the next three to five years). Their responses are summarised as follows.

General (all international commodity value chains)

- The changing motivation for companies to engage in sustainability initiatives, from pressure by civil societies in “name and shame” campaigns focusing on environmental and social reasons to using sustainability initiatives to also focus on commercial interests to secure supply and quality, create branding, cement relationships in the value chain, and increase corporate transparency.
- The impact of sustainability initiatives will continue to be questioned as the lack of robust monitoring and evaluation systems at all levels continues to draw attention. Voluntary certification

schemes/standards have been responsive to this knowledge gap with multiple impact evaluation studies and reports over the last four years. Platforms, particularly with public financing, such as IDH, have become obliged to demonstrate the impact of their investments (see for example the IOB report (IDH 2013, Ministry of Foreign Affairs of the Netherlands 2014). Companies have increasingly responded to scepticism by consumer groups and NGOs about the claims made on impact by more robust reporting (see reports published by Cargill¹⁷ and Unilever¹⁸). They are expected to continue to do in the medium-term.

- Information sharing and transparency are crucial factors in the success of the uptake of sustainability initiatives, and in enhancing the consumers' willingness to pay for sustainably produced commodities, hence providing the suppliers (farmers, traders, processors) a return on investments into sustainable production.
- The difficulty of comparing the impact of sustainability initiatives, even when reporting is according to standard guidelines – such as the Global Reporting Initiative G4 Guidelines and Accountability AA100 Assurance Standards – means that there will continue to be debates about the effectiveness of sustainability initiatives and the extent to which they are actually upscaled. In recent years different initiatives have been set up which aim to inform consumers about the impact of sustainability initiatives and critically assess claims. Examples of such initiatives include Oxfam's Behind the Brands campaign and apps such as the Ethical Company Organisation Ethical Shopping, ShopNoGMO, Questionmark, Buycott, Allesduurzaam, Rank a Brand and Boodschapp. Voluntary certification schemes/standards can also be compared through the KeurmerkenWijzer app and websites such as the International Trade Centre's Standards Map.

Cocoa: respondents expect an

- Increasing differentiation, innovation and branding of chocolate products which integrate sustainability criteria.
- Continued but slower growth of the coverage of sustainability standards in the Dutch and European market.
- Gradual harmonisation and increase adoption of sustainability standards by more small-holder farmers in producer and emerging country markets.
- Growth in volume of certified chocolate and cocoa in the Dutch market to reach the Letter of Intent targets, with a move towards increasing the volume of certified products sold globally.

Coffee: respondents expect that

- Certified coffee will remain stable at around 50 to 60% market share and NGOs will continue to devote less attention to coffee as they re-focus their attention to other value chains with more pressing sustainability hotspots.
- Climate change will have an increasing effect on coffee production (e.g. areas suitable for production) which will increase the attention given to sustainability issues. Active participation will become a must instead of a voluntary choice.
- Increasing differentiation, innovation and branding of coffee products (e.g. single origin) which integrate sustainability criteria.
- Corporate initiatives and branding will be used to create competitive advantage
- Certification remains a way to reach farmers, and secure supply.

Soy: interviewees claim that

- Achieving targets set by the sector will remain a challenge if the demand for certified soy does not increase. It is therefore expected that the sector will adopt a demand focus aimed at increasing the demand for certified soy.
- In order to achieve this the focus in terms of certification is expected to be on the harmonisation of sustainability schemes/standards at a European level and on the implementation of better monitoring and evaluation systems.

¹⁷ <http://www.cargill.com/corporate-responsibility/responsible-supply-chains/index.jsp>

¹⁸ See Annual Sustainable Living Reports since 2012 and <http://www.csrwire.com/members/16348-Unilever>

- Changing consumer preferences towards less meat consumption will continue and the promotion of vegetarian alternatives by retailers will increase. The effect that this will have on the demand for soy and on certified soy is uncertain.
- There is no one size fits all solution for the challenges facing the soy value chain. Country and region specific solutions will most likely begin to be developed in the coming years. From a European viewpoint this will also include the search for alternative sources of (plant and some novel animal-based) protein including those that are and/or can be grown in Europe. These are expected to become relatively more economically and environmentally attractive over time.

6.6 Lessons and recommendations

This section summarises several lessons learned from the data collected through the interviews and analysed that may be considered as recommendations for the Dutch government and other stakeholders to work on and help further stimulate the transition towards sustainable production and the consumption of sustainably produced products. The recommendations are grouped by the type of actions the Dutch government together with value chain stakeholders could take.

Collect data and invest in research to show the impact of sustainability initiatives

- Investment is needed in the systematic monitoring and evaluation of sustainability initiatives and the approaches (certification, platforms and corporate initiatives) used. To convince (other) companies to adopt voluntary standards, and to continue government support for these (rather than using obligatory policy instruments), participating companies and standards organisations need to publically demonstrate that their voluntary initiatives work. Evidence is needed if the predicted impact of initiatives actually occurs resulting in more sustainable chains, and the timescales and cost involved. The initiatives by IDH and certification schemes, such as the State of Sustainability Initiatives Review and work by the ISEAL Alliance, to demonstrate their impacts are lauded as a good start in this direction. However, the very modest impact of voluntary initiatives and standards to date, may also indicate that a fundamentally different approach is required to address deep rooted structural problems, particularly in producer countries where the span on influence and control of companies and consumers governments is limited; this requires going beyond voluntary certification standards as the main policy instrument.
- Another recommendation in this area of data collection is to set up HS, CN and SITC¹⁹ classifications for certified cocoa and chocolate, coffee and soy products to enable European level (Eurostat) statistics on certified sustainable products.
- Invest in research designed to test the mechanisms and models used to scale up the support and adoption of sustainability initiatives in international chains. Potential topics include improving productivity (particularly in cocoa and coffee), more effective service delivery models, insights into how effective sustainability initiatives are, and adaptation and migration possibilities for different regions and types of farmers in response to the effects of climate change.

Broaden the international base for sustainability

- Dutch government and private sector should intensify their working together with the governments of producing countries to develop, implement and enforce (existing) policies designed to stimulate sustainable production practices. One such example is the Rural environmental registration (CAR) initiative in Brazil (see www.car.gov.br) where the Brazilian government is mapping land use to support enforcement of the new forest code.
- Dutch government and private sector should work more closely with the governments of producing countries on making sustainable products/markets more accessible to smaller (Dutch) companies.

¹⁹ The Harmonized Commodity Description and Coding System (HS) is an internationally standardized system of tariff nomenclature (names and numbers) for classifying traded products, developed and maintained by the World Customs Organization (WCO) (formerly the Customs Co-operation Council). The HS classification used a 6 and 8-digit nomenclature. The Standard International Trade Classification (SITC) is a classification of goods used to classify the exports and imports of a country to enable comparing different countries and years, maintained by the United Nations, commenced in 2006.

An example is extending the support given to small-scale Central American cocoa producing companies through the CBI.

- Intensify awareness in neighbouring EU countries to use responsibly produced products. The differing positions of countries within EU to certification and the extent to which this is a requirement (for public sector procurement and encouraging or obliging private sector, business and consumers) is a challenge that needs to be tackled which the Dutch government could play a leading role in. Alliances already existing with countries which also support sustainable commodities, such as Germany, Switzerland, Denmark and the UK could be expanded to other countries.

Increase consumer awareness

- Experiences in this study suggest that increasing consumer awareness and demand for more sustainably produced components of a product, and the lowering of costs of setting up initiatives (e.g. certification) can be effective stimulants to more sustainable chains.
- CSOs and knowledge institutes can contribute to increase consumer awareness and the transparency and credibility of sustainability initiatives. This is based on the logic that market demand for certified sustainably produced products will increase if consumers not only understand what the sustainability issues are but also trust the initiatives that are being implemented to address them (De Pelsmacker *et al.* 2005; Collins *et al.* 2007; Clonan *et al.* 2010).

Increase private sector cooperation

- Industry and platform associations can focus on creating cooperation between competitors and other stakeholders to address sustainability and to raise the bar of voluntary standards, encourage and take steps to help those lagging behind. A facilitating role for government is possible to aid and encourage industry associations (i.e. further voluntary letters of intent with the stick of legislation if this does not produce effect, time bound results).
- Work with companies to move away from own standards in the long-run towards chain and sector wide standards.
- Engaging the 'laggards': it is important that it is not just NGOs and government set the sustainability agendas in commodity value chains together, yet that all (Dutch) companies in chains are engaged, particularly smaller and medium-sized companies and those with no current corporate initiatives. These are the 'high hanging fruits' that the government could focus on engaging these in platforms and initiatives.

Encourage thinking on how to harmonise standards

- Work together with standard/scheme owners and over-arching organisations such as the ISEAL Alliance on the harmonisation of existing standards. The harmonisation of standards will act to reduce consumer confusion, reduce the costs certification, pave the way for more robust monitoring and evaluation systems and generate increased demand for sustainable products.
- Create one discussion about the sustainability of different commodities to work towards a common baseline, rather than for each commodity separately – this becomes important as complex products with multiple ingredients are tackled, and other agri-food and non-food sectors (i.e. garments, electronics,) where significant sustainability issues need to be tackled.

Recognise the limits of upscaling using voluntary approaches

- For commodities which are used in complex, compound products, such as sugar, oil palm and paper in packaging, many actors are unsure if they can achieve further increases by persuading smaller companies to engage, because their consumer or business markets do not place a value on sustainability and costs are high. Mandating instruments, particularly at EU and global level, could further promote sustainable value chains, particularly where some initiatives and in some parts of the chains plateaus in scaling up sustainably initiatives have been reached.

6.7 Key findings summarised

Sustainability initiatives in the cocoa, coffee and soy value chains have been dramatically upscaled through replication, extension, horizontal and vertical scaling. This has resulted in an increased number of private sector, as well as civil society organisations, adopting and supporting sustainability initiatives. The coverage of these initiatives has also been dramatically scaled up, in terms of the market share of 'sustainably produced' products, production volumes, the numbers of farmers and their organisations producing products in a sustainable way, and the area of crops produced using sustainable production methods. The differences in upscaling and the timeframes between the three value chains are due to structure of the chains and how they are governed, and different motives and drivers to adopt sustainability initiatives, and different mix of instruments used to increase value chain sustainability. This chapter summarises the study's key findings.

6.7.1 Value chain structure and the upscaling of sustainability initiatives

The cocoa and coffee value chains exhibit market based characteristics combined with a growing element of relational governance (see conceptual framework in Chapter 2). The soy chain has elements of captive and hierarchical governance. In all three value chains, the location and extent to which market and technical information is disseminated along the value chain has been a key element in determining the balance of power between Dutch based actors and particularly, farmers and processors. The power in all three value chains is mostly concentrated among the large processors and traders.

Sustainability initiatives have resulted in an increase in the provision of technical information, focus focussing on disseminating good agricultural practices through farmer organisations, in particular in the cocoa and coffee value chains where traditional, small-scale farmers continue to play a critical role in production of the primary product. Both large scale professional farmers and small holders are engaged in soy production, with the mix depending on the region and country in question.

The majority of sustainability initiatives are directed at countries which supply the European market. This is the result of the importance placed upon sustainability issues in the EU, as a result of increasing consumer awareness. In emerging wholesale and consumer markets (e.g. Brazil, China, India and other emerging economies) sustainability issues often do not have the same level of importance, which decreases the motivation to upscale sustainability initiatives.

6.7.2 Overview of sustainability initiatives

Three types of sustainability initiatives which have been upscaled were found. Seventeen **platforms, networks and associations** were found in the three value chains, with two (IDH and VNO/NCW) common to all chains. Platforms have been established in order to bring together organisations from different segments of the value chain in the hope of encouraging them to collectively discuss and address the specific sustainability issues that each value chain is facing. International trade associations and inter-governmental organisations have in recent years offered their support and in a lot of cases, including in soy value chain, these associations act and speak on behalf of the sector. The support of both international trade associations and inter-governmental organisations has been instrumental in the upscaling of voluntary certification schemes and standards in recent times.

Voluntary sustainability initiatives refer to voluntary, third party verified certification standards and/or schemes. These have been the most common form of initiative used. A total of sixteen standards, relevant to the three value chains in the Netherlands were identified through the ITC Standards map and stakeholder interviews. The upscaling of voluntary certification schemes/standards relates to both the absolute number of certification schemes/standards as well as to the number of organisations who have adopted the standards and the percentage of the market that they represent. In the Netherlands an estimated 40% of coffee, 25% of coca and 8% of soy consumed is certified sustainable (CBS 2013; Logatcheva 2014). In all three value chains all of the major importers, processors and retailers have adopted voluntary certification schemes, some replicating upscaling by adhering to two or more schemes. The increase in the number of voluntary standards used in all three

chains has increased with some companies adhering to two or three schemes, and retailers additionally having own labels or brands with sustainability claims, leading to calls for harmonisation. Harmonisation has also been seen as a way to lower the cost of holding multiple certificates as well as the associated costs of auditing. The costs involved are often quoted as being particularly burdensome for smallholder farmers in the three value chains studied. Certification has been dramatically extended to cover increasing numbers of farmers, farmers groups in different geographic locations, and larger area of land under production and volumes of certified commodities, growing from single figures a decade ago to 8% for soy, to 25% for cocoa and 60% of products consumed in the Netherlands in 2014.

The most varied group of sustainability initiatives are **individual corporate programmes** and projects. Companies demonstrate their commitment to address sustainability and scale up their initiatives in different ways, often combining corporate programs with certification, using one or multiple third party voluntary certification schemes to demonstrate their own practices and those of their suppliers. There appear to be more corporate-based sustainability initiatives (own brands and programs) in cocoa and coffee than in soy with this suspected to be the result of the more direct relationship between producers and consumers. In cocoa and coffee, many smaller Dutch-based companies are not involved in platforms such as IDH, or certification standards. Instead they voice their opinion through professional trade associations or their own branding and approach to addressing the sustainability side of business. In the soy chain, corporate initiatives have evolved around standard setting and compliance. Large traders and processors such as Cargill, ADM and Cefetra have developed their own certification standards to increase the possibilities for compliance at a lower cost while protecting their own corporate interests. Large manufacturing and retail companies such as Unilever and Ahold have also set their own sourcing guidelines which place stringent requirements on their suppliers.

Chapters 3 to 5 showed how sustainability initiatives have developed alongside of platforms and networks. There are notable differences in how the three types of sustainability initiatives have taken shape in each of the three value chains studied. The long history of external pressure has led to a higher level of interaction between stakeholders in both the cocoa and coffee value chains with different initiatives working to reinforce each other. The soy value chain is less developed in this respect, although things are changing fast.

6.7.3 Motives to upscale

There have been strong motives both introduce and upscale sustainability initiatives in each of the three value chains vary, related to the importance placed upon the sustainability in each value chain and the issues that the initiatives seek to address. In all three chains the primary focus has been, and is, still on primary production and market demand (consumer awareness). All the largest, and multinationals active in the Dutch based chains have upscaled initiatives using at least one and often all three of the sustainability initiatives. The motives to upscale generally combine several of the following drivers:

1. **CSO and NGO push:** response to targeted public campaigns directed at both consumers and companies highlighting sustainability issues (slave and child labour, deforestation, etc.).
2. **Dutch Government stimulation:** The Dutch commitments included the 2010 Letters of intent appeared to be instrumental in bringing together multiple stakeholders and stimulating them to both adopt certification (mainly in the form of voluntary agreements) and examine other ways of making international commodity value chains more sustainable. Match funding and networks provided by IDH were also instrumental in setting up, replicating and extending certification and corporate initiatives, and scaling these up.
3. **Corporate philosophy regarding sustainability and social responsibility:** Sustainability in the cocoa and coffee value chains, where consumer orientated end products dominate, is increasingly used as a branding and marketing tool to create economic and competitive advantage and innovation in the chains and/products. Large multinationals particularly in cocoa and coffee, are increasingly seeing sustainability initiatives as a way of securing supply, both in terms of quantity and quality. Increasing support for sustainability initiatives is also the result of B2B pressure being placed on those upstream in the value chain by large retail companies who are responding to increasing consumer awareness of sustainability issues.

4. **Cross commodity learning:** Experience from early innovations in value chains, such as in coffee, has been translated into lessons for the establishment of sustainability initiatives in more complex value chains such as cocoa and soy and to other value chains with a predominantly B2B focus.
5. **Push from certification organisations:** Additional standards e.g. ISO NEN, FORCES, landscape, carbon – have sprung up in and have had the effect of mainstreaming the concept of certifying ecosystem goods and services (especially carbon) in the value chains where sustainability issues have a high profile i.e. coffee and cocoa.
6. **Business activities**– sustainability initiatives, in particular certification and corporate programs, have also made good business sense, bringing Dutch based companies closer to their suppliers all the way to farmer level, and helping secure better quality and the required quantity of goods where the (more sustainable) origin and production processes are better known.

A small number of mainly smaller and medium-sized companies in the chains have chosen not to engage in sustainability initiatives, for a number of different reasons. These include:

- The high costs of participation, particularly setting up sustainability initiatives such as certification, acting as an entry barrier.
- The uncertain level of return and impact, particularly relevant for the size and duration of contracts with suppliers and investment in traceability initiatives, monitoring and evaluation schemes and voluntary certification standards.
- Lack of urgency to join, particularly for companies in predominantly B2B products due to less consumer awareness about sustainability issues and less pressure from NGOs.
- Limits to upscaling: some products and chains appear to have reached 'glass ceilings' in terms of upscaling. Many actors are unsure if they can achieve further increases in the future by persuading smaller companies with the resulting market share to engage because their consumer or business markets do not place a value on sustainability.

6.7.4 Instruments to increase value chain sustainability

Many sustainability initiatives have indirectly received government support, through policies and instruments promoting and endorsing corporate self-regulation and partnering, ranging from political support to stakeholder engagement, dialogues and public private partnerships. These have been facilitated by various subsidies, politically couched as match funding. Whilst these have arguably contributed to the successfully upscaling of many initiatives and their use by many companies in the chains. Mandating regulations are the least used policy tool, resulting in an uneven playing field between larger and small actors both in the Netherlands and internationally. As some emerging markets do not share the Dutch preoccupation with sustainable chains and products, an uneven international situation is created. On the one hand this creates costs for Dutch players but on the other hand also in the long-term, competitive advantage and a slow transformation of systems, values and process in the three chains, particularly in cocoa and coffee where sustainably initiatives are most far reaching and widely scaled.

There is scope for continued upscaling and harmonisation of voluntary sustainability certification schemes, and for replication and extension, particularly by smaller companies in the chains. Smaller companies have also often found innovative ways to implement and scale up sustainability actions. However, using the entire toolbox of policy instruments available appears critical if further scaling is to be maintained. Mandating instruments, particularly at EU and global level, could further promote sustainable value chains, particularly where some initiatives and in some parts of the chains plateaus in scaling up sustainably initiatives have been reached.

The organisations interviewed stressed that increasing value chain sustainability is dependent on the intrinsic motivation of stakeholders and that without it external pressure would have little long-term effect. The interviewees suggested a range of (policy) instruments that could push things in the right direction.

Voluntary certification standards: an instrument that has added value due to its market based nature and its high degree of recognition among consumers. The costs of certification, particularly for small holder farmers in the cocoa and coffee value chains is proving prohibitive to some stakeholders, particularly the harder to reach farmers and cooperatives in producing countries. Support could help

offset some of the investments costs in certification, provide capacity development to aid learning and fund research into improving the certification business model.

Harmonization of voluntary certification schemes/standards: In recent times the number of voluntary certification standards has exploded. Supporters of harmonization are pushing for benchmarking of existing standards so that the standards landscape becomes more transparent and accessible.

Government to Government support of producing country policy initiatives aimed at improving the enabling environment: Support from governments of consumption markets for the (policy) initiatives of producer country governments is vital if the initiatives are to be accepted and enforced. Governments need to cooperate on the development of policy that supports sustainable production practices. As certification and company initiatives have been successful ways to provide market and technical information along the value chain this has also empowered farmers, and resulted in discussion about inclusion in initiatives and chains of certain actors (i.e. women), providing a counterweight to the increased power gained as private sector consolidation has increased the power of processors, traders and grinders to dictate trade terms.

Partnership creation/support: Platforms and networks focused on the creation of public-private partnerships - such as IDH – were repeatedly mentioned as a vital tool in helping those companies that are willing but perhaps unable to trial, invest and upscale their participation in sustainability initiatives to do so. Other forms of partnership creation mentioned by those interviewed included increasing the level of cooperation between Dutch and local providers, and between companies and producer country governments. Moreover, interviewees argued in favour of stimulating a move towards business-minded partnerships instead of project-based cooperation that is reliant on external funding.

Consumer awareness campaigns to stimulate demand: Raising awareness of sustainability hotspots and key issues, and making consumers aware of the provenance and activities behind the products has been a key approach to change consumer behaviour and demand for products which are sustainably produced. Increased harmonization is needed to raise consumer awareness of which products are sustainable, and to promote sustainably produced products for business users and end-consumers.

Fiscal and monetary instruments: a range of fiscal and monetary instruments were suggested by those interviewed, such as lowering trade barriers and providing tax advantages for business sourcing and supplying products certified as sustainable.

Legislative instruments: Although legal options to favour the import of only sustainable commodities into the Netherlands are difficult due world trade agreements, respondents noted the possibility to create a more level playing field for importers and exporters that support sustainable production. The instruments identified above can be applied at the international, the European level and the national level. The global level involves engagement and cooperation between the governments of both producing and consuming countries and the participation of governments in inter-governmental organisations such as the WTO. International platforms, networks and associations are also important tools for achieving change internationally. At the European level harmonisation of policies as well as of sustainability schemes and standards is key to creating a level playing field for producers and importers and for the promotion of sustainable consumption.

6.7.5 Recommendations

The Dutch government could help further stimulate the transition towards sustainable production and consumption of sustainably produced products in many ways. The often indirect role of the government in upscaling sustainability initiatives and difficulty in determining the impact of such complex multi-partner initiatives has raised questions on the effectiveness, transparency and legitimacy of these forms of industry self-governance and on the most appropriate role for (national)

governments (Vermeulen and Kok 2012; Ministerie van Economische Zaken, 2014). The key recommendations from this study are to:

- Work together with *industry* on efficient data collection in order to build on robust monitoring and evaluation systems, and to communicate the economic and ecological impacts of sustainability initiatives. While companies and stakeholders in all three value chains acknowledge the advantages of sharing existing pre-competitive data that will benefit the value chain as a whole the majority of data remains confidential.
- Increase collaboration with *governments of producing countries* to develop, implement and enforce (existing) policy designed to stimulate sustainable production practices;
- Address the different positions of *EU governments* towards sustainable production, both at a bilateral and particularly on an EU level to ensure a more level playing field and stimulate demand. Continuing to work with voluntary approaches with only Dutch companies is unlikely to meet the sustainability challenges persisting the chains.
- Work together with *civil society organisations and knowledge institutes* on increasing consumer awareness and the transparency and credibility of sustainability initiatives (by investing in systematic monitoring and evaluation of sustainability initiatives).
- Work together with *standard/scheme owners* and over-arching organisations (e.g. ISEAL and the ITC) on the harmonisation of existing standards. The harmonisation of standards will act to reduce consumer confusion, reduce the costs of certification, pave the way for more robust monitoring and evaluation systems and generate increased demand for sustainable products.

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AHold Coffee Company	http://www.aholdcoffeecompany.nl/en/sustainability
Armajaro	http://www.ifc.org/wps/wcm/connect/regprojects_ext_content/ifc_external_corporate_site/bacp/projects/projsummary_armajaro
Barry Callebaut	https://www.barry-callebaut.com/sustainability/cocoa-sustainability
BT Cocoa	http://www.btcocoa.com/news/view/751/bt-cocoa-with-sustainable-cocoa-production-program
Cargill	http://www.cargillcocoachocolate.com/sustainability/cargill-cocoa-promise/index.htm http://www.cargillcocoachocolate.com/wcm/groups/public/@ccc/@all/documents/document/na31657361.pdf
Continaf	http://www.continaf.nl/sustainability_traceability/sustainability.html
Dutch Coffee	https://www.oneworld.nl/business/hoezo-fairtrade-wij-kiezen-voor-direct-trade-en-fairchain
Douwe Egberts/JDE	http://www.douweegbertsprofessional.com/uk/homepage/about-decs-as-a-partner/about-us/sustainability-/
Ecom	http://www.ecomtrading.com/en/sustainability/sustainability-in-cocoa/introduction.html http://www.ecomtrading.com/en/our-products/coffee/about-ecom-coffee-113.html http://www.ecomtrading.com/en/sustainability/sustainability-in-coffee/introduction.html
Mars	http://www.mars.com/global/about-mars/mars-pia/our-supply-chain/cocoa.aspx
Moyee Coffee	https://www.moyeecoffee.com/
Mondelēz	http://www.mondelezinternational.com/well-being/sustainable-resources-and-agriculture/agricultural-supply-chain/cocoa http://www.mondelezinternational.com/well-being/sustainable-resources-and-agriculture/agricultural-supply-chain/~/_media/MondelezCorporate/uploads/downloads/MDLZCocoaLifeFactSheet
Olam	http://olamgroup.com/sustainability/sustainable-development-goals/
OxfamNovib	http://www.oxfamnovib.nl/Cocoa.html http://www.oxfamnovib.nl/Redactie/Downloads/Artikelen/FINAL%20PrivateSectorBrochureENG-sm_web%20(2).pdf
Nestle	http://www.nestle.com/csv/rural-development-responsible-sourcing/nestle-cocoa-plan
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8 Justification

This study was carried out and supervised by Verina Ingram, Lucas Judge, Martina Luskova, Siemen van Berkum and Jolanda van den Berg (all LEI Wageningen UR). The research methods and research approach has been supervised by members of TEEB (The Economics of Ecosystems and Biodiversity), the Ministry of Economic Affairs and the Ministry of Foreign Affairs. Mark van Oorschot and Christi Veldhuis of PBL Netherlands Environmental Assessment Agency, and Bethe Harms of IUNC Netherlands have provided feedback on earlier drafts of this final technical report. Their comments have been considered and incorporated as much as possible in this final report.

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Annex 1 Stakeholder questionnaire

Name of organisation	
Date of Interview	
Name of person interviewed	
Position of person interviewed	
Stage in value chain	Producer of raw material Processor Trade (please specify export, import or both) Manufacturing Retail Additional services
Sector	Coffee Cocoa Soy
Confidentiality	Anonymous name can be used Name and /organisations name can be used
Provide draft copy of report ?	Yes/no

1. Which sustainability initiative(s) does your organisation actively participate in?

No	Initiative	Since when (year)	Reason to participate	Type of initiative Roundtable / Network Independent / Third party verified (e.g. certification) Corporate CSR policy/guidelines for sustainable production/ Other
1				
2				
3				
4				
5				
6				

2. Can you describe the initiatives in more detail? (e.g. what is the history and goal of the initiative, how many members does it have, what types of companies are members (farmers/producers/suppliers))
3. What are the pros and cons of participating these sustainability initiatives? What are (potential) reasons for leaving or not actively participating in sustainability initiatives?
4. Are any Dutch companies that you directly do business with (e.g. suppliers, customers) actively involved in these sustainability initiatives, or are they involved in other sustainability initiatives?
5. Are non-Dutch organisations/companies/businesses involved in these sustainability initiatives? Why are they involved?
6. Are you aware if the sustainability initiatives your organisation actively participates in are being scaled up in any way?
7. In what way(s) is upscaling occurring ?
 - more companies in a chain
 - more companies in a network/roundtable/standard
 - more products
 - more farmers/primary producers
 - more regions/countries
 - other.....

8. To what extent is your organisation's involvement in sustainability initiatives a result of your organisation's business philosophy/history and ownership characteristics?

1 strongly disagree	2 slightly disagree	3 neutral	4 partly agree	5 strongly agree

9. To what extent is your organisation's involvement in sustainability initiatives a result of your organisation's reputation, market position and role in the sector?

1 strongly disagree	2 slightly disagree	3 neutral	4 partly agree	5 strongly agree

10. To what extent is your organisation's involvement in sustainability initiatives due to economic/financial motives?

1 strongly disagree	2 slightly disagree	3 neutral	4 partly agree	5 strongly agree

11. To what extent is your organisation's involvement in sustainability initiatives due to environmental motives/concerns?

1 strongly disagree	2 slightly disagree	3 neutral	4 partly agree	5 strongly agree

12. To what extent is your organisation's involvement in sustainability initiatives due to social motives/concerns?

1 strongly disagree	2 slightly disagree	3 neutral	4 partly agree	5 strongly agree

13. To what extent is your organisation's involvement in sustainability initiatives the result of decisions made by or requirements placed on your organisation by others (supplier, customer, industry association etc.)?

1 strongly disagree	2 slightly disagree	3 neutral	4 partly agree	5 strongly agree

14. To what extent is the push (or lack thereof) to participate in sustainability initiatives coming from the decisions of competitors?

1 strongly disagree	2 slightly disagree	3 neutral	4 partly agree	5 strongly agree

15. Is the pressure to participate in sustainability initiatives coming from any one part of the value chain?

16. Are there any companies/organisations in particular who you feel are driving the sustainability agenda in your chain?

17. Are there any companies in particular or regions in particular that are responsible for the pressure and/or resistance to participate in sustainability initiatives?

18. What is behind the pressure/resistance to participate in sustainability initiatives in the sectors that your organisation is active? (E.g. economic (security of supply), product quality, environmental (pollution, biodiversity), social (working conditions, living wage of workers).

19. What could the Dutch government do to further promote and upscale sustainable initiatives in the (cocoa/coffee/soy) value chain?

20. At which level should the Dutch government focus its efforts?

- International
- European
- Inter-governmental
- Other

Why ?

21. Where do you think Dutch government support would be most effective to support upscaling of sustainability initiatives in chains?

- initial investments in setting up sustainability schemes
- upscaling
- developing new initiatives
- direct to producers/governments in developing countries
- via companies
- via (Dutch) partners/service providers e.g. NGOs, research
- measure/prove impacts of sustainability initiatives
- raising awareness among end consumers/users
- other

22. Which type of government support would you prefer to support upscaling of sustainability initiatives in chains?

- legal
- market voluntary e.g. certification
- fiscal i.e. tax breaks
- subsidies
- grants
- others

Why?

23. Which instruments do you think have been most effective at stimulating your business to invest in and scale up sustainability initiatives?

Why?

Annex 2 Respondents

Table 24
Stakeholder interviews

Organisation	Position in chain	Value Chain		
		Cocoa	Coffee	Soy
Ahold	Retailer	✓	✓	✓
Cargill	Trader & processor	✓		
Cefetra	Association			✓
Friesland Campina	Processor	✓		✓
IDH	Government agency	✓	✓	✓
Ministry of Economic Affairs	Government	✓	✓	✓
MVO	Association			✓
NEVEDI	Association			✓
Oxfam Novib	NGO – farmer level	✓	✓	✓
Solidaridad	NGO – farmer level	✓	✓	✓
Unilever	Processor	✓	✓	✓
VION				✓
Coffee company*	Processor		✓	
KNVKT	Association	✓	✓	
Coffee company*	Processor		✓	

*Anonymised at the request of the company

Annex 3 Sustainability initiatives in the cocoa value chain

Table 25

Platforms, networks and associations in the cocoa chain

Initiative	Sustainable Trade Initiative (IDH)	Letter of Intent for sustainable cocoa & Chocoworkgroup	Association for Bakery and Confectionary Industry (<i>Vereniging voor de Bakkerij- en Zoetwarenindustrie (VBZ)</i>)	
Type of initiative	Public private CSO research partnership	Public private research CSO partnership	Industry association	
Mission	<p>Accelerates and upscales sustainable trade by building impact oriented coalitions of front running companies, civil society organisations, governments and other stakeholders towards MDGs 1 (poverty reduction), 7 (safeguarding the environment) and 8 (fair and transparent trade). The Cocoa Improvement Program (2008-2011) aimed at training 50.000 farmers, at least 30.000 certified, over 64.000 tonnes of certified cocoa produced, and UTZ Certified cocoa to be widely available in the international market. The Cocoa Productivity and Quality Program (CPQP) (2011- 2015) aimed to mainstream innovations around farmer support and improved production to catalyze large-scale positive impact within the sector in six areas:</p> <ul style="list-style-type: none"> •Quality •Productivity •Professionalization of farmers and their organisations •Total quality standard systems •Financing •Coordination and alignment 	Dutch government initiative to convene a Working Group of companies, trade unions, NGOs and governmental bodies by signing a declaration of intent stating that by 2025 all chocolate sold in the Netherlands will be sustainable.	Corporate social responsibility is one of the top priorities of the trade association for manufacturers of cookies, candy and chocolate, focusing on raw materials supplies, innovation and employees in the sector	
Key sustainability	Environmental	300,000 ha sustainable land use, Climate change adaption	By 2020 80% of cocoa used in cocoa and chocolate products on Dutch market is Guaranteed sustainably produced.	Sustainability commodity chains, Roundtables cocoa, ICSR Risk, Barometer Sustainable Bakery and Confectionery
	Social	Increased income for at least 300,000 farmers in West Africa 50% of Dutch import certified sustainable		Information provision ²⁰ , Formation of new coalitions, Development of tools, Inspiration and knowledge sharing, Sustainable Employability of Employees, occupational safety Training & Education, CAO Agreement on Labour & Health

²⁰ See for example the Factsheet CSR Leader Network, VBZ CSR report.

Initiative	Sustainable Trade Initiative (IDH)	Letter of Intent for sustainable cocoa & Chocoworkgroup	Association for Bakery and Confectionary Industry (<i>Vereniging voor de Bakkerij- en Zoetwarenindustrie</i> (VBZ))
Year of establishment & end year	2008 to 2015	2009 to 2020	CSR program since 2014
Links to other sectors	Learning from other IDH commodity programs	Learns from Letters of intent in coffee, soy, palm oil, aquaculture fish and wood	Links to European level association (CABISCO, ECA) and international associations (WCF) and national industry association (VNO-NCW)
Initiative countries of origin	Netherlands	Netherlands	Netherlands
Global production amount (tons)	Approximately 30% of the global chocolate market via stakeholders (Ahold, Armajaro, Barry-Callebaut, Cargill, Ecom, FrieslandCampina, Mars, Heinz, Nestlé, Utz Certified,)	Approx. 20%	
Types of involved actors	Traders, processors, retailers, government, certifiers, NGOs	Processors, retailers, government, certifiers, NGOs	Trader, processors, retailers,
Number of small-holders involved	Indirectly via traders	Indirectly via traders and CSOs	None
Dutch companies involved in initiative	Ahold, ADM, Armajaro, Barry-Callebaut, BT Cocoa, Cargill, Continaf, Ecom, Ferrero, Friesland Campina, Mars, Heinz, Nestlé, Solidaridad, Petra Foods (Delfi)	Ahold, ADM, Armajaro, Barry-Callebaut, BT Cocoa, Cargill, Continaf, Ecom, Ferrero, Mars, Oxfam Novib, Petra Foods (Delfi), Tony Chocoloney, Dutch Cocoa, AW Watson, La Place, Theobroma, PLUS, VBZ, Unilever, Mars	Over 100 companies including all major multinationals and SMES in the sector
Other partners	UNDP, WCF and WWF. Solidaridad ICCO, Swiss Contact, Oxfam Novib, UTZ Certified,	IDH, UTZ, Rainforest Alliance, Fairtrade, VBP, Organic, Oxfam Novib, Voice Network, Ministry EZ, Wageningen UR, KIT, CREM, Louis Bolk Institute, Chococ, CBL	
Main focus in production countries	Côte d'Ivoire, Ghana, Indonesia, Nigeria, Cameroon, Vietnam	Global	Indirect via suppliers of members
Main focus of consumption countries	Netherlands, Switzerland, Germany	Netherlands	Netherlands
Subsidized by the Dutch government	Yes	Yes	No

Table 26

Voluntary sustainability standards in the cocoa chain

Initiative	Fairtrade (Max Havelaar)	Organic (IFOAM) (EKO)	Rainforest Alliance	UTZ Certified	Dutch Standard sustainable Cocoa (NEN)
Type of initiative	NGO (founded by ICCO, Oxfam Novib)	NGO	NGO	Business and NGO partners	Private sector, CSO, government, research
Mission	Better life for farming families in developing world via fair prices, direct trade, community development and environmental protection	Create a verified sustainable agriculture system that produces food in harmony with nature, supports biodiversity and enhances soil health	Integrate biodiversity conservation, community development, workers' rights and productive agricultural practices to ensure sustainable farm management.	Improve market transparency and promote good agricultural practices at farm level. Focus on farmers livelihoods via quality and productivity.	Dutch Standards Committee on Cocoa, with experts from trade and industry, interest groups, government, scientists, trade unions and private standardization organisations, concurrently developing an international –European (CEN) and Dutch (NEN) standard for sustainable and traceable cocoa, according to sustainability: profit, people and planet principles dealing with technical and procedural aspects.
Social	Focuses on labour conditions in production and paying 'fair' for production to support poor farmers with minimum prices and premiums. Prioritizes smallholder producer cooperatives, restricts child labor, guarantees freedom of association and right to collective bargaining, buyers encouraged to sign long-term contracts and aid access to credit	Freedom of association and right to collective bargaining, working conditions, equal treatment, etc.	Freedom of association, safe and clean working environment, national legal minimum wage, dignified housing, medical care, free education, health, training	Voluntary standard framework for sustainable cocoa to help align industry efforts. Includes farmer collective action, labour practices and rights.	adaption of Global Good Agricultural Practices (GAP) to cocoa, standards for record keeping, better and documented use of agrochemicals, labour rights and access to health care and education
Environmental	Highly toxic agrochemicals use restricted (standards go beyond national laws), water conservation buffer zones around water bodies. No GMOs	Prohibits use of synthetic fertilizers and agrochemicals, encourages integral soil management, no GMOs	Restricted agrochemical use, encourages social and water conservation, shade trees standards: canopy cover of mixed native trees. Based on Sustainable Agriculture Network principles.	Adherence to national laws and avoiding use of illegal agrochemicals, reduce contamination and GAP.	Adherence to national laws and avoiding use of illegal agrochemicals, reduce contamination and GAP. Based on Sustainable Agriculture Network principles.
ISEAL Alliance members	Yes	No	Yes	Yes	Learn from other ISO/CEN/NEN standards, harmonize other cocoa standards

Initiative	Fairtrade (Max Havelaar)	Organic (IFOAM) (EKO)	Rainforest Alliance	UTZ Certified	Dutch Standard sustainable Cocoa (NEN)
First certified cocoa imported to NL	1994	Approx. 2004	2006	2009	Netherlands
Country where initiative originated	Netherlands (Potts <i>et al.</i> 2014)	France	USA	Netherlands	
Global production amount (tons)	124,000 (2011)	103,554	405,608	534,614	Processors, retailers, government, certifiers, NGOs
Share of global production	3% (2011)	3%	10%	13%	Indirectly via ISO and national standards bodies in origin countries
Global sales (tons)	47,000 (2011)	77,539	146,852	118,641	Cargill Cocoa, Theo-broma, Barry Callebaut Cocoa, Ascot Amsterdam, CWT Commodities, Daarnhouwer & Co, Mars Nederland, Mondelēz International
Share of global production	1% (2011)	2%	4%	3%	UTZ, GAIN, IUCN Nederland, IDH, Rainforest Alliance, Fairtrade, Organic, Oxfam Novib, Voice Network, VBZ, Ministry EZ, Wageningen UR, KIT, Agriplace, Solidaridad, World Cocoa Foundation, Federatie Nederlandse Vakbeweging,
Share of global market sales	2%	3%	5%	4%	Global
Share of Dutch market sales	4.5%	n/a	n/a	n/a	Netherlands
Types of actors involved	Producers, producers organisations and traders (FLO-CERT certified) ²¹	Producers, producers organisations and processors ²²	All	All	No
Number of smallholders	176,600 (2012-13) ²³ 130 small producer		Over 120,000 cocoa farms 6 in 2011	406,702 and 77 estates (2014) (UTZ 2015)	

²¹https://www.utzcertified.org/attachments/article/365/jheise_comparison_of_private_sector_cocoa_standards_april_2010.pdf

²² <http://www.ifoam.bio/en/ifoam-accredited-certification-bodies>

²³ <http://www.slideshare.net/fullscreen/fairtrade/2014-enfairtradescopebenefitscocoafinal/>

Initiative	Fairtrade (Max Havelaar)	Organic (IFOAM) (EKO)	Rainforest Alliance	UTZ Certified	Dutch Standard sustainable Cocoa (NEN)
	organisations ²⁴				
Major Dutch companies involved	Jumbo, Tony Chocoloney, Happy Chocolate, Tjolk Choclade, PLUS, Perfekt, Koninklijke Verkade	Crown of Holland, Ecom Dutch Cocoa, LoveChock, Barry Callebaut, AH, Biorganic B.V., Australian Homemade	Unilever ²⁵ , Ecom Dutch Cocoa, Mars, Lidl, Selecta Vending, Van Velze's, Mondelēz (Côte d'Or), Kraft Foods, Australian Homemade	Barry Callebaut Cocoa Netherlands B.V., Cargill, Arma-jaro, Ahold, Dutch Cocoa, Jadico Spece-rijen, Friesland Campina, Delicia B.V., Continaf B.V., Theobroma BV, Mourik b.v., Mars, Australian Homemade	
Countries of origin	Côte d'Ivoire (39%), Ghana (32%), Dominican Republic (12%), Peru (10%), Ecuador (4%) Belize, Bolivia, Cameroon, Costa Rica, Colombia, Haiti, Honduras, India, Nicaragua, Panama, Papua New Guinea, Peru, Sao Tome e Principe, Sierra Leone, Sri Lanka	Dominican Republic (70%), Peru (9%), Ecuador (8%), Mexico (3%), Bolivia (2%), Brazil (2%)	Côte d'Ivoire (61%), Ghana (16%), Dominican Republic (9%), Indonesia (6%), United Republic of Tanzania (3%), Nigeria (2%), Ecuador (1%)	Côte d'Ivoire (54%), Ghana(16%), Dominican Republic (8%), Sierra Leone (6%), Peru (4%), Indonesia (4%), Nigeria (2%), Uganda (2%),	
Countries of Consumption	EU including Netherlands, USA, Canada, South Africa, India, Australia, New Zealand, Japan.	EU including Netherlands, 40 countries globally, especially Europe and North America.	EU including Netherlands and over 40 countries globally, particularly Europe.	EU including Netherlands and, Australia, Brazil, Chile, , Japan, Malaysia, Russia, South Africa.	
Subsidized by the Dutch government	No	No	No	Partly via support form IDH	

Sources: UTZ, FLO, Fairtrade and Rainforest Alliance websites, (Logatcheva 2014) (Willer and Lernoud 2015) (Jha *et al.* 2011) (Potts *et al.* 2014)

²⁴ <http://www.fairtrade.net/cocoa.html>

²⁵ In brands such as Cornetto and Magnum, http://www.rainforest-alliance.org/sites/default/files/publication/pdf/ra-certification-cocoa-cote-divoire-cosa_0.pdf

Table 27

Corporate initiatives in the cocoa chain

Organisation	Name	No of farmers	Certification					Activities									
			UTZ	RA	Organic	Fairtrade	ISO	Farmer training	Community development	Management/traceability system	Credit	Farmer orgs	Research	Inputs, equipment & seedlings	Campaign & advocacy	Partnerships	
ADM	Socially and Environmentally Responsible Agricultural Practices		√							√		√					
Barry Callebaut	Cocoa Horizons		√	√						√			√				
BT Cocoa	Sustainable Cocoa Production Program BT Care		√							√			√		√		
Cargill	Cocoa Promise	115,000	√							√	√	√	√		√		√
Continaf	-		√	√			√										
Ecom	-			√						√		√	√		√		
Mars	Sustainable Cocoa Initiative, Vision for Change program		√	√			√			√	√	√	√	√	√		√
Mondelēz	Cocoa Life	38,000		√			√			√	√						√
Olam	Olam Livelihood Charter (OLC)		√	√						√		√	√	√	√		
OxfamNovib	Behind the Brands'		√							√			√	√		√	√
Nestle	Cocoa Plan	45,833								√	√		√				√
Solidaridad	For the love of chocolate		√							√	√	√	√	√	√	√	√
Theobroma	Professional Cocoa Farming Program		√							√	√	√	√		√		
Tony Chocoloney	Bean to Bar project						√			√	√	√	√				
Unilever	Sustainable Agriculture program		√	√						√	√	√	√	√	√		√
Voice Network	-									√				√		√	

Sources: Interviews and company websites (see references)

Annex 4 Sustainability initiatives in the coffee value chain

Table 28

Platforms, networks and associations in the coffee chain

Initiative	Sustainable Trade Initiative (IDH)	Royal Dutch Coffee and Tea Association (KNVKT)
Type of initiative	Public private CSO research partnership	<i>Dutch trade association</i>
Mission	Accelerates and upscales sustainable trade by building impact oriented coalitions of front running companies, civil society organisations, governments and other stakeholders towards MDGs 1 (poverty reduction), 7 (safeguarding the environment) and 8 (fair and transparent trade). Collectively, the partners aim to increase sustainable green coffee sales from the current 8% to 25% by the end of 2015	Sustainable Action plan from Tree to Cup, Initiator of Letter of Intent for Sustainable coffee in November 2010 with the goal that 75% of coffee consumed in Dutch market by 2015 is sustainable.. Uses a sustainable value chain approach
Key sustainability	Environmental	Focus on sustainable development of production, food safety and quality laws, health aspects of coffee consumption
	Social	
	Productivity, quality, farmer organisation, access to finance, effectiveness of extension services, climate adaptation, involvement of women & youth, income diversification and livelihood of farmers	
	Focus on service delivery to sustainably farmed coffee service delivery models, Coffee farming as a family business toolkit, SCP National Sustainability Curriculum, Business Case Brazil	
Year of establishment & end year	2008 to 2015	In 2010 (declaration of intend)
Links to other sectors	Learning from other IDH commodity programs	Tea
Initiative countries of origin	Netherlands	Netherlands
Global production amount (tons)	73,796 farmers trained by 2014, approx.5% of global sales of green coffee sustainably sourced in 2014 ²⁶	Members cover 98% the coffee and tea sector in the Netherlands
Types of involved actors	Traders, processors, retailers, government, certifiers, NGOs:	Traders, processors, retailers
Number of smallholders involved	Indirectly via traders	Indirectly via traders
Dutch companies involved in initiative	DE Master Blenders 1753 (now JDE), Non Dutch companies: ECF, Mondelēz International, Nestlé, Tchibo ,	54 KNVKT members - those with coffee focus include Theobroma, AHold Coffee Company, Euro Caps, Mocca dór, Rombouts, Jones Bonthy, Beans Coffee, Barista coffee, Hesselink Cofee, Blanche Dael, Smit & Dorlas, ULS, Miko Coffee service, JDE, Ily, AVS coffee, ULS, Pelican Rouge, Beans Coffee, Unilever, Starbucks, Peeze, Simon Levelt. NGOs and platform associations also signed the 2010 Letter of Intent

²⁶ <http://www.idhsustainabletrade.com/koffie-results-2014>

Initiative	Sustainable Trade Initiative (IDH)	Royal Dutch Coffee and Tea Association (KNVKT)
Other partners	Hivos, European Coffee Federation, 4C Association, ACDI-VOCA, Café Africa, Coffee & Climate, ECX, FNC, HRNS, IPSARD, P&A International Marketing, PAN-UK, RIAS, SAI Platform, Solidaridad, SNV, TechnoServe	IDH, Oxfam Novib, HIVOS, Rainforest Alliance, UTZ Certified, Fairtrade, Eco, Solidaridad, Biologica, Ministry of Economic Affairs, Verduurzaam Vodesel platform
Focus in production countries	Brazil, Colombia, Ethiopia, Indonesia, Uganda, Vietnam	Global
Focus on consumption countries	Netherlands and global	Netherlands
Subsidized by the Dutch government	Yes	No

Table 29
Voluntary sustainability standards in the coffee chain

Initiative	Fairtrade ²⁷	Organic (IFOAM) ²⁸	Rainforest Alliance	UTZ Certified	4C Association
Type of initiative	NGO (Solidaridad)	NGO ²⁹	NGO	Businesses	Businesses and government
Mission	Supports a better life for farming families in the developing world via fair prices, direct trade, community development and environmental protection	Creates a verified sustainable agriculture system that produces food in harmony with nature, supports biodiversity and enhances soil health	Integrate biodiversity conservation, community development, workers' rights and productive agricultural practices to ensure comprehensive sustainable farm management Based on Sustainable Agriculture Network principles.	Improve market transparency while promoting good agricultural practices at the farm level (Potts <i>et al.</i> 2014) Based on Sustainable Agriculture Network principles.	Inclusive membership driven organisation of coffee farmers, trade and industry and civil society working towards improving economic, social and environmental conditions through more sustainable and transparent practices for all in the coffee sector.
Key sustainability issues initiative addresses	Environmental Highly toxic agro-chemicals use restricted (standards go beyond national laws), water conservation buffer zones around water bodies No genetically modified organisms	Prohibit the use of synthetic fertilizers and agrochemicals, encourage integral soil management, no GMOs	Restricted agrochemical use, encourages social and water conservation, shade trees standards: canopy cover of mixed native trees (Jha, 2011)	Focus on enforcing adherence to national laws and avoiding use of illegal agrochemicals, several standards to reduce pollution	Unacceptable practices: cutting of primary forest or destruction of other forms of natural resources in protected areas, use of pesticides under Stockholm and Rotterdam convention

²⁷Max Havelaar in the Netherlands

²⁸EKO in the Netherlands, issued by Skal International (inspection under the control of IFOAM)

²⁹ISEAL (2008), Governmental Use of Voluntary Standards: Groningen Province (the Netherlands) and Fairtrade (FLO) Standards, ISEAL Alliance. London

Social	Prioritizes smallholder producer cooperatives (co-ops receive minimum coffee prices plus premium for social development), standards restrict child labour, guarantee freedom of association and rights to collective bargaining, buyers encouraged to sign long-term contracts directly with smallholder co-ops and provisions access to credit	Freedom of association and right to collective bargaining, working conditions, equal treatment,	Freedom of association, safe and clean working environment, the national legal minimum wage, dignified housing, medical care, free education, health, training	Originally used Global Good Agricultural Practices (GAP) criteria for coffee, standards for record keeping, better and documented use of agrochemicals, labour rights and access to health care and education for employees and their families	Unacceptable practices: Worst forms of child labour, forced and bonded labour, trafficking in persons, prohibiting members of/or representation by a trade union, forced eviction without adequate compensation, failure: to provide adequate housing where required by workers and to provide potable water to all workers.
Year of establishment & end year (data)	1988, Max Havelaar label (Potts <i>et al.</i> 2014)	1972	1987 (Potts <i>et al.</i> 2014)	1997 (Certification label in Dutch market 2002) (PBL 2014)	2006 (PBL 2014)
ISEAL standard	Yes (PBL 2014)		Yes	Yes	Yes
First certified coffee	1997(Potts <i>et al.</i> 2014)		1995		
Initiative countries of origin	Netherlands(Potts <i>et al.</i> 2014)	France	USA	Netherlands	Germany
Global production amount (tonnes)	430,000 (2012) (Potts <i>et al.</i> 2014)	248,767 (2011) (Potts <i>et al.</i> 2014)	265,565 (2012) (Potts <i>et al.</i> 2014)	715,648 (2012) (Potts <i>et al.</i> 2014)	1,782,058 (2012) (Potts <i>et al.</i> 2014)
Production market share of global production	5% (2012)(Potts <i>et al.</i> 2014)	3% (2011) (Potts <i>et al.</i> 2014)	3% (2012) (Potts <i>et al.</i> 2014)	9% (2012) (Potts <i>et al.</i> 2014)	22% (2012) (Potts <i>et al.</i> 2014)
Global sales(tonnes)	128,000 (2012)(Potts <i>et al.</i> 2014)	133,163 (2011) (Potts <i>et al.</i> 2014)	129,846 (2012) (Potts <i>et al.</i> 2014)	188,096 (2012) (Potts <i>et al.</i> 2014)	152,708 (2012) (Potts <i>et al.</i> 2014)
VSS sales market share of global production	2%(2012) (Potts <i>et al.</i> 2014)	2% (2011) (Potts, <i>et al.</i> 2014)	2% (2012) (Potts <i>et al.</i> 2014)	2% (2012) (Potts <i>et al.</i> 2014)	2% (2012) (Potts <i>et al.</i> 2014)
Imported value to the Netherlands	n/a	n/a	n/a	n/a	n/a
Production share of imported commodity in Netherlands	n/a	n/a	n/a	Around 30% of all coffee consumed (2009)	n/a

Initiative	Fairtrade	Organic (IFOAM)	Rainforest Alliance	UTZ Certified	4C Association
Types of actors certified in the chain	Producers, producers organisations and traders ³⁰	Producers, producers organisations and processors		Smallholders/Estates (UTZ 2015)	Coffee farmers, traders (importers and exporters), industry players (coffee roasters and retailers), CSO, NGOs, standards, trade unions)(ITC 2015)
Number of smallholders working with initiative	730,000 Small-scale farmers (2014) 439 producer organisations (2013) ³¹	580 000 in Africa (2012) (IFOAM 2014)	More than 160,000 farmers	8 615/ 70 (2014)(UTZ 2015)	360,000 producers (4C 2015)
Dutch companies involved in initiative	Jacobs Douwe Egberts (D.E Masterblenders and Mondelez), UCC Coffee, Peeze, Pelican Rouge BV, Simon Lévelt, Jumbo	UCC Coffee, Peeze, Pelican Rouge BV ³²	Unilever, Jacobs Douwe Egberts (D.E Masterblenders and Mondelez), UCC Coffee, Peeze, Simon Lévelt	Jacobs Douwe Egberts, Migros, Lidl Netherland, UCC Coffee, Ahold Simon Lévelt	Cooperation with Rainforest Alliance, UTZ Certified, Fairtrade International
Country of origin	Colombia(28%),Peru (16%), Brazil (13%), Indonesia (7%),Nicaragua (6%), Costa Rica(6%), India(4%), Mexico (4%), Honduras (4%), United Republic of Tanzania	Peru(25%), Ethiopia (18%), Mexico (18 %), Honduras (7 %), Indonesia (6%), Brazil(5%), Bolivia(4%), Nicaragua (3%), Guatemala(2%), Papua New Guinea (2%), Colombia (2%)	Brazil(33%), Colombia (11%) Peru (11%), Vietnam(8%), El Salvador(7%), Guatemala(7%), Indonesia(4%), Costa Rica(4%), (2012), Nicaragua(4%), India(4%)	Brazil(33%),Vietnam(22%), Colombia (11%), Honduras (9%), Peru(8%)	Brazil (55%), Colombia(15%),Vietnam(20%)
Countries of Consumption	US, Canada, EU (incl Netherlands, Japan Australia, New Zealand(SCAA 2009)	US, Canada, EU (incl. Netherlands.),Russia, Japan(SCAA 2009)	44 countries on 6 different continents. Netherlands (SCAA 2009)	US, UK, Netherland, Norway, Sweden, Belgium, Spain, France, Japan (SCAA 2009)	
Subsidised by the Dutch government	No	No	No	No (UTZ 2015)	No

³⁰ ISEAL (2008), Governmental Use of Voluntary Standards: Groningen Province (the Netherlands) and Fairtrade (FLO) Standards, ISEAL Alliance. London

³¹ Fairtrade (2014) Monitoring the scope and benefits of Fairtrade: coffee
<http://www.slideshare.net/fullscreen/fairtrade/2014-enfairtradescopebenefitscoffeeinal/2>

³² IFOAM (2015), International Federation of Organic Agriculture, <http://www.ifoam.bio/en/ifoam-accredited-certification-bodies>

Table 30

Corporate initiatives in the coffee chain

Organisation	Name Project/ programme	Certification						Activities							Energy saving	
		UTZ	RA	Organic	Fair- trade	others	4C	Farmer training	Community develop- ment	Manage- ment/ traceability system	Credit	Farmer orgs	Research	Inputs, equip-ment seedlings		Campaigns/ Advocacy
Douwe Egberts / JDE/Mondelēz	CSR, DE Foundation	√						√	√	√		√	√			√
ECOM	Sustainable Management Services Since 1999-		√					√	√	√		√				
Starbucks	CSR, Starbucks foundation, Coffee and Farmer Equity (C.A.F.E.) Practices			√	√	√			√	√		√		√		
Moyee Coffee	Fairchain Project			√	√			√	√	√	√	√			√	
Nestlé	Creating Shared Value, Nescafé Plan		√			√	√	√	√	√		√				√
OxfamNovib	TCC					√	√	√		√		√	√		√	
Simon Lévelt	-		√	√	√					√					√	
Smit & Dorlas Koffiebranders	-		√	√		√										
Ahold Coffee Company	-	√		√	√			√		√		√				√
Volcafé	-	√	√	√	√		√			√						

Sources: Interviews and company websites (see references)

Annex 5 Sustainability initiatives in the soy value chain

Table 31

RTRS certified soy 2011-2015 (x 1000)

Year	2011	2012	2013	2014	2015
Certified volume (Tons)	364.9	1,000.5	1,155.6	1,408.1	2,280.1
Certified hectares	122.9	373.1	450.7	483.4	715.7

Source: RTRS (2015)

Table 32

Platforms, networks and associations in the soy chain

Initiative	Sustainable Trade Initiative's (IDH) Soy Fast Track Fund (SFTF)	The European Feed Manufacturers' Federation's (FEFAC) sourcing guidelines	The 'Stichting Keten-transitie Verantwoorde Soja' (Foundation Chain Transition Responsible Soy)	Duurzame Zuivelketen (Sustainable Dairy chain)	The Dutch Feed Industry Association (NEVEDI)	The Brazilian Association of Vegetable and Oil industries (ABIOVE)
Type of initiative	Public private CSO research partnership	European Association	Platform	Association	Association	Association
Mission	Accelerates and up-scales sustainable trade by building impact oriented coalitions of front running companies, civil society organisations, governments and other stakeholders that will deliver impact on Sustainable Development Goals. IDH runs public-private, precompetitive market transformation programs in 18 sectors.	Represent, defend and promote the interests of the European compound feed industry to the European Institutions; lobby for a legislative framework and its implementation, without discrimination in EU Member States so as to maximise market opportunities for EU compound feed companies; safeguard conditions of free access to raw materials, the proper functioning of their markets and the definition of their quality; develop professional rules and good	The goal of Foundation was to stimulate the transition of the Dutch market towards 100% use of responsibly sourced Soy in the production of meat, dairy, eggs and other food products by 2015.	Towards a future-proof and responsible dairy sector, the Sustainable	Nevedi protects the interests of manufactures of compound feed and premixes, of producers of milk replacers and of suppliers of humid feedstuffs.	ABIOVE's objective is to represent the vegetable oil industries, cooperate with the Brazilian government as regards policies related to this sector, promote Brazilian products, support its members, generate statistics and prepare sectorial studies.

	<p>A prerequisite for any IDH investment is a minimum of 50% co-funding by companies.</p> <p>The Soy Fast Track Fund will leverage investments of producers, processors and/or buyers to increase volumes of responsible soy.</p> <p>Projects will be proposed by supply chain actors itself. Solidaridad Latin America has been identified to be the project manager of the fund. The Soy Fast Track Fund is open to companies or producers who aim to purchase large quantities of RTRS soy, and who want to get co-financing for projects that support the supply of RTRS soy.</p>	<p>manufacturing practices including the sourcing of feed materials that ensure the quality and the safety of compound feed; encourage the sustainable development of livestock production responding to the market requirements, so as to maximise market opportunities for EU compound feed companies; encourage the development of precompetitive European feed-related Research & Development projects seeking to enhance the EU feed & livestock sectors competitiveness and capacity to innovate in and/or transfer science and technology based solutions to improve the sustainability of resource efficient livestock production systems</p>				
<p>Key sustainability issues addressed</p>	<p>Environmental</p>	<p>The FEFAC sourcing guidelines attempt to harmonise soy standards making it possible for an standard, including corporate initiatives to be benchmarked against minimum requirements.</p>	<p>NA</p>	<p>Climate neutral development (20% less greenhouse gases and climate neutral growth, 16% sustainable energy & 2% energy-efficiency); Preservation of biodiversity & the environment (100% responsible soy, below environmental requirements Phosphate and Ammonium and no netto loss of biodiversity).</p>	<p>The activities that Nevedi carries out on behalf of collective interests of its members, can be grouped under four priority areas.</p> <ul style="list-style-type: none"> • Sustainability of raw materials • Healthy and safe food • Good employer ship • Green Innovations 	<p>NA</p>

Social			Continue improving animal health and welfare (responsible use of antibiotics, extend average age of cows by 6 months and continual improvement of animal health scores); Preservation of grazing area (at least at 2012 levels);			NA
Year of establishment & end year	IDH was founded in 2008. The SFTF was established in 2011 for a period of 5 years.	1959 by the compound feed associations of France, Belgium, Germany, Italy and the Netherlands	2012-2014	2009 - ongoing	Nevedi came into being in 2000 after the merger of umbrella organisations of the private and co-operative feed manufacturers.	1981 - ongoing
Links to other sectors	IDH runs programmes in 18 sectors.	Yes. Sourcing guidelines not only for Soy,	No	No	No	No
Initiative countries of origin	IDH was setup with a €155 million co-funding grant from the Dutch, Swiss and Danish Governments,	Members of FEAC	Netherlands	Netherlands	Netherlands	Brazil
Global production amount (tons)	Farm animals in the EU-28 consume an estimated 480 million tonnes of feed a year, of which about 30% are produced by the compound feed manufacturers. Turnover of the European compound feed industry is estimated at €50 billion.	Purchase of responsible Soy amounted to: 2012: 314,880 (28% of total); 314,880 RTRS 2013: 545,250 (55% of total); 417,250 RTRS, 128,000 CRS 2014: 502,500 (34% of total); 252,500 RTRS, 250,000 CRS.	NA	The production and sales of Nevedi members in 2014 was as follows: Categorie – x million ton Cattle 3,7 Pigs 5,0 Poultry 3,1 Other 0,4 Totaal 12,2	Brazil is responsible for some 27 percent of the world's soybean production, with the estimate of a production of 93 million tonnes in the 2014/15 crop.	
Types of involved actors	Today FEAC consists of 25 national associations in 24 EU Member States as full members and Associations from Switzerland, Turkey, Norway, Serbia and Russia with observer/associate member status.	On a domestic level the a multi-stakeholder approach was chosen that included stakeholders from all segments of the Dutch soy value chain.	The Sustainable Dairy Chain (Duurzame Zuivelketen) is part of ZuivelNL and is a joint initiative between the Dutch Dairy Association (NZO) and LTO Netherlands. Combined, the 13 dairy companies that are members	NA	ABIOVE has 13 members companies who are responsible for approximately 56 percent of Brazil's soybean processing volume	

			of the NZO process 98% of all milk made in the Netherlands.		
Number of smallholders involved	NA	NA	LTO Netherlands represents approximately 70% of the 18,000 Dutch dairy farmers.	NA	NA
Dutch companies involved in initiative	Dutch Feed Industry Association NEVEDI and its members	Active participants included Nevedi, IDH, Dutch Dairy Organisation (NZO), Central Organisation for the meat sector (COV), Albert Heijn, C1000, Jumbo, Lidl, Superunie, Productschap Pluimvee en Eieren, MVO (the sector association for Oils and Fats) and LTO Nederland.	Initiators include: Friesland Campina, CONO, Leerdammer	113 Feed companies and suppliers are associated with Nevedi. The represent 96% of the total feed production for livestock in the Netherlands.	No Dutch companies are members.
Other partners	International Trade Centre (ITC)	WWF and Solidaridad had an advisory role.	Arla	NA	ADM, Cargill, AMAGGI, BUNGE
Main focus in production countries	NA	NA	Dairy Chain has formulated the following goals for 2020: development towards climate neutrality, continuous improvements in livestock health and welfare, preservation of grazing, and protecting biodiversity and the environment.	NA	ABIOVE's objective is to represent the vegetable oil industries, support its members, generate statistics and prepare sectorial studies, cooperate with the Brazilian government as regards policies related to this sector and promote sustainable programs for the productive chain.
Main focus of consumption countries	Benchmarking of existing standards	Purchase of Certified Soy (RTRS or equivalent)		NA	NA
Subsidized by the Dutch government	Yes	No	Yes	No	No

Table 33

Voluntary sustainability standards in the soy chain

Initiative	Round Table on Responsible Soy (RTRS)	ProTerra	GMP+	International Sustainability and Carbon certification (ISCC)	Non-GMO	Organic (IFOAM)	Eco-Social
Type of initiative	NGO	NGO	NGO	Multi-stakeholder	NGO	NGO	NGO
Mission	<p>Encourage current and future soybean is produced in a responsible manner to reduce social and environmental impacts while maintaining or improving the economic status for the producer.</p> <p>Through:</p> <ul style="list-style-type: none"> - The development, implementation and verification of a global standard - The commitment of the stakeholders involved in the value chain of soybean 	<p>ProTerra aims to advance and promote sustainability at all levels of the feed and food production system and assist economic operators to efficiently implement and demonstrate sustainability .It has the following objectives:</p> <ul style="list-style-type: none"> - Make the ProTerra Certification Scheme a credible, widely recognised standard for sustainable and fully traceable agricultural commodities - Contribute to a fast scaling-up of good agricultural practices worldwide - Link sustainable production with the demand from the consumer side - Contribute to the creation of a favourable environment for sustainably produced agricultural 	<p>GMP+'s dream is that all companies in the feed chain worldwide contribute to safe and responsible food of animal origin.</p> <p>GMP+'s mission is to provide a reliable, practical and comprehensive feed certification scheme, leading internationally. GMP+ also links parties and stimulates shared responsibility and exchange knowledge and information.</p>	<p>ISCC is a globally leading certification system covering the entire supply chain and all kinds of biobased feedstocks and renewables. Independent third party certification ensures compliance with high ecological and social sustainability requirements, greenhouse gas emissions savings and traceability throughout the supply chain. ISCC can be applied in various markets including the bioenergy sector, the food and feed market and the chemical market.</p> <p>ISCC is globally applicable for all kinds of agricultural crops, their derivatives and renewables. All elements along the supply chain from</p>	<p>CERT-ID, headquartered in the U.S., was one of the pioneers in non-GM certification, with a programme launched in 1999. Offices are located in the United States, Brazil and the United Kingdom. CERT ID provides third party non-GM certification for various grains and food types, including large volumes of non-GM soy from Brazil exported to the European Union and soy lecithin produced in India.</p>	<p>The International Federation of Organic Agriculture Movements (IFOAM) has developed a list of all standards officially endorsed as organic by the international organic movement, defining what is organic and what is not.</p>	

Initiative	Round Table on Responsible Soy (RTRS)	ProTerra	GMP+	International Sustainability and Carbon certification (ISCC)	Non-GMO	Organic (IFOAM)	Eco-Social	
		commodities and derived goods - Contribute to improved food security with technical expertise and good knowledge of agricultural markets		agriculture or the point of origin up to the end user of the final product are covered				
Key sustainability issues addressed	Social	Legal Compliance and Good Business Practices; Responsible Labour Conditions; Responsible Community Relations	The ProTerra Standard for Social Responsibility and Environmental Sustainability is at the heart of ProTerra Foundation's activities. The ProTerra Standard covers all important challenges related to the large-scale production of agricultural commodities along the whole value chain:	The GMP+ Feed Certification scheme does not only define conditions relating to production facilities of feed, but also for storage, transport, staff, procedures, documentation etc. Together with her partners, GMP+ internationally transparently defines clear conditions, so that feed safety and sustainability are guaranteed and certification bodies can conduct independent audits.	Human, labour and land rights are respected	The CERT-ID Non-GMO standard assures a GM-content below the quantification limit of 0.1% ('Hard IP'). The CERT-ID EU standard assures 0.9% maximum accidental or technically unavoidable GMO contamination. ¹⁶⁷ Besides the non-GM requirement, the certification does not require additional social or environmental criteria.	Organic farmers do not use chemical pesticides, fertilizers or GM organisms. Alternative methods and crop rotation are used to reduce diseases. The cultivation of local crops, soil fertility control and efficient irrigation are important criteria. Farming areas on land that has been obtained by clearing of HCVAs in the preceding five years are excluded from certification. For the soy to be certified as organic the origins have to be fully traceable and based on non-GM production.	EcoSocial requires Organic certification and full traceability and excludes the use of GM soy. The standard is based on standards and recommendations established by organisations such as the International Labour Organization (ILO), International Federation of Organic Agriculture Movements (IFOAM), Fairtrade Labelling Organisations International (FLO) and the Social Accountability in Sustainable Agriculture Project (SASA). Additional principles taken into consideration include international cooperation agreements related
	Environmental	Environmental responsibility including the requirement that soy expansion after 2009 has not taken place on land cleared of native habitat; Good agricultural practices including maintenance or improvement of soil quality and water supply, and reduction of negative environmental and health impacts of phytosanitary products by implementation of Integrated Crop Management (ICM) techniques.	• Protection of the Amazon and other High Conservation Value Areas • Good labour practices including workplace safety, equal opportunity, protection of children, and forced labour • Protection of the rights of communities,	For the supply chain of RTRS soy, a combined certification is provided for the production and trade of RTRS soy. This certification is	Greenhouse gas emissions are reduced Biomass is not produced on land with high biodiversity and high carbon stock Good agricultural practices and the protection of soil, water and air is applied	ISCC does not exclude GM soy and Segregation is not mandatory; products are traced via mass balance or optional physical segregation.		

Initiative	Round Table on Responsible Soy (RTRS)	ProTerra	GMP+	International Sustainability and Carbon certification (ISCC)	Non-GMO	Organic (IFOAM)	Eco-Social
		indigenous people, and small holder farmers <ul style="list-style-type: none"> • Good Agricultural Practices with regard to soil fertility, water management and reduced input of fertilisers and pesticides • On demand: Rigorous Non-GMO requirements (<0.1% adventitious GMO) 	approved by RTRS as equivalent to their RTRS Chain of Custody certification.	ISCC aims to protect high conservation value areas (HCVAs) and land with high carbon stock. Land converted from peat land in January 2008 or thereafter is excluded from conversion.			to social and environmental management, such as Agenda 21, Global Pact Program, Millennium Development Goals, Earth Charter and Human Rights Declaration, as well as standards like SA8000, ISO 14000 and BS 8800.
ISEAL Alliance members	Yes	Yes	No	No	No	Yes	No
First certified soy imported to NL	2011	unkown	unknown	Unknown	Unknown	unknown	unknown
Country where initiative originated	Switzerland, 2006	2006 within Cert ID (part of Global ID Group). In January 2012 full ownership and responsibility for the ProTerra Certification Scheme was transferred to the ProTerra Foundation, based in the Netherlands.	GMP stands for Good Manufacturing Practices. In 1992 the current GMP+ Feed Certification scheme started out with this. Afterwards, it developed into a full-fledged certification scheme by integrating ISO quality management requirements, HACCP and other elements. The + stands for the integration of HACCP	ISCC was financially supported by the German Federal Ministry of Food, Agriculture and Consumer Protection until 2012.	CERT-ID, headquartered in the U.S., was one of the pioneers in non-GM certification, with a programme launched in 1999. Cert-ID has been certifying non-GMO soy since 2000. Offices are located in the United States, Brazil and the United Kingdom.	Established in 1992.	Launched in 2004 by the Instituto Biodinâmico (IBD), a Brazilian organisation for rural development.
Global production amount (x 1,000 tons)	2011 364.9 2012 1,000.5 2013 1,155.6 2014 1,408.1	2007 4550 2008 4233 2009 4130 2010 3946	NA	Worldwide, more than 4,800 certificates have been issued to date, but no	Global production of non-genetically modified (non-GMO) soybeans is	Approximately 750,000 tonnes produced globally in 2012	Volumes produced are relatively small; no information about certified volumes is

Initiative	Round Table on Responsible Soy (RTRS)	ProTerra	GMP+	International Sustainability and Carbon certification (ISCC)	Non-GMO	Organic (IFOAM)	Eco-Social
	2015 2,280.1	2011 4050 2012 3511 2013 2930 2014 2827		numbers are published by ISCC regarding total volumes of biofuels produced under the standard.	estimated at 56.1 million metric tons (MT) in 2015. Production of certified soybeans under the Cert ID Non-GMO Standard are expected to expand by around one-third to 4.5 million MT in 2015		available
Share of global production	2015 0.70%	NA	NA	NA	Non-GMO soy represents around 17% of the total soy production	Organic accounted for 12% of the total standard-compliant production of soy in 2012	NA
Global sales (tons)	NA	NA	NA	NA	NA	NA	NA
Share of global production	NA	NA	NA	NA	NA	NA	NA
Share of global market sales	NA	NA	NA	NA	NA	NA	NA
Share of Dutch market sales	Total purchase of RTRS soy in tonnes/year by Stichting Keten transitie members: 2013 314,880 2014 417,250 Share (%) of total soy purchase 2013 18% 2014 23%	No detailed figures on ProTerra volumes imported to the Dutch market are available. Animal feed producer ForFarmers states that 8.4% of its soy was ProTerra-certified in 2013.	NA	NA	NA	NA	The Dutch organic poultry sector achieved 30% certification in 2013 and is aiming for poultry feed to be 60% EcoSocial-certified in 2014 and 100% in 2015
Types of actors involved	Members divided into 3 categories: Producers (smallholders and large	Proterra website lists 13 full members and Three associate	A quality mark of GMP+ International tells you, the	ISCC is governed by an association with currently more than	unknown	815 Affiliates (Members, Associates, and	The EcoSocial certification applies to companies,

Initiative	Round Table on Responsible Soy (RTRS)	ProTerra	GMP+	International Sustainability and Carbon certification (ISCC)	Non-GMO	Organic (IFOAM)	Eco-Social
	organisations), Industry, Trade and Finance (including supply chain actors such as crushers, traders, food and feed manufacturers and financial institutions) and Civil society organisations (including social and environmental NGOs). As of 2015 there are more than 180 members from around the world, including: Germany, Argentina, Belgium, Bolivia, Brazil, Denmark, Spain, U.S., Finland, the Netherlands, France, India, China, Singapore, Norway, Paraguay, Uruguay, United Kingdom, Sweden, and Switzerland.	members including Amaggi (Brazil), Caramaru (Brazil), IMCOPA (Brazil), Alpro (Belgium), Skretting Norway.	entrepreneur, that participating companies from the international food chain guarantee reliability, quality, sustainability and safety. That means that they meet all local and international statutory standards in the feed industry.	80 members. ISCC was developed through an open multi-stakeholder process involving around 250 international associations, corporations, research institutions and NGOs from Europe, the Americas and South East Asia in order to ensure high practicality and cost effectiveness		Supporters) in 120 countries	properties, and producer groups that envision a process of human, social and environmental development on a local level stimulated by commercial relationships that are based on the principles of fair trade. The EcoSocial standard had 16 soy producers certified in Brazil and nine other countries in 2013.
Number of smallholders	In 2015 a total of 10,790 farmers were producing RTRS certified soy.	NA	NA	NA	NA	NA	NA
Major Dutch companies involved	Ahold, Friesland Campina, Nutreco, Unilever, Vion, KLM, Shell, Jumbo.	None	GMP+ members anno 2014 include: Friesland Campina, Van Drie Group, Nevedi, MVO, LTO Nederland among others.	The certificate database lists nine current certificate holders for soybean inputs in the Netherlands, including three held by ADM in Rotterdam for its oil	unknown	unknown	Dutch importers of EcoSocial-certified soy include DO-IT Dutch Organic International Trade and GFI Greenfood International. Also Provamel, the organic brand of

Initiative	Round Table on Responsible Soy (RTRS)	ProTerra	GMP+	International Sustainability and Carbon certification (ISCC)	Non-GMO	Organic (IFOAM)	Eco-Social
				mill and refinery and two each held by Cargill and Biopetrol Rotterdam. In 2013, all of the soyoil used in biodiesel on the Dutch market was ISCC-certified.			Alpro soy products for human consumption, which is also marketed in the Netherlands, obtained EcoSocial certification for its organic soybeans.
Countries of origin	In 2013, 1.16 million tonnes of soy were certified under the RTRS criteria; equivalent to 0.4% of global production. The soy was produced in Brazil (70.3%), Argentina (19.5%), India (5.8%), Paraguay (3.6%) and the US (0.9%).	About 95% of the volume is covered by Soy from Brazil the remaining volumes come from Canada, France, Moldavia and India.	In 2014 GMP+ Feed Safety Assurance passed the 13,400 companies in 75 countries milestone.	NA	CERT ID provides third party non-GM certification for various grains and food types, including large volumes of non-GM soy from Brazil exported to the European Union and soy lecithin produced in India.	Seven countries account for 90% of the certified organic soy production: China (58%), the United States (15%), Canada (4%), India (3%), Austria (3%), Argentina (3%) and Italy (3%).	Latin America
Countries of Consumption	Mainly countries in the European Union.	Mostly for European markets		NA	The growth in the non-GMO soy volume is fuelled by retailers throughout Europe – especially in Germany, Austria and Switzerland – that require non-GMO reared animal products. The aquafeed sector in Scandinavia also contributes to this demand.	Mainly European markets	Europe
Subsidized by the Dutch government	The Dutch government is an Observing member of the RTRS.	No	No	No	No	No	No

Table 34

Corporate initiatives in the soy chain

Organisation	Name	Activities								
		Certification	Farmer training	Community development	Management/ traceability system	Credit	Farmer organisation	Research	Inputs, equipment seedlings	Campaigns/ Advocacy
ADM	Various the ADM Responsible Soy Standard	✓	✓	✓	✓		✓	✓	✓	
Ahold	Various		✓							✓
Cargill		✓	✓	✓	✓		✓	✓	✓	
Unilever	Sustainable Agriculture program		✓	✓	✓		✓	✓	✓	
Cefetra	Various including CRS	✓	✓	✓	✓		✓	✓		✓

Sources: Interviews and company websites (see references)

Published documents in the Technical reports series of the Statutory Research Tasks Unit for Nature & the Environment.

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 Reports can also be downloaded from www.wageningenUR.nl/wotnatuurenmilieu

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Natuur & Milieu
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NL-6700 AA Wageningen
T +31 (0) 317 48 54 71
E info.wnm@wur.nl

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