Quality control in cross-border agro-based supply chains

Modes of regulation in coffee, cocoa, bananas, palm oil, timber and aquaculture

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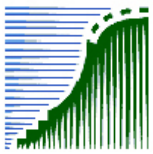

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This report describes the regulation and control of quality of product and process in a selection of cross-border agro-based supply chains. The factual presentation reveals the specific nature of regulation in a product group. It also provides a basis for comparing the modes of regulation and informs a discussion on horizontal policy and strategy issues. The review of the presented material identifies a number of issues helping to identify cross-product dimensions of regulation and the epilogue elaborates on the continuum between regulation based in public interests and regulation based in particular private interests.

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Contents

Preface

The World Summit on Sustainable Development (WSSD) in Johannesburg, 2002 has resulted in a number of initiatives linking sustainable development to market-led growth. The Netherlands government has committed itself to assist in improving market access for producers in selected Asian and African countries in order to enhance sustainable development and generate extra income for smallholders. To understand the conditions for market access, this research project addressed the issues of regulation and governance, i.e. through quality control, in cross-border supply chains. The report also examines the institutional conditions for monitoring and establishing quality at the level of production and processing.

The report aims to contribute to a policy discussion on public and private roles in the development of cross-border agro based supply chains and sub-sectors. This relates to the question 'who cares for what', which was discussed by the informal council of European ministers of Agriculture during the Dutch presidency of the European Union in the second half of 2004. The report combines an overview of factual information with a discussion on what lessons can be learned from the study of different product groups for policy makers, both in the public and in the private sector.

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Summary

This report presents an inventory of different modes of regulating the quality of both agricultural products and of the production methods deployed. The matrix, presented in Appendix 1, table A.2, specifies the involvement of the public sector, the private sector and civil society in controlling and monitoring quality in agro-based supply chains. The matrix also describes aspects of agenda setting, trade-related agreements, governance and organisation in the respective supply chains. The selected commodities are coffee, cocoa, bananas, palm oil, timber and aquaculture (fish and shrimp).

The factual descriptions allow the reader to make horizontal comparisons between the selected product groups or to search for the specific nature of quality regulation in a single product group. A review of the presented material identifies a number of issues helping to identify cross-product dimensions of regulation. In the epilogue, the authors introduce three issues related to the observed continuum between regulation anchored in public interests and regulation grounded in private interests. The discussion aims to inform and inspire a strategy and policy discussion among public officials, corporate managers, and actors in civil society on the timely issue of 'who is responsible for what' in cross-border trade.

1. Introduction

Quality, in the widest sense, has become a key element in commercial transactions and public regulation in agro-based supply chains, in particular where products and materials are crossing national borders. This report investigates how trade related quality control of the product as well as the production process is arranged in international supply chains of selected product groups: coffee, cocoa, bananas, palm oil, timber and aquaculture (fish and shrimp). These product groups represent commodities with a considerable scale and volume in international trade, which enables a systematic approach to cross-product policy and strategy making.

The information displayed in this report invites the reader to compare regulation and control mechanisms between product groups. Such a comparison may lend a hand to identify critical points where to intervene most effectively to achieve common goals, such as sustainability or healthy food that require substantial investments or joint efforts. This endeavour exceeds the boundaries of specific supply chains or sectors, around which many stakeholders are organised, and, thus, emphasises the relevance of discussing policy and strategy horizontally or generically.

Chapter 2 characterises the nature of quality control in each individual product group and summarises the findings presented in the extensive table A.2 in Appendix 1.

The 'matrix', presented in Appendix 1, describes in detail the mode of regulation that affects the 'quality of the product' and/or the 'quality of the production process'.

Chapter 4 reviews the modes of quality control by making a horizontal comparison from the perspective of understanding the division of responsibilities between public and private actors.

Chapter 5, the epilogue, further examines some key issues linked to the continuum between regulation anchored in public interests and regulation grounded in private interests.

2. Overview: The nature of quality control in selected cross-border agro-based supply chains

Table A.1 summarises the detailed descriptions of the modes of quality control and regulation in coffee, cocoa, bananas, palm oil, timber and aquaculture as presented in table A.2 (Appendix 1). This chapter tries to briefly characterise the nature of regulating quality in a specific product group, with the risk of simplifying reality.

2.1 Coffee

Quality of the green coffee bean matters in the trade. Quality is reflected in price setting in international stock exchanges. Also the International Coffee Organisation has a definition of quality that can be used in the trade of green beans. The quality of the coffee bean is also related to the origin and management of the production process. The coffee sector seems to play a vanguard role in efforts to include the quality of the production process into commercial transactions, involving a number of issues such as fair trade, forest protection or labour conditions. The economic prospect of smallholder producers receives strong attention in the sector. A variety of standards and certificates are operational in the coffee sector. And the practice of certification and verification is expanding to mainstream trade.

2.2 Cocoa

In contrast to coffee, the product quality of cocoa is usually hidden in manufactured products, i.e. chocolate. Nevertheless, the quality of the product matters in international trade. The issue of child labour has been dominating the discussion on the quality of the production process in the sector, which is related to unacceptable practices as defined by conventions of the International Labour Organisation (ILO). The quality of the production process is also embedded in efforts to enhance the sustainability of tree crop production. How to include smallholders into transformation processes towards more sustainable production systems is a prominent issue in numerous policy frameworks.

2.3 Bananas

In the banana trade, quality of the product has more or less been harmonised between the public and the private sector. Pressure from civil society, encourages the establishment of a broader quality concept, including the production process. The effect of agro-chemicals on labourers in banana plantations has importantly directed transformations. The introduction

of fair trade bananas raised public awareness of the fate of smallholders. A long-standing trade dispute in WTO is a continuing story in media coverage on the banana sector.

2.4 Palm oil

Like cocoa, palm oil is an interchangeable ingredient of manufactured food products. Recently, public discussion and media coverage relates its product quality to the presumed positive health effect of vegetable fats. The major production locations of palm oil are concentrated in a limited number of Southeast Asian countries. A number of contrasting views on the quality of the production process of palm oil can be observed. The effect on rain forest features prominently in the media and in information provided by environmental organisations. Civil society and the private sector have assembled in a round table discussion to address these concerns.

2.5 Timber

The trade in tropical timber has experienced a long and continuous involvement of the public sector in defining and regulating quality of the production process, in particular related to conservation of tropical forests. Also single-issue organisations from civil society have been pressing for legislation in this field. The European Union collaborates closely with producing countries, on installing a legal framework of certification and control in order to ban illegally produced timber. In comparison with export of tropical timber to Western countries, the Asian market is a much larger consumer of tropical timber.

2.6 Aquaculture

The quality of product and production process in aquaculture is primarily considered in terms of food safety, i.e. risky ingredients or contamination. The quality is subject to control through organisational and administrative procedures, e.g. HACCP (Hazard Analysis Critical Control Points). Consumer organisations bring forward the possible health risks of aquacultural products, e.g. the accumulation of toxic ingredients through fish/based feed, while, on the other hand, the consumption of fatty fish, with 3/omega fatty acids, is also considered part of a healthy diet. In terms of regulation of the production process, aquaculture has been part of legislation for fisheries. Due to the fast growth of the aquacultural sector, new regulation needs to be tailored to the specific dynamics of the sector. Already, sector organisations take a lot of responsibility by composing codes of conduct and stimulating new and safe practices. Environmental organisations have criticised aquaculture for its impact on, for example, mangrove forests or for its pollution.

3. Matrix: quality control in coffee, cocoa, bananas, palm oil, timber and aquaculture

3.1 How to read the matrix

The 'matrix' (table A.2) presents an inventory of different modes of regulating the quality of both agricultural products and of the production methods employed. The matrix is a way of bringing together a wide variety of information into an accessible format. Hopefully, the matrix invites the reader to browse through the table and discover product specific aspects or come across horizontal policy issues.

The matrix specifies the perspectives and involvement of the public sector, private sector and civil society in controlling and monitoring quality in agro-based supply chains. The matrix also describes aspects of agenda setting, trade-related agreements, as well as governance and organisational issues in the respective supply chains. The selected products are coffee, cocoa, bananas, palm oil, timber and aquaculture (fish and shrimp).

The material included in the matrix aims to identify product specific requirements rather than generic requirements, such as those included in the Codex Alimentarius, the General Food Law of the European Union, or the sanitary and phytosanitary or SPS measures agreed in the World Trade Organisation (WTO), the International Plant Protection Convention (IPPC) or the World Organisation for Animal Health (OIE). The Codex Alimentarius, for example, largely covers generic product quality requirements, which sets generic guidelines for 'legal requirements-product' and covers all the main processed, semi-processed and raw foods. The overall aim of the Codex is to ensure consumers of healthy and safe food (Understanding the Codex Alimentarius 2005 Y7867/E). Codex provisions concern the hygienic and nutritional quality of food, including microbiological norms, food additives, pesticide and veterinary drug residues, contaminants, labelling and presentation, and methods of sampling and risk analysis. Where possible, the investigation tried to trace specific requirements for one of the selected products within these generic regulations. Similarly, the matrix does not make a systematic or technical comparison of the different private standards applied in a product group. Neither does the matrix include specific national requirements and regulations with respect to quality control, such as SPS (Sanitary and Phytosanitary Standards) or environmental legislation. The matrix rather generalises the scope of these standards in order to make a comparison with public or civil society regulation or with other product groups.

The 'matrix' contains 4 sections, focusing on, respectively, product quality, quality of the production process, governance and organisation.

Quality of the product

Section 1 of the matrix describes the 'regulations for the quality of the product', which specifies rules and regulations affecting the physical standard of the product *itself* like product safety, appearance, packaging, residues in the product, etc. Hygiene during processing is also described in these boxes. It is described under 'product' and not under 'pro-

duction process' because the aim of the hygienic processing is to ensure *product* quality and safety. The modes of regulating product quality are categorised in legal requirements, private regulation, and civil society regulation.

Quality of the production process
Section 2 describes 'regulations for the quality of the production process'. This refers to rules and regulations that apply to the way the product is produced, such as the impact on the environment, safety of working place, hygiene, worker rights, community development, etc.. Similar to the 'regulations for the quality of the product', the modes of regulating quality of the production process are categorised in legal requirements, private regulation, and civil society regulation.

Governance
Section 3 contextualises quality control by specifying a number of issues constituting governance in the selected supply chains. The matrix describes which actor(s) have an initiating role in policy making and strategy formation for the sector. And, it identifies what kinds of means are used, such as industry platforms, stakeholder dialogue, protest and campaigns, or media attention. Existing 'codes of conduct' or private standards are identified. The functioning of sector or product specific 'international trade agreements' is explained and WTO disputes are introduced.

Organisation
Section 4 gives an indication of the level of concentration in an industry or sector, suggesting that a sector with a limited number of major buyers or processors has different conditions for reaching an agreement of good performance as compared with a sector with multiple and fragmented buyers and sellers.

A selection of sources of information and relevant websites for further reading are listed at the end of table A.2.

4. Review: The balance between legal anchoring and self-regulation in quality control

The leading question in this research was 'who cares for what' in controlling the quality of product and production process. The inventory made in this report reveals that the actual involvement of public and private actors in quality control varies substantially in different product groups. The task of this chapter is to review horizontal, cross-product dimensions of regulating quality in international agro-based supply chains. Generally speaking, public legislation is mandatory and sets a baseline from the perspective of protecting public interests. A typical code of conduct or standard, as a form of private self regulation, covers complementary aspects not anchored in laws, which can be the outcome of negotiations with civil society organisations or other representative groups. All examined product groups reveal a combination of these modes of quality control.

The modes of regulation described above balance between legal anchoring of quality requirements and independent, self regulation of quality requirements, which differs significantly for product (section 4.1) and for production process quality (section 4.2). The differences in the mode of regulation largely depend on what you can control and correct and what not, which also affects the scope of regulation (section 4.3).

4.1 Product quality

In controlling safety of food products, usually national governments are the ones taking action when the health or well being of their citizens is at stake. In general, regulations on safety and risk aspects of a product apply within the territorial boundaries of the respective government, including the European Union. Public organisations set and control acceptable limits for specific ingredients and define general rules of practice, such as traceability, within the boundaries of a specific constituency.

The anchoring of food safety in legislation implies the question of liability. Private actors have to comply with national laws and companies often request clear rules from governments and collectively strive for international harmonisation. Companies do not consider compliance with national law as an asset for pro-active business strategies: it is a prerequisite. Compliance is, however, a complex issue because many business to business transactions cross national boundaries and national laws can differ widely.

The definition and control of other product related qualities can be a combined responsibility of different actors. For some companies, product quality can be part of a competitive strategy based on market differentiation. For producers, a certificate of origin can represent a certain quality in the market and result in premium prices. The quality of bananas desired by trade companies is also reflected in EU regulation. And, in the case of commodities such as coffee and cocoa, international commodity boards also play a role setting quality criteria.

4.2 Product process quality

The quality of the production process is typically located outside the jurisdiction of the national governments of importing countries. A number of issues are addressed by internationally agreed conventions, such as worst forms of child labour or protection of primary forests. In the case of timber, governments cooperate to introduce an internationally accepted norm for legal wood, while respecting the autonomy of national states.

National legislation in producing countries importantly sets the judicial conditions for the production process, which may be related to labour laws, e.g. minimum wages, or environmental laws, e.g. management of water sheds. Environmental concerns are increasingly incorporated into forms of legislation, sometimes supported by collaboration between different actors and countries. Social concerns, especially those related to smallholder production, are more difficult to anchor in legislation, due to multiple agendas and complex negotiations.

The quality of the production process has increasingly become an asset for the private sector and be become part and parcel of competitive strategies. The social and environmental impact of the production process has become a labelled attribute of consumer goods, which enables companies to differentiate themselves from others. Likewise, companies can use credible monitoring and control systems in their interactions with civil society, which enhances their public accountability and protects their reputation. Alliances between companies and civil society organisations frequently result in a strongly focused process of labelling the quality of the production process, e.g. bird-friendly coffee. The role of public involvement is often to catalyse or stimulate certain transformation processes by providing resources or knowledge.

4.3 The scope of regulation

The factual description of the modes of regulation in a selection of product groups indicates that the distribution of responsibilities in the field of quality control, in particular between public and private actors, is organised differently for each product group. The observed diversity in quality control and regulation has become even more apparent since, in addition to safety and quality requirements, quality also applies to production and processing methods. This introduced non-product related aspects, such as sustainability or social welfare, to the terrain of quality control. Obviously, these aspects hardly affect the physical characteristics of the final product and, consequently, they are not yet addressed. It does, however, bring about new strategic questions and policy issues on the institutional architecture of quality control (see chapter 5).

Integration of multiple dimensions of quality, both product and production process related, into a single form of regulation requires negotiations between various stakeholders. In the case of coffee, different actors assembled to draft a common code for sustainable coffee, which was initiated and directed by an alliance between a public institute and an industrial federation. A possible outcome of such a multi-actor negotiation process is the inclusion of different quality aspects into a single framework.

The selection of quality requirements, for product and production process, is usually embedded in negotiations between selected actors. In setting standards, civil society organisations coordinate strongly with private actors. The involvement of single-issue civil society organisation in the construction of self-regulation may result in one-dimensional quality requirements. Lobby or advocacy organisations usually represent a particular issue, for which they negotiate with other actors. For example, trade unions strive for the right to organise and for proper working conditions, for example, stipulated in a code of conduct of a company or sector. One-dimensional regulation may reveal a rather rigid nature, referring to the most desired situation of the negotiating actor. Rigid standards on a single issue in one product group can have a strong influence on negotiations in another sector. The constant factor can be a specific group of actors, e.g. the US senators who worked on abolishing child labour in the cocoa sector.

This review also leads to a discussion on what can be most effectively regulated by the public sector and what can be left to the private sector or public-private alliances. Most likely, the outcomes of this discussion will vary per country or product group and it will be difficult to give a blue print for institutionalising effective quality control. Standards and codes of conducts, as examples of forms of self-regulation, reveal little legal anchoring of quality requirements, especially in the field of production process. The lack of legal anchoring makes the establishment of sustainability highly dependent on market dynamics. However, quality requirements in private sector regulation can be combined with public policies. Particularly in the field of environmental impact of production, the management of common goods may require more than individual compliance with standards because it crosses the boundaries of the individual domains of private actors. In this sense, linking policy and regulation might also be an important step in up scaling quality requirements. Also in the field of food safety and quality, regulatory requirements can be linked to the policy terrain of public health. Linking private regulation and public policy concerns the existing critique on safety or quality standards: that the rigidity and prescriptive nature of quality requirements leads to a uniform and exclusive food provision system. Linking quality requirements to development policy can lead to an integrative mode of operation, allowing for an open mind when selecting the right practices while maintaining the primary goal, namely healthy food.

5. Epilogue

The previous chapter reflects on the balance between legal anchoring and self regulation of quality control in cross-border supply chains. This epilogue tries to further unravel the overall balance between, on the one hand, regulation embedded in public interests and collective action and, on the other hand, regulation embedded in a particular, individual interest and dependent on the actions of a selected group of actors. Its aim is to extend this discussion to the issues of acceptance, scale, and viability of regulation. Three hypothetical and non exclusive continuums make up the proposed frame of reference for further discussion. The suggested challenge when discussing these continuums is to enhance coherency and to correct unbalances within a continuum.

5.1 The acceptance of regulation

This continuum focuses on the way different interests and possible conflicts are dealt with. The assumption is that a mode of regulation is acceptable to different stakeholders when clear and transparent procedures are installed to handle differences.

The institutionalisation of quality control is positively assessed by different stakeholders. Smallholders experience the regulatory system as supportive to the creation of a level playing field. Actors find their way to the installed forms of arbitrage and agree with proposed settlements. Procedures are transparent and self-control is an accepted form of monitoring performance.

Coherency and synergy leads to enhanced capacity to cope with unexpected events and unanticipated risks, based on the active involvement of multiple stakeholders. A clear distribution of functions leads to socially robust organisations. Uncertainty intrinsic to complex food provision systems does not lead to public distrust.

The mode of regulation suffers from a low sense of credibility by external stakeholders and motivates public action. Inside and outside actors primarily consider the mode of regulation as a consolidation of existing power relations in the chain, especially concentration at the level of trade and processing.

Conflicts are settled through negotiations. Disagreements on the distribution of responsibilities results in vulnerable organisations.

Businesses and corporations spend much time and energy on dealing with public unrest and media pressure. Risks are primarily considered in terms of liabilities, which hampers constructing a level playing field.

5.2 The scale of regulation

This continuum introduces the level or scale of intervention. In particular, the inclusion of the sustainability performance in the production process lifted quality control to other scales than the individual product. Consequently, establishing quality might also entail collaboration between different actors and is no longer the single responsibility of an individual actor. This raises the question what the leverage points are for achieving quality and sustainability. A leverage point is that particular 'step' that has disproportionate effect on the 'steps' afterwards in the process. It also suggests more attention to systemic change.

The complexity and ambition of a transition towards sustainability imply that change takes place in different locations and at different levels. An individual action or intervention might not be the most effective endeavour. Joint and coordinated efforts might be necessary to turn the lever, so that an action or intervention has an effect on different aspects at different levels in the transition. This may entail linking distributed capacities into a single organisational framework.

The above can be illustrated by referring to the protection of biodiversity, which is typically an issue that exceeds the capacities of individual actors. Accordingly, biodiversity may best be addressed at a regional level. The size and scale of the production locations of timber and palm oil suggest a similar approach to the management of common goods.

Codes, standards or regulations assess performance exclusively at the level of an individual actor. Also good performance is illustrated by referring to a single farm or factory. Standards are tailored to specific, local situations or products.

Compliance with standards may result into an exclusive group of actors, e.g. preferred suppliers. This may hinder the inclusion of distributed smallholders in cross-border supply chains. In the case of coffee and cocoa, trade industry acknowledge the difficulty to reach each individual farm.

One organisational alternative may be the option of group certification, which relies on a system of self control managed by an independent organisation. This moves away from performance assessment at the individual level, but requires identifying the right levels of aggregation acceptable to other actors in the chain.

5.3 The viability of regulation

This continuum embeds regulation into the wider process of economic development. It suggest that an exclusive focus on controlling quality and improving performance in export-oriented markets or supply chains may hamper social and economic development in the production locations. The levels of connectedness between international trade, national purchasing power, and local industriousness, may give an indication of the possible impact of the institutionalisation of quality control on development.

The economic activity is well connected to and receives continuous feed back from the local economic environment. National public legislation and locally owned private standards regulate the provision of healthy, sustainable produced food to domestic and international markets. Local purchasing power encourages innovation by active entrepreneurs in the agricultural sector and food industries, resulting in value adding activities. Local customers recognise the value of the established quality.

The economic activity is largely disconnected from its local economic environment and resembles an enclave.

High performance in export oriented economic domains is isolated from other enterprises in the local economy. The public involvement in management of food-related risks and environmental management is weak. Mainly preferred suppliers are allowed to enter strictly regulated international markets. Two-tier market exists: for high quality and for second-class food products.

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Appendix 1 Tables

Table A.1 Summary: Quality control in cross-border agro-based supply chains

	Issue	Coffee	Cocoa	Bananas	Palm Oil	Tropical Timber	Aquaculture (excl. shell-fish)
Product	Legal requirements-product Public regulation to guarantee safe provision of food in European Markets i.e. General Food Law (GFL).	• Specific article in GFL on presence of mycotoxin.	• No specific stipulations for cocoa in GFL; focus on manufactured products such as chocolate. EU directive on vegetable fat in chocolate.	• EC regulation on quality standards, i.e. Size and appearance.	• GFL requirements for specific uses of palm oil: food, feed and non-food/energy • EC decision on illegal colouring.	• EC regulation on dangerous preservation substances.	• GFL refers to HACCP/SQF and labeling systems. • Residues, toxins and contaminants with health impact.
	Private regulation-product Private sector regulation usually combines safety and quality in its product standards, in which food safety is a bottom-line.	• Quality standards for taste, aroma and appearance. • Quality differentiation.	• Quality measured by defects. • Differentiation in fine and bulk cocoa	• Quality standards vary for different markets.	• Refining close to production to avoid quality decrease. • Palm oil is trans-fat free	• Conservatism in experimenting with new timber species • KOMO certification for quality (impregnated)	• Food safety received highest priority: including residues, toxins and contaminants
	Civil society regulation-product Civil society participation in marketing schemes of food products.	• Specialty coffees, i.e. origin labeling. • Health aspects coffee	• Health aspects of chocolate.	• Negative effect of selecting by appearance on sustainability.	• Positive health aspects of vegetables fat	• Durability of wood products.	• Fish part of healthy diets. • Accumulated toxins
Production process	Legal requirements-production process The production process of food or agricultural materials is partly addressed by legislation, i.e. use of pesticides.	• Phyto-sanitary requirements. • Organic certification.	• International concern and action on child labour. • National legislation.	• National legislation. • Proposal in WTO to link labour and trade standards	• National regulation predominantly focused on product quality.	• EU program on banning illegal logging. • Forest preservation.	• Generic fishery laws apply. • Disease outbreak. • FAO code: resource management
	Private regulation-production process Food and retail companies wish to be accountable about the impact of the production processes of the consumer goods they sell.	• Private-public initiatives to include sustainability in quality concept. • 3rd party certification.	• Quality is largely established in production process. • Initiatives: labour and environment.	• Industry traceability guideline. • Coordination with trade unions. • 3rd party certification.	• Codes of conduct for integrated operations. • Industry-NGO dialogue.	• Forest management certification organised by industry.	• Producers associations and retail initiated codes of conduct. • Standards for shrimp
	Civil society regulation-production process Civil society strives for regulation of production processes to avoid negative social and environmental impacts, e.g. through international conventions.	• Fair trade included in mainstream chain. • Mainstream certification of sustainability. • Niche certification	• Advocacy and campaigns focus on banning use of child labour.	• Niche markets for eco-friendly and/or fair trade. • Labor and pesticide use. • Certification	• Raising public awareness on deforestation and land tenure problems.	• Nature conservation advocacy • Boycott of tropical timber. • Non-timber forest products.	• Environmental impact of shrimp-farming and open water fish farming • Public awareness on negative health effects • Modern vs ancient production methods
Governance and Organisation	Setting the agenda Different players take on a leading role in setting the agenda in the sector, by different means, such as industry fora, stakeholder dialogue, protests, or media attention.	• NGOs put Fair trade and coffee crises on the agenda. • Industry incorporates sustainability.	• Media and NGO's placed child labor on the agenda: national governments and industry responded.	• Trade unions and NGOs pressed for improved working and living conditions.	• Nature conservation organisations initiated dialogue.	• Intergovernmental initiatives to balance trade and conservation • Private certification and NGO lobby.	• Environmental organizations campaigned for legislation. • Health concerns linked to production.
	International Trade Agreements	• ICA	• ICCA	• Lomé Convention	• Arbitration, contracts	• ITTA	• Fishery agreements
	Concentration in the supply chain	• Few roaster and manufacturers control half of trade. • Smallholders supply majority of coffee.	• Few companies control chocolate manufacturing. • Smallholder crop; some plantations.	• Two large producers and distributors control 50% trade. • Plantation type of production.	• Production concentrated in two countries. • Few, integrated processors.	• Trade concentrated in Asia • Large domestic consumption in producing areas.	• Strong growth in aquaculture. • Concentration in salmon. • Smaller systems: different impacts.
	WTO cases	• Tariffs on soluble coffee		• EU preferential trade agreements		• Elimination of import tariffs	• Quarantine regulation • Tariff quota system. • Naming of product • Subsidies/fisheries • Dumping of shrimp

Table A.2 Matrix: Quality control and regulation in coffee, cocoa, bananas, palm oil, timber and aquaculture

Issue		Coffee	Cocoa	Bananas (Fruits)	Palm Oil	Tropical Timber	Aquaculture (fish and shrimp)
Product (section 1)	Legal requirements - product	Regulation 123/2005 of the GFL establishes a maximum level of ochratoxin A (OTA) in coffee. Ochratoxin A is a mycotoxin which has been shown to have carcinogenic and other toxic properties. Ochratoxin A occurs naturally and can contaminate crops in the field or after harvest. The following limits were agreed: roasted coffee beans and ground roasted coffee 5 µg/kg and soluble coffee 10 µg/kg. HACCP principles are applied, as it is expected that national food authorities will include green beans in HACCP. The International Coffee Council adopted Resolution number 407 in February 2002 to implement the Coffee Quality Improvement Program (CQP), subsequently modified by Resolution number 420 adopted in May 2004. The program is designed to improve the balance between supply and demand of coffee by stimulating demand through the provision of a better overall standard of quality to the market. The program encourages exporting members of ICO not to export coffee that a specified number of defects or exceeds minimum and maximum levels of moisture content. This program also envisages the development of alternative uses for sub-standard coffee. However the program is not legally binding. Following the Kona scandal in 1996 (central American coffees labelled as Kona), some countries (Guatemala, Nicaragua, Colombia), are in the process of developing laws for the enforcement of 'Appellations of origin' and designation of regions of origin.	In the general food law (GFL) index there are no straight linkages that refer to cocoa specifically. However there are general issues that cocoa need to comply with, like 'import requirements', but these focus merely on procedures. In case a country chooses to export chocolate instead of cocoa there are additional GFL requirements that become relevant, such as the use of additives, flavouring and labelling requirements. Also, in the case when the medicinal characteristics of cocoa are labelled for an end product, additional legal requirements will need to be met. Another legal issue is the approval of the EU parliament of a directive (EC 2000/36) that permits European cocoa producers to replace up to 5 % of the cocoa fat by another vegetable fat. At the moment of writing (November 2005) the EC is negotiating a regulation on Ochratoxin A for cocoa.	EC regulation No 2257/94 lays down quality standards for bananas (not including plantains, bananas for processing of fig bananas). Regulation refers to bananas and banana hands/clusters, to size and appearance, taste and classification. In size and appearance, the product must be green and unripe, firm, practically free from pests, bruises, malformation, and external moisture, among others. It must be free of foreign smell and/or taste. Bananas are classified into three classes: 'extra' class, class I, class II. For each class minimum criteria are given for sizing, quality tolerances (% of non-compliance) and presentation (uniformity, packaging) and marking. The EU has also formulated a list of Maximum Residue Levels (MRL's) specifically for bananas (see link Fresh Quality Guide at bottom). EC regulation No 178/2002 lays down the general requirements of the GFL on traceability.	Two types of palm oil exist: crude palm oil (CPO) and crude palm kernel oil (CPKO). Palm kernel cake is a by product commonly used as animal feed. Around 80% of palm oil and palm kernel oil is used in food applications (ice creams, margarines, cookies, noodles, etc). Other uses are animal feed and non-food applications like soaps. The GFL has general requirements for all these products. A specific commission decision exists for crude palm oil, decision 2004/92/EC of the European Food Law, because the illegal dye Sudan, which may have serious damaging health effects, was found in crude palm oil destined for consumption as such. In 2005, the decision, already in place for chilli, was extended to palm oil. It requires a certificate for directly edible virgin palm oil demonstrating the absence of the illegal dye Sudan I-IV' otherwise the importer has to demonstrate the absence of Sudan I-IV. Palm oil destined for further processing, or refined palm oil imported in bulk, is exempted. Palm oil can also be used as bio-diesel. Like solar and wind energy bio-diesel is considered as sources of Renewable energy. By the year 2010 the EU aims to have a percentage of 12% of the energy supplies coming from renewable sources. With regard to bio-fuels policies like improving infrastructure and bio-fuel promotion are suggested. There are no specific requirements for palm-oil but there are for bio-fuels in general.	For timber the GFL is not relevant. However there are safety-regulations that timber needs to comply with. The directive on European Dangerous Substances 75/548/EEC is one that demands labelling of wood for which the preservation substance Boric Acid is used. This acid carries possible risks of impaired fertility and may harm unborn children. In Japan a law was introduced in 2003/4 to restrict building materials in which formaldehyde is used (like in plywood)	The prevention of human diseases is the most explicit issue in food safety regulation. With regard to aquaculture *products* the GFL refers to the same directives as for aquaculture in general (see box 'Production method; Legal requirements production method'). The packing of the fish needs to clearly display 1) what the trade mark is, 2) what the production method is, 3) where the product originates from. The hygienic circumstances under which fish is produced directly influence the food quality and safety of fish. Therefore codes of conduct like HACCP and a voluntary code like Safety Quality Food (SQF) are of high importance for the product quality too. Most countries use HACCP as a guideline for their legislation for fish. However in Australia, New Zealand and various Arabic countries Safety Quality Food (SQF) is used. The presence of dioxin is a timely issue in the trade of fish, also because a number of governments, including the Netherlands, strongly reduced the tolerable level.
	Private regulation – product	In green coffee a distinction is made between organoleptic characteristics (aroma, taste) and bean appearance (grading, defects). Quality relates to altitude of cultivation, classified as high grown or hard bean, also called 'specialty coffee'. NYBOT (New York Board of Trade) and LIFFE (London International Financial Futures Exchange) have set grading standards for respectively Arabica and Robusta green coffee. Mainstream coffees are blends, which combine coffees of different quality. Main safety problem is mould that will cause OTA. The private sector has set guidelines for moisture levels for green beans between 8 - 12.5% and for roasted beans below 5% (European Coffee Federation). On health issues the coffee industry responded with the Positively Coffee initiative. An initiative to spread information to consumers on (healthy drinking of) coffee. The private sector also gives information through the pan-European Coffee Information Centre (CoSIC) , and the National Coffee Association (Coffee Science Source)	Product Quality is of highest importance for chocolate manufacturers. By measuring the number of defects (most important are smoky beans, mould, unfermented beans, insect infestation) quality can be measured. For a long time the marketing boards were responsible for safeguarding the quality, but with the end of (many) marketing boards in some occasions local governments, and NGO's have taken over that task. In industry a divergence is made between fine-flavour and bulk cocoa. For specific chocolates an extra high quality (fine-flavour) is sometimes required.	In industry the quality of bananas is of high importance. Importers usually determine At the port: size (length of fingers and thickness), evenness of ripening, blemishes, defects and the arrangement of the clusters. A single overripe cluster can destroy a whole container of bananas, also when quality of the fruit is poor, shipping's can be rejected. Quality standards may vary in the different markets. Bananas fall into two categories: (a) cooking bananas, including plantains and (b) dessert or sweet bananas. Virtually all exported bananas belong to the Cavendish variety group, which accounts for some 43 percent of global banana production. Banana puree is often used in juices, baby food, dairy products or baked goods. For baby food the food industry often requires that there are guaranteed no pest residues in the fruit, through controlled cultivation.	Palm oil processing (sterilisation, pressing) needs to take place as soon after harvest as possible, to prevent a decrease in quality. What is produced is Crude Palm Oil (CPO). CPO may already be exported but in countries like Malaysia there is plenty capacity to refine palm oil. To meet industry (and FAO Codex) standards the oil needs to be refined. Triggered by health issues around trans-fats, companies that produce vegetable fats are stimulated to reduce the number of products containing trans-fats significantly. Since palm oil is trans-fat free it might prove a good replacement	Wood quality is of importance for the wood industry. There are hundreds of different types of wood, all with their own specific qualities. However in the wood industry it is not common to experiment with new and unknown species. Like in the Netherlands the industry only works with wood that is known for its quality and carries a KOMO (product) certificate, this is a quality standard for the Dutch building sector. Wood with a KOMO certificate is guaranteed impregnated (with legal chemicals) using the vacuum method.	For (farmed) fish industry food safety is probably the most important aspect of product quality. World largest fish farming company Marine Harvest (Nutreco) has developed a code of conduct for the company it concerns: residues and contaminants, tracking and tracing, monitoring, cooling, HACCP and ISO standards. A number of large retailers (Ahold, Delhaize, Coop, McDonalds, ea) are member of the Integrated Aquaculture Assurance (IAA) by EurepGAP. Food safety is one of the aspects.
	Civil society regulation - product	Specialty coffees are increasingly applying for 'appellation of origin' status to avoid imitation and mislabelling. The Coffee Quality Institute, a non profit educational foundation, trust of the Specialty Coffee Association (SCA), focuses on improving coffee quality 'and lives of people producing it'. Through Q-auctions coffees are rated according to the cupping scale of the SCA of America and offers origin profiles (countries) Association Scientifique Internationale du Café (ASIC), an International Association on Coffee Science, and studies, is currently focusing on health and quality issues (Conference Sept 2006) With regard to health a lot attention has been give health and (excessive) coffee drinking. Too high coffee consumption would cause jitters, high cholesterol and nervousness. Other research has proven coffee reduces the risk for diabetes and Parkinson. In civil society health care institutions, media, scientists and industry (CoSIC) inform consumers about the (damaging or not) health effects of drinking coffee.	Health is an issue for civil society. There are dietary needs (chocolate without sugar, low-fat products) but there is also a need for information about healthy eating. Private industry (Mars, Nestlé) stimulates initiatives to inform consumers about the health effects of cocoa consumption.	Both legal and private quality standards for bananas include elements relating to visual appearance, which has the effect of increasing the pressure for agrochemical treatments, as the standards are potentially difficult to reach. The European Banana Action Network (Euroban, an organisation set up by NGOs) is striving at a redefinition of 'quality' in terms of sustainability, so that taste, environmental and social impact and production costs are been taken into account. Institutes like the US Federal Drug Administration (FDA) and consumer organisations consider bananas to be healthy, because they are: a source of potassium, low in fat, low in sodium contents, high in Vit. C and a good source of fibre.	Vegetable fats, containing unsaturated fats, have become increasingly popular at the expense of animal fats: consumption of saturated fats increases the risk of heart disease due to high cholesterol. Also 'trans-fats', formed when liquid oils are made into solid fats like shortening and hard margarine to increases shelf life and flavour stability of foods, have health risks. Some countries, e.g. Denmark, already demand labelling of trans-fat ingredients. Companies have already taken initiatives to reduce the trans-fats in their products altogether. Palm oil has a balanced composition of saturated and non-saturated fats and is free of trans-fats, therefore it can be expected that in countries like the USA (where palm oil consumption is relatively low) the demand for palm oil will increase. Health organisations, insurance companies, food manufacturers and some retailers campaign for products with health claims. The Malaysian Palm Oil Promotion Council (MPOPC) promotes the benefits of palm oil to consumers.	A remarkable thing about wood products is that the use or buying of wood products is perceived positively by consumers but the cutting of wood is perceived as very negative. Especially with regard to tropical hardwoods, consumers foresee problems. This pressures (local) governments to guarantee the resources of the timber (see box *production method, civil society*) Wood quality is important for consumers in the face of appearance, durability, maintenance and the fact that wood is a replaceable product. For projects like 'duurzaam bouwen' (sustainable building) in the Netherlands, the durability and maintenance of wood are also of high importance. The higher the durability of the material, the more sustainable and environmental friendly it can be considered.	There are two sides of the story about fish quality and human health. On the one hand the eating of fish and shrimp is recommended by public organizations for heart patients, for the large number of unsaturated fats and unique components like Omega 3 fatty acids. It is also recommended as a suitable replacement for meat for its proteins. On the other hand others recommend to not eating fish because toxins easily accumulate in fish. Methyl Mercury is an issue for (older in age) wild fish whilst with regard to farmed fish there are even more health concerns. Fish would be unhealthy because of the high quantity of PCB's, mercury and black Sabbath. Also farmed salmon is coloured with a chemical 'carophyll pink' (astaxanthin) what some consumers do not appreciate.

Issue		Coffee	Cocoa	Bananas (Fruits)	Palm Oil	Tropical Timber	Aquaculture (fish and shrimp)
Production Process (section 2)	Legal requirements - production process	Legal requirements are mostly of a phytosanitary character and include measures to avoid the extension of pests (coffee borer) and fungus. For organic coffee, certification is a crucial element for market access. Products from third (non-EU) countries can be sold as organic only when it has been demonstrated that they are from a country whose organic farming rules are equivalent to those of the EU as laid down in the Regulation 2092/91. Certification must be carried out by a recognised inspection body, either a national authority in the country concerned whose equivalence has been approved according to Regulation 2092/91 or by an EU inspectorate which operates internationally, like Ecocert, SKAL, KRAV or BCS. In the European Union, different competent authorities have set different requirements for organic group certification.	Here the focus is on cocoa production, not the manufacturing of chocolate. Mostly cocoa is produced in developing countries within a belt of 8° within the equator, is exported and is processed to become chocolate in a developed country. Thus in the production process of cocoa there needs to be dealt with varying legal requirements in different countries. Relevant for cocoa production is the proclaimed use of child labour. The European parliament published a resolution on child labour in July 2005 and urges member states to help develop UN norms against child labour in order to make it a useful international tool. The Parliament recommends legal action against EU-based importers using child labour or violating other fundamental labour rights. Governments in producing countries, in particular Cote d'Ivoire, work on monitoring systems and legislation.	There are no specific legal production requirements for banana other than the general laws in producing countries.	Palm oil production is concentrated in Malaysia (47% of world production) and Indonesia (35%). From 1982-2002 palm oil production has increased enormously in both countries: 3x in Malaysia and 10x in Indonesia. Almost all palm oil is produced in plantations. New plantations impacted on the environment and local communities. The Malaysian Palm Oil Board mentions a whole set of quality criteria but they only refer to the quality of the product, not to the quality of the production process. The Malaysian Palm Oil Promotion Council refers to the good performance in current production processes in promotional information. With regard to palm oil the Indonesian government seems to be mainly involved with allocating land for expansion. In 2002 3,5 million ha was under palm oil production Growth estimates vary from a total of 5,5 million hectares in 2020 (Dutch MVO) to 11,2 million hectares in 2020 (World Rainforest Movement).).	After the world summit on sustainable development in 2003, the European Union developed the, so-called Forest Law Enforcement, Governance and Trade action plan (FLEGT). This action plan aims ensure that ultimately only legally produced timber enters the EU. The key-element of the action plan is to enter into so-called Partnership Agreements with timber -producing countries. These agreements will contain a range of measures to improve governance of the forest sector in timber-producing countries. Most importantly the agreements will contain a licensing system which will allow EU customs to determine the legal origin of the timber exported by partner countries to the EU. The FLEGT action plan explicitly does not strive for a general production guideline for timber. It does strive for legally produced timber, meaning produced in accordance with the laws and regulations of the country of origin. Since these the content of what legal is, also varies. Most countries and most governments seem to be quite involved with their forest and wood production. In 2000 149 countries were involved with international initiatives (FAO 2001). Many try to regulate their wood production and imports and exports through tariffs on timber products, taxes on e.g. lumber exports, bans on log exports and certification.	Until the 1990's aquaculture was hardly considered in legislation: it was seen as part of general fishery laws. This resulted in unauthorized aquaculture, discharge of waste water without permit and illegal imports of fish. In the General Food Law (GFL) Animal health (Council Directive 91/67/EC) and welfare are becoming important issues. It also needs to be transparent where the feed comes from. The GFL also contains many commission decisions for aquaculture with regard to 'approval of zones and farms', 'placing on the market of species', 'diseases', 'rules governing imports from third countries' and 'safeguard measures'. (see EU link) According to the FAO many countries have prepared national laws as a response with regard to aquaculture and prevention of disease outbreak and environment impact. FAO developed a code of conduct for responsible fisheries, adopted by over 170 FAO member countries. It stresses the importance of cooperation between 'those involved in fisheries and aquaculture' to conserve and manage fish resources and their habitats. It contains 4 articles, focused on national jurisdiction, international cooperation, genetic resources and responsible aquaculture. The Network of Aquaculture Centers in Asia Pacific (NACA), an intergovernmental organization, developed a code of conduct for shrimps in cooperation with the World Bank, FAO, WWF, and UNEP.
	Private regulation - production process	A number of coffee roasters work with their own standards, e.g. Starbucks, or ask third party organisations to certify their coffees, e.g. Kraft and Rainforest Alliance or Sare Lee/DE and Utz Kapeh. Nestlé, manufacturer of soluble coffees, works with direct buying relationships in a number of Southern countries. The independent Utz Kapeh code, which originated in the Ahold Coffee Company, explicitly aims to certify mainstream coffee, which also implies including numerous unorganised coffee farmers. In 2003, coffee producers, trade & industry, trade unions and social and environmental NGOs assembled to develop the Common Code for the Coffee Community (4C). The aim was to integrate social, ecological and economic dimensions of sustainability of the production, processing and marketing of green coffee into a baseline code of conduct for the market for 'mainstream coffee'. It builds on the notion that most of the existing codes and standards in the coffee sector often deal with specific ecological and/or social aspects or with specific coffees, regions or production methods.	Private companies have an interest in influencing the production process because it largely determines the quality of the cocoa. Since losses is cocoa are high due to pests and plagues, various initiatives (like those of the Common Fund for Commodities) focus on reducing pests. However in addition to that we can observe an increase in private initiatives that not only focus on the production process with regard to quality but focus on sustainability. There are a number of these initiatives: Sustainable Cocoa Program (WCF), the Sustainable Tree Crop Program (STCP), the International Cocoa Initiative (ICI) that include many manufacturers and processors. Child labour receives special attention in these initiatives since a number of producing countries were accused of abusive child labour. Private companies, e.g. Cargill/ADM and Nestle, have formulated individual codes of conduct.	The banana industry developed 'Banana Supply Chain Traceability Guideline' for compliance with traceability related provisions of the GFL. Organisations that produced the guidelines include Chiquita, Del Monte, Dole and Fyffes, including key areas of the supply chain (grower, packer, transport, loading, unloading, ripening and distribution) as well as record keeping for tracing and tracking by using barcodes. On international pressure, Dole, Del Monte and Chiquita have set up a Permanent Committee with Latin American and Filipino trade unions in 2000, followed by signing an agreement with COLSIBA (Latin American Banana Workers Union Coordination). Rainforest Alliance developed a standard for bananas that focuses on environmental and social criteria. Since 2000 all Chiquita's farms are certified and a large number of their small-scale suppliers. In 2005 Chiquita actively started to promote their certified bananas in the Netherlands.	In the palm oil sector vertical integration is common business. The largest vegetable oil processors (Unilever, Cargill) also own various plantations in Malaysia, Indonesia, Ghana. Large vegetable oil importers like Unilever, Cargill have some sort of code of conduct with regard to the palm oil business. These codes of conduct start at the agricultural level down to the processing and cover: soil loss/fertility, nutrients, pest management, biodiversity, product value, energy, water, social/human capital, local economy, community development. The largest initiative is the Round Table on Sustainable palm oil. Here industry joined hands with NGOs to come to an agreement on how to achieve sustainable palm-oil production. A set 8 of principals and 40 adjoining criteria are formulated with regard to sustainable Palm oil production. There are a few plantations that produce organic palm oil: The Ghanaian Oil Palm Development Cooperation (GOPDC, privatized in 1995) produces organic certified palm oil since 2002. All their plantations are certified and recently they also have started certification of GOPDC outgrowers. Another is DAABON in Colombia.	There are many (inter)national certification initiatives, with varying standards: e.g. PEFC (by far world's largest certifier), FSC (best known in the Netherlands), Smartwood (world's first independent certifier), Keurhout, CSA, SFI, ATFS, MTCC, and PACF. Timber trade and industry recognize the need for clarity amongst all those standards to prevent market disturbance. However, the definition of sustainable forest management varies, specifically on practical issues, scope, participation of stakeholders, responsibility, transparency, legality and control. Members of the Dutch association for wood firms (VVNH), representing 300 wholesale firms (90% market share) and a number of associations, signed a code of conduct, demanding trade in timber produced in accordance with (inter)national laws. They stand for a European Law banning the import of illegal wood. Certification has proven to be successful for temperate forests but less successful for tropical forests (of all certified wood only five percent comes from tropical countries). In an ITTO workshop in 2005 participants suggested that a phased introduction of certification schemes would stimulate producers to take part in a certification scheme.	The EU refers to organisations of fishermen or fish-farmers for assurance of supply of quality products to the market. Membership is voluntary but includes compliance with rules about production and sales. Based on the FAO code of conduct and European and national legislation both the Federation of European Aquaculture Producers (FEAP) and the Dutch 'produktschap vis' developed a voluntary code of conduct to promote best practices in the sector. An Aquaculture group of IFOAM drafted standards for organic aquaculture in 2003. In the UK, the Soil Association certified organic fish farms, although a number of issues are still undefined. For shrimp additional initiatives exist. The Global Aquaculture Alliance (GAA) have developed standards for shrimp production. They have lined up with Aquaculture Certification Council (ACC). ACC specifically aims at the production process. At the moment of writing (November 2005) ACC only certifies shrimp hatcheries, farm and processing plants. In the near future feed mills will also be incorporated and once the shrimp certification is completed, certification for other species will follow. A number of large retailers (Ahold, Delhaize, Coop, McDonald's) belong to the Integrated Aquaculture Assurance (IAA) of EurepGAP.
	Civil society regulation-production process	Since the launching of the 'Max Havelaar' initiative (1989), that brought Fair Trade coffee into the regular retail chain, other 'sustainability' labels emerged. The 'Fair Trade' label ('Max Havelaar' has become a brand) certifies on social sustainability criteria of organised small farmers and estate employees and guarantees a minimum price. Increasingly certification schemes involve both NGOs and private sector. IFOAM (International Federation of Organic Agricultural Movements) elaborated manuals for implementation of Internal Control Systems for inspection and certification that specifically addresses smallholder needs in monitoring. Utz Kapeh, a mainstream certification initiated by Ahold, certifies social and environmental conditions. Starbucks has elaborated buying guidelines with Conservation International. Other labels include Bird Friendly Coffee by the Smithsonian Migratory Bird Center, Rainforest Alliance with Sustainability Agriculture Network.	A number of NGOs have expressed their concerns about abusive child labour and it was hot news in the media. Companies in the cocoa sector had to take position and many of the private initiatives are an answer to what was 'discovered' in the cocoa sector.	NGOs have criticized banana companies for not complying with basic labour standards and for the use of large amounts of pesticides used, even whilst workers were in the field. Also attention was drawn to the low remuneration and low guarantees for small-scale banana growers. As a result, new niche markets for organic, eco-friendly and fair-trade bananas have emerged. Certification according to social and environmental standards is done by Social Accountability International (SAI) with SA8000, FLO, Conservation Agriculture Network/Rainforest Alliance with Better Banana Project (label), IFOAM (organic certification). All four organizations work together in the Tropical Fruit Network (TFNet) facilitated by FAO. Due to all the media attention many large banana companies also entered the market with their own organic banana or other labelling like the Rainforest Alliance.	The potential impact of the increase in palm-oil production at the expense of rainforest is widely publicised. Between 1990 and 2002 the global area under production increased with 43% with the largest growth in Indonesia and Malaysia. The problems mentioned are: deforestation, land tenure, loss of livelihood of indigenous people, erosion, forced labor, loss of biodiversity, high use of chemicals and fertilizer, research of GMO palm oil. Governments argue that palm oil plantations are better carbon-sinks than tropical rainforest. Various NGOs, Friends of the Earth, World rainforest movement, WWF, are involved in raising public awareness. WWF takes part in a Round Table initiative. Also national NGOs, such as the Indonesian NGO SAWIT-watch, are concerned about the costs of the expansion of palm oil production. They actively support expropriated local people by pressuring the local governments and campaign against IMF/World Bank's policies.	In 1975 one of the key players to set forest conservation on the agenda was the WWF. A year later the FAO published a document 'Tropical Forest Report' that, together with others, led to more acceptance of the forestry dilemma's by governments to take international action. In the early 80-ties the UN together with the WWF developed a World Conservation Strategy. During the same time European NGOs called out for a boycott of tropical timber. Deforestation of tropical forests has been a major issue in civil society and various environmental NGO's (WWF, Greenpeace, Friends of the Earth) have given it a lot of attention. They mostly address the degradation of land and, as with Palm Oil and soy, land tenure issues and the loss of livelihood of local communities.	Many endeavours for codes of conduct minimally differentiate between open marine fish farming and closed recirculation systems, despite large differences. Most criticisms by researchers, NGOs or media address open systems affecting the environment. Aquaculture is sometimes positively commented on because it would reduce the pressure on the fisheries. However more often it is criticised, e.g. websites of NGOs and research institutes referred to a critical article published in the scientific magazine 'Nature'. Especially farming of Atlantic salmon is criticised for its environmental and health effects. Many shrimp farms, especially in Asian coastal areas, are established at the expense of mangrove forests and are therefore criticised by NGOs (WRM, ISA-NET) for the loss of rural livelihoods, destruction of the ecosystem. Industrial shrimp farming is considered to be unsustainable, whereas ancient integrated aquaculture methods do exist. The NGOs recommend the latter.

Issue		Coffee	Cocoa	Bananas (Fruits)	Palm Oil	Tropical Timber	Aquaculture (fish and shrimp)
Governance (section 3)	Setting the agenda	Dutch NGOs initiated the Max Havelaar/ Fair Trade label. They also founded the Coffee Coalition in 1999. The International Coffee Coalition has been set up in December 2001 to create a common umbrella for different organizations campaigning on the coffee crisis (low prices). So far, it includes 26 organisations representing 11 countries and 5 international organisations. The Coffee Coalition started an intensive public awareness campaign in 2003 to pressure market leaders towards more corporate responsibility. As a result, Sara Lee/Douwe Egberts committed itself to buy a minimum of 4% Utz Kapeh certified coffee. The ICO plays a major role in setting the agenda on international government and industry level.	The Media has drawn attention to the occurrence of child labour in the cocoa production; NGO's (Free the slaves), UN organisations (ILO, UNICEF) and governments in producing countries have shown their concern en cooperation with further investigation. An US senator, Tom Harkin, and a US representative, Eliot Engel, played a large role in addressing child-labour to the cocoa initiative. A protocol known as the 'Harkin-Engel' protocol was signed by industry in 2001 and led to various initiatives. The attention for child labour led to explicit views and statements by associations like the World Cocoa Foundation (WCF), European Cocoa Association (ECA), Federation of Cocoa and Commerce (FCC), Chocolate Manufacturing Association (CMA) and to the initiation of a number of initiatives: 'The Joint statement of the cocoa branch', Sustainable Cocoa Program (SCP), Sustainable Tree Crop Program (STCP) and the International Cocoa Initiative (ICI). Furthermore Max Havelaar and organic chocolate are available to the public.	Fair Trade (1995) and the organic (1996) bananas were the first 'produced under certain standards' bananas that entered the Dutch market. Max Havelaar. The European Banana Action Network (EUROBAN), a coalition of civil society organisations has been pressing to improve living and working conditions of plantation workers and family farmers. EUROBAN counts over 35 members in Europe and works in close association with over 45 trade unions and small producer organisations in Latin America, the Caribbean and the US.	On the initiative of WWF a number of stakeholders (plantations, associations and companies, Sainsbury and Unilever) set up a round table on sustainable palm oil with palm oil-related traders, producers, retailers and investors in Malaysia in 2003. Over 200 delegates, from 16 countries, representing industry and interest groups attended. There was consensus among participants that a common code of conduct has to be developed, agreed upon and implemented. In April 2004, the 'Roundtable on Sustainable Palm Oil' (RSPO) was registered as a not-for-profit organisation in Switzerland. The International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers' Associations (IUF) together with the World Rainforest Movement focused on the social living circumstances of plantation workers, including those working in the palm oil plantations. The International Labour Organisation supported their statements.	The first initiatives on sound forest management were taken by FSC in 1984. Meanwhile, in 1983 the International Tropical Timber Agreement described trade and conservation as of equal importance (culminating in what is known as 'objective 2000') Since the mid 1980s, wood users, traders, producers, governments, and Ngo's agree that there is a problem of deforestation and unsustainable forest management. However, there are different viewpoints on to approach this. Traders and users want stricter bans and rules on the legality of the wood to stop unfair competition. Producers and producing countries prefer to stick with voluntary certification to minimize costs and they fear that certification leads to non-tariff trade barriers. NGO's want stricter bans and rules. Some large NGO's cooperate with the wood industry to strive for certified wood. The European Union is active with the FLEGT: Forest Law Enforcement, Governance and Trade.	Aquaculture appeared in media for a number of reasons. Pollution of the environment, escapes, spread of disease, large amounts of feed (caught fish), toxins, etc. Various environmental NGOs have taken a lead in this. Legislation is also triggered by environmental groups. Notably, this critique on aquaculture is largely directed to large scale commercial farms in open waters. Recirculation system or small scale self sufficient systems do not have the same environmental impact. Some of those farmers (like the Dutch Association for fish farmers, NEVEVI) wanted to develop a code of conduct to make clear to the public that in contrary to other sectors and other fish farmers, their farming method was environmental friendly.
	Codes Standard	• Bird Friendly coffee • Fair trade • Organic • Rainforest Alliance • Utz kapeh	• Fair trade • Organic	• Biodynamic • EurepGAP • Fair trade • Organic • Rainforest Alliance	• Organic	• CSA, SFI, ATFS, MTCC, PACF • Forest Stewardship Council (FSC) • Keurhout / VVNH code of conduct • PEFC • Smartwood	• ACC (shrimp) • EurepGAP • Organic (salmon, trout) • (for fisheries MSC, *waddengoud*)
	International Trade Agreements	The International Coffee Organization (ICO) was established in 1963 when the first International Coffee Agreement came into force. It included an international quota system for exporters and importers' members from 1963 to 1973. From 1973 to 1989 an adjusted quota system was re-established to stabilize prices. From 1989 onwards, the organization continues as a centre for collecting and disseminating information, research and sector support. On 2005 a new Agreement entered into force, without economic provisions (quota) and with the promotion of sustainability as new objective, referring to the principles of Agenda 21 agreed at the United Nations Conference on Environment and Development. In 1999 ICO installed the Private Sector Consultative Board (PSCB). This board consisting of 16 leading industry representatives of producing and consuming countries is consults and advises the ICO about matters relevant to the coffee industry.	The International Cocoa Organisation (ICCO) was established in 1973 to administer the first International Cocoa Agreement, and the agreements that followed in 1975, 1980, 1986, 1993 and 2001. The Agreements were made among the governments of cocoa-producing and cocoa-consuming countries, under the auspices of the United Nations. The last agreement was negotiated at the UN Cocoa Conference in February 2001. In the 2001 International Cocoa Agreement, economic clauses were excluded and greater emphasis is placed on a sustainable cocoa economy. New in this agreement is the creation of a Private Sector Consultative Board (PSCB), the Agreement seeks the active involvement of the private sector in the achievement of its goals.	In 1975, 48 ACP (African, Caribbean and Pacific) countries and European Union concluded the Lomé Convention for the duty free import of a range of commodities, including bananas. Separate trade regimes (high prices, quota, duty free) of EU countries with former colonies and for EU production of bananas. 'Dollar' bananas from Latin America pay 20% import duty, with exception of export to Germany, that negotiated duty free import for Latin American bananas. After the integration of the European Market, the Common Organization of the Market in Bananas (COMB) was established. To protect the production of 12 traditional ACP countries and European producers from the dollar bananas with far less production costs (half to one third), preferential access to the European market was established by means of a system of tariffs and quotas. Germany lost its preferential import position. Banana quota for these ACP countries duty free up to annual volume of 857700 tons. Quota for dollar bananas 2.553 million tons (1995) with tariff of 75 euro per ton. European banana producers receive compensation. The Cotonou Agreement was signed in 2000 between EU and 77 ACP countries, replacing Lomé for duty free import of bananas. 'Traditional' ACP countries continue to have duty-free access.	There is no International umbrella organization for palm oil in which governments are represented. FOSFA is the Federation of Oil, Seeds and Fats Associations. FOSFA is a professional international contract issuing and arbitral body concerned exclusively with the world trade in oilseeds, oils, fats and edible groundnuts. Internationally 85% of the global trade in oils and fats is traded under FOSFA contracts. The contracts provide the terms of trade for the oilseeds, oils and fats and groundnut commodities.	The first International Tropical Timber Agreement was negotiated in 1976. During negotiations in the early eighties concerns about conservation and trade became prevalent. In the ITTA of 1983 both matters were considered to be of equal importance. The ITTA never appeared to be commodity agreements like others, but from the early beginning took both conservation and trade components serious. To guide and facilitate the ITTA, the International Tropical Timber Organisation (ITTO) was founded in 1986. The ITTO is an intergovernmental organization. It 'promotes the conservation, sustainable management, use and trade of tropical resources'. ITTO has 59 members who represent around 80% of worlds' tropical forests and 90% of worlds' tropical timber trade. Another intergovernmental policy forum is the United Nations Forum on Forests (UNFF). UNFF has been operational since 1995. Although no trade agreements are made here, two fora: IPF (1995-1997) and IFF (1997-2000) resulted in non-binding proposals how to achieve sustainable forest management. Especially producing countries are cautious towards non-tariff trade barriers. All the countries that are member of the UN are UNFF members.	With regard to fisheries there are agreements between governments. Aquaculture is commonly mentioned as one way to contribute to a solution for fisheries, because it somehow relieves the pressure on fisheries. There is a lot of cooperation between the different member states to maintain healthy fisheries in healthy waters. In order to protect the fisheries and the future of the fish sector cooperation is needed to arrange inspection and control services. Within the European Union producer organizations (founded by fishermen and aquaculture farmers) are important for the regulation in the member states, and the EC has also suggested that the PO's should take the lead in an integrated fishery policy and the market. . The powers of the PO's vary within the different member states.
	WTO-cases	In 2001 Brazil threatened the EU of filing a complaint with the WTO because of 'discriminatory treatment'. The EU had lifted tariffs on its imports of soluble coffee from the Andean countries and from Central America as a way to stimulate the fight there against the illegal narcotics trade, maintaining the tax on the Brazilian product. The EU permitted the entry of up to 31,364 tons of coffee tariff-free over three years, with a limit of 8,740 tons in the first year, and larger quotas in the two subsequent years. The decision marked the end of a 10-year trade dispute.		Even before WTO, the USA complained twice to GATT (General Agreement on Tariffs and Trade) about European policies on import of bananas. GATT judged it as incompatible with its rules, but was not able to enforce a reform of EU policy. In 1996 five countries (Honduras, Guatemala, Ecuador and the USA) filed a complaint with the WTO. Result: EU was entitle to keep preferential agreement with ACP countries, but had until 1999 to adjust methods of license allocation. In 1999 the WTO ruled in favour of the USA (Lobbied by Chiquita) and Ecuador on quota and license allocation. Ecuador obtained the authorization to apply sanctions against the EU to a value of US$ 201 million a year. In 2001, prompted by the WTO, the EU adjusted its import policy by (a) eliminating national allocations of the dollar quota, (b) 17% of the dollar quota allocated to 'non-traditional' operators (c) transfer, from January 2002,of 100,000 tons of APC quota to the dollar quota, (d) this transitional regime to be replace by a tariff only regime for dollar bananas (no quotas nor licenses)	With the eye on entering the WTO, China - worlds' second largest palm oil importer and the largest importer of Malaysia-, decided to eliminate the import tariff quota for palm oil. It seems there has not been a WTO dispute on palm oil.	In the house of parliament in the Netherlands there is a proposal to differentiate between sustainable and non-sustainable produced timber through labelling. The European Commission blocked this proposal because it would be discriminatory. Meanwhile the proposal is already linked to a standard (BRL) the Dutch government wants to implement, also when investments are done for public use. Countries like Canada and Malaysia are following these developments and have informally announced to take action towards the WTO in case of trade discrimination or non-tariff trade barriers.	Within the WTO there is doubt whether aquaculture subsidies fall under the mandate of the WTO negotiations for fisheries. Aquaculture does affect fisheries due to the use of juveniles and fish feed yet is deals with different issues. Some discuss trade-distorting effect of aquaculture; others emphasize the importance of aquaculture for developing countries. There have been five cases on salmon, one on sardines and three on shrimp. Cases for salmon addressed USA quarantine regulation, an EU tariff quota system, and USA investigations of Chilean salmon imports. All above mentioned cases were resolved or settled. For sardines Peru filed a complaint against the EU about the naming of the product. The EU and Peru had to agree a reasonable time for Peru to implement the EU recommendations. In shrimp, Thailand, India, Malaysia, Philippines, and Pakistan directed three cases at the USA. The latest one is against anti-dumping measures taken by the USA Thailand. Shrimp would be produced under the price of production. Accused ones claim this is not true. The case is not solved yet. The two other cases are about the USA banning certain shrimp (products). In both cases consultancy about the bans were requested.

Issue		Coffee		Cocoa		Bananas (Fruits)		Palm Oil		Tropical Timber		Aquaculture (fish and shrimp)	
Organisation (section 4)	Industry and supply chain organization	Four large coffee companies dominate almost half of world coffee trade (Kraft, Procter &Gamble, Nestle and Sara Lee, plus to some extend Tchibo). An estimated 70% of production comes from farms less than 10 has. Of the total 110.5 million bags world coffee production in 2004, Brazil produced 34%, Vietnam 11% and Colombia 10%. Vietnam has augmented its production of Robusta by factor 7 from 1990 to 2000. The industry is characterized by oversupply, leading to a 30 year low price in 2002-2003. Of all producing countries, Brazil has a large developed internal market for roasted coffee. Most roasting and consumption takes place in the USA and Europe.		80% of the cocoa is produced by smallholders, although in the new producing countries (Malaysia) 85% of the crop comes from plantations. Most cocoa (58%) comes from West Africa (Ivory Coast (43%) and Ghana (15%)), but South East Asia is still increasing its production. In the manufacturing of chocolate Barry Callebaut (24%), Nestlé (21%), Mars (13%) and Cadbury (12%) account together for 70% of the manufacturing of industrial and consumer chocolate. A clear trend is that small processors and manufacturers are taken over by large (abovementioned) companies. Only 4% of the global chocolate production takes place in developing countries. Due to tariff escalation developing countries remain mere suppliers of unprocessed cocoa (situation in 2003)		The two largest producer and distributors of bananas are both US-based companies: Chiquita Brands International (formerly known as the United Fruit Company, then United Brands) and Dole Food Co. (formerly Standard Fruit). Each accounts for just over a quarter of all bananas traded internationally. Then comes Del Monte Fresh Produce, owned by the Chilean-based IAT Group (the capital is held in the United Arab Emirates), and controlling some 15% of the banana trade. The fourth biggest banana export company is Noboa, an Ecuadorian company that controls over one third of Ecuador's exports and therefore some 11% of total world sales. Fifth is the Irish-based company Fyffes with a 7-8% share. Fyffes controls nearly 20% of the EU market (i.e. in second place), but has almost no production of its own. Multinational banana companies are integrated vertically, owning or contracting plantations, sea transport and ripening facilities, and have their own distribution networks in consuming countries. They tend to repatriate profits to their countries of origin; only 12% of the final price stays in the producing countries. 8 out of 10 bananas exported originate from Latin America. Leading producing countries are Ecuador, Costa Rica and Colombia. The Philippines are Asia's main exporter, in Africa Cameroon and Côte d'Ivoire and in the Caribbean the Dominican Republic and the Windward Islands.		After soy oil Palm oil is with approximately 28% the second most consumed vegetable fat. Malaysia *(47%) and Indonesia* (35%) account for 82 % of the world production of palm oil. Other countries like Nigeria* (3,6%), Thailand *(2,3%) and Colombia* (2,1%) follow at large distance. Largest importers are India* (17%), China* (14%), The Netherlands* (6,9%), Pakistan8(6,4%) and Germany* (5,8%). The trend in the palm oil industry is 1) that there has been a shift from 'many small palm oil processors' to 'fewer and larger processors' and 2) companies integrated various functions (production, processing, refining and trading directly with retail). With 17%,Unilever has by far worlds' biggest market share in vegetable oils (Montedison/cargill 3,1%, Nisskin oil mills 2,3%, etc)**. They buy 6-8% of the total world production of palm oil. Although Unilever emphasizes the uniqueness of palm oil, scientific research suggests that due to new technologies vegetable oils are increasingly interchangeable. This may imply an increased competition between the various vegetable oils. * *data from FAO database 2002* ** markets.duke.edu/student_it/soc142_spring2002/team4/global.html		*All data come from ITTO, year 2003-2004, sometimes based on estimations and on sources other than member governments.* <u>Logs (total ITTO production 136 million m3)</u> Indonesia, Brazil, Malaysia and India account for 75% of total ITTO log-**production** and for 72% of total ITTO **consumption**. China is another upcoming consumer, but domestic harvesting is restricted and therefore China has become largest **importer**, followed by India and Japan. Malaysia is the largest **exporter** followed by Papua New Guinea. Their market is mainly Asian. Gabon is ITTO's' 3rd exporter and Africans' largest. <u>Sawn wood (total ITTO production 43).</u> Brazil, Indonesia, India, Malaysia and Thailand produce nearly 80% of ITTO sawn wood. Brazil is with 37% the largest **producer.** The list looks the same for sawn wood **consumption**. China's consumption increased, overtaking Thailand and Japan. China is the largest **importer** followed by Thailand and Malaysia. ITTO members account for most of the sawn wood **exports**. Malaysia, Brazil , Thailand, Cameroon and Côte d'Ivoire being the largest. <u>Veneer (total ITTO production 2.6 million m3 in 2003)</u> ITTO producers account for most veneer **production** from the tropics. China, Malaysia, Philippines, Brazil and Ghana are the largest producers. China, Philippines, Malaysia, India and Brazil are the largest **consumers**. The largest **importers** are Rep. of Korea, Taiwan, Malaysia, China and USA. Malaysia is by far the largest **exporter** (48%) followed by Gabon and Ghana. <u>Plywood (total ITTO production 15.7 million m3 in 2003)</u> Indonesia, Malaysia, China, India and Brazil are the main **producers** (86%). Production in China rose by 33%(!). Japan, China, India, Indonesia and Rep. of Korea are main **consumers** (67%). Japan is largest **importer** with 40%, followed by Rep. of Korea, USA, Taiwan and China. Indonesia and Malaysia are the largest **exporters** accounting for 2/3rd of total. Other exporters are Brazil, China and Belgium.		Aquaculture is the fastest growing sector in the world's food production. In 1995 aquaculture produced 1/5 of the total production of fish and shellfish. In monetary terms aquaculture took even 1/3 for its account. According to FAO data from 2002 China was worlds' largest producer of Aquaculture products with 27,767,251t. India follows at large distance with 2,191,704 t followed by Indonesia (914,066t) and Japan (828,433t). Norway is the first West European country and occupies the 7th place with 553,933t. Unfortunately these data are not split out for fish and shellfish. According to EU data the EU is the 3rd largest fishery producer in the world. Of this total more than 1/5 comes from Aquaculture. The average EU consumption is 25 kg per head per year, compared to the average world consumption of 16 kg per head per year.	
	Interesting links	4C CoSIC ECF ICO Positively Coffee Utz Kapeh	www.sustainable-coffee.net/ www.cosic.org/ www.ecf-coffee.org www.ico.org www.positivelycoffee.org/ www.utzkapeh.org/	**CAOBISCO** **CIC** **ICCO** **ICI** **STCP** **WCF**	www.caobisco.com/ www.chocolateinfo.com/ www.icco.org/ www.cocoainitiative.org/ www.treecrops.org/ www.worldcocoafoundation.org/	**Banana link Brochure 'golden fruit'** **FAO** **Max Havelaar** **UNCTAD**	www.bananalink.org.uk/ www.fao.org/es/ESC/common/ecg/29090_en_WorkingGoldenFruit.pdf www.fao.org/es/ESC/en/20953/20987/highlight_29090en.html www.maxhavelaar.org/pages/template.asp?soort=B&rID=26&produktID=2 r0.unctad.org/infocomm/anglais/banana/market.htm	**FAO** **FOSFA** **GOPDC** **MPOPC** **RSPO** **WRM**	www.fao.org/docrep/V4700E/V4700E0a.htm www.fosfa.org/ www.gopdc-ltd.com/main.html www.mpopc.org.my/index.asp www.sustainable-palmoil.org/default.htm www.wrm.org.uy/	**EU-FLEGT:** **FSC:** **ITTO:** **KOMO** **PEFC:** **WWF:**	europa.eu.int/comm/development/body/theme/forest/initiative/index_en.htm www.fsc.org/en www.itto.or.jp/live/index.jsp www.komo.nl www.pefc.org/internet/html/ www.panda.org/	**EU** **FAO-code** **FEAP** **Marine harvest** **Organic** **WRM** **WWF**	europa.eu.int/comm/food/animal/animalproducts/aquaculture/index_en.htm www.fao.org/figis/servlet/static?dom=org&xml=CCRF_prog.xml www.aquamedia.org/feap/code/default_en.asp www.marineharvest.com/ www.certifiedorganic.bc.ca/rcbtoa/services/aquaculture.html www.wrm.org.uy/index.html www.panda.org/about_wwf/what_we_do/policy/agriculture_environment/commodities/shrimp/table_of_facts/index.cfm