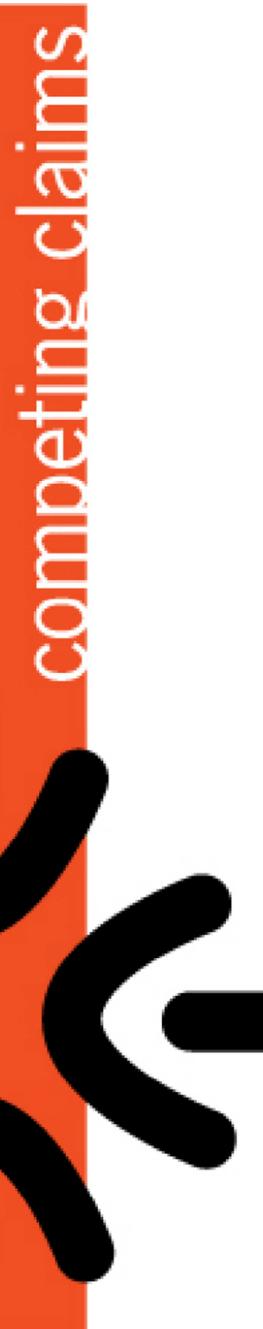




## Towards a sustainable biofuel trade an analysis of trade barriers and WTO- consistency of certification schemes for biofuels as currently being developed in the EU

Anouk Grinsven  
August 2009



This series of Policy Briefs is a result of the Partnership Programme between the Netherlands' Ministry of Foreign Affairs Government and Wageningen UR

The Netherlands' Directorate-General for International Cooperation and Wageningen UR are implementing the Partnership Programme 'Globalisation and Sustainable Rural Development'. In the context of conflicting local, national and global interests and drivers of change processes, the programme aims, among other things, to generate options for the sustainable use of natural resources, pro-poor agro-supply chains and agro-biodiversity. Capacity strengthening and institutional development form cross-cutting issues in of the Partnership programme. The programme's activities contribute to improved rural livelihoods, poverty alleviation and economic development in countries in the south. Farmers and other small-scale entrepreneurs in the agricultural sector form the primary target group. The program has a strong -but not exclusive- focus on countries in Sub-Saharan Africa.

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MSc thesis

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WAGENINGEN UNIVERSITEIT  
WAGENINGEN UR



MSc thesis

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# **Summary**

This research attempts to answer the question: "*What are the opportunities and barriers of certification schemes within the WTO-regime for sustainable biofuel trade, as these are currently being developed in the EU?*" by using the concept of environmental authority. The market for biofuels has grown rapidly in recent years by the target setting of national governments and the EU, which are now almost overruled by concerns on the sustainability of biofuels. In order to deal with the sustainability, standards are developed by different stakeholders, which are divided in three groups in this research: state based initiatives, non-state initiatives and hybrid initiatives. Those standards can on the one hand be limited by the WTO Agreements and on the other hand can create trade barriers, especially for developing countries.

Literature study, visited seminars and open-structured interviews conducted in the Netherlands, Brussels and Geneva, have shown that the environmental authority of the EU and states is nowadays too limited to regulate the sustainability of biofuels by a standard. The private sector however is able to set strict criteria on all the issues to regulate the sustainability of biofuels in an effective way. Future discussions of the WTO Members on the interpretation of the WTO Agreements in relation to (potential) trade barriers caused by certification schemes on sustainable biofuels will provide more insight in the opinion of Member States on the acceptance of non-product related production and processing methods within the WTO. Harmonisation and stakeholder involvement are some of the factors which can limit the chance on trade barriers and a WTO-dispute and will increase the chance of acceptance of possible WTO-inconsistencies of certification schemes.

**Key words:** *biofuels, WTO, biofuel trade, European Union, certification, trade barriers, environmental authority*

# Acknowledgements

'Life is what happens to you while you're busy making other plans'  
- John Lennon-

I have certainly experienced these wise words of John Lennon during the writing of this thesis. Everything seemed to develop according to plan in the first month of writing the research proposal and in the period of data collection.

However, I got the opportunity to do my internship at the Dutch Ministry of Foreign Affairs on the topic of the indirect effects of biofuel production. At the same time I had health problems, which caused some weeks of delay. Rescheduling my time schedule was needed in order to be able to do this internship and to finalize this thesis still within the academic year.

From the perspective of time management, it was not the best decision to postpone the finalisation of my thesis. However, content wise it was the best decision I could have made; my internship and thesis did complement each other perfectly.

I hereby would like to thank Arthur Mol and Peter Oosterveer as my supervisors for their enthusiasm and helpful feedback, the stakeholders that were willing to offer some of their time to contribute to this research and my family for making me able to study and the support, I would also like to thank Judith Floor for listening to me so many times, the staff members of the Ministry of Foreign Affairs, who helped me out with providing new insights at the moments I needed those, and all the other people, that were involved the last year.

Anouk van Grinsven  
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# List of acronyms

CEN	European Committee for Standardization
CDM	Clean Development Mechanism
COC	Chain of Custody
COM	Communication
CSD	Commission on Sustainable Development
DG	Directorate-General
DG TREN	Directorate-General for Energy and Transport
DSU	Dispute Settlement Understanding
EC	European Commission
EU	European Union
EP	European Parliament
EPFL	École Polytechnique Federale de Lausanne
EPP	Environmentally Preferable natural Product
FAO	Food and Agriculture Organization
FSC	Forest Stewardship Council
FQD	Fuel Quality Directive
G8	Group of Eight
GATT	General Agreement on Tariffs and Trade
GBEP	Global Bioenergy Partnership
GHG	Greenhouse gas
GIN	Global Integrated Network
GIBN	Global Integrated Biofuel Network
GMO	genetically modified organism
HS	Harmonized system
IEA	International Energy Agency
ILO	International Labour Organization
ISEAL	International Social and Environmental Accreditation and Labelling Alliance
ISO	International Standards Organisation
LNV	Dutch Ministry of Agriculture, Nature and Food Quality
MDG	Millennium Development Goals
MFN	Most Favoured Nation
NEN	Dutch Standardization Institute
NGO	non-governmental organisation
Npr-PPM's	non-product-related production and process methods
Pr-PPM's	product-related production and process methods
NTA	Dutch Technical Agreement
NTC	Non-Trade Concern
OECD	Organization for Economic Co-operation and Development
PPM	production and process methods
RED	Renewable Energy Directive
RSB	Roundtable on Sustainable Biofuels
RSPO	Roundtable on Sustainable Palm Oil
RFA	Renewable Fuels Association
RTF	Renewable Transport Fuel
RTFO	Renewable Transport Fuel Obligation
SPS	Sanitary and Phytosanitary Measures
TBT	Technical Barriers to Trade
UK	United Kingdom
UNCTAD	United Nations Conference on Trade and Development
VROM	Dutch Ministry of Housing, Spatial planning and the Environment
VNBI	Vereniging Nederlandse Biodiesel Industrie
VNPI	Vereniging Nederlandse Petroleum Industrie
WCO	World Customs Organization
WTO	World Trade Organization

# List of definitions

<b>Accreditation</b>	'the formal recognition by a specialised body – an accreditation body – that a certification body is competent to carry out certification.' (Woods and Diaz-Chavez 2007)
<b>Biofuels</b>	'organic primary and/or secondary fuels derived from biomass which can be used for the generation of thermal energy by combustion or by using other technology. They comprise both purpose-grown energy crops, as well as multipurpose plantations and by-products (residues and wastes). The term "by-products" includes the improperly called solid, liquid and gaseous residues and wastes derived from biomass processing activities. There are three main biofuel categories: Wood-fuels, Agrofuels and Municipal wastes.' (FAO 2000)
	'liquid or gaseous fuel for transport produced from biomass' (European Parliament and Council of the European Union 2003)
<b>Biomass</b>	'the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste.' (European Parliament and Council of the European Union 2003)
<b>Bioethanol</b>	'ethanol produced from biomass and/or the biodegradable fraction of waste, to be used as biofuel' (European Parliament and Council of the European Union 2003)
<b>Biodiesel</b>	'a methyl-ester produced from vegetable or animal oil, of diesel quality, to be used as biofuel' (European Parliament and Council of the European Union 2003)
<b>Certification</b>	'a procedure by which a third party gives written assurance that a product, process or service is in conformity with certain standards. Certification can be seen as a form of communication along the supply chain which provides assurances that a product, process or service is in conformity with certain requirements. The certificate demonstrates to the buyer that the supplier complies with certain standards. A label is a symbol indicating that compliance with standards has been verified. While the certificate is a form of communication between seller and buyer, the label is a form of communication with the end consumers.' (Dankers 2003)
	'the issuing of written assurance (the certificate) by an independent, external body – a certification body – that has audited an organisation's management system and verified that it conforms specifically to the standard.' (Woods and Diaz-Chavez 2007)
<b>Labelling</b>	'Display of information about a product on its container, packaging, or the product itself. For several types of consumer and industrial products, the type and extent of information that must be imparted by a label is governed by the relevant safety and shipping laws.' (BusinessDictionary)
<b>Regime</b>	'Principles, norms, rules and decision making procedures around which actors' expectations occur. An international regime is usually considered to take the form of an international organization. It is a concept associated with neo-realism.' (Oxford University Press 2007)

<b>Standard</b>	'a set of principles and criteria to be used consistently as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes and services meet their purpose. The 'standard' will also define indicators and methods that are used to measure compliance with principles and criteria.' (Woods and Diaz-Chavez 2007)
<b>Trade</b>	'Commercial transaction involving the sale and purchase of a good, service, or information' (BusinessDictionary)
<b>Trade barrier</b>	'Government imposed restriction on the free international exchange of goods or services. Trade barriers are generally classified as:  (1) import policies reflected in tariffs and other import charges, quotas, import licensing, customs practices, (2) standards, testing, labeling, and various types of certification, (3) direct procurement by government, (4) subsidies for local exporters, (5) lack of copyright protection, (6) restrictions on franchising, licensing, technology transfer, (7) restrictions on foreign direct investment, etc.' (BusinessDictionary)
<b>WTO</b>	'UN multilateral trade organization formed on January 1, 1995 (after culmination of the Uruguay Round) as the successor to GATT and the court of final settlement in trade disputes. Its objectives included (1) removal of all barriers to international trade in goods, services, and intellectual property, (2) equitable and speedy resolution of disputes between trading partners, and (3) identification of non-compliance with trade agreements.' (BusinessDictionary)

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# 1. Introduction

In this first chapter the problem definition (1.1) and research objective (1.2) of this research are given. The research questions are stated in 1.3. The scope and limitations of this research are described in 1.4, followed by a description of the methods used (1.5). At the end a thesis outline is given, which shows how the rest of the report is build up (1.6).

## 1.1 Problem definition

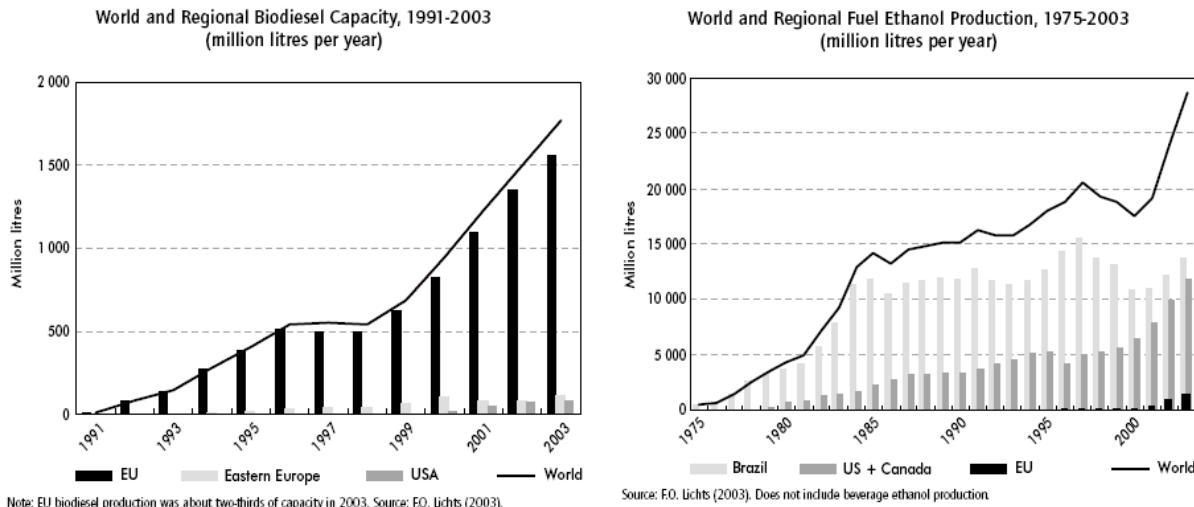
*'A global market for biofuels is desirable, but must be tempered by environmental reality.'* –(Mandelson 2008)

With these words, Peter Mandelson, formal European Commissioner of Trade, ended his article in The Guardian of 29 April 2008 on how to deal with biofuels. Why a global market is desirable and the demand for biofuels has increased can be explained by the following developments, as mentioned by different authors:

- Firstly, the increased concern about released GHG-emissions by fossil fuels stimulates the search for renewable energy alternatives, like biofuels, and which makes governments set national targets for the use of renewable energy and also specifically for energy derived from biofuels.
- A second reason is the increased oil price; this tendency makes that biofuels can compete more easily with the regular fossil fuels. Although there has been a decrease in oil prices a year ago, predictions still show an increase of the oil price on the long term.
- Thirdly, in the light of energy security and diversification, fossil-fuel importing states do want to decrease their dependency on fossil fuel exporting states, like states in the Middle-East. A way to increase energy security is to diversify by making use of biofuels.
- the final reason is the crisis in the agricultural sector of OECD countries; due to overproduction and low prices for agricultural commodities causing low income for farmers, there is room on the market for the production of new agricultural commodities. For developing countries biofuel production can be beneficial because of the positive impacts of biofuel production on the agricultural sector and the trade position of these countries, although the role of developing countries in the currently increasing demand for biomass is not significant.  
(Dufey 2006; Mol 2007; Van Dam, Junginger et al. 2008)

Elaborating on the first reason, different policy measures can be mentioned. Especially the EU Directive plays an important role in the stimulation of the use of biofuels in the light of climate change mitigation. The original targets were 5,75% of biofuels in 2010 and 10% in 2020, although the EU currently has decided the 10% should come from road transport in general implying that only a part of the 10% should come from biofuels. (European Parliament and Council of the European Union 2003) An effect of these targets is an increased demand for biofuel export and a market expansion from local and national markets into an international market for biofuel trade.

Looking at the quantitative effect of this increased demand on actual production of liquid biofuels, it shows a doubled global ethanol production and a fourfold global biodiesel production in 2005 compared to the year 2000 (WWI 2006) in (Van Dam, Junginger et al. 2008). Figures 1.1 and 1.2 reflect these trends: the growth in biodiesel capacity and ethanol production is presented for the major regions. Figure 1.2 shows that especially Brazil is a significant producer of ethanol and in Figure 1.1 Europe seems to be the region with the highest biodiesel capacity. The use of biofuels in the Dutch transport sector has increased from 2.8 to 3.0 percent of total benzene and diesel consumption in 2008. In 2007 relatively more than the obligatory percentage was mixed with conventional fuels, which explains why the year 2008 shows a small decrease in the use of biofuels. (CBS 2009) In a provisional review of the targets for sustainable energy of the Dutch government, it is stated that it is likely the targets will be reached by 2011 (4% use of biofuels) and 2020 (20% sustainable energy). (Hoogervorst and Hoen 2009)



Note: EU biodiesel production was about two-thirds of capacity in 2003. Source: F.O. Lichts (2003).

Source: F.O. Lichts (2003). Does not include beverage ethanol production.

Figure 1.1 World and regional Biodiesel Capacity, 1991-2003 (left) (IEA 2004)

Figure 1.2 World and Regional Fuel Ethanol Production 1975-2003 (right) (IEA 2004)

### First, second and third generation biofuels

Biofuel is a generic term and it has to be clear that there is a variety of biofuels coming from different types of biomass and processed using different techniques. In the discussion concerning biofuels, those different biofuels are mostly categorised in different generations: first, second and third generation biofuels, although no general accepted definitions exist. Mostly, stakeholders explain the difference between first and second generation biofuels by referring to the use of edible or non-edible sources of biomass for the production of biofuels, like is also stated in the definition given by Oliver, Stephen et al.: '*Second generation biofuel technologies are able to manufacture biofuels from inedible biomass and could hence prevent conversion of food into fuel.*' (Oliver , Stephen et al. 2008) This means biofuels from corn are seen as first generation and biofuels from the rest products of corn, the cellulosic materials, are seen as second generation, because it took longer to develop the advanced technologies needed to break down the chains of cellulose. The third generation is less mentioned in the debate and not all stakeholders do acknowledge the existence of this generation. Biofuels from algae are mostly referred to as third generation biofuels. In general, second or third generation biofuels are perceived as more sustainable compared to the first generation biofuels, although first generation still dominate the markets nowadays, because those are only commercially available.

### Direct and indirect effects of biofuels

Biofuel production can cause several effects, negative as well as positive. Although biofuels are seen as a promising solution for climate change and the reduction of GHG emissions, production of biofuels can also be the cause of environmental and social problems. Child labour and bad labour conditions are examples of social problems that can arise in biofuel production. Possible negative impacts on the environment, especially on the local scale, are (Fresco, Dijk et al. 2007; Hunt 2007):

- accelerating soil erosion and loss of nutrients
- depletion of aquifers
- deforestation /destruction of ecosystems
- negative impact on biodiversity
- food security issues

Concerning the global effects of biofuels there is disagreement about the net savings of GHG emissions. It is questioned whether biofuels emit less GHG emissions compared to the conventional fossil fuels and it has been argued that some biofuels emit even more GHG emissions. (Quitério 2007)

The different effects of biofuel production can be divided into direct and indirect effects of biofuel production: in general direct effects occur at consignment level, like the local effects mentioned above. Indirect effects occur at a higher level at regional, national and/or global scale and are outside the scope of the producer. The best known indirect effects are indirect land use change and the (potential) effect on food prices.

## **Governance of the sustainability of biofuels**

Until now biofuels have been mostly governed at national level. However, an international market for biofuels is emerging and initiatives are taken to develop international policy and regulations for the governance of this new market (see Chapter 2. Conceptual Framework). There is a need to guarantee the sustainability of biofuels within this new emerging international biofuel market, because targets are set in the light of climate change policy and biofuels are therefore used for environmental purposes. A tendency is visible towards the development of certification systems for biofuel production; different actors are focussing on the development of sustainability criteria and are exploring the possibilities for application (Van Dam, Junginger et al. 2008). However, a certification scheme can create trade barriers and may for this reason not be consistent with the WTO-legislation. Due to the newness of biofuel trade this issue has not yet been addressed within a WTO round. (IPC and REIL 2006)

So on the one hand there is the problem of unsustainable biofuels causing negative environmental and socioeconomic impacts, on the other hand there is a need for more insight in the link between trade barriers and the application of sustainability criteria for biofuels.

### **1.2 Research objective**

The following research objective can be derived from the problem description:

*"To get insight in the trade barriers and the WTO-consistency of certification schemes for biofuels in order to determine the (potential) influence of the WTO-regime on the design of the certification scheme as currently being developed in the EU."*

### **1.3 Research questions**

#### **Main research question:**

*"What are the opportunities and barriers of certification schemes within the WTO-regime for sustainable biofuel trade, as these are currently being developed in the EU?"*

#### **Sub questions:**

Above main research question can be divided into the following sub questions:

- 1     *"What are the main certification schemes for biofuels as currently being developed in the EU and what are the considerations and choices behind it?"*
- 2A    *"How are biofuels classified within the WTO regime?"*
- 2B    *"Which trade barriers relevant for certified biofuels do exist within the WTO regime?"*
- 3     *"Which trade barriers can occur by using the EU certification schemes for biofuels concerning the international trade regime?"*

### **1.4 Scope and limitations**

The choice is made to only look at certification efforts in the European Union. The European Union is front runner in certification efforts and a major actor on the international biofuel market due to the production of biodiesel in the EU and the interest in importing bioethanol from other (developing) countries.

In the current market bioethanol and biodiesel, as first generation biofuels, are mostly available for trade and therefore this research will focus on those two liquid biofuels. Second generations biofuels that are being developed and maybe will be available in the future will not be taken into account in this research.

Concerning the time perspective this research will focus on the current developments of the international biofuel market, because the future is too unpredictable due to the complexity of the market. A future perspective will lead to a lot of assumptions and

speculations, although this research intends to give facts and a good overview and analysis of the current developments. The problem, however, with the current situation is the lack of well developed certification schemes. Certification schemes are now being developed by different actors, but in the process these actors are still mainly in the phase of defining criteria, which should be later used in a certification scheme.

The research period has been limited to six months from which roughly three months are spent on data collection. Other months are meant for preparation and writing of the report. Another aspect that needs to be taken into account is the rapid development of the market, which makes this research subjected to policy developments during the period of data collection.

## **1.5 Methods**

In order to answer the main research question, the following research methods are applied: data is collected by the use of a literature study and by conducting open-structured interviews.

### **1.5.1 Literature study**

The literature used consists of journal articles and books, but also of grey literature sources as Directives, white papers, working and position papers of different organisations. Grey literature is less reliable, although the use of this kind of literature is needed in this research due to the newness of the subject and the rapid development. Without using these sources, a good overview of all the visions and opinions of the different stakeholders could not be given.

### **1.5.2 Key informant interviews**

Fifteen open-structured interviews are conducted in order to complete the information found in the literature. Next to the use of grey literature, interviews are a good research method to gain not yet published information (Berg 1998). The interviewees are selected on their representation of all stakeholders involved in the certification of biofuels. The aim is to have a representative view of the opinion and vision of the different stakeholder groups: national governments and transnational organizations, intergovernmental organisations, companies (producers, trade and industry), NGO's and international bodies and initiatives (as also used by Van Dam, Junginger et al.) (Van Dam, Junginger et al. 2008)

Selected persons or organisations are at least focused on certification of biofuels or on implications of the WTO regime for trade and environment. Literature has served as a tool for selecting persons and/or organisations; those that are referred to several times in literature or who have written articles on this subject were interesting parties to interview. Due to time and travel limitations, most interviews are conducted in the Netherlands. Other interviews are held in Brussels (Belgium) and Geneva (Switzerland). All interviews have been recorded by a voice recorder and are analysed in a qualitative way. In Annex I a list of the interviewees is given. Not all the Member States of the EU can be visited; the interviews in the Netherlands are used to give a reflection of a Member State considerations and the interviews in Brussels to get insight in the view of the EU.

### **1.5.3 Seminars and stakeholder meetings**

During the data collection period different seminars and stakeholder meetings were visited. These were helpful, because different national as well as European stakeholders came together to discuss the latest developments. Therefore those meetings helped to hear the latest development and opinions, which are not always written down in literature. In Annex 1 the list of visited seminars and stakeholder meetings is given.

### **1.5.4 Discussion on research methods**

The main limitation of the literature study is the lack of data on actual biofuel trade due to the WTO classification of biofuels. Some limitations of the interviews are the fact that, although requests were send, no interview was held with a research institute. Next to this, it has to be kept in mind that all the interviewees are Western stakeholders and

therefore this research has a lack of representation of stakeholders from developing countries. In practice, it showed that most stakeholders were a good source to gain information on the different certification systems, but there were only a few stakeholders, which were familiar enough with WTO law to provide useful information on the WTO-consistency of the certification systems. Therefore the outcomes of the interviews are mostly used for chapter 4, while chapter 5 is mostly based on literature study.

### **1.6 Thesis outline**

After this introduction, the conceptual framework will be discussed in more detail in Chapter 2. In Chapter 3 I will elaborate on the concept of certification and the different steps of the certification process. An overview will be given of the different certification schemes that do exist in Member States of the European Union or that are being developed (sub question 1) in Chapter 4. Chapter 5 deals with all WTO-related sub questions (2 A/B and 3). Chapter 6 ends this thesis by providing the main conclusions of this research.

## 2. Conceptual framework

This chapter provides the theoretical background for this research. The process of globalisation and the influence on production and consumption patterns will be discussed by using the sociology of networks based on the global network society of Castell (2.1). In 2.2 the changing role of the nation state and other stakeholders is further explained by using the concept of environmental authority.

### 2.1 Global integrated biofuel network

The conceptual framework of this research will be based on the sociology of networks and flows based on Castell's global network society. Although global food flows are central In 'Environmental Governance of Global Food Flows; The Case of Labelling strategies' (Oosterveer 2006), the theory can and also will be applied in this research on the growing global biofuel flows. Global food trade can be seen as mature compared to the young international biofuel trade, which is still in an early development phase. Oosterveer mentions that globalisation should not only be seen as the growth of international food trade, but also as a process in which the organisation of production, trade and consumption are changing together with the social practices. The new 'time-space organisation of social practices' can be called the 'space of flows'. (Mol 2007) Oosterveer refers to Castells interpretation of 'globalisation as a process where the space of flows is increasingly replacing the space of places'. (Oosterveer 2006) Time and distance have become less important factors in this replacement; in earlier times the seasons determined the availability of certain products on the markets; some products were only available during summer time, while nowadays products can be bought all year round due to the easiness of importing food over large distances. This growing distance between the place of production and the place of consumption on the one hand and the time compression on the other hand are presented in the schematic overview of Figure 2.1.

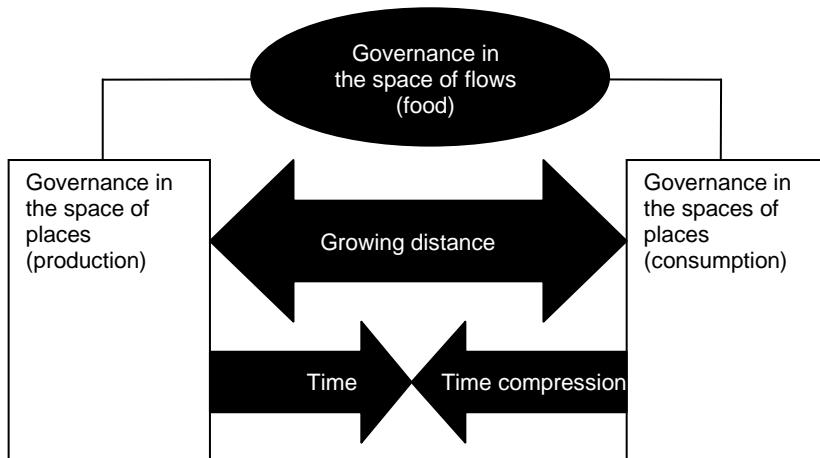


Figure 2.1. Governance and globalized food production and consumption (Oosterveer 2006)

Mol (2007) elaborates in 'Boundless Biofuels; between environmental sustainability and vulnerability' on Urry's work based on Castells' 'spaces of places' and 'space of flows'. According to Urry we can speak of three spatial patterns, namely:

- **Regions:** Regions can be seen as the spatial patterns dominating before the process of globalisation; in regions networks are mostly clustered within a country. The boundaries of these regions are fixed like the solid relations. Due to the geographical boundaries, the nation state can be most powerfull in these spatial patterns.
- **Global integrated networks (GINs):** In the case of GINs the distance between the place of production and the place of consumption has increased. Flows are between regions instead of only within a region, but although nation state boundaries are less important, relations are fixed, stable and predictable.

- **Global fluids:** Global fluids are the less structured spatial patterns, because boundaries and stable relations are lacking. Instead the global fluids are structured by 'large flexibility, liquidity, gel-like movement and permeable boundaries.' (Mol 2007)

Governance of these spatial patterns is done through so-called 'scapes'. Mol provides Urry's definition of the concept of 'scape': '*networks of machines, technologies, organisations, texts and actors that constitute various interconnected nodes along which flows can be relayed*' (p.35)(Urry 2000) in (Mol 2007). I would describe the 'scapes' as the infrastructure needed for the flows, although in a less concrete meaning than infrastructure in the meaning of roads and railways. Due to the different characteristics of the three spatial patterns each kind of spatial pattern asks for different 'scapes'.

### **'Power' and the governance of the spatial patterns**

In relation to 'power', 'scapes' are determined by existing power relations, but also have an influence on the power relations around the flows. So in fact a correlation can be found between power relations and 'scapes'. Looking at the power relations for the three spatial patterns, it shows a decrease of power and ability of the states to govern from region to global fluids:

- **Regions:** because regions networks are mostly clustered within territorial borders of a nation-state, the state is well able to govern this kind of spatial pattern.
- **Global integrated networks (GINs):** the ability to govern has decreased and nation states are less able to steer the flows.
- **Global fluids:** the role of nation-states is marginal in the governance of global fluids due to the lack of boundaries and stable relations.

Applying these concepts on the situation of biofuels, Mol (2007) speaks of two different kind of biofuels regions; in developing countries the organisation of biofuels is on a very local scale and the involvement of the nation-state is limited; techniques applied are very simple. There are countries as Brazil where we can speak more of a national organisation of biofuels in which the government is strongly involved next to the involvement of more different actors. Biofuel flows are more mobile and are more spatially spread. These last regions can also be called national biofuel regions.

Next to these examples of biofuel regions, we can speak of a GIN for biofuels, also called global integrated biofuel network (GIBN). However, this GIBN is emerging due to 'increasing transboundary flows of biofuels', a more globally defined scape and a decreasing influence of governments. We do not speak of global fluids, because routes and patterns are still stable and predictable. (Mol 2007)

Developments show that local biofuel networks are disappearing in the bigger national biofuel networks and the development of the GIBN makes the national biofuel scapes inappropriate to govern the transnational biofuel flows, although a global regime has not yet been established. Talking about the governance of the GIBN, the discussion is mostly on certification, standardization and free trade. (Mol 2007) Certification can bring back the local environmental, social and economic impacts into the 'space of flows' (Oosterveer 2007) in (Mol 2007), where now the bigger environmental issues, like climate change, are overruling the local impacts in the GIBN.

## **2.2 The concept of authority**

In above paragraph, it has become clear that globalisation has led to developments in the existence of different spatial patterns, which can be governed within 'scapes'. In the definition of scapes actors are part of networks together with machines, technologies, organisations and texts, but in above story only the actor 'state' and its ability to govern the new spatial patterns is discussed. In this paragraph, I will also include other actors, like the private sector, by working with the concept of authority and the different forms of authorities that exist according to different authors.

First of all, it needs to be clear how authority can be defined. Often 'power' and 'authority' are used as synonyms, although this is not the case:

*"...power is about getting someone to do something irrespective of their desire to do it or the extent of their resistance to doing it, while authority rest on assumptions that the person is willing to obey, and accepts the right of the person doing the ordering to expect compliance."* (p.79)(Jackson and Carter 2002)

Or in other words: because I see the Dutch state as a legitimate power, the Dutch state does not have to enforce me to obey the law. Authority is therefore the result of having power and legitimacy at the same time. (Cline 2009)

According to Weber there are three ideal types of authority, which he defined as:

- **Traditional authority**, which rests on history, myth and ritual;
- **Charismatic authority**, founded on a belief in a leader's exceptional qualities and inspirational mission;
- **Rational-legal-authority**, founded on democratic principles and a framework of law to which all individuals and institutions are subject. (Williams 2003; Mol 2009, forthcoming)

In case of the governance of the GIBN, the last type of authority, rational-legal authority, is the most relevant type. In case of the authority to control environmental problems, we speak of environmental authority, which is mostly linked with the state, but start to be linked more and more to other actors. (Mol 2009, forthcoming)

As discussed in paragraph 2.1, in case of global integrated networks and in case of global fluids the ability of nation-states to govern has decreased. In recent decades states have played a key role in the governance of environmental problems. In first instance the state seems to be more appropriate compared to the private sector, because environmental goods are seen as collective goods and environmental problems are perceived as market failures. (Mol 2009, forthcoming) On the contrary, the transboundary nature of environmental problems and the changes caused by globalisation makes nation-states less appropriate. Zarsky states the following on the role of the state in relation to globalization: 'Globalization does not make nation states irrelevant, but asks for different governance by the state.' (p...) (Zarsky 1997) Combining this statement with what has been mentioned before, it implies nation states have a different role to play in the scapes of the GIBN.

In case of state authority we also speak of public authority. In the last two decades public authority has lost ground and private market authority has gained ground, which can be explained by the following factors:

- private authority knows a higher efficiency and comes with lower transaction costs
- the power of the actors, like big multinationals, responsible for the private authority has expanded in the last two decades
- globalisation and the loss of state sovereignty has led to a diminishing public authority

(Cutler, Haufler et al. 1999) in (Mol 2009, forthcoming)

It has to be mentioned that private market authority is only one form of non-state authority; scientific authority and moral authority should not be forgotten. (Mol 2009, forthcoming) Nowadays, we are not only facing state environmental authority and non-state authority, but also see more often a 'mix' of both sorts of authority, which can be called hybrid environmental authority, where non-state actors and state actors work together.

## 2.3 Conclusion

Where paragraph 2.1 was used to introduce and better understand the concept of environmental authority in 2.2, the concept of environmental authority determines the structure of the rest of this research. In Chapter 4, the concept of environmental authority will be used to explain the different initiatives focused on the development of sustainability criteria for biofuels. This will (partly) be done by using the same classification of environmental authority as used by Mol, 2009 and discussed in 2.2, namely:

- state-based initiatives (public environmental authority)
- non-state initiatives (non-state authority)
- hybrid initiatives (hybrid environmental authority)

In Chapter 5 this same classification will be used to assess the WTO-consistency of the initiatives of Chapter 4. Using this classification will serve two goals: on the hand, applying the theory of this chapter on the case of sustainability criteria for biofuels can lead to new insights and explanations. On the other hand, combining the case of sustainability criteria for biofuels with the used theory can also work the other way around; the case of biofuels in this research can also confirm or invalidate the theory discussed in this chapter.

### **3. Certification and labelling in general**

Chapter 2 dealt with the global integrated biofuel network and the need for governance of the space of flows. As mentioned in the previous chapter, the authority of the state to govern the global integrated biofuel network is small compared to the authority of the governance of the 'old' spatial patterns and has the role of other non-state actors increased. This chapter will explain the theoretical background of certification and explains why this instrument fits the global integrated biofuel network. After this, the different steps in the certification process are explained which will be referred to in Chapter 4 when describing the different initiatives.

#### **3.1 Certification as a tool to control the supply chain and as a form of self-regulation**

According to Dankers, 2003, *certification is 'a procedure by which a third party gives written assurance that a product, process or service is in conformity with certain standards.'* (Dankers 2003) The written assurance consists mostly of a certificate, which moves together with the certified product along the supply chain and can be seen as a communication tool to inform the involved stakeholders of the supply chain on the compliance with the standards. At the end of the supply chain a label can be placed on the end product to also inform end consumers. This shows that certification will not be able to decrease the distance between the place of production and place of consumption, but it will be able to deal with the information asymmetry within the supply chain. A retailer is not able to visit the place of production on a regular basis to verify if the place meets its standards, but a certificate brings the information to the retailer. For a company certification is an instrument to control the supply chain and as a form of environmental marketing (in the case of environmental standards). Next to this, the role, especially the controlling power, of NGO's, consumers and non-state actors has increased, which enlarges the need for control of the supply chain to avoid scandals, which can harm the reputation of the company.

This makes certification also an instrument for risk management, but it can also function as an instrument to promote sustainable development and it can create new niche markets for sustainable products. The incentive for producers to get certified is the premium price that can be asked for certified sustainable products. (Van Dam, Junginger et al. 2008)

In addition to chapter 2, certification can also be approached as a form of self-regulation. This form of regulation has several advantages compared to the more conventional command and control regulation of the government: it is argued self-regulation is 'more effective, efficient, flexible, less time consuming and is able to 'repair' government failures' (Van Amstel 2007) in (Van de Staaif 2008). In relation to chapter 2, self-regulation can regulate beyond the capacity of the governments, which is limited by its national borders, its sovereignty and the international agreements a government has ratified.

The interests for biomass certification of different groups of stakeholders are presented in Table 3.1. by Van Dam et al. (2008). Certification has proven itself already in case of different commodities, like coffee, bananas, wood and fish.

Table 3.1. Stakeholder interests for biomass certification (Van Dam, Junginger et al. 2008)

Stakeholders	Some interests for biomass certification
National governments and transnational organizations	Policy instruments to promote sustainability management and sustainable consumption pattern; provides information for policy making. The EU, one of the more powerful players for establishing international standards has a special role in this
Intergovernmental organizations	The UN, FAO and UNEP in particular, play an important (potential) role as a neutral forum for negotiations between all kinds of stakeholders (particularly countries).
Companies (producers, trade, industry)	Instrument for environmental marketing, risk management and market access, tool for controlling origin and quality of raw materials, products or services provides information for optimization of production processes, allows for product differentiation
NGOs	Provides information on the impacts of products, provides information whether the product meets quality or technical standards, instrument to promote sustainable management
International bodies and initiatives	Instrument to promote sustainable management and sustainable consumption pattern, information for policy consultancy and collaboration

### 3.2 The different steps in the certification process

Before a third party can certify, different steps of the certification process need to be taken. In this paragraph the different steps of the certification process will be discussed. In figure 3.1 the main steps in the certification process are shown, which will be clarified in this paragraph.

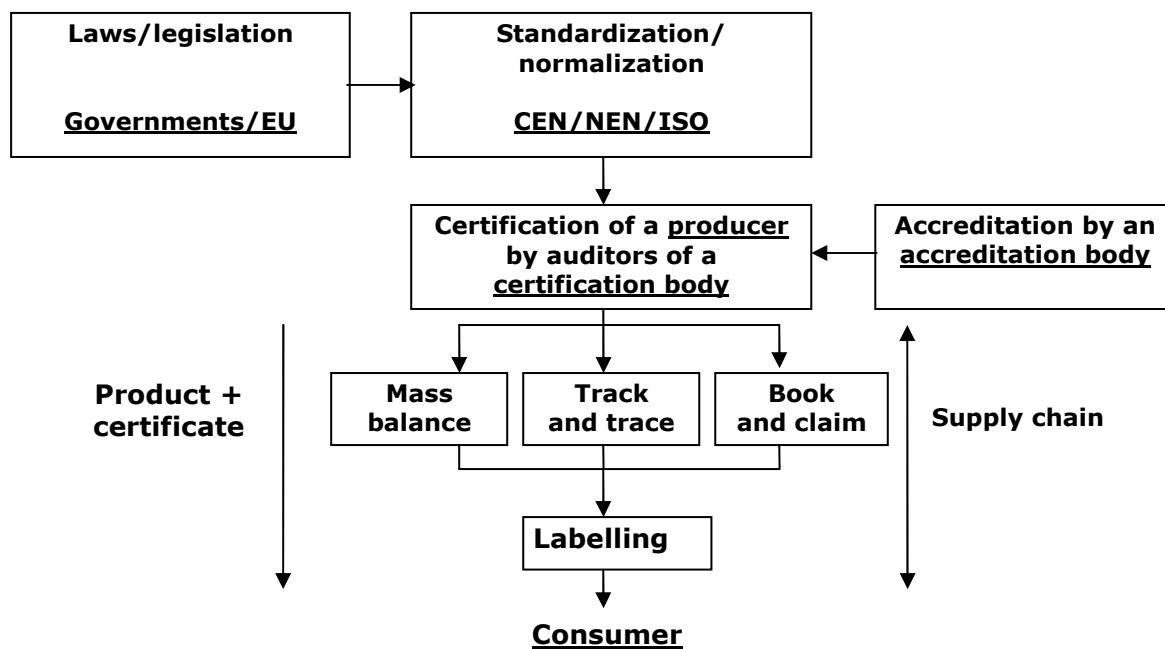


Figure 3.1 Schematic overview of the different steps in the certification process

#### Standardization

As stated in the definition of Dankers, a third party assesses compliance with certain standards. This implies that certification cannot take place without a standard or a norm. The process of developing a standard is called standardization. A synonym often used for standard is 'norm' and in case of speaking of a norm we also speak of 'normalization'. There is however a difference between normalization and standardization. In case of normalization a norm is developed by all stakeholders reaching consensus on the content of the norm, where in case of standardization only representatives of some important stakeholders are involved. So there is a difference in the level of support. It can also happen that a standard is accepted by all the stakeholders as the norm in the normalization process. The process of normalization can be guided by normalization

organization, like the Dutch Standardization Institute (NEN) and European Committee for Standardization (CEN). (NEN 2008) A standard can be initiated by different stakeholders, like by a government or by a private body.

Standards can be focused on different areas;

- **Environmental standards** are used to ensure that negative environmental impacts are limited and minimal
- **Organic standards** are used for the certification of organic food
- **Labour standards** are focused on the working conditions and can for example deal with child labour
- **Social standards** can show overlap with labour standards, but can also deal with the social effects on the communities near the place of production.
- **Normative standards** are standards for standard development, which can be used by local standard setting organizations. (Dankers 2003)

A standard on sustainable biofuel production will be a mix of an environmental standard, labour standard and a social standard. In this case the triple-P (people, planet, profit) approach of sustainability is used. In the design process of a standard on sustainable biofuel production a normative standard can be used.

Next to this division, we can also distinguish product standards and process standards. This last category can be divided into management standards and performance standards. In the case of an environmental standard, a product standard will only look at for example the environmental effects of the materials a product is made of, in the case of a management standard, like ISO14001, the standard set requirements for the management system of a company and finally, in case of performance standards the environmental aspects of the production process are assessed, like the use of pesticides. (Dankers 2003) Based on the sustainability concerns on biofuels as mentioned in the Introduction, performance standards on the production process will probably dominate in the case of biofuels.

In Figure 3.2. a schematic overview of the structure of a norm is presented. First principles are developed, which serve as the general objectives of the standard. Those principles are worked out in more specific requirements. In order to be measurable and verifiable by a certification body, criteria need to be worked out in indicators. (Van de Staaij 2008)

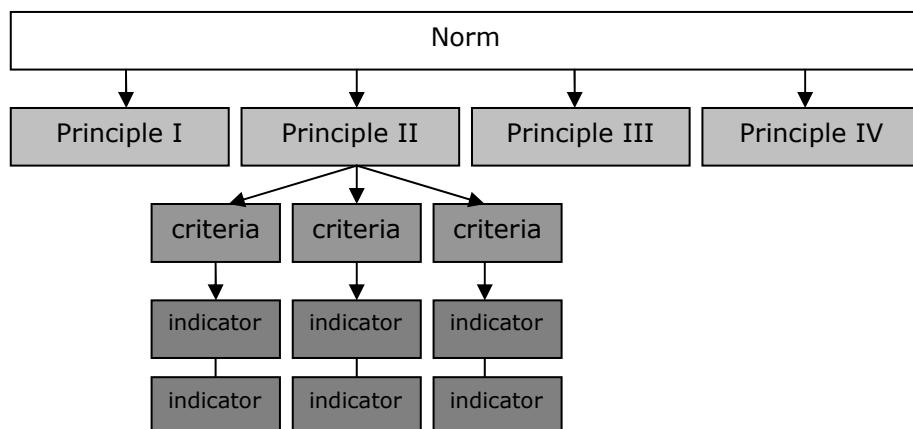


Figure 3.2 Schematic overview of the structure of a norm

Global convergence of standards, a growing global use of the same standards, can benefit trade, which can be illustrated by the following example: in case a producer is producing constructing materials according to the standard used in one country, the producer cannot export to a country where an other standard is used unless the production process is suitable to produce according to multiple standards. If other countries adopt the standards used by the country of producer B, the export market of the producer expands without any adaptations in the production process. The increase of export opportunities will lead to an increase in trade. According to Zarsky, convergence

of standards in OECD countries will lead to an OECD-average for environmental product and production standards. Because developing countries will benefit from export to OECD markets, developing countries will follow this OECD-average. (Zarsky 1997)

#### Certification

In order to ensure objectivity, certification is done by an independent accredited third party, called the certification body (or certifier). This is done, because it is more trustworthy compared to a producer providing the assurance himself. Verification of compliance with the standard is done through site visits, also called audits. The certification body should be independent to ensure no economic or other interest to influence the certification process. (Dankers 2003)

#### Accreditation

Accreditation is 'the evaluation and formal recognition of a certification programme by an authoritative body,' called an accreditation body. Accreditation is done to ensure a certification has the capacity to perform the certification in a proper way. (Dankers 2003)

#### Labelling

In case a producer is certified, he might want to communicate this to the end-consumer of his products. The label, a sign indicating verification with a standard, is only used at the end of the supply chain for the communication to the end-consumer. By transfers in other parts of the supply chain the certificate is used as proof of compliance. In order to avoid misuse of labels, labels are controlled by the standard setting organization or the certification body. (Dankers 2003)

As there are different kinds of certification, also different kinds of labels exist. Appleton writes of three types of labels (p197) (Appleton 1999):

- **Single-issue labels:** on a particular product characteristic (recyclable for example) or on a particular performance characteristic (like electricity consumption)
- **Negative labels:** inform consumers on negative characteristics. The message on stating cigarettes are dangerous for your health is a good example.
- **Eco-labels:** a label given to a product based on a life-cycle analysis

In case of biofuels, labelling in order to inform the consumer is not the case. Because fuel suppliers are able to blend up to 5% biofuel with regular fuel without informing the consumer, labels are not used. (Schnepf 2006)

### **3.3 Chain of Custody (COC)**

In case a product is certified it is mostly not yet at the place of consumption; this implies that the product needs to move along the supply chain. Chain of custody certification is the independent control of the entire supply chain from the source to the last point of sales.(CommissieCramer 2006) It is important that the certified products can be identified and be traced at the different stages in the supply chain.

There are different systems of certification from which three systems are mostly used:

- (1) the mass balance system
- (2) physical segregation
- (3) the book and claim system

Each system has its advantages and disadvantages, which will be discussed here. To what extent a system is suitable depends also on the kind of certified products. In the case of biofuels we speak of liquid biofuels which are transported in bulk quantities.

#### **3.3.1 Mass balance system**

The mass balance system implies that the product is partly traceable to the source and certified products can be mixed with uncertified products. This is a big practical advantage in case of large quantities of biofuels and it limits the additional costs. Figure 3.3 shows clearly that biofuels from different sources are mixed at the beginning of the supply chain.

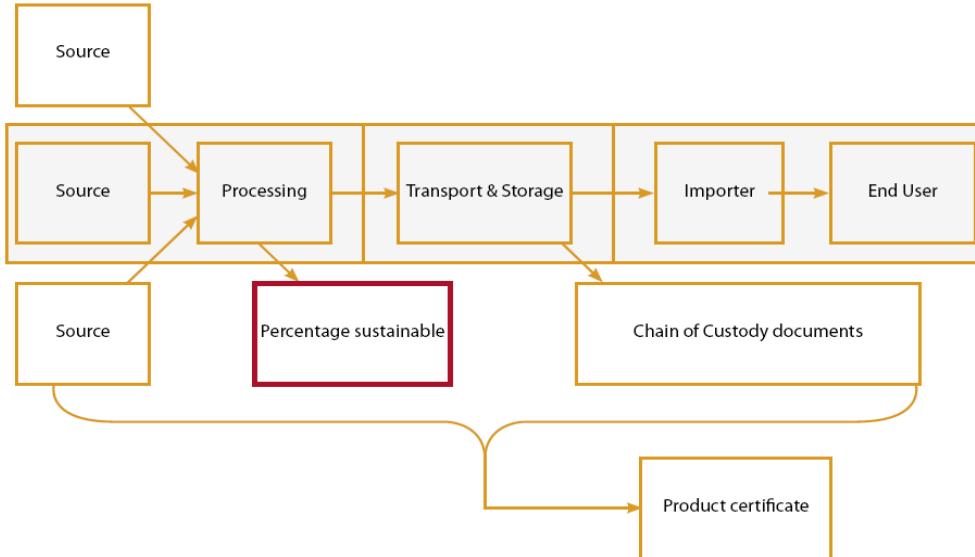


Figure 3.3 Diagram mass balance system (CommissieCramer 2007)

### 3.3.2 Physical segregation

In case of physical segregation certified and non-certified products are physically segregated through the supply chain. Different levels of physical segregation can be distinguished varying in levels of the extent of segregation and traceability. The two most well-known systems of physical segregation are the track and trace system and the bulk-commodity approach (CommissieCramer 2007; Dehue, Meyer et al. 2007):

#### Track and trace system:

In case of the track and trace system, the product is fully traceable to the source and moves separated from uncertified products along the supply chain. In case of long supply chains the traceability can be a problem, therefore this system is more appropriate for small supply chains. The operational costs for keeping the certified and non-certified biomass separated can also be seen as a disadvantage. The track and trace system is mostly used in case of Fair Trade products.

#### Bulk-commodity approach:

The main difference between the track and trace system and the bulk-commodity approach is that the track and trace system aims at full traceability to the source where the focus in case of the bulk-commodity is on keeping certified and non-certified products segregated and traceability to the source is not the goal. As can be seen in Figure 3.4, the certificate moves along the supply chain together with the product.

The system of physical segregation is seen as a credible and transparent system, but in case of bulk quantities segregation can be costly and a separate logistical framework needs to be set up.

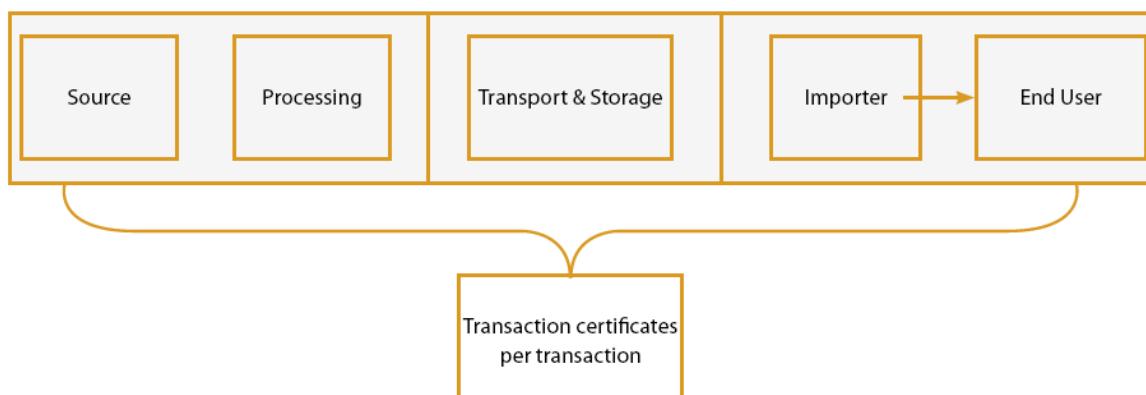


Figure 3.4 Diagram physical segregation (CommissieCramer 2007)

### 3.3.3 Book and claim system

The book and claim system is well known from the tradable certificates of the green power sector. In case of this system, only the primary producer is certified. Compared to the other two systems, the product is not traceable to the source in case of the book and claim system. On the one hand this has the advantage that there is no distortion of the trade of the physical products and a higher demand for certificates will result in a demand for a higher production of certified products. Next to this, the system can be implemented easily and fast. On the other hand, the verification of the book and claim system is more difficult to the other systems; there is a risk of double claims. The decoupling of certificate and the supply chain is shown in Figure 3.5.

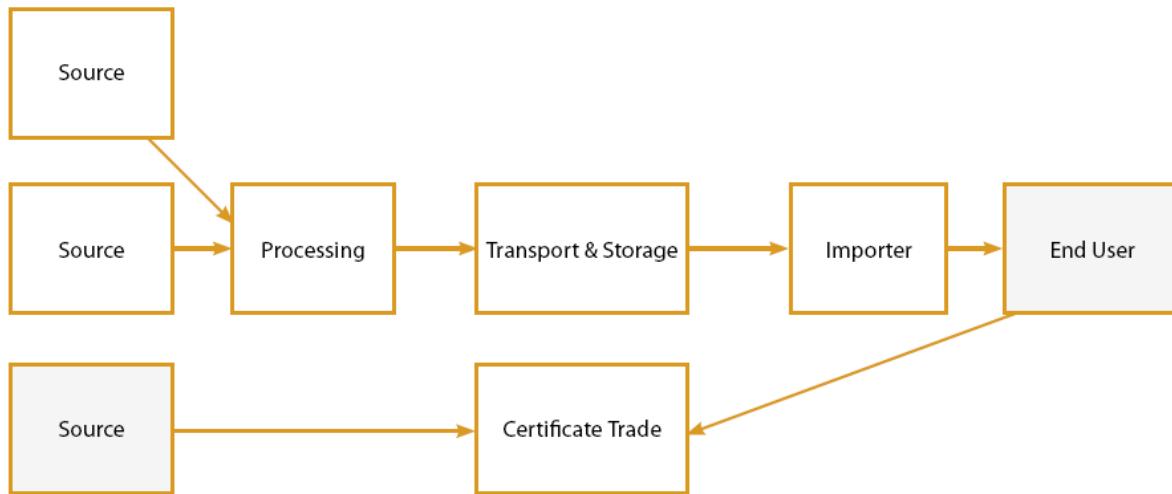


Figure 3.5 Diagram negotiable certificates (CommissieCramer 2007; Dehue, Meyer et al. 2007)

### 3.4 Meta-standard approach and benchmarking

In case of the Meta-standard approach no new standard is developed, but already existing schemes are used. A standard needs not only to qualify against the principles and criteria of the Meta-standard, but also have to meet certain minimum quality requirements concerning the audit procedures. The comparison of the Meta-standard with other standards is called 'benchmarking'. Standards that meet all the requirements are called 'qualifying standards'. (Dehue, Meyer et al. 2007)

The following steps need to be taken in case of the Meta-standard approach:

- Development of the Meta-standard: first of all, a Meta-standard needs to be designed which consists of (sustainability) principles and criteria
- Development of 'procedures and norms for benchmarking the sustainability criteria of existing standards against the sustainability criteria of the Meta-standard': it has to be determined whether it is for example sufficient if a standard does not meet all the principles and criteria, but only the majority of them.
- Development of 'procedures and norms for benchmarking the audit and certification quality of existing standards against the requirements of the Meta-Standard'
- The benchmarking resulting in 'qualifying standards'
- A producer which is certified against a 'qualifying standard' can also state that he complies with the meta-standard.

(Dehue, Meyer et al. 2007)

Comparing these steps with the steps that need to be taken in case of certification it shows the system saves time by not developing an own certification system. In the first line of this paragraph it is stated no standard is developed, which also indicates saving time. However, the time saved is limited because of the meta-standard, consisting of principles and criteria, which need to be developed.

In Dehue, Meyer et al. (2007), six advantages are mentioned for the use of this approach:

- **Avoid re-inventing the wheel:** a new standard does not necessarily add value to already existing standards
- **Producer acceptance:** producers are familiar with the 'qualifying standards' and have often been involved in the design process of those standards. In the case of a new standard, producer acceptance needs to be regained
- **Availability in short term:** partly due to above mentioned necessary stakeholder involvement, the development of a new standard can take years. A meta-standard can be available in the short term.
- **Cost-effectiveness:** due to the meta-standard approach, the costs of certification by multiple standards can be saved.
- **Influencing existing standards:** because the biofuel market has become an interesting market for feedstock producers to explore, it will be likely that standards will be adapted in order to qualify against the meta-standard
- **Convergence of standards:** (on the long term) a Meta-standard can contribute to the convergence of standards.

On the other hand, the following disadvantages are identified (Dehue, Meyer et al. 2007):

- **'Changes in a Meta-standard will not take effect directly':** it will take a certain period before changes are reflected in the qualifying standards.
- **'Most existing standards in agriculture and forestry which cover sustainability issues are rather elaborate':** therefore those standards can be a financial barrier for small producers. Because they cannot certify against the elaborate schemes, proof of compliance with the Meta-standard is not possible.
- **Lack of operational sustainability standards:** for energy crops as jathropa no operational sustainability standards exist. This means a jathropa producers has to wait until a standard is developed before he can proof compliance with the meta standard (or should use the alternative of elaborate agricultural schemes).

In my opinion the increased dependency on other standards is the main disadvantage of the system. The Meta-standard is a good alternative for normal standard setting, but can only be used if there are already enough other standards (in development) to use as qualifying standards. This is also the reason why not all standards can be replaced by a meta-standard.

### 3.5 Conclusion

Linking this chapter back to the conceptual framework of this research, the following can be concluded: certification is a form of self-regulation performed by non-state actors that deals with the information asymmetry caused by the growing distance between the place of production and the place of consumption. A well-functioning chain of custody and the use of independent certification and accreditation bodies make claims of companies on the sustainability of products reliable.

The capacity to regulate the environmental circumstances at the place of production confirms the environmental authority of non-public actors. Due to the supply and demand mechanism of the market and the related price incentive producers will voluntary obey in case they have the capacity to comply. All these factors make certification also an appropriate form of the governance of the Global Integrated Biofuel Network.

In relation to the rest of this report, this chapter will function as a basic understanding of the certification process and will make the interpretation of the considerations of involved stakeholders to choose for certain principles, criteria and indicators and one of the COC-systems, as described in chapter 4, easier.

## **4. Current initiatives on sustainability criteria for biofuels**

In the introduction chapter the different drivers behind biofuel targets were stated. One of these mentioned drivers is the increased concern for released GHG-emissions by fossil fuels and therefore the need to search for renewable energy alternatives. Thus stimulating biofuels is (partly) done for environmental reasons, which makes governments responsible for avoiding unsustainable biofuels. However, this issue has not been addressed in first instance at the target setting stage. Due to the attention of NGO's and research outcomes revealing possible negative effects of biofuel production, different initiatives initiated by different actors have started to formulate sustainability criteria for biofuel production.

This chapter will examine those different initiatives focused on sustainability criteria for biofuels. Attention will especially be paid to the involvement of states in the initiatives, because this factor is important for the WTO-consistency, as will be discussed later on in chapter 5. Therefore, the following classification will be used in this chapter, based on the different environmental authorities mentioned in chapter 2:

- State initiatives (4.1)
- Non-state initiatives (without state involvement) (4.2)
- Hybrid initiatives (state and non-state actors together) (4.3)

The description of the initiatives can in some cases lead to questions concerning the classification; high stakeholder involvement in state initiatives can for example raise the question why such an initiative is not classified as hybrid. The choice for a state initiative is in this research based on the intention of an initiative to take up the sustainability criteria in national or European law.

### **4.1 State initiatives**

Two different state-based initiatives can be distinguished; initiatives at the national level and at the supranational level. In 4.1.1 two initiatives of national governments, the Netherlands and the United Kingdom, will be discussed and in 4.1.2 the Renewable Energy Directive (RED) of the European Union will be described. These examples show also involvement of other actors, which makes that it can be questioned why these initiatives are not called hybrid in this case. The reason to name these examples state initiatives in this case, is the goal to translate these sustainability criteria into national law, making the states involved primarily responsible.

#### **4.1.1 National governments**

Several national governments have taken attempts to deal with the sustainability of biofuels at the national level to ensure that only sustainable biofuels are able to count for the renewable energy targets. In this paragraph the national biofuel policies and the sustainability criteria of two European Union Member States, namely the Netherlands, and the United Kingdom will be discussed. Those national initiatives are chosen, because these are most often referred to in literature as well as in the interviews. Germany is also often mentioned, but left out, because the German policy is comparable to the Dutch policy.

#### **The Netherlands**

The Dutch government has played a very active role in the promotion of sustainability criteria for biofuels. The Interdepartmental Programme Management Energy Transition established the project group 'Sustainable Production of Biomass' in 2006. This project group is more known as the Cramer Commission as named after the chair person Jacqueline Cramer, who is currently minister of Housing, Spatial Planning and Environment (VROM). (UnitedNations 2008)

In the period of the Commission, Jacqueline Cramer was not working for the Dutch government. The choice for an external chair person was made due to failure of an earlier commission on biomass chaired by the Ministry of Economic Affairs. Next to this, another lesson was to not focus on signing a general statement. The members of the

Cramer Commission did not necessarily represent the opinion of their organisation, because they did contribute on personal title in order to simplify the process. However, it was expected that the members kept in contact with their and similar organisations. In the first half year the commission worked on the first report (CommissieCramer 2006)

The six themes the Cramer commission selected to work on are:

- Greenhouse gas emissions
- Competition with food and local applications of biomass
- Biodiversity
- Environment
- Prosperity
- Social well-being

(CommissieCramer 2006)

In working out these themes in criteria and indicators the commission had a close look at already existing conventions and certification systems, like the ILO, FSC, RSPO etc. The indicators consist of process indicators and performance indicators. In case it was not possible to formulate verifiable indicators, the commission made the choice for reporting obligations. Criteria and indicators were formulated for the years 2007 and 2011 (as included in Annex I). This last year, 2011, was chosen, because at the moment of publication of the report, the European targets of the Biofuel Directive, ruling the European biofuel policy at that moment, should have been reached by 2010. The triple-P based criteria and indicators did not make a distinction between Dutch, EU and non-EU biomass.

However, the six themes were not worked out sufficiently in the first report, which made the commission decide to continue another six months. In the second half year, the commission finished what could not have been done during the first period by working in working groups in which also external people participated and contributed. Each working group delivered draft texts on one of the themes and provided concrete discussion points to lead the discussion within the commission. Although 75% of NGO's stated to want an indicator for GMO, no indicator was included in the final report 'Testing Framework for Sustainable Biomass' (March 2007)(CommissieCramer 2007) According to Ewald Breunesse of Shell, the report of the commission was also on purpose translated to German due to the similar activities in Germany. (interview Ewald Breunesse)

### Certification

The establishment of a well-working certification system was not within the scope of the commission. In the first report of the commission, the different systems for certification were discussed (see chapter 3). The commission also expressed its thoughts that there will probably no support for a system like book and claim, where the certificate or information does not move along the supply chain together with the certified products. The commission advices the track and trace system for the coming years, because of the current status of biofuel trade. The additional costs of certification are also discussed in the first report. According to the commission there are two types of additional costs: costs that are needed to meet the sustainability criteria and costs for certification. Estimates of the first type of costs range from 8% to 65% additional costs and in case of the second type certification will form 0.1-1% of the total cost to produce the biofuel. The scale of production is an important factor in the percentage of additional costs. Group certification can help to minimize the percentage. Another option to reduce costs is to join existing initiatives as much as possible. Establishing a certification system is seen as the responsibility of the market, where the state can play a role by look for contact with reliable certifiers, sharing its expertise and gain experience from pilots. (CommissieCramer 2006) In the second report of the commission the three different systems are discussed in more detail including advantages and disadvantages as also described in chapter 3. The overlap with other certification systems was also investigated by using the meta-standard approach by Ecofys, as is discussed in the second report. This study showed that some certification systems can be called equivalent to the testing framework, however none of the other certification systems has a criteria for the greenhouse gas balance, which therefore makes that other certification systems should be complemented by adding additional information on this issue.

### Stakeholder involvement

Three of the interviewed people did participate in the Cramer committee: Ella Lammers as secretary, Senter Novem, Sander van Bennekom, Oxfam Novib and Ewald Breunesse, Shell. When asked for their opinion on the outcome of the Cramer commission all three see the Cramer commission as a success and as a pioneer job. NGO's criticise the outcome of the Cramer committee; according to environmental and development organisations the efforts of this committee are a good step forward, but these organisations do believe that these criteria cannot guarantee the sustainability of biofuels (Milieundefensie 2008). Due to the given incentives as subsidies and the mixing obligations, the government is obliged to guarantee the sustainability. According to Ella Lammers of Senter Novem, criticising NGO's are less negative about the Cramer criteria since the EU criteria has been published in the proposal, which are clearly weaker criteria compared to the work of Cramer. (interview Ella Lammers)

Sander van Bennekom, Oxfam Novib, thinks the Dutch government could have done more to promote the Cramer criteria at the EU and international level. According to him, the government missed some chances. Concerning the criteria, he thinks the percentage of minimal CO<sub>2</sub> reduction of 30% is too low and could have been higher and for some aspects he rather would have seen more than only a reporting obligation and a statement about GMO's. (interview Sander van Bennekom). On the contrary, Hans de Waal of VROM emphasises the success of the Dutch government in promoting the criteria at the EU level. (see 4.1.2)

Although those stakeholders have participated, an often heard complaint is the stakeholder representation in the Cramer committee; only Dutch stakeholders were involved and no stakeholders from producing countries. However, it can be questioned whether it would have worked to involve stakeholders in this Dutch committee; it was a first attempt to 'brainstorm' on the issue of sustainability of biofuels and involvement of a variety of stakeholders would have not been appropriate.

### What has been done with the Cramer criteria

The Dutch government has accepted the proposed Cramer criteria and see them as the criteria, that are needed to make biofuels more sustainable. The following policy initiatives have been taken by the Dutch government related to the work of the Cramer commission:

- **Lowering of the blending target:** The blending target for 2010 of 5,75% has been lowered to 4%. This has been done due to concerns about effectiveness and the sustainability of biofuels, especially the relation with food security. In the letter of minister Cramer of 13 October 2008 to the Dutch Parliament, the minister refers to the Gallagher review, which stated that a fast growing demand for biofuels can lead to unsustainable practices. The report therefore recommends a temporization of stimulating the demand for biofuels. Another argument in the letter was the lack of a reliable certification system and the ability to track biofuels back to the source. Due to the uncertainties the Dutch government has decided to lower the targets. The choice for 4% instead of freezing the 2007 target is done in order to not weaken the investment incentive too much. (interview Hans de Waal) This investment incentive was also mentioned by Uwe Jurgensen of VNBI. According to him lowering the targets leads to higher risks for investors. Therefore, it will be better for investors if the government will set targets and keep to the targets until 2020. (Cramer 2008; SenterNovem 2009)
- **Double counting of second generation biofuels:** the Dutch government is preparing an arrangement, which deals with the obligations of the Renewable Energy Directive (see 4.1.2). This also includes the double counting of second generation biofuels, which makes it able to let second generation biofuels count twice for the renewable energy target. This provides an incentive for the biofuel market to use more second generation biofuels from which is believed environmental impacts are lower. Second generation biofuels, which already have found a market like deep frier fat are excluded even as the biofuels, which can be

applied higher in the cascade by using it as food or cattle-fodder. (interview Hans de Waal)(ProductschapMVO 2008)

- **Corbey Commission:** the Corbey Commission will follow up the Commission Cramer. In a letter of minister Cramer to the Dutch Parliament of 29<sup>th</sup> of June, the different tasks for this commission are mentioned. Tasks will be advising on the issues of indirect effects and the translation of the Renewable Energy Directive into national policy. (Cramer 2009)

### **United Kingdom (UK)**

In the United Kingdom the Renewable Transport Fuel Obligation (RTFO) Programme was developed since November 2005 and has come into force from April 15<sup>th</sup> 2008, which obliges fuel suppliers to ensure a percentage of 5% biofuels by 2010. This percentage is based on EU obligations, a realistic estimation of what the industry is able to deliver, 'the desired level of carbon savings' impact on the national industry and the acceptability of price effects for consumers (GaiaCommodities 2008). The programme is based on an earlier programme Renewable Obligations for the electricity sector. RTF certificates are supplied to complying fuel suppliers or can be bought from other suppliers. A supplier also has the possibility to buy out the obligation. During different phases of the development of the RTFO systems online public consultations were held by the Department of Transport of the UK, where different stakeholders could provide input in the process. (DepartmentforTransport 2008)

#### Gallagher review

The obligations under the RTFO has come under pressure by the publication of the Gallagher report in July 2008. (Gallagher 2008) In this report a panel of government experts came to the conclusion that further research on the indirect effects of biofuels on land use change and food production is needed before the government sets any targets. Ed Gallagher, as head of the Renewable Fuel Agency (RFA), has chaired the group of government experts and therefore the report is named after him. (Borger and Vidal 2008; Gallagher 2008)

#### Reporting requirements and the RTFO meta standard approach

The RTF certificates are not only linked to the quantity of biofuels provided by the fuel supplier, but also linked to the quality of the biofuels; a fuel supplier has the obligation to report on the net GHG reduction and the sustainability of the biofuels. Although the English government is also aiming at a mandatory certification scheme on the long term, the sustainability reporting requirements are seen as a necessary first step due to the following reasons: there is a lack of data, 'the robustness of the criteria and methodology' needs to be proven and the risks concerning WTO rules need to be reduced. Obligated fuel suppliers (obliged to use a certain quantity of biofuels) are obliged to report on a monthly and annual basis. On monthly basis, the fuel supplier should report per (homogeneous) batch on the following issues using a specific format:

- Fuel type
- Feedstock
- Feedstock origin (country)
- Standard to which the feedstock has been grown;
- Environmental level: which environmental qualifying standard or full RTFO Meta standard level?
- Social level: which environmental qualifying standard or full RTFO Meta standard level?
- Land-use (as on 30 November 2005)

(Dehue, Hamelinck et al. 2008)

Concerning points four, five and six, a fuel supplier needs to provide information on used standards. In case of the RTFO, no specific certification system is designed, but only already existing certifications systems are benchmarked as proof of compliance. This approach is called the RTFO Sustainable Biofuel meta-standard approach (see also chapter 3 for a general description of this approach). (interview Ella Lammers, SenterNovem). According to the Renewable Fuels Agency (RFA) reporting on this compliance can be done in two ways:

- By compliance with the developed RTFO Meta-Standard
- By compliance with a qualifying standard  
(ProForest 2009)

The principles used for the Meta-Standard are shown in Table 4.1 and the qualifying standards Table 4.2. (DepartmentforTransport 2008)

Table 4.1 Environmental and social principles of the RTFO (DepartmentforTransport 2008)

<b>Environmental principles</b>
1. Biomass production will not destroy or damage large or below ground carbon stocks
2. Biomass production will not lead to the destruction of or damage to high biodiversity areas
3. Biomass production does not lead to soil degradation
4. Biomass production does not lead to the contamination or depletion of water sources
5. Biomass production does not lead to air pollution
<b>Social principles</b>
6. Biomass production does adversely affect workers' rights and working relationships
7. Biomass production does not adversely affect existing land rights and community relations

Table 4.2 Qualifying environmental and social standards of the RTFO (DepartmentforTransport 2008)

Standard	Qualifying Environmental Standard?	Qualifying Social Standard?
Linking Environment and Farming Marque	Yes	No
Roundtable on Sustainable Palm Oil	Yes	Yes
Sustainable Agriculture Network/Rainforest Alliance	Yes	Yes
Basel criteria	Yes	Yes
Forest Stewardship Council	Yes	No
Social Accountability 8000	No	Yes
Assured Combinable Crops Scheme	No	No
EurepGAP IFA	No	No
International Federation of Organic Agriculture Movements	No	No

The monthly reports stay confidential in contrary to the annual reports, which will be made public except from information on volumes. In the annual report the following information should be included:

- 'Policies of the reporting company to improve the sustainability of its biofuels.
  - Aggregated information from the monthly reports.
  - Additional information on the sustainability of the biofuels delivered to the UK market, which is not covered by the batch reports (...)
  - Verifier statement...'
- (Dehue, Hamelinck et al. 2008)

#### Chain of custody

All three systems, as also discussed in chapter 3, are seem to be appropriate by the RTFO for the chain of custody, because each system reaches the goal; the amount of sustainable biofuels brought on the market will be equivalent to the amount of sustainable biofuels claimed by the obligated fuel suppliers. Because not all of the qualifying standards do have a certifiable COC system, fuel suppliers have to arrange this themselves, although the RTFO provides some technical guidance for this. (Dehue, Hamelinck et al. 2008)

### Time plan for the coming years

The Low Carbon Vehicle Partnership is asked by the UK government to explore the feasibility of a voluntary labelling scheme and the UK government is working together with the European Commission, other European Member States and international organisations to develop sustainability standards. Information gained from the sustainability reports delivered by the fuel suppliers serve as input for a sustainability standard. The RTFO Administrator shall report 'every three months on the effectiveness of the RTFO's environmental reporting system, and on the carbon and sustainability effects of the RTFO'. In April 2010 the UK Government will start with rewarding biofuels based on the amount of carbon they save. From 2011 only biofuels meeting the appropriate sustainability criteria will be rewarded by the government. (BioenergyWiki 2008; DfT year unknown)

Compared to the Netherlands and Germany, the system in the United Kingdom is the only one being implemented already. Uwe Jurgensen, chair man of the VNBI (association for the Dutch biodiesel industry) has therefore a preference for the English system, because it works gradually to certification. By the use of reporting obligations the system is already implemented, while in the Netherlands nothing has been done yet; there are still no sustainability criteria a producer has to comply to, which he thinks is a bad case. (interview Uwe Jurgensen, VNBI)

### **Conclusion**

Both government initiatives as described above are state led and meant as obligatory systems. In practice, the initiatives of the Dutch, German and United Kingdom ran almost parallel to each other, although there are some minor differences: the English system for assuring the sustainability of biofuels is already in the implementation phase due to the choice for a system with the focus on reporting obligations and benchmarking instead of having an emphasis on certification from the start on. The goal is to replace the reporting obligations by certification in the long run. The Dutch committee was more certified focussed, which took more preparation time. At the moment the Dutch government was ready for the implementation phase, the EU published the draft proposal, which made the Dutch government unable to adapt laws for implementation. This was also the case in Germany.

#### **4.1.2 European Union (EU)**

In the EU, the Renewable Energy Directive (RED) can be seen as the leading EU- policy concerning the sustainability of biofuels. This Directive makes the national initiatives as discussed in 4.1 irrelevant. This paragraph will be based on the final text of the Directive, is partly based on the interpretation of involved stakeholders, but not all issues are interpreted yet; therefore an own interpretation was sometimes needed.

#### **Previous and related Directives and policy documents**

Although the RED is the most recently adopted Directive related to biofuels and contains the so heavily discussed sustainability criteria for biofuels, a look at the previous and related Directives and policy documents is needed to get a full understanding of the developments and the debate. First of all, the promotion of biofuels has started by the identification of biofuels as a possible fuel for transport by the European Commission in the 'Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions on alternative fuels for road transportation and on a set of measures to promote the use of biofuels' (EC 2001)

Table 4.3 Overview previous and related Directives and policy documents in relation to RED

Date	Document nr.	Directive/Policy Document
13 October 1998	98/70/EC	Fuel Quality Directive (FQD)
7 November 2001	COM(2001)547 final	Proposal for a Directive of the European Parliament and of the Council on the promotion of the use of biofuels for transport
3 March 2003	2003/17/EC	Reviewed Fuel Quality Directive (FQD)
8 May 2003	2003/30/EC	Directive on the promotion of the use of biofuels or other renewable fuels for transport (Biofuel Directive)
7 December 2005	COM(2006) 628 final	Biomass Action Plan
8 February 2006	COM(2006) 34 final	An EU Strategy for Biofuels
April – July 2006		Start open consultation: Review of EU biofuels directive, April – July 2006*
10 January 2007	COM(2006)848	Renewable Energy Roadmap – Renewable energies in the 21st century: building a more sustainable future
16 May 2007 until 18 June 2007		Start open consultation: Biofuel issues in the new legislation on the promotion of renewable energy (EC 2006)
10 January 2007	COM(2006) 845 final	Biofuel Progress Report
31 January 2007	COM(2007) 18	Proposal for review Fuel Quality Directive
23 January 2008	COM(2008) 19 final	Proposal Renewable Energy Directive (RED)
17 September 2008	2009/C 77/12	Advice of the European Economic and Social Committee
17 December 2008		European Parliament votes for RED
6 April 2009		Decision of the European Council
5 June 2009	Volume 52, L140	Publication of the RED in the Official Journal of the European Union
23 April 2009	2009/28/EG	final Renewable Energy Directive (RED)

### Fuel Quality Directive (FQD)

As the name suggests, the Fuel Quality Directive deals with the quality of fuels, that are brought up the European market. The original Directive originates from 1998, but has been revised in 2003. Part of the revision was the inclusion of a blending limit for biofuels in petrol fuels. The European Committee for Standardization (CEN) has decided that for technical reasons a fuel supplier cannot blend more than 5% share by volume. (Schnepf 2006)

### Biofuel Directive

The Biofuel Directive of 2003 is the first Directive setting targets for the use of biofuels in Member States for environmental and energy security reasons. The general aim is stated as follows:

*'This Directive aims at promoting the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes in each Member State, with a view to contributing to objectives such as meeting climate change commitments, environmentally friendly security of supply and promoting renewable energy sources.'* (EC 2003)

The Directive has set guiding, not binding reference values for the percentage of biofuels to be achieved in the Member States. These are;

- 2% biofuels by 31 December 2005
- 5.75% biofuels by 31 December 2010 (EC 2003)

Member States can choose for blending or 100% application. In case of blending, the fuel must be labelled in case it contains more than 5% biofuels (the percentage set in the FQD). The Dutch government has been the only government which has implemented the targets in national legislation, but has lowered the 5.75% target to 4% (see 4.1.1). (EC 2003; VROM year unknown)

### **The interim period between the Biofuel Directive and the RED**

In 2005, it became clear that EU Member States would not meet the 2% of the Biofuel Directive, but only would meet 1,4%. Based on this conclusion, the European Commission came with the EU strategy for biofuels, which was based on the earlier published Biomass Action Plan (COM(2006) 34) and has the following aims:

- 'Further promotion of biofuels in the EU and developing countries.
- Preparation for large-scale use of biofuels by improving their cost-competitiveness.
- Support of the research into second-generation biofuels.
- Exploration of the opportunities for developing countries for the production of biofuel feedstocks and biofuels.' (p.8)(Van Thuijl and Deurwaarder 2006)

At the time of this Directive there was little or no insight in the sustainability aspects of biofuels. This Directive will be fully replaced by the Renewable Energy Directive of 2009.

### **General description of the RED**

The Renewable Energy Directive is an initiative of Directorate-General Energy and Transport (DG TREN) The sustainability of biofuels forms only a part of the directive, which is the guiding directive for EU's energy policy until 2020 and is the first directive in which sustainability criteria, in this case for biofuels, are included to such extent. DG TREN foresaw possible problems with WTO-consistency and therefore asked Directorate-General TRADE (DG TRADE) to be involved in the process for advise on the WTO-issues. The proposal of the Renewable Energy Directive has been published on 23th of January 2008 and has been adapted by the European Parliament on the 17<sup>th</sup> of December 2008. The main targets of the Directive are (EC 2009):

- a binding 20% target for the overall share of renewable energy in 2020 – the effort to be shared in an appropriate way between Member States;
- a binding 10% target for the share of renewable energy in the transport sector

Initially, the binding target of 10% only included the use of biofuels, but has been widened for all transport purposes; for example renewable energy used for trains will also count. In theory, this implies less stimulation of biofuel production, but in practice, this will mean that most of the 10% target still will come from biofuels. (EC 2009)

### **Design process of the RED**

During the design process of the final Renewable Energy Directive, EC had contact with NGO's and companies, mostly on the initiatives of these organisations. Next to this, EC had relatively often contact with the Dutch, United Kingdom and German government. According to Ewout Deurwaarder of DG TREN, the role of these governments was especially pressuring the process of the realisation of the sustainability criteria. Concerning the content, the usefulness of the national initiatives was somewhat lower than expected, because Germany and the Netherlands did not have implemented their initiatives already and the United Kingdom's approach was too different of what the EC was aiming at. For the methods concerning greenhouse gas emissions, a temporary working group was established. (interview Ewout Deurwaarder, DG TREN)

Next to this, stakeholders were invited to participate in the online public consultation 'Biofuel issues in the new legislation on the promotion of renewable energy' from 16<sup>th</sup> of May until 18<sup>th</sup> of June 2007. The following questions were answered by the respondents from public authorities, NGO's and companies (EC 2007):

1. How should a biofuel sustainability system be designed?
2. How should overall effects on land use be monitored?
3. How should the use of second-generation biofuels be encouraged?
4. What further action is needed to make it possible to achieve a 10% biofuel share?

Only Malaysia, as (kind of) developing country, contributed (of the 250 contributions). Due to this underrepresentation of producing developing countries, the EC decided to invite Brasil, Malaysia, Mozambique and Indonesia for information exchange. From these countries, the most input came from Brasil; Brasil was not against the use of criteria, but wanted the criteria to be based on scientific knowledge. In the summer of 2008 there was also a stakeholder meeting with ASIAN countries in Jakarta. (interview Ewout Deurwaarder, DG TREN)

### **Sustainability criteria for biofuels (as well as bioliquids)**

The sustainability aspects, which are formulated in criteria can be found back in Article 17 of the RED and can be summarized as follows (EC 2009)

- **Greenhouse gas reduction:**

*'The greenhouse gas emission saving from the use of biofuels and other bioliquids taken into account for the purposes referred to in paragraph 1 of this Article shall be 35%.'*

- **Land with high biodiversity value:**

*'Biofuels and other bioliquids taken into account for the purposes referred to in paragraph 1 of this Article shall not be made from raw material obtained from land with high biodiversity value....'*

- **Land with high carbon stock:**

*'Biofuels and other bioliquids taken into account for the purposes referred to in paragraph 1 shall not be made from raw material obtained from land with high carbon stock...'*

- **Peatland:**

*'Biofuels and other bioliquids taken into account for the purposes referred to in paragraph 1 shall not be made from raw material obtained from land that was peatland in January 2008.'*

The details on for example green house gas reduction calculations and exceptions can be found in the Directive.

### **Reporting obligations under the RED**

Different reporting obligations are laid down in the Directive; the European Commission and the Member States have both different obligations. The most important reporting obligations are listed in Annex III. Reporting by the EC and the Member States is on issues concerning the implementation and effects of the Directive rather than information on the sustainability of the production process.

### **Chain of custody**

In the Directive the mass balance system is mentioned as the appropriate system for verification which guarantees the sustainability of the biofuels without causing a burden for producers. It is unsure whether other systems will also be allowed; in the Directive it is stated the EC will review other verification systems.

### **Implementation and implications of the RED**

The official Directive has been published on the 5<sup>th</sup> of June 2009 in *the Official Journal of the European Union*, which means that the Directive will come into force twenty days after publication. The Directive needs to be implemented 5<sup>th</sup> of December 2010 at the latest (EC 2009). A time schedule of the RED with most relevant activities of the Commission and Member States is included in Annex III. 'RED has been adopted under a legal statute ("art. 95") that does not permit Member States to go beyond EC

requirements.' (Van der Vlist 2009) As mentioned earlier, this prohibited the Netherlands, Germany and the United Kingdom to adapt laws needed for implementing their criteria after publishing of the RED proposal. Not allowing going beyond EC requirements is called maximum harmonisation and is used less often compared to minimum harmonisation in which Member States have the freedom to go beyond an EU Directive (Dickie 2003). From a trade perspective, maximum harmonisation is beneficial, because it does not lead to a high amount of standards: a producer only have to meet one standard to export to the EU.

### **Standards**

The European Commission needs to determine which standards may be used in order to proof compliance with the sustainability criteria of the Directive. The Commission can develop its own standard, but can also make use of already existing standards as stated in the Directive:

*'The Commission may decide that voluntary national or international schemes setting standards for the production of biomass products contain accurate data for the purposes of Article 17(2) or demonstrate that consignments of biofuel comply with the sustainability criteria set out in Article 17(3) to (5).' (EC 2009)*

For example; in case the Commission determines that an RSPO-certificate (see 4.4.2) covers the minimum requirements of the RED, a RSPO-certificate will be enough to proof compliance with the RED. Another case could be that an already existing standard covers partly the RED criteria, but needs additional certification on for example the GHG reduction criteria.

At the moment of writing, these details of the Directive still need to be worked out, but initiatives of standard setting bodies and other organisations, as will be explained in the following paragraphs, are already influenced by the RED: any new standard will only function if it at least covers the criteria of the RED. Due to the costs and efforts for certification, a producer will only certify once. Now the criteria are known the organisations have to decide how far they will go beyond the RED criteria and estimate the need of producers to work 'RED plus' and thus a need for stricter sustainability criteria.

### **Effectiveness of the sustainability criteria**

One question that still remains is whether this Directive will sufficiently cover the sustainability issues of biofuels. Direct effects can be dealt with a consignment level, but not all possible direct effects are covered by the sustainability criteria as included in the Directive. Next to the GHG-aspect of biofuels, the sustainability criteria deal with the sort of land, which will be used for production, but do not deal with the local environmental and social conditions. Indirect effects cannot be included as sustainability criteria, because those effects cannot be dealt with by producers; monitoring and policy adaptation is needed at the national or even global level. In the Directive the EC has taken up the responsibility to investigate what exactly those indirect effects are, to see what can be done to minimize those effects and to adapt its policy to new gained insights and developments in science. In this way, the EC leaves the possibility to adapt the RED in the future, which can result in uncertain investment circumstances for investors, although it is stated in the Directive that the renewable energy targets will be binding in order to create a certainty for investors.

After all, at the moment it is still not clear to what extent it will be possible to prove the link between certain indirect effects and the production of biofuels and next to this, it may be even harder to proof whether those effects are caused by the targets of the RED or by demand from targets as set by for example, China or the United States. Exactly the indirect effects, like the influence of biofuel production on food prices, gain much negative attention in the public debate on biofuels.

### **Conclusion**

Summarizing the development in European policy related to biofuels it can be said that biofuels have been firstly identified as a possible form of renewable energy as alternative

for fossil fuels. Secondly, the European Commission has started to stimulate the use of biofuels by setting targets. Although the environment is mentioned in the Biofuel Directive, less was known on the sustainability aspects of biofuels. Only when reports from research institutes and critical notes from NGO's the EC decided to handle the sustainability in the RED. This indicates that the precautionary principle has not been applied in first instance. Now the European Commission has to destimulate what was stimulated before, namely biofuel production without sustainability requirements.

## **4.2 Non-state initiatives**

Non-state initiatives are defined as: initiatives without any state involvement. This does not necessarily mean companies, but also includes NGO's, science and other non-state actors. From the three categories, this category is the only initiative in which states are not involved.

### **4.2.1 Roundtable on Sustainable Palm Oil (RSPO)**

In the Roundtable on Sustainable Palm Oil different stakeholders from different sectors worked on the development of a voluntary standard for palm oil. The RSPO distinguishes seven sectors of ordinary members:

- Oil Palm Growers
- Palm Oil Processors and/or Traders
- Consumer Goods Manufacturers
- Retailers
- Banks and Investors
- Environmental/Nature Conservation NGO's
- Social/Developmental NGOs

(RSPO 2009)

Due to the shifting attention from palm oil for food to palm oil for energy, stakeholders like Shell became members of the RSPO a couple of years ago. However, within the RSPO no statements are made on the end use of palm oil.

The Roundtable on Sustainable Palm Oil (RSPO) can be called the front runner in the process of developing a workable certification system; a set of principles and criteria for the sustainable production of palm oil has already been adopted in November 2005. The final eight criteria are:

- 'Commitment to transparency'
- Compliance with applicable laws and regulations
- Commitment to long-term economic and financial viability
- Use of appropriate best practices by growers and millers;
- Environmental responsibility and conservation of natural resources and biodiversity;
- Responsible consideration of employees and of individuals and communities affected by growers and mills;
- Responsible development of new plantings;
- Commitment to continuous improvement in key areas of activity.'

(RSPO 2005)

A two-year long 'pilot implementation period' was meant to test the appliance of criteria in practice and to improve the whole system, making it ready for a more large-scale application. This 'pilot implementation period' was finalized in June 2007, followed by a review by 'a public consultation period' and 'a physical review meeting' (UnitedNations 2008) On the 11<sup>th</sup> of November 2008, the first supply of RSPO-certified palm oil has arrived in the harbour of Rotterdam coming from Malaysia. (OxfamNovib 2008)

#### Certification

Certification is done by a third party certification body as approved by the RSPO. The RSPO acknowledges the four existing systems: identity preserved, segregation, mass balance and book and claim, but does not state a specific preference. For more information on the requirements for certification, see RSPO Supply Chain, Certification Systems (RSPO 2008).

## **4.2.2 Dutch Standards Organization (NEN) and European Committee for Standardisation (CEN)**

The organisations CEN and NEN are already shortly discussed in chapter 3, but here the activities around biofuels will be explained. NEN and CEN are both standard/norm setting organisations, where NEN is the Dutch and CEN the European norm setting organisation. Both organisation are involved in standard setting for biofuels.

### **Dutch Standards Organization (NEN)**

The Dutch Standards Organization (NEN) has in corporation with different stakeholders developed a so called Dutch Technical Agreement (NTA) called NEN TC8080. The Cramer criteria are part of this agreement, which can be used on a voluntary basis by industry. This process is ended already, but the NEN has taking the initiative to lead the European process of CEN as will be discussed next. (Vos and Vis 2008; Energie+ 2009)

### **European Committee for Standardisation (CEN)**

The European Committee for Standardisation works with its thirty national members on the development of European voluntary standards. Those standard become often de facto mandatory, because CEN standards are often adopted as national standards. It is important to know that any stakeholder can participate in the standard setting process and that decisions are made by consensus. Another important point is the fact that the CEN is not working for the European Commission as is often thought. (Van der Vlist 2009)

The CEN process to develop a standard for the sustainability of biofuels is called CEN/TC 383 'Sustainability criteria for biomass' and has started in February 2008 and is chaired by NEN. The standard will be based on the Dutch, English and German criteria and later on also on the EU criteria. The Commission has been established in April 2008 and the total development of the standard will take about three years. It will probably result in a meta-standard to which other standards can be qualified. (Vos and Vis 2008)

The CEN is working out the different aspects in six different working groups:

- Terminology and cross-cutting issues
- GHG emission/fuel balance and calculations
- Biodiversity and environmental issues
- Economic and social aspects
- Verification and auditing
- Indirect effects

(Costenoble 2008)

An important decision CEN has to make whether to go for RED or RED+. By going for RED+, CEN will go beyond the criteria which are included in the RED. This not necessarily has to lead to any problem, because the CEN-standard will be a voluntary standard. The question is however if there is a demand from companies to go voluntary beyond the RED criteria. (Van der Vlist 2009)

## **4.3 Hybrid initiatives**

Hybrid initiatives can be defined as private initiatives with state involvement. The most important hybrid initiatives in relation to biofuels are the Roundtable on Sustainable Biofuels (RSB) and the Global Bioenergy Partnership (GBEP).

### **4.3.1 Roundtable on Sustainable Biofuels (RSB)**

There are different so called roundtables focused on biofuels or on a commodity which can be used for biofuel purposes. Of all the roundtables, only the Roundtable on Sustainable Biofuels (RSB) is focused on biofuels, where the other roundtables are focused on one particular commodity, like: soy, palm oil and sugar cane. On the one hand, the standards being developed by roundtables are mainly perceived as standards to be used for voluntary certification.

The RSB of the Swiss École Polytechnique Fédérale de Lausanne (EPFL) is '*a key multi-stakeholder initiative to develop standards for the sustainability of biofuels*'.

(BioenergyWiki 2009) It can be called a hybrid initiative, because different governments are also involved as stakeholders in the standard setting process. During the whole standardization process, the RSB works according the ISEAL Code of Good Practice for Setting Social and Environmental Standards. (BioenergyWiki 2009)

After a year of stakeholder consultations, the RSB has published Version Zero (August 2008), as follow up of the first draft.(RSB 2008) Stakeholders were invited to comment on the Version Zero principles. This was done by regional outreach meetings (like Brussels, Buenos Aires, Nairobi), comments via email, internet and phone, Working Group and Expert Group teleconferences and '*in-person stakeholder meetings in Brazil, China, South Africa, and India*'.The RSB received feedback from 900 participants from 40 different countries. Concerning the kind of stakeholders involved, the RSB has difficulties with reaching farmers as a stakeholder group. For example; no farmers were represented on the RSB outreach meeting on 19<sup>th</sup> of March 2009. (RSB 2009(a))

In January 2009, the RSB has adopted a new governance structure, which makes that members are divided in different chambers each representing a different stakeholder group. Two representatives of each chamber (a South representative and North representative) represent the chamber in the Steering Board of the RSB and being part of the decision making process concerning the strategy. This chamber structure has been implemented to ensure a good balance amongst the different stakeholders. Based on the received feedback, the secretariat compiled a version 0.4 which was, after consultation of the RSB chambers, presented in the Steering Board. The considerations of the Steering Board has led to version 0.5. One important change in this version compared to version zero is the division between minimum requirements and progress requirements. The requirements have to be fulfilled within three years of certification. (RSB 2009(b))

The RSB plans to finalize Version 1 in November 2009 bringing the organization a step closer to its final goal: 'global applicable standards.' (RSB 2009(a)) If the CEN and ISO process will lead to a global standard for biofuels, the RSB will quit its job, but until there is a global standard, the RSB will continue its job. (as stated on the RSB stakeholder meeting Brussel, see Annex I) Like all other initiatives aiming at the development of a standard, the RSB also has to decide to what extent the standard will go beyond the RED-criteria.

The standard consists of environmental principles like on the greenhouse gas balance of biofuels, but also principles on local environmental circumstances, like soil, water, air and conservation. There are social principles on land rights, local food security, human and labour rights and rural and social development. (RSB 2008)

#### **4.3.2 Global Bioenergy Partnership (GBEP)**

The establishment of the Global Bio-energy Partnership (GBEP) is the result of the commitment of the G8 and five other governments ((Brazil, China, India, Mexico and South Africa) in the Gleneagles Plan of Action in 2005. The goal of GBEP is to support "*biomass and biofuels deployment, particularly in developing countries where biomass use is prevalent*".(GBEP 2009)

Different preparatory meetings were held in 2005 to consult stakeholders from both developed and developing countries. During a session of the Commission on Sustainable Development (CSD) in New York, the GBEP was officially launched on 11 May 2006. GBEP revised its mandate and its aims is now to develop a methodological framework which is able to measure GHG emissions from biofuels. Next to this GBEP is focused on the development of 'science-based benchmarks and indicators for sustainable biofuel production and the initiative wants to boost technological progress. (G8 Summit Declaration – L'Aquila, 8 July 2009)' (GBEP 2009)

Public, private and civil society stakeholders are involved in the process. The GBEP secretariat is hosted at FAO Headquarters in Rome and the initiative is registered as a CSD (Commission on Sustainable Development) Partnership. The organisations works through different committees:

- Steering Committee

- Technical working groups
  - Taskforce Sustainability
  - Taskforce on GHG Methodologies
- (GBEP year unknown)

Although GBEP's aim is not to develop a standard, the initiative is worth mentioning, because of the commitment of major biofuel exporting and importing countries, like Brazil, the United States and the EU. Therefore, consensus within GBEP on specific biofuel related issues can be guiding for international biofuel trade and can influence the standard setting process in other initiatives. Approval of the major biofuel producers on a standard can strongly influence the effectiveness of a standard in the future and thus the amount of sustainable biofuels that will be produced. Especially the opinion of Brasil is important; this country is less in favour of certification in comparison to the United States and the EU.

#### **4.4 Feasibility of sustainability criteria for biofuels**

After discussing the developments in the current national and international policies, related to the sustainability of biofuels, some crucial factors in the formulation of sustainability criteria can be identified. Those factors will be discussed in this paragraphs.

##### **4.4.1 Balance of strong criteria and ability to comply**

The environmental problems related to biofuels ask for strict and strong sustainability criteria. However, the strength of criteria is not only limited by WTO agreements, which will be discussed later on in Chapter 5, but also by the ability of producers to comply to those criteria. Strong, but not realistic, criteria will result in low compliance of producers, which will endanger either the fulfilment of the blending targets, either more sustainable production conditions. Producers will seek for other markets instead of exporting to European countries, if compliance asks too much effort and investment. On the one hand, ambitious criteria my in the short term result in low compliance, but stimulate improvement and innovation. Therefore, the balance of strong criteria and producer ability is an important factor for the success of sustainability criteria.

##### **4.4.2 Stakeholder involvement**

Either for an adaptation of the criteria to the ability of producers, either for understanding and legitimacy of the criteria, it is crucial to involve stakeholders already in the design process of a certification system. Simonetta Zarilli of UNCTAD talked about the term 'honourship': in case of a participatory process stakeholders will feel honoured. This 'honourship' will result in a higher willingness to comply and acceptance of the criteria. (interview Simonetta Zarilli). She warns for the imposing effect when not enough attention is paid to this participatory process, which will result in one way traffic and non compliance. As can be read in the above description of the different initiatives, these initiatives seemed to be aware of the need for a participatory process.

##### **4.4.3 Amount of initiatives and harmonisation**

Interviewed stakeholders, however, warn for the currently high amount of initiatives. Harmonisation is needed in order to decrease the 'confusing' effect for producers. (interview Simonetta Zarilli) It is impossible especially for small producers to comply with different sets of sustainability criteria. Formulating one set of international criteria is mentioned as the solution. There are different international fora, which are mentioned as possible fora for setting one international set of sustainability criteria. According to Simonetta Zarilli, UNCTAD, the United Nations is often mentioned in this context, but not appropriate due to the slow decision making process. FAO, is also often mentioned as a good forum to do this job. (interview Simonette Zarilli)

On the one hand, it can be questioned whether there is really a need for the development of one set of international criteria. The development of the international biofuel market is an important factor, which determines the need for such criteria. In Table 4.4 national biofuel targets world wide are listed. If all those countries will set their own sustainability criteria, there is certainly a need for harmonisation and one international standard, but if only the European Union and United States connect

sustainability criteria to their targets, it will be sufficient to have those criteria and there is less need to reach international consensus on the content of international criteria. A good understanding of trade-statistics of the trade in biofuels, will be able to answer the 'real' need for international sustainability criteria. Unfortunately, international trade statistics on biofuels are hard to find due to the classification of biofuels within the World Customs Organization (WCO) (see Chapter 5.3). Comparing Brazil with the EU, it shows that both have set ambitious biofuel targets, but due to Brazil's mature domestic ethanol sector it is unlikely that Brazil has to import a lot to reach the target, where the EU will more depend on import in order to reach the targets.

Table 4.4 Global Biofuel Targets (April 2008) (Petersen 2009)

<b>Country (group)</b>	<b>Blending target (T) or mandate (M)</b>	<b>Quantity or share</b>	<b>Target year</b>
Brazil	M	25% ethanol 5% biodiesel	2007 2013
Canada	M	5% ethanol 2% biodiesel	2010 2012
China	T	15% of fuel for transportation	2020
EU-27	T	10% of transport fuel	2020
India	M	10% ethanol 5% biodiesel	2008 2012
Japan	T	6 billion litres	2020
USA	M	134 billion litres	2022

#### 4.4.4 Scope

Another point of discussion is the scope of sustainability criteria. In the Netherlands for example, the government has made the choice for stimulating biofuels, but research of CE as commissioned by the VNPI, shows higher environmental benefits in case biomass is used for electricity. (interview Uwe Jurgensen, VNBI) The question is therefore whether the scope of sustainability criteria for biofuels should not be widened to sustainability for bioenergy in general. However, the discussion in the Netherlands is ended by the argumentation of the government that the transport sector cannot lean on another sector for CO2-compensation. (interview Ewald Breunesse, Shell).

Comparing to other sectors, the discussion on sustainability in the biofuel sector plays an important role. This can easily be explained by the drivers behind the demand for biofuels, but at the same time also raises the question whether there are no sustainability criteria for fossil fuels and why there is no demand for only sustainably produced agricultural products. In the policy process of designing sustainability criteria, this issue will probably influence the contribution of producers. For example, palm oil producers can be afraid for widening the scope to all applications of palm oil. Current developments can result in a revision of the regulation of sustainability in other sectors. Another argument for broadening the scope is a possible application of bioraffinage where the focus is on multiple applications of biomass and applying the concept of cascading. Interviewed stakeholders are positive about this approach, but also see bioraffinage as a long term development. (interviews LNV, Shell)

#### 4.4.5 Limitations of sustainability criteria and reporting obligations

Besides the need for realistic criteria in terms of producer capacity and the WTO, the limitations of sustainability criteria also have to be taken into account.

Next to this, there is a general agreement among the interviewed stakeholders about the limitations of using sustainability criteria/certification for dealing with the indirect effects of biofuels. At this moment, it is not possible to formulate criteria which deal with those effects. However, at the same time those effects are the most heavily debated negative impacts of biofuels by NGO's etc. This inability is caused by a lack of scientific data on how to monitor those effects. As different interviewed stakeholders said: certification of biofuels is only half of the story. The interviewed stakeholders agree that in case of sufficient stakeholder involvement, certification can be a useful tool/instrument to make the international biofuel trade more sustainable.

#### **4.5 Conclusion**

This chapter has discussed different initiatives to regulate the sustainability of biofuels. First of all, it can be concluded that the state has acknowledged the non-state, and especially the private environmental authority to regulate the sustainability of biofuels by certification. Standard setting and certification done by private standards have in the past proven to deal effectively with the consequences of (economic) globalisation, like the increased distance and time compression, in the case of for example coffee, bananas and other food commodities. By formulating sustainability criteria, the states and EU enforce the development of private standards letting the governance of the other steps of the certification process up to non-state authority. Where environmental standard setting was in the past mostly a non-state activity, the case of biofuels shows a tendency to a more hybrid standard setting process. Also the formulation of sustainability criteria has a hybrid character by the stakeholder consultations held by the state actors, realizing that stakeholder involvement will lead to a more effective implementation and higher acceptance of the criteria. By a limited role of the state and more involvement of other actors, the state and EU have accepted the changed spatial patterns and the need for other forms of governance, namely the governance of flows rather than staying with the conventional governance of places approach.

Table 4.5 summarizes the different characteristics of the initiatives. It can be concluded that voluntary hybrid or non-state initiatives are in general criteria oriented, while reporting obligations play a bigger role in obligatory state initiatives. This can partly be explained by the limitations of the global trade system, as will be discussed in chapter 5, and by a form of protectionism for domestic industry. Those initiatives are not static, but interact with each other; this chapter showed an influencing role of the hybrid and voluntary initiatives in the design process of the RED. After approval of the RED, roles were turned around and the RED became leading in the development of non-state and hybrid initiatives: the future role of the different initiatives, like the RSB, CEN etc. will depend on the European Commission and to what extent the Commission will accept one or more of the standards as developed by these organisations as proof of compliance with the RED. At the moment of writing this is still not communicated by the European Commission. To ensure viability of a standard in development at least the criteria of the RED should be included.

For international biofuel trade the different sustainability initiatives have the following implications; state initiatives are translated into national or European law and are thus bounded to specific regions and countries. Therefore, state initiatives will be able to change the direction of trade: in case producers are willing to adapt and to certify, consumption of sustainable biofuels will mainly occur in regions where compliance is necessary. When stakeholders are not willing or able to comply to the criteria, trade flows to the EU will decrease and will expand to other regions, where compliance is not required. By a high avoidance of compliance requiring regions, the total amount of sustainable biofuels will hardly increase. Due to a lack of knowledge, capacity and technology developing countries can face difficulties in complying, which can result in losing export markets. This makes that state-based initiatives can result in trade barriers. On the one hand these trade barriers are thus created by a lack of capacity to compliance by producers, but on the other hand trade barriers can also be caused by the content of the criteria as is shown by the following example; the asked GHG emission savings in a standard may not be reached by every kind of biofuel. The criteria in a standard can therefore be formulated in such a way palm oil can never be comply. Because palm oil is mainly produced in countries as Indonesia and Malaysia biofuel trade from these regions can decrease by a mandatory standard. It has to be clear that in the case of biofuels, 'unsustainable' biofuels can still be exported to the European Union, but because only sustainable biofuels may count for the targets fuel supplier in practice will mainly import sustainable biofuels.

Non-state and hybrid initiatives are in general not bounded to specific regions. Those initiatives have therefore a higher geographic range, which mainly depends on the representation of the stakeholders. A standard developed and accepted by mainly Asian stakeholders will probably result in more sustainable biofuels in Asia without having significant effects elsewhere. Biofuel producers in for example least developed countries

can still face difficulties to comply with private and hybrid initiatives, but due to the voluntary nature of those standards, non-compliance does not result in losing specific export markets. So barriers exist for certification, but no trade barriers are created concerning export possibilities.

Reporting obligations can cause a barrier to trade due the administrative burden for producers and depends mainly on the information asked. The effectiveness depends the transparency of the system and to what extent the market reacts on the published information. A reaction of the market will be accelerated by negative publications initiated by NGO's.

Table 4.5 Overview initiatives concerning choices for criteria or reporting obligations

Based on the presentation 'Overview of biofuel certification schemes resistance to 'sustainability' criteria for soy' presented on 8 May 2009, NCIV Biofuels and Indigenous people

\* as meant before the draft of the RED

<b>Initiative</b>	<b>State, private or hybrid</b>	<b>Criteria or reporting</b>	<b>Voluntary/ obligatory</b>
<b>EU:</b> Renewable Energy Directive (RED)	<b>State</b>	<b>Criteria:</b> * Biodiversity and GHG emissions  <b>Reporting:</b> * All social, environmental issues <i>EC: no detailed information public, no naming and shaming</i>	Obligatory
<b>Netherlands*:</b>  Cramer Criteria, criteria for biomass and biofuels,	<b>State</b>	<b>Criteria:</b> * HCV and GHG, rest biodiversity, environmental, social  <b>Reporting (until 2011):</b> * Public, once a year, nonspecific information, companies can answer: don not know. ' <i>NGOs should name and shame</i> '	Obligatory
<b>United Kingdom*:</b>  Renewable Transport Fuel Obligation (RTFO)	<b>State</b>	<b>Reporting (until 2011):</b> * public, monthly, but no company-specific information. Companies can answer: do not know	Obligatory
<b>Roundtable on Sustainable Palmoil (RSPO)</b>	<b>Non-state</b>	<b>Criteria</b>	Voluntary
<b>Roundtable on Sustainable Biofuels (RSB)</b>	<b>Hybrid</b>	<b>Criteria (in development)</b>	Voluntary

## **5. The WTO-consistency of sustainability criteria for biofuels**

Due to the international trade of biofuels, consistency with WTO agreements, which govern international trade, is an important issue. Three issues can be identified as relevant factors in relation to the WTO; the consistency of sustainability criteria with WTO agreements, the classification of biofuels and subsidies and tariffs related to biofuels. Due to the research question of this research, the focus of this chapter will be on the consistency of sustainability criteria.

In chapter 4, the different initiatives where discussed using a classification based on the involvement of the state. In this chapter, this classification will be used again:

- State initiatives (5.5.1)
- Non-state initiatives (only non-state actors) (5.5.2)
- Hybrid initiatives (state and non-state actors together) (5.5.3)

This chapter will start with a general explanation of the functioning of the WTO in 5.1. The issue of mandatory sustainability criteria has not yet been discussed in the Doha round, which makes that the opinion of WTO members on this topic is unknown. Therefore it is impossible to discuss the current WTO-debate on biofuels. However, the WTO-consistency can be judged by looking at the legal texts of the WTO agreements, which will be done in 5.2. It will be made clear which agreements are related to sustainability criteria for biofuels and to what extent proposed sustainability criteria comply with these agreements. Next, the classification of biofuels will be dealt with in 5.3. In 5.4 the dispute settlement procedure of the WTO will be explained, which is used if any of the Member States finds certain measures or policies not in line with the WTO agreements and feels harmed. Besides the legal texts, as described in 5.2, the jurisprudence on environment related trade disputes are a good means to assess a possible trade dispute on biofuels. Finally, avoidance of discussing biofuels in the WTO and a dispute is discussed (5.5).

### **5.1 The World Trade Organization**

*'The World Trade Organization — the WTO — is the international organization whose primary purpose is to open trade for the benefit of all.'* (WTO)

Above statement can be seen as a one-sentence summary of the WTO, but it needs more explanation to understand the system. The WTO is a relatively young organisation (1995), but knows a long history in the form of the General Agreement on Tariffs and Trade (GATT). This agreement has existed from 1948 until 1995. Over the time, 128 states have signed the agreement and became contracting parties. After the update of the GATT text was signed by all the GATT parties in 1994, those contracting parties became WTO members. (WTO 2008) This new revised GATT was developed during the so-called Uruguay round (because it was launched in Punta del Este, Uruguay) from September 1986 until April 1994, where the agreements were signed in Marrakech, Morocco by the 124 Governments and the European Communities. (GATT/WTO 1994)

The current round of negotiations is called the Doha Round, which started in Doha, Qatar in 2001. The negotiations of 23-29 July 2008 failed, because the members did not succeed in reaching agreement on 'agricultural import rules'. Since then there were no new negotiations, but different members ask for a restart of the negotiations in order to complete the Doha round. On the 9<sup>th</sup> of July, during the G8-top in L'Aquila, leaders of the G8-countries came with a statement on the willingness to complete the Doha round in 2010, which should lead to more open markets and less protectionism. (ANP 2009; WTO....(b))

The WTO is the only global international organisation on trade rules between (more than 130) nation states. (Dankers 2003) Some argue that 'global' can better be replaced by 'multilateral', because not all nation states are member of the WTO. However, most

nation-states are a member as can be seen in Figure 5.1. Other nation states only participate as 'observer governments' and also international organisations, like the United Nations, World Bank etc., are an observer of the discussions of their interest. The European Communities is also a member next to all the 27 EU Member States. Due to legal reasons the EU is called European Communities and not the European Union (WTO 2008)

In the schematic overview of the WTO in Annex IV the different committees of the WTO are listed. One of those committees, the Committee on Trade and Environment (CTE) especially focuses on environmental related trade issues. In paragraph 31 the Ministerial Declaration of Doha of 14 November 2001 the CTE was given several assignments, from which two are important in the light of this research: first of all the CTE should give special attention to how environment measures effect especially the market access of developing countries (Least-Developing Countries in particular) and secondly, the CTE should pay attention to 'labelling requirements for environment purposes'.(WTO 2001) Meetings held by the CTE are not part of the WTO negotiations, but are meant to lead the discussion among the WTO Members.

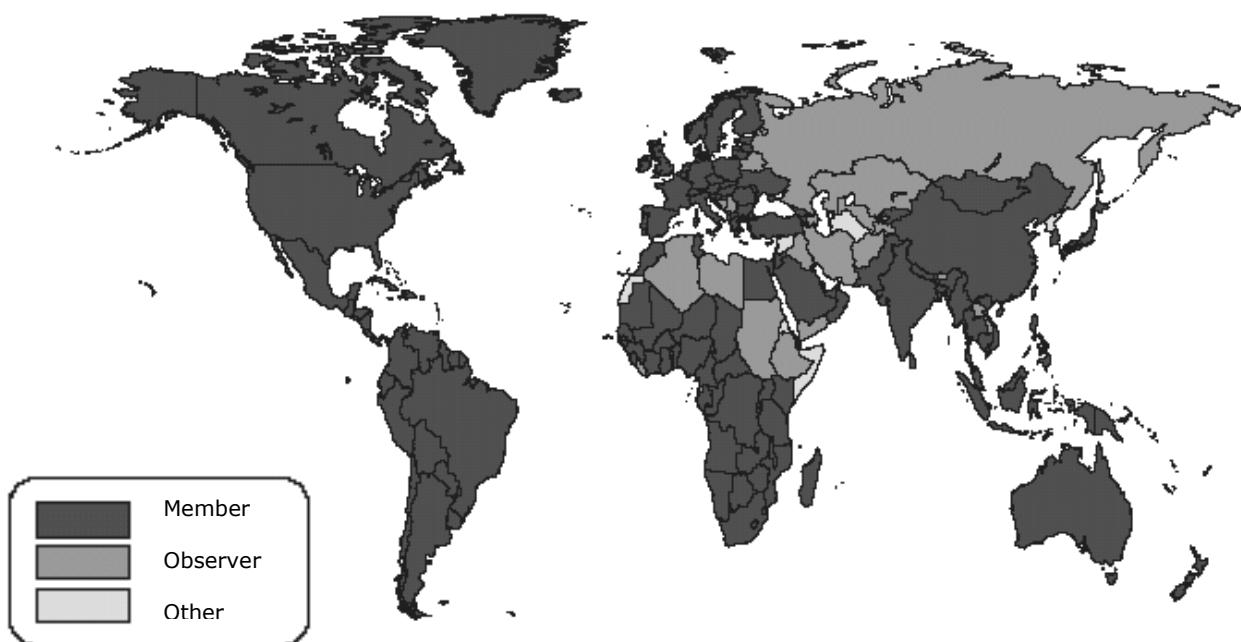


Figure 5.1 Map WTO members (p.189)(WTO 2008)

## 5.2 WTO agreements

In this paragraph the WTO-agreements and Articles of those agreements relevant for the biofuel sector, and especially sustainability criteria for biofuels are discussed. Those agreements are the legal texts of the WTO and are the result of consensus among the WTO members on trading rules. Certification is a Non-Tariff Measure (NTM) within the WTO, which makes that all the WTO-agreements in relation to subsidies are irrelevant to discuss here, although it has to be kept in mind that WTO provisions on subsidies do also have an influence on international biofuel trade. (FERN 2003) The WTO agreements, which are relevant to study in order to say something on the WTO-consistency of the different initiatives, are:

- The General Agreement on Tariffs and Trade of 1994 (GATT)
- Agreement on Technical Barriers to Trade (TBT agreement)
- Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)

### **5.2.1 The General Agreement on Tariffs and Trade (GATT)(1994)**

The GATT has existed from 1947 until 1994 and the content of the GATT has evolved over time. In this paragraph the most up to date version of the GATT will be used: the texts of 1994, which has served as the basis for the establishment of the WTO. (GATT 1994)

#### Article I General Most-Favoured-Nation (MFN) Treatment

The Most Favoured Nation principle of the WTO prevents Member States to set different tariffs for different Member States. In the light of biofuels this means that the EU cannot for example set different criteria for Brasil than for the United States. The fact this principle is the first article shows the weight of non-discrimination within the WTO and therefore this principle can be seen one of the basic principles of the system, which also is prevalent in the General Agreement on Trade in Services (GATS) and Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS). Exceptions on this principle are only allowed under strict conditions. (see also Article XX for the exceptions) (Howse, van Bork et al. 2006; WTO 2008)

#### Article III National Treatment on Internal Taxation and Regulation

Article III is closely related to Article I due to the non-discriminatory nature of it. Where Article one prohibits discrimination between different Member States, Article III prohibits discrimination of so called 'like' products. There is no clear definition of 'like' products given by the GATT. What is clear in the determination of 'like' products is the focus on the end characteristics of a product. Production and processing methods only are allowed to play a role in case these can be found back in the end characteristics of the product. For example, if the region in which a product is grown affects the taste of a product than a distinction based on production and processing methods is allowed, because taste is an end characteristic. However, sustainability criteria are primarily focusing on the production and processing methods of biofuels and the sustainable production and processing methods cannot be found back in the end characteristics of for example, ethanol.

This implies a 'like' treatment of unsustainable bioethanol and sustainable bioethanol. These production and processing methods, focusing on labour conditions, environmental conditions etc., are called non-product related production and processing methods (npr-PPM's). On the contrary, the energy content of biomass related to the greenhouse gas savings of a biofuel is an end characteristic of the product and can thus be used as a criteria without being discriminatory. It is heavily debated by stakeholders whether or not it should be able to make a distinction based on npr-PPM's. In 5.4 it can be read how those npr-PPM's are perceived in the WTO Dispute Settlement Understanding.

Besides the production and processing methods, Article III also prevents discrimination and protectionism of domestic markets by not allowing non domestic 'like' products to be treated 'less favorably' compared to domestic markets. It is not easy to determine discrimination based on this principle. It can be argued whether sustainability criteria are discriminatory due to the difference in efforts that are needed to comply between domestic (EU) producers and developing countries.

#### Article XX General exceptions

In Article XX of the GATT, the general exceptions are listed, which justify a violation of the other articles, like article I and III. The following is stated:

*"Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:*

- (a) necessary to protect public morals;
- (b) necessary to protect human, animal or plant life or health;
- (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption";(GATT 1994; Bronckers, Verberne et al. 2007)

There are ten exceptions in total, but only the exceptions relevant in the case of biofuels are listed above. In case of exceptions (b) and (g) there are some restrictions: there needs to be a territorial link, the trade distorting measure needs to be proportional and it is not possible to impose a measure based on an international agreement on a Member State, which is not party of that agreement. This makes that Member States act in 'an objective, transparent, non-arbitrary and non-protectionist manner.' (p27) (Howse, van Bork et al. 2006)

### **5.2.2 Agreement on Technical Barriers to Trade (TBT agreement)**

The Technical Barriers to Trade agreement deals primarily with technical regulations and international standards and how Member States should deal with those. Member States are forced to set technical regulations only if it serves a legal objective, like '*to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices.*' (WTO 1994(a)) Technical regulations should be not more trade-restrictive than necessary or in other words should be proportional. To what extent a technical regulation is proportional can be subject of discussion and depends on the interpretation. Until now there has been no interpretation within the WTO, which can serve as guidance. (Bronckers, Verberne et al. 2007) Next to proportional technical regulations, members should also use international standards as much as possible as the basis for their regulations. (WTO 1994(a))

The Agreement also pays attention to the special difficulties developing countries may face in relation to technical regulation and the Agreement asks for assistance of these countries by for example providing developing countries more time to adapt to a regulation. (WTO 1994(a))

#### Voluntary standards

Next to rules for Member States on how to deal with technical regulations, Member States are also held responsible for the way in which technical regulations are set by non-governmental standardizing bodies:

*'...to ensure that local government and non-governmental standardizing bodies within their territories, as well as regional standardizing bodies of which they or one or more bodies within their territories are members, accept and comply with this Code of Good Practice'* (WTO 1994(a))

This '*Code of Good Practice for the Preparation, Adaptation and Application of Standards*' is included as annex III in the TBT agreement, which deals with voluntary standards. This Code of Good Practice can be accepted by any standardizing body as long as it is within the territory of any WTO-member. A standardizing body can be a governmental or non-governmental body. If any standardizing body accepts the code, it should notify this to the ISO/EC centre, also if the body withdraws from the standard. (WTO 1994(a))

#### Product related or non-product related?

The TBT agreement deals with both mandatory and voluntary rules and standards used to regulate 'product characteristics or their related processes and production methods'. It is however not clear to what extent rules and standards that deal with non-product related production processes fall under the TBT agreement. Many WTO-members do have the opinion that environmental labelling programmes and other measures based on a life-cycle approach and referring to production and processes methods which cannot be find back in the end characteristics are not covered by the TBT-agreement. This implies that those labelling programmes and measures fall under the more general agreement, namely the GATT. In some way, this seems to be contradictory, because product related PPM's therefore fall under the stricter TBT-agreement, while product related PPM's have in practice less potential to be trade restrictive in comparison to npr-PPM's. (Gonzales) Next to this, falling under the TBT-agreement or not has implications for the WTO-consistency of especially non-state and hybrid initiatives, which will be more elaborated on in 5.5.2.

### Lack of international standard for biofuels

In the case of biofuels, no international standard for biofuels exists yet. Because this unavailability, it can be argued that some of the domestic regulations on biofuels can be challenged more easily, because these create unnecessary trade barriers for biofuel trade. An example of a domestic, not internationally accepted, regulation is the limit of biofuel that could be blended according to the Fuel Quality Directive. (Howse, van Bork et al. 2006; Bronckers, Verberne et al. 2007)

### **5.2.3 Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)**

As the name suggest the agreement deals with the application of sanitary and phytosanitary measures and how these measures affect international trade. In case of sanitary and phytosanitary measures, measures related to '*risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms*' and '*risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs*' as stated in Annex A of the agreement. Such risks do also arise by international biofuel trade, which makes it relevant to discuss this agreement in this chapter. The SPS agreement, dealing mainly with risk management, shows some overlap with the TBT-agreement; mandatory measures should be proportional and not more trade-restrictive than necessary and measures should also be based on international standards as much as possible. However, the SPS agreement goes one step further; in case no international standard exists, measures should be based on scientific evidence.

Like in the TBT Agreement, the SPS Agreement also states the responsibilities of the Member States for the non-governmental bodies and to what extent these take the SPS Agreement into account. In Article 13 of the SPS Agreement the following is stated:

*'Members are fully responsible under this Agreement for the observance of all obligations set forth herein. Members shall formulate and implement positive measures and mechanisms in support of the observance of the provisions of this Agreement by other than central government bodies. **Members shall take such reasonable measures as may be available to them to ensure that non-governmental entities within their territories, as well as regional bodies in which relevant entities within territories are members,** comply with the relevant provisions of this Agreement. In addition, Members shall not take measures which have the effect if, directly or indirectly, requiring or encouraging such regional or non-governmental entities or local governmental bodies, to act in a manner inconsistent with the provisions of this Agreement. Members shall ensure that they rely on the services of non-governmental entities for implementing sanitary or phytosanitary measures only if these entities comply with the provisions of this Agreement.'* (WTO 1994(b); Gascoine, Vergano et al. 2006)

### **5.3 Classification of biofuels and the environmental goods discussion**

Because it is impossible to list every individual product, the WTO works with categories of products and determines tariff rates per product group. Due to the commitment of the majority of WTO Member States to the World Customs Organisation (WCO), the system of the WCO is used, called Harmonized Commodity Description and Coding System (HS), is also used for classification of goods in the WTO regime. The WCO is the only intergovernmental organization focusing on customs issues and is seen as the global customs organization, like the WTO is for trade. (WCO 2009)

Concerning the classification of ethanol, the HS system only makes a distinction between denatured and undenatured ethanol. This distinction is based on the chemical composition of ethanol and not on the application of ethanol, which makes Member States unable to differentiate between fuel ethanol and ethanol used for other purposes. This leads to the following problems; on the one hand, tracing biofuel flows and thus collecting good statistics of trade in biofuels is a hard job. On the other hand, Member States are not allowed to apply different tariffs on fuel ethanol compared to ethanol for

other purposes, which Member States would like to do in order to stimulate the use of bioethanol. (Howse, van Bork et al. 2006; Kojima, Mitchell et al. 2007)

Concerning the categories of classification, biodiesel is classified as an industrial good and bioethanol as an agricultural good. Classification of biofuels by giving each biofuel an own HS code is difficult due to the different applications a commodity can have. Commodities that are only serving for energy use purposes and cannot be used for other end uses, are given their own HS classification, like ETBE (Ethyl tert-butyl ether). Due to these own classifications, monitoring of trade is easier compared to agricultural commodities with different end uses, like palm oil. (Bio-energyTrade; Kojima, Mitchell et al. 2007)

In the Doha Ministerial Conference of November 2001, major developed countries brought up the issue of the liberalization of trade in environmental goods. By classifying products with a positive effect on the environment, these products should gain liberalized market access. The discussion started with a strong focus on machinery and equipment, but nowadays some member states argue that biofuels should also be classified as an environmental good. Where with machinery and equipment solely developed countries are able to benefit, classifying biofuels as environmental goods also provides developing countries with the opportunity to benefit from this agreement. (p.117) (Das 2003)

The role of EU Member States can be questioned in this debate: to be in line with EU policy, it would be logic to connect sustainability criteria to the approval of biofuels as environmental goods. However, it is very unlikely other WTO Members will agree on the inclusion of sustainability criteria and therefore not a realistic option to strive for. In case also 'unsustainable' biofuels will be classified as environmental goods, the RED will still form a disincentive for fuel suppliers to import unsustainable biofuels.

The discussion on environmental goods is still ongoing, but will not be elaborated on in this research, because the classification of environmental goods is related to the market access of biofuels in general and is less related to the sustainability criteria for biofuels.

#### **5.4 WTO dispute settlement understanding**

If a Member State thinks another Member State is violating any of the agreements and feels discriminated, it can make use of the WTO dispute settlement understanding (DSU). Only Member States can make use of the DSU; individuals and companies are not allowed to do this. The DSU is needed as a system of rule enforcement and provides the multilateral trading system with security and predictability. The WTO dispute settlement understanding consists of four basic phases:

- Consultations
- Panel process
- Appellate process
- Surveillance of implementation

(Davey 1999; Das 2003)

In the interviews with stakeholders the importance of dispute outcomes was mentioned several times. According to Sander van Bennekom (Oxfam Novib) the outcomes of disputes say more about the current opinions and tendencies than the legal Agreements. (interview Sander van Bennekom). Simonetta Zarilli sees a tendency towards the acceptance of npr-production and processing methods, while this same conclusion cannot be drawn from the legal texts. (interview Simonetta Zarilli) Where Agreements stay very general, disputes are more specific and can be seen as a good representation of the current debate in the WTO.

Disputes being important in the light of biofuels are i.e. the Tuna-Dolphin case and the Turtle-Shrimp case, because these disputes are environmental focused and deal with discrimination based on production and processing methods, like most of the sustainability criteria for biofuels. In order to predict the outcome of a possible dispute on sustainability criteria for biofuels, outcomes of such disputes can be helpful by their representation of the tendencies within the WTO. The below described disputes both show a tendency towards acceptance of production and processing methods implying the

likeliness of acceptance of the sustainability criteria for biofuels based on dispute outcomes is higher compared to the same likeliness based on only the Agreements.

#### Tuna-Dolphin case

In 1991 there was a case by Mexico and other states against the United States due to restriction on imports of tuna. This case took place under the 'old' GATT. The panel report has never been adopted, because Mexico decided to not continue with the case.

In the new WTO-system a panel report is automatically adopted if it is not rejected by the parties within sixty days. Mexico and the US solved the problem in bilateral agreements. The case was on yellowfin tuna that swim beneath the dolphins in certain areas of the Pacific Ocean. 'When tuna is harvested with purse seine nets, dolphins are trapped in the nets.' (WTO....(e)) The dispute was on the US Marine Mammal Protection Act (MMPA), which regulated dolphin protection methods and focused especially on the incidental catching of the dolphins above the yellowfin tuna. This meant that purse seine nets fishing was prohibited unless the harvesting government had a comparable protection programme or in case the 'the average rate of incidental taking of marine mammals' was almost the same as the US average. The US not only banned the tuna from Mexico (as harvesting state), but also from the states that were part of the supply chain and processed the tuna from Mexico. In the panel report it was stated that the US was not allowed to impose its own environmental standard on other states. Allowing this, would have given room to imposing environmental standard as protectionist measures, which is not in line with the multilateral trade rules of the GATT.(WTO....(e)) However, in the unadopted report of the panel the following was stated:

*'... the labelling provisions of the DPCIA do not restrict the sale of tuna products; tuna products can be sold freely both with and without the "Dolphin Safe" label. [...] provisions governing the right of access to the label [should meet] the requirements of Article I:1'. (GATT 1991) in (Dankers 2003)*

This is one of the few times, a statement on non-product related production and processing methods has been made by the dispute settlement panel. It shows that in case it concerns voluntary labelling, it has not have to be in violation with the WTO unless it is implemented in a discriminatory way (according to Article I of the GATT). (Dankers 2003) Recently this year, Mexico has again brought up the case in the WTO, because it is still experiencing trade barriers in exporting tuna to the United States. The US is not happy with the choice of Mexico to bring it up in the WTO rather than solving it at a regional level. Mexico prefers the WTO, because other WTO Members have expressed the wish to follow the dispute or even join Mexico against the US. The establishment of a panel by the DSU in order to hear the complaints of Mexico show us that the debate on production and processing methods is still actual and Members are willing to discuss the issue. (ICTSD 2009)

#### Turtle-Shrimp dispute

The Turtle-Shrimp dispute was brought up by the states of India, Malaysia, Pakistan and Thailand against the United States in 1997, because the United States had imposed a ban on the import of specific shrimp due to sea turtle protection reasons. Five species of sea turtles are listed in the US Endangered Species Act of 1973. The implication of this act for US shrimp trawlers was the mandatory use of so-called 'Turtle excluder devices' (TEDs) in high risks areas. Such a device prevents capture or killing of the five endangered sea turtles. In 1989 a public law came into force in the United States which regulated imports and a part of this law stated an important ban on shrimps harvested by the use of technologies which were a risk for sea turtles. The law had also some exceptions, but in practice this meant that states, which had one of the five endangered sea turtle species in their seas and harvested shrimps mechanically also had to oblige the use of TEDs.

The Appellate Body decided as follows: The action of the US is legitimate under Article XX, article (g) '*relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption*'.(GATT 1994) This seems to indicate that the states India, Malaysia,

Pakistan and Thailand did not have any reason to complain and would lose the dispute, but the US violated other articles of the GATT by discriminating between different WTO members. The US imposed the use of TEDs only on WTO members having one of the five species of sea turtles in their seas, but according to the GATT the US should have applied this measure to all WTO members. Therefore the US did lose this dispute, but could 'easily' adapt the public law to the comments of the Appellate Body. In the same year Malaysia argued that the US had not implemented the comments rightly; it expected the US to completely stop with the ban, but the US only adapted the ban to be no longer discriminatory. Malaysia argued Article XI:1 was still violated by the US; the US did not deny this, but argued that this violation was allowed under Article XX (g). Another argument of Malaysia was the lack of an international agreement and the interpretation of Malaysia that the US was obliged to conclude an international agreement, but the implementation panel concluded that the US had an obligation to negotiate and not to conclude any. According to the panel, the US negotiating efforts were sufficient so far. (Howse 2002; WTO....(f); ICTSD year unknown)

#### A possible dispute on the sustainability criteria of the RED

Since the establishment of the WTO in 1995, there have been 397 disputes. 130 of the 332 cases had become a full panel process by July 2005. The question is whether the sustainability criteria on biofuels will increase this number. (WTO...(c); WTO....(d))

The first threat for a WTO complaint about the EU sustainability criteria is made by eight developing countries: Argentina, Brazil, Colombia, Malawi, Mozambique, Sierra Leone, Indonesia and Malaysia. Those countries can be seen as major (potential) biofuel producers: In their letter of the 8<sup>th</sup> of December 2008, before the European Parliament would vote on the RED, the following sentences are stated:

*'They impose unjustifiably complex requirements on producers.....Some of our countries don't exclude the possibility of defending their rights in the World Trade Organisation, as a last resort.....Provisions relating to land-use change will impinge disproportionately on developing countries, where there are stocks of undeveloped arable land which can be used for biofuels production..,'* (Lenicov, Tavares et al. 2008) in (Lester 2008)

This threat seemed to be a political means in order to let some amendments concerning indirect land use change, the definition of 'no go' areas and also some additional social and environmental requirements not being accepted by the European Parliament. (Lenicov, Tavares et al. 2008; Lester 2008)

Malaysia's Minister of Plantation Industries and Commodities, the Hon. Datuk Peter Chin Fah Kui, stated in an interview: "We urge the EU to ensure that its sustainability scheme does not discriminate against third country producers and that the criteria used are science based, verifiable and WTO-compatible".(WRA 2009)

Appleton argues that it is only a matter of time before there will be a dispute on eco-labelling. He also argues the respect for the WTO will decrease by such a dispute; in case sustainability criteria for biofuels are seen as a trade barrier, environmentalists will be disappointed and in case sustainability criteria for biofuels are judged as WTO-consistent developing countries will see the WTO as an organisation in favour of the Western world and not able to deal with the concerns of developing countries. (Appleton 1999)

#### After a WTO-dispute outcome

An important issue is to know to what extent a losing party is obliged to implement the outcome of the WTO-dispute. In practice any losing party should follow the recommendations of the Dispute Settlement Body and adapt their trade-restrictive measures or policies to such extent these will become WTO-consistent. In case it can not be done immediately, the losing party is given time to adapt within a certain period. If adaptation has failed within this period, the losing party has to negotiate with the discriminated party on a proper form of compensation. This can be for example be a lowering of tariffs for that country. But if no consensus is reached on the compensation within 20 days, the WTO Dispute Settlement Body can 'authorize retaliation' by the discriminated country (or countries). Combining this knowledge with the potential of a WTO-dispute between developing countries and the EU results in some question marks;

is the EU willing to adapt the Renewable Energy Directive in case of a negative dispute outcome and to what extent are developing countries able to come with retaliations? (WTO....(d))

#### WTO avoidance

In the interviews the stakeholders were asked for the best way to prevent a WTO-dispute. First of all, an answer on this question depends strongly on the attitude towards the likeliness of a WTO-dispute. The opinions of the interviewed stakeholders varied and could be divided into three groups.

- **Confrontation oriented**

Some interviewed stakeholders expect a dispute, but see no reason to prevent it. Those stakeholders in general think it will be good to have a dispute, because a dispute on the sustainability criteria of biofuels can serve as a good test case. The outcome will give a good impression of the current attitude towards environmental regulations and npp-PPM's. For example, the EC is preparing for a WTO dispute despite the participatory characteristics of the design process of the RED. According to Colin Brown, working for the legal unit of DG Trade and interviewed for this research, EC is preparing for a dispute and thinks it will probably win a dispute based on Article I or III. When the DSU will disagree on Article I and III, EC thinks the sustainability criteria are justified under Article XX.

- **Prevention oriented**

Other interviewed stakeholders see also the likeliness of a dispute, but prefer dispute prevention instead of confrontation. A WTO dispute will not contribute to good relationships and will damage the willingness to cooperate. Therefore these stakeholders think a WTO dispute should be prevented by improving the participatory aspects of the different initiatives. Risk-minimizing actions can also be found back in the different initiatives: the WTO-consistency of the Cramer criteria by a lawyer office and the choice in the United Kingdom to first introduce reporting obligations are good examples. At the European level, DG Trade was asked by DG TREN to investigate the WTO-consistency of the Renewable Energy Directive. In the final version of the RED, the items with a high risk on WTO-inconsistency, have a reporting obligation instead of criteria and the sustainability criteria will be the same for domestic and exporting countries. (interview Colin Brown)

- **There will be no dispute**

Some interviewed stakeholders think it is unlikely there will be any dispute, because of the international initiatives that are already there. This implies that stakeholders feel enough involved and heard in the current process, leading to acceptance of the sustainability criteria. Another reason for avoidance of a WTO-dispute is related to the image of the state: starting a dispute on sustainability criteria, will give that state the image of a polluter. (interview Sander van Bennekom)

The main message of this is that Member States do have a choice in case of any inconsistency. The Member States of the WTO decide to what extent a possible WTO-consistency will be accepted. It can be a strategy to not bring up the issue in the WTO.

## **5.5 WTO-consistency of the different initiatives**

Above described interpretation of the different WTO-agreements in combination of the outcomes of earlier disputes, the WTO-consistency of the different initiatives will be done in this paragraph in the following order:

- State-based initiatives (5.5.1)
- Non-state initiatives (only non-state actors) (5.5.2)
- Hybrid initiatives (state and non-state actors together) (5.5.3)

### **5.5.1 WTO-consistency of state-based initiatives**

Because the WTO Agreements are agreements between nation-states, the analysis of state-based initiatives leaves less room for other interpretations in comparison to the analysis of the private and hybrid initiatives.

Before going into detail on each individual initiative, some general remarks can be made on the consistency of mandatory sustainability criteria for biofuels. The WTO-consistency of sustainability criteria depends next to the nature of the initiative also on the kind of criteria and the part of the life-cycles these are focused on. According to Howse, Van Bork et al. (2006) the following distinction can be made:

- Criteria focused on the environmental impacts in the importing country
- Criteria focused on the entire life cycle
- Criteria promoting sustainable agricultural practices in the producing country

Looking at the different criteria of the initiatives, it shows most attention is paid to the sustainability of the agricultural practices in the producing countries. This implies an emphasis on production and processing methods rather than on characteristics of the end product. Each criterion on a non-product related production and processing method is per definition in violation with the WTO-agreements, especially Article III of the GATT, because these criteria treat 'like' products differently and thus can be called discriminatory. WTO-consistency therefore depends for this criteria on justification based on one of the exceptions under Article XX.

The following assessment can be made on the justification of exceptions under Article XX based on the different groups of criteria:

#### Environmental criteria

Concerning the environmental criteria, we can speak of two categories:

- **Global environmental criteria:** The sustainability criteria concerning the GHG reductions can be called global and due to the global environmental impacts of GHG-emissions, there is a territorial link between environmental problems in for example the Netherlands and what is emitted in other countries. Therefore it is justified to 'discriminate' on this ground. In the decision making process on base line years and calculation methods, countries should be careful in order to not harm specific countries. Next to this, the energy content of a specific biofuel, which is related to the potential of GHG savings, is an end characteristic of the product and thus allowed under Article III.
- **Local environmental criteria:** There is no territorial link for the local environmental problems, like ground water pollution, or the territorial link is hard to prove. Imposing local environmental criteria on a nation-state therefore implies disrespect for the sovereignty of the nation-state. (Bronckers, Verberne et al. 2007)

#### Social criteria

Social criteria focusing on human rights are also seen as problematic, because human right violations are mostly the case in developing countries and do not play a role in a country as the Netherlands. Therefore these criteria can be discriminatory. Article XX provides no opportunities for exceptions for these criteria as is similar for the local production conditions. A Member could try to defend violation under (a) public morals, but the chance is very small, because public moral is difficult to prove. (GATT 1994; Bronckers, Verberne et al. 2007)

#### Domestic treatment and MFN-principle

All mandatory systems, discussed in this research, are not in violation with the MFN-principle of Article I and the like treatment for domestic and foreign products of Article III, because no distinction is made between import and export and different countries. However, a point of discussion can be the de facto discriminatory effect of the sustainability criteria by the difference between regions concerning physical, social and general development circumstances. For example, a criterion on human rights is per definition discriminatory, because human rights are an issue in developing countries and not an issue of concern in the developed world.

### The principle of proportionality

It can be discussed whether the standards developed by governments fall within the scope of the TBT-Agreement; only a part of mandatory standards deals with product related production and processing methods. This implies those standards deal mostly with non-product related production and processing methods and thus are not covered by the TBT Agreement.

It is however, interesting to look at the principle of proportionality. First of all, proportionality is a very subjective principle, which can not easily be defined and applied in WTO-law. Different Member States will assess the proportionality of a measure in a different way. The question is to what extent the sustainability criteria of the RED are proportional and thus not more trade-restrictive than necessary and if there are not less-trade restrictive alternatives. A WTO Appellate Body will also certainly look at the efforts of the EU to minimize the amount of unsustainable biofuels themselves. This last issue can be questioned; knowing the possible negative effects of biofuels has not lead to a moratorium on biofuels, which also contributes to solving the problem of unsustainable biofuels without leading to de facto discriminatory by sustainability criteria.

### **Cramer criteria**

Although the WTO was kept in mind during the Cramer commission an evaluation of the WTO-consistency of the Cramer criteria was done by a law office as requested by VROM and the Dutch Ministry of Foreign Affairs after the publishing of the two reports (Bronckers, Verberne et al. 2007) The lawyers used the classification white (consistent), grey (consistency depends on interpretation; national use of the criteria can lead to problems, but these are not per definition inconsistent with WTO and/or EU law) and black (not in line with WTO and/or EU law). The outcome of this report was the reason why VROM made the choice for reporting obligations rather than criteria. Reporting obligations would not have led to problems within the WTO, but the transparency would have led to steering the biofuel market towards the use of more sustainable biofuels, as already was being implemented in the United Kingdom. At the moment of the making of a manual on how to deal with these reporting obligations, the EC published the proposal of the Renewable Energy Directive, making the Dutch government unable to adapt one single law needed for the implementation of the reporting obligations.

In general, the following can be said about the WTO-consistency of the Cramer criteria for biofuels: Bronckers and Verberne (2007) concluded that all sustainability criteria are on npr-PPM's and therefore are not in line with the WTO. However, it can be argued that the criteria on GHG balance are related to the energy content of biofuels, which is a product-related PPM. The implementation of the criteria is too unclear to say something about eventual 'less favorable' treatment except that developing countries will probably have more problems with complying due to difference in development levels. In table 5.1 the outcome of the report of the lawyers Bronckers and Verberne is summarised. (Bronckers, Verberne et al. 2007)

As can be seen, 'no competition food security, local energy supply, medicines and building/constructing materials' is assessed black with the same explanation as given for the grey criteria. The EU also has a proportionality test for measures applied by EU Member States and this criterion will probably not be seen as proportional. Therefore it can be concluded that EU law is in case of this criterion decisive.

### **Reporting obligations of the RTFO**

Reporting obligations on sustainability issues as in the United Kingdom do not have to violate any WTO-agreement. No difference is made between sustainable and unsustainable production; the focus is on providing information and not on the content. If a producer reports honestly on his unsustainable production methods he suffices the obligation.

There is only a higher risk of violation by possible corrective actions based on those reports; especially the government of the United Kingdom is restricted to come up with actions based on the contents of those reports. For example; information as provided in the reports by biofuel producers can show unsustainable practices in relation to palm oil

from Asia, but cannot put an import ban on palm oil from this area based on those environmental grounds without violation of Article III of the GATT. However, a transparent system accessible by all stakeholders can lead to trade-restrictive measures enforced by fuel suppliers. If an environmental NGO discovers the use of unsustainable biofuels by fuel supplier A, fuel supplier A will be pressured to change its practices otherwise it will lead to negative publicity and reputation. Thus, by providing information a government can stimulate market-led action. Any fuel supplier banning biofuels from a specific region is allowed to do so.

Table 5.1 WTO consistency Cramer criteria based on Bronckers and Verberne 2007

Criteria	Explanation
Positive GHG balance	In case non-domestic products are treated the same as domestic and concrete measures do not fall under Art. XI GATT Or justification based on Art. XX GATT if there is a territorial link and no arbitrary choices are made
No negative impacts on CO <sub>2</sub> stocks	In case non-domestic products are treated the same as domestic and concrete measures do not fall under Art. XI GATT Or justification based on Art. XX GATT if there is a territorial link and no arbitrary choices are made
No competition food security, local energy supply, medicines and building/constructing materials	No territorial link with the Netherlands, so no justification possible based on Art. XX GATT. Will not survive proportionality test of the EU (not of the WTO)
No negative impacts on biodiversity or improvement of biodiversity	No territorial link with the Netherlands, so no justification possible based on Art. XX GATT.
Soil quality not negatively changed or improved	No territorial link with the Netherlands, so no justification possible based on Art. XX GATT.
Ground and surface water level not exhausted, water quality	No territorial link with the Netherlands, so no justification possible based on Art. XX GATT.
Maintenance air quality or improvement	No territorial link with the Netherlands, so no justification possible based on Art. XX GATT.
Contribution to local prosperity	No territorial link and focus on foreign production
Contribution to welfare employees and local community	There is a small chance of justification based on public moral concerning human rights, but mainly focused on foreign production, no territorial link

Next to this, possible trade barriers caused by reporting obligations depend on the kind of information asked and the existence of the possibility to report 'unknown'. Asking for specific data, which can only be obtained by the use of advanced technologies, can create obstacles for small farmers in developing countries. The possibility to answer with 'unknown' does not create an obstacle, but on the other hand provides the opportunity to hide known information and therefore harms the transparency of the system.

### **Renewable Energy Directive**

Looking at the EU Renewable Energy Directive, the following can be said about the WTO-consistency: first of all, as Colin Brown stated in the interview the EC explored the

boundaries of the WTO agreements with this Directive. (interview Colin Brown, DG Trade) Together with DG Trade, the Directive is made WTO compatible as much as possible. Social criteria and other criteria that are seen as a risk for the WTO-consistency are replaced by reporting obligations.

Another point being important in the discussion around the WTO-consistency of the RED is the application of the criteria: in case of the sustainability criteria of the RED not all imported biofuels have to comply with those criteria. It is still possible to export unsustainable biofuels to EU Member States, although those biofuels cannot count for the target. In theory this implies no complete import ban on unsustainable biofuels, but in practice the question is whether there remains a demand for unsustainable biofuels. Due to the discussions on sustainability in combination with pressure from NGOs, it will be likely that companies will only import sustainable biofuels in order to not harm their reputation. In case of a WTO-dispute it can be questioned to what extent the RED, and thus the EC is responsible for this decreasing demand or that this is caused by the market.

In table 5.2 the WTO consistency of the sustainability criteria of the Renewable Energy Directive are assessed in the same way Bronckers and Verberne (2007) have assessed the WTO-consistency of the Cramer criteria. The colour chosen for the last criterion on peat land is white, because peat land can also be viewed as a high carbon stock, which is assessed white by Bronckers and Verberne. However, this can be a point of debate in which scientific evidence on the functions of peat land can play an important role. Comparing table 5.2 with table 5.1 shows *de jure* more WTO-consistent criteria. However, developing countries can argue those criteria lead to *de facto* discrimination, because the percentage of greenhouse gas emission savings and the definitions like high biodiversity value can be chosen in such a way that certain biofuels (from certain regions) will never be able to comply with the criteria, while other biofuels, from for example the EU easily can. This can lead to the presumption of protectionism by the EU.

Table 5.2 WTO consistency sustainability criteria of the Renewable Energy Directive

Criteria	Explanation
<b>Greenhouse gas reduction:</b> 'The greenhouse gas emission saving from the use of biofuels and other bioliquids taken into account for the purposes referred to in paragraph 1 of this Article shall be 35%.'	In case non-domestic products are treated the same as domestic and concrete measures do not fall under Art. XI GATT Or justification based on Art. XX GATT if there is a territorial link and no arbitrary choices are made
<b>Land with high biodiversity value:</b> 'Biofuels and other bioliquids taken into account for the purposes referred to in paragraph 1 of this Article shall not be made from raw material obtained from land with high biodiversity value....'	No territorial link with the Netherlands, so no justification possible based on Art. XX GATT.
<b>Land with high carbon stock:</b> 'Biofuels and other bioliquids taken into account for the purposes referred to in paragraph 1 shall not be made from raw material obtained from land with high carbon stock...'	In case non-domestic products are treated the same as domestic and concrete measures do not fall under Art. XI GATT Or justification based on Art. XX GATT if there is a territorial link and no arbitrary choices are made
<b>Peat land:</b> 'Biofuels and other bioliquids taken into account for the purposes referred to in paragraph 1 shall not be made from raw material obtained from land that was peat land in January 2008.'	In case non-domestic products are treated the same as domestic and concrete measures do not fall under Art. XI GATT Or justification based on Art. XX GATT if there is a territorial link and no arbitrary choices are made

### **5.5.2 WTO-consistency of non-state initiatives and hybrid initiatives**

The non-state initiatives and the hybrid initiatives of this research can in general be perceived as voluntary standards and therefore discussed together in this chapter. Although assessing voluntary standards seems more simple in comparison to assessing the WTO-consistency of state-based initiatives, there are some issues which hinder a straightforward assessment. There are several issues that need clarification in case of the TBT and SPS Agreement. In this paragraph I will clarify at least the two most important issues:

#### **Definition of standardizing bodies and non-governmental bodies**

In England a report, comparable to the report on the WTO-consistency of the Cramer criteria, was written, but in this case the WTO-consistency of private voluntary standards within the WTO regime was assessed by lawyers. (Gascoine and Vergano et al., 2006) This report also refers to Article 13 of the SPS Agreement, as stated earlier in this chapter. The authors argue that the SPS agreement is not clear on the definition of the 'non-governmental entities' (WTO 1994 (b)). In case of the TBT Agreement 'non-governmental body' is defined in the Annex of the Agreement as:

*'Body other than a central government body or a local government body, including a nongovernmental body which has legal power to enforce a technical regulation' (WTO 1994(a))*

Because the WTO-agreement should be interpreted as a whole, it can be argued the definition of the TBT Agreement can be used to explain the 'non-governmental entities' of the SPS Agreement. In Article 4.1. of the TBT Agreement 'non-governmental standardizing bodies' is mentioned. Because Article 4.1 is comparable to Article 13 of the SPS Agreement the following interpretation is suggested by the Appellate Body: 'non-governmental entities' can be seen as equal to 'non-governmental standardizing bodies.' However, this definition differs from the definition provided in the Annex of the TBT Agreement.

Next to this, there is also a discussion on the extent to which 'non-governmental bodies' need to be entrusted certain tasks by the government or that operating or being established within the territories of a Member State is enough to fall as a 'non-governmental body' under the TBT Agreement.

Overall, slightly different terms are used in the Agreements and above interpretations are just one of many interpretations. In my own interpretation for example a non-governmental body does never have legal power. WTO Members will probably also have varying interpretations, which can lead to confusion and disagreement on the applicability of an Agreement.

Looking at the non-state and hybrid initiatives, it can be questioned if these initiatives are covered by the definitions provided in the Agreements. In my opinion CEN and NEN are standardizing bodies and therefore are certainly covered by the TBT Agreement. In case of the RSB it depends on how Member States see this organisation; it can be viewed as a standardizing body, but also as a private scheme, like the RSPO. GBEP has a different legal status compared to the other initiatives, because it is registered as a partnership of the Commission on Sustainable Development and therefore falls under the United Nations. It must however be said that due to the relation with the UN a development of a standard by GBEP can lead to an international standard for biofuels which is in favour in the rules laid down in the TBT Agreement and decreasing the chance on a WTO-dispute, because a GBEP standard will mean the approval of main exporting countries of biofuels, like Brasil. In case the definitions mentioned in the Agreement apply on the initiatives, governments are held responsible for the functioning of those initiatives. (Gascoine and Vergano et al., 2006)

#### **Product-related or non-product related production and processing methods**

As mentioned earlier in this chapter, there is no consensus whether or not standards focused on non-product related production and processing methods are covered by the TBT Agreement. In my personal opinion, sustainability initiatives are mainly focussing on

npr-PPM's making them falling out of the scope of the TBT Agreement. The next question would be whether this makes those initiatives fall under the general GATT. In the case of state initiatives, npr-PPM's are not in line with Article III and therefore violate the GATT Agreement. In case of voluntary standards, no statement is made within the general GATT on non-governmental bodies implying only Member States are subject to the Agreements of the GATT. This is also confirmed by the existence of other non-biofuel environmental standards focussing on npr-PPM's; those environmental standards would than all be in violation with the GATT. Although this seems to make sense, the question remains how standards are assessed that consist both of npr- and pr-PPM's.

Due to the lack of case law on voluntary environmental standards no interpretations of the issues discussed above exist. The unclear definitions used in the TBT Agreement and SPS Agreement imply that WTO-consistency mainly will be determined by the interpretation of the different WTO Members in future disputes or WTO discussions.

### **De facto discrimination of non-state and hybrid initiatives**

In general, involvement of governments in private initiatives, making them hybrid initiatives, can have the following implications: hybrid initiatives mostly have the same legal status as private initiatives, which makes the WTO-consistency of such initiatives very similar. Due to the involvement of governments in private initiatives, governments are better able to 'watch' the standard and to what extent the initiatives follow Annex 3 of the TBT Agreement, the Code of Good Practice for voluntary standards. Involvement of governments will also lead to convergence of standards: European Member States would like to see the minimum requirements of the RED being taken up in a standard. However, like with the voluntary initiatives, hybrid initiatives can by this convergence become de facto mandatory if the EC appoints those standards as qualifying standards for compliance with the RED. However, this convergence has also a positive side by decreasing the confusion among producers on which standard to comply.

### **5.6 Conclusion**

Because the conclusions of this chapter will for a large extent answer the main research question of this research, the conclusions of this chapter will be discussed in chapter 6. 'Conclusions and recommendations'.

## 6. Conclusion and recommendations

After discussing the different standard setting activities around the sustainability of biofuels and discussion of the different WTO-agreements and jurisprudence the main research question as repeated below can be answered:

*"What are the opportunities and barriers of certification schemes within the WTO-regime for sustainable biofuel trade, as these are currently being developed in the EU?"*

### 6.1 Main conclusions

States and the EU have discovered a new form of governance of the space of flows by including sustainability criteria in national or EU law and leaving the other steps of the certification system up to the private sector. Although certification is an effective way to govern the GIBN, the opportunities of a certification scheme are limited by the WTO and biofuel producers can experience trade barriers from the certification scheme. WTO-consistent sustainability criteria do form the opportunities of certification schemes within the WTO and the WTO-inconsistent sustainability criteria do form the barriers of certification schemes within the WTO. The following can be concluded:

- Opportunities of state-based initiatives on sustainability criteria:

States and the EU are able to set sustainability criteria on the end characteristics and product-related production and processing methods of a biofuel as long as they do not violate Article I and III of the GATT. They are also able to set criteria, which have a territorial link or can in other ways be justified under Article XX.

- Opportunities of non-state and hybrid sustainability criteria:

Non-state and hybrid initiatives are able to set criteria on pr-PPM's as well as on npr-PPM's in case they do not apply those in a discriminatory manner

- Barriers of state-based initiatives on sustainability criteria:

States and the EU cannot apply the criteria on production and processing methods dealing with local conditions in another state. The best alternative for those criteria seemed to be the use of reporting obligations.

- Barriers of non-state and hybrid initiatives on sustainability criteria:

In general non-state and hybrid initiatives do not have to cope with barriers within the WTO. In case of pr-PPM's however, non-state and hybrid initiatives fall under the TBT-Agreement, which makes states responsible for those initiatives. Next to this, the initiatives thereby also have to be proportional and should follow international standards as much as possible.

Above opportunities and barriers are based on the legal texts of the WTO, while this research also has shown that those are the opportunities and barriers on paper, while the opportunities can be broader in practice. A whole grey area exists concerning the interpretations of the WTO Agreements. For example, the general exceptions of Article XX and the proportionality of measures are issues that need interpretation of the WTO Member States.

Earlier disputes have shown a tendency towards the acceptance of production and processing methods and WTO Members can choose to not bring up the issue of sustainability criteria for biofuels within the WTO discussions and negotiations and can accept WTO-inconsistent sustainability criteria. If there will be a dispute or to what extent WTO-inconsistencies are accepted by the Member States depends on the factors, like harmonisation and stakeholder involvement as discussed in chapter 4.

### Trade barriers for biofuel producers

Certification schemes on the sustainability of biofuels can thus face barriers within the WTO, but on the other hand also have the potential to create trade barriers for biofuel producers due to the following reasons:

- The costs for the certification process itself are too high
- The producer has not the knowledge, access to technology and the financial means to adapt its production process to the standard
- The GHG emission saving percentage of a standard does exclude a specific biofuel or other criteria exclude a specific region
- The use of different standards by fuel supplier or governments obliges a producer to produce according to multiple standards or limits its export possibilities

The relation between those trade barriers and WTO-consistency is as follows: if any initiative is WTO-inconsistent it is likely to cause trade barriers, but the other way around does not have to be the case. An initiative can be WTO-consistent and cause trade barriers at the same time, especially in case of non-state and hybrid initiatives. It can be questioned to what extent the WTO can eliminate all trade barriers; its focus is on the promotion of free trade and not on removing all trade barriers.

Concerning state-based initiatives, the Renewable Energy Directive creates a trade barrier for producers from developing countries who are not able to pay the costs of certification and do not have the ability to produce according to the criteria of the RED making them unable to export to the European Union. On the other hand, the Renewable Energy Directive sets one standard for all 27 Member States of the EU, making it clear to producers what to comply to.

The high amount of different private standards can have a trade distorting effect, because the producer does not know which standard to comply to. Convergence of standards is therefore highly recommended.

### **Environmental authority in relation to certification and the WTO-regime**

Based on the opportunities and barriers of the different initiatives as described above it can be argued, the environmental authority of the EU and states is nowadays too limited to regulate the sustainability of biofuels by a standard. This weakened environmental authority is caused by the increased distance between place of production and place of consumption as well as by the state-based structure of the WTO, which disables the EU to set sustainability criteria which cover the sustainability concerns of the EU, which are mostly related to production and processing methods and local environmental, labour and other social conditions.

On the contrary, the environmental authority of private initiatives is able to deal with the sustainability concerns of the EU: the private sector is able to set strict criteria on all the issues to regulate the sustainability of biofuels in an effective way. Although these private initiatives are WTO-consistent, the criteria set will cause trade barriers for developing countries. The ability to be WTO-consistent and regulate environmental process and production methods in a proper way can be ascribed to the weakness of the trade system: first of all, private initiatives would be less trade-restrictive in case non-product related production and processing methods do fall under the TBT agreement, which is not the case at the moment. Secondly, the WTO regime shows clearly a form of governance of the space of places rather than the space of flows. This can be explained by the WTO still being structured in a way in which national boundaries play a significant role, where the governance of the GIBN asks for a trade system in which the authorities of other actors are not underestimated and unjustifiable trade barriers caused by private bodies are also prevented.

Overall the case of sustainability criteria on biofuels in relation to the WTO seems to confirm the changing role of actors due to globalization and the need for other forms of governance as described in theory.

### **Future of the WTO and the future of sustainability criteria**

This research has shown that the WTO is a trading system in which the state is still the main entity and thus shows no adaptation to the diminishing authority of the state and the increased authority and role of other non-state stakeholders. Without any adaptation, the WTO will be less and less able to govern trade in the future.

It is certain this form of the application of the sustainability of biofuels will serve as a test case for other commodities and agricultural practices in general. If the criteria of the RED are allowed under the WTO, sustainability criteria will probably be more often in European Directives and national policies. This possibility partly explains the negative attitude of stakeholders from important exporting states.

## **6.2 Recommendations**

In the light of the conclusions of this research, I have the following recommendations:

- It is recommended to develop an international standard to regulate the sustainability of biofuels. On the one hand, this will lead to harmonisation of initiatives and therefore will benefit trade. On the other hand, for developing an international standard consensus is needed. Although it may take some time before international consensus is reached, it will limit the chance of a WTO dispute.
- Although private certification schemes have from an environmental point of view proven to be effective, it is recommended to seriously look at the trade effects of (WTO-consistent) private voluntary standards. Because states are limited in this, this should preferably be done by the private sector itself. An improved inclusion of private bodies in the WTO system is beneficial from a free trade perspective, but will limit the possibilities of certification, an instrument which has proved to be an effective form of the governance of flows. Therefore all involved stakeholders should carefully redesign the trade system in such a way that protection of the environment can go hand in hand with avoiding protectionism.
- From an environmental point of view, it is recommended to investigate the possibilities to also include sustainability criteria for other commodities in EU law.
- The global trade system is not adapted well to globalization in order to govern the space of flows and changed environmental authorities. The system should be revised and especially the role of private actors within the global trade system should be reconsidered.
- Adaptation of the TBT Agreement by making npr-PPM's also fall under this agreement, will make it able to better limit the trade-restrictive effects of voluntary standards. However, I can imagine not all Member States will be in favour of this, because acknowledging npr-PPM's in the TBT Agreement will influence the acceptance of npr-PPM's in general.

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- **Palm oil:**

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- **Traffic jam:**

<http://www.happymoms.nl/file-vermijden-naar-vakantie.html>

- **Biodiesel pump:**

<http://www.amt.nl/web/Nieuws/Algemeen/Tonen-Nieuws-Algemeen/Tankstation-biodiesel-voor-automobilist.htm>

- **Soja plantation:**

<http://www.remonstranten.org/land/landsamenlevingduo.htm>

- **Soja:**

<http://www.biofuel.sg/picts/soya.jpg> soja

- **Farmer:**

[http://www.zinfo.nl/zinfo/images/2007/07/23/ghana\\_boerin.jpg](http://www.zinfo.nl/zinfo/images/2007/07/23/ghana_boerin.jpg) boerin

## **Annex I      Interviewed stakeholders**

<b><u>Organisation</u></b>	<b><u>Name</u></b>
BTG	Martijn Vis
EC – DG TRADE	Colin Brown
EC - DG TREN	Ewout Deurwaarder
GSI	Tara Laan
Ministerie van Buitenlandse Zaken	Saskia de Smidt
Ministerie van LNV	Gerrit Meester
Ministerie van VROM	Hans de Waal
Oxfam Novib	Sander van Bennekom
Senter Novem	Ella Lamers
Shell	Ewald Breunesse
Stichting Natuur en Milieu	Willem Wiskerke
UNCTAD	Simonetta Zarrilli
VNBI	Uwe Jurgensen
WBCSD	George Weyerhaeuser

### **Seminars and stakeholder meetings**

18 November 2008	GAVE marktdag, SenterNovem
1 December 2008	Debate: 'Biofuels: green engine or black page?'
19 March 2009	RSB European stakeholder meeting
8 May 2009	NCIV Biofuels and Indigenous people

## Annex II Cramer criteria

Source: (CommissieCramer 2006) (English version)

Table 1. Criteria and indicators for sustainable biomass production from 2007.

Criterion	Indicator / procedure
<b>1. Greenhouse gas balance</b> Net emission reduction compared with fossil reference, inclusive of application, is at least 30%. Here a strong differentiation of policy instruments is assumed, in which for instance a better performance would lead to more financial support.	<ul style="list-style-type: none"><li>Testing with the aid of calculation methods (Appendix 5).</li><li>Use of standard values for different steps in standard chains.</li></ul>
<i>For all the themes below a dialogue with national and local stakeholders is required.</i>	
<b>2. Competition with food, local energy supply, medicines and building materials</b> Insight into the availability of biomass for food, local energy supply, building materials or medicines must not decrease.	<ul style="list-style-type: none"><li>Reporting obligation on the availability of biomass for food, local energy supply, building materials or medicines. Protocol for this will be worked out further.</li></ul>
<b>3. Biodiversity</b> No deterioration of protected areas or valuable ecosystems	<p>Comply with local requirements:</p> <ul style="list-style-type: none"><li>Plantations must not be located in or in the immediate vicinity of 'gazetted protected areas' (areas protected by the government) or areas of 'High Conservation Value'. Reference year for ligneous feedstocks is 1994 [FSC 10.0], for palm oil 2005 [RSPO 7.3], and for other feedstocks 2006.</li><li>Reporting obligation in which other aspects of biodiversity come up for discussion. The protocol for this will be worked out further.</li></ul>
<b>4. Economic prosperity</b> Insight into possible negative effects on the regional and national economy.	<ul style="list-style-type: none"><li>Reporting obligation according to, among other things, the Economic Performance Indicators, as expressed in the Global Reporting Initiative. A protocol for this will be worked out, in which indirect effects on the meso and macro-economy are taken into account.</li></ul>
<b>5. Well-being</b> No negative effects on the social well-being of the workers and local population, taking into account: 5a Working conditions of workers 5b Human Rights 5c Property rights and rights of use 5d Insight into the social circumstances of local population 5e Integrity	<ul style="list-style-type: none"><li>Comply with Social Accountability 8000 and with the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy compiled by the International Labour Organisation.</li><li>Comply with the Universal Declaration of Human Rights (concerning: non-discrimination; freedom of association; child labor; forced and compulsory labor; disciplinary practices; security practices and indigenous rights).</li><li>Comply with the following requirements:<ul style="list-style-type: none"><li>No land use without the consent of sufficiently informed original users.</li><li>Land use is carefully described and officially laid down.</li><li>Official property and use, and customary law of the indigenous population is recognized and respected.</li></ul></li><li>Reporting obligation about the social effects of biomass cultivation for local population, according to a protocol that will be worked out further.</li><li>Companies in the supply chain comply with the Business Principles for Countering Bribery.</li></ul>

Criterion	Indicator / procedure
<b>6. The Environment</b> No negative effects on the local environment. This relates to: 6a Waste Management  6b Use of agro-chemicals (including fertilizer).  6c Insight into the prevention of erosion and soil exhaustion, and conservation of the fertility level.  6d Insight into the conservation of quality and quantity of surface and ground water 6e Emission to air	<ul style="list-style-type: none"> <li>• Comply with local and national legislation and regulations.</li> <li>• Apply Good Agricultural Practice guidelines on integrated crop management.</li> <li>• Comply with local and national legislation and regulations.</li> <li>• Reporting obligation in which the following aspects come up.           <ul style="list-style-type: none"> <li>• Erosion management plan</li> <li>• Prevention of extensive cultivation on steep slopes, marginal or vulnerable soil.</li> <li>• Monitoring of the condition of the soil and management plan.</li> <li>• Nutrient Balance</li> </ul>           The protocol for the reporting will be worked out further.         </li> <li>• Reporting obligation in which attention for use of water and water treatment. The protocol for this will be worked out further.</li> <li>• Comply with local and national legislation and regulations.</li> </ul>

Table 2. Criteria and indicators for sustainable biomass production from 2011.

Criterion	Indicator / procedure
<b>1. Greenhouse gas balance</b> Net emission reduction compared with fossil reference, inclusive of application, is at least 50%. Here a strong differentiation of policy instruments is assumed, in which a better performance would lead to more financial support.	<ul style="list-style-type: none"> <li>• Testing with the aid of calculation methods (Appendix 5).</li> <li>• Use of standard values for different steps in standard chains.</li> </ul>
<i>For all the themes below a dialogue with local and national stakeholders is required.</i>	
<b>2. Competition with food, local energy supply, medicines and building materials</b> Availability of biomass for food, local energy supply, building materials or medicines must not decrease.	<ul style="list-style-type: none"> <li>• Comply with minimum requirements testable by means of performance indicators. These are developed on the basis of obligatory reporting from the period 2007-2010.</li> </ul>
<b>3. Biodiversity</b> No deterioration of protected areas or valuable ecosystems	<ul style="list-style-type: none"> <li>• Comply with minimum requirements testable by means of performance indicators. These are developed on the basis of obligatory reporting from the period 2007-2010.</li> <li>• Further comply with the following requirement:           <ul style="list-style-type: none"> <li>• Plantations must not be located in or in the immediate vicinity of protected areas or valuable ecosystems. Reference year for lignocellulosic feedstocks is 1994 [FSC 10.9], for palm oil 2005 [RSPO 7.3], and for other feedstocks 2006.</li> </ul> </li> <li>• Reporting obligation on a "management plan for active protection of the local ecosystem".</li> </ul>
<b>4. Economic prosperity</b> No negative effects on the local and regional economy	<ul style="list-style-type: none"> <li>• Comply with minimum requirements testable by means of performance indicators. These are developed on the basis of obligatory reports from the period 2007-2010.</li> </ul>
Insight into the active contribution to the increase of local prosperity	<ul style="list-style-type: none"> <li>• Reporting obligation on the way in which active contribution is made to local prosperity. Here an open and transparent communication is expected with and, in consultation with, the local population.</li> </ul>

## 5. Well-being

No negative effects on the social well-being of the workers and local population, taking into account:

5a Working conditions of workers  
NO TIGHTENING

5b Human Rights  
NO TIGHTENING

5c Property rights and rights of use  
NO TIGHTENING

5d Insight into the social circumstances of local population

Insight into the active contribution to improvement of social circumstances of local population

5e Integrity  
NO TIGHTENING

- Comply with Social Accountability 8000 and with the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy compiled by the International Labour Organisation.
- Comply with the Universal Declaration of Human Rights (concerning: non-discrimination; freedom of association; child labor; forced and compulsory labor; disciplinary practices; security practices and indigenous rights).
- Comply with the following requirements:
  - No land use without the consent of sufficiently informed original users. Land use is carefully described and officially laid down.
  - Official property and use, and customary law of the indigenous population is recognized and respected [FSC 3].
- Comply with minimum requirements testable by means of performance indicators. These have been developed on the basis of obligatory reports from the period 2007-2010.
- Reporting obligation in which is described how an active contribution to the social circumstances of the local population is made. Here an open and transparent communication is expected with and, in consultation with, the local population.
- Companies in the supply chain comply with the Business Principles for Countering Bribery.

## 6. The Environment

No negative effects on the environment. This relates to:

6a Waste Management  
NO TIGHTENING

6b Use of agro-chemicals (including fertilizer).

6c Prevention of erosion and soil exhaustion

6d Insight into the conservation of quality and quantity of surface and ground water

6e Emission to air

- Comply with local and national legislation and regulations.
- Apply Good Agricultural Practice guidelines on integrated crop management.
- Comply with the strictest local, international and EU rules and regulations
- Comply with minimum requirements testable by means of performance indicators. These have been developed on the basis of obligatory reports from the period 2007-2010.
- Comply with minimum requirements testable by means of performance indicators. These have been developed on the basis of obligatory reports from the period 2007-2010.
- Comply with EU regulations.

### **Annex III Time schedule of the RED**

Date	Action
5 June 2009	Publication in the Official Journal of the EU
30 June 2009	'the Commission shall adopt a template for the national renewable energy action plans'
End of 2009	<p>- 'The Commission shall report on requirements for a sustainability scheme for energy uses of biomass, other than biofuels and bioliquids, by 31 December 2009. That report shall be accompanied, where appropriate, by proposals for a sustainability scheme for other energy uses of biomass, to the European Parliament and the Council.'</p> <p>- 'Each Member State shall publish and notify to the Commission, six months before its national renewable energy action plan is due, a forecast document indicating:</p> <p>(a) its estimated excess production of energy from renewable sources compared to the indicative trajectory which could be transferred to other Member States in accordance with Articles 6 to 11, as well as its estimated potential for joint projects, until 2020; and (b) its estimated demand for energy from renewable sources to be satisfied by means other than domestic production until 2020.'</p>
2010 and 2012	'The Commission shall report to the European Parliament and the Council in 2010 and 2012 on the operation of the mass balance verification method described in paragraph 1 and on the potential for allowing for other verification methods in relation to some or all types of raw material, biofuel or bioliquids.'
31 maart 2010	'By 31 March 2010, the Commission shall submit a report to the European Parliament and to the Council on the feasibility of drawing up lists of areas in third countries where the typical greenhouse gas emissions from cultivation of agricultural raw materials can be expected to be lower than or equal to the emissions reported under the heading 'cultivation' in part D of Annex V, accompanied if possible by such lists and a description of the method and data used to establish them. The report shall, if appropriate, be accompanied by relevant proposals.'
30 June 2010	'Member States shall notify their national renewable energy action plans to the Commission by 30 June 2010.'
5 December 2010	Deadline for implementation of the RED
31 December 2010	'The Commission shall, by 31 December 2010, submit a report to the European Parliament and to the Council reviewing the impact of indirect land-use change on greenhouse gas emissions and addressing ways to minimize that impact.'
31 December 2011	'Each Member State shall submit a report to the Commission on progress in the promotion and use of energy from renewable sources by 31 December 2011, and every two years thereafter. The sixth report, to be submitted by 31 December 2021, shall be the last report required.'
2012	<p>'The Commission shall, every two years, report to the European Parliament and the Council, in respect of both third countries and Member States that are a significant source of biofuels or of raw material for biofuels consumed within the Community, on national measures taken to respect the sustainability criteria set out in paragraphs 2 to 5 and for soil, water and air protection. The first report shall be submitted in 2012.'</p> <p>'On the basis of the reports submitted by Member States pursuant</p>

	<p>to Article 22(1) and the monitoring and analysis referred to in paragraph 1 of this Article, the Commission shall report every two years to the European Parliament and the Council. The first report shall be submitted in 2012.'</p>
31 December 2012	<p>'By 31 December 2012, the Commission shall report to the European Parliament and to the Council on:</p> <p>(a) the effectiveness of the system in place for the provision of information on sustainability criteria; and</p> <p>(b) whether it is feasible and appropriate to introduce mandatory requirements in relation to air, soil or water protection, taking into account the latest scientific evidence and the Community's international obligations.</p> <p>The Commission shall, if appropriate, propose corrective action.'</p>
31 December 2014	General review moment of the Directive
1 juni 2015	'The Commission should present a report to the European Parliament and the Council by 1 June 2015 outlining the potential for increasing the use of energy from renewable sources in each transport sector.'
2018	'In 2018, the Commission shall present a Renewable Energy Roadmap for the post-2020 period.'
2020	Binding targets of the Directive need to be reached
2021	'In 2021, the Commission shall present a report reviewing the application of this Directive.'

# Annex IV WTO structure

Source:(WTO 2006)

## WTO structure

All WTO members may participate in all councils, committees, etc, except Appellate Body, Dispute Settlement panels, and plurilateral committees.

