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# Trade barriers and traded volumes of sustainable biomass in the Netherlands

>> Focus on energy and climate change

## Trade barriers and traded volumes of sustainable biomass in the Netherlands

### Colofon

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## Executive summary

### **Introduction, aims and method**

Following the target of 20% renewable energy in 2020 in the EU as defined in the renewable energy directive (RED), the Netherlands are obliged to reach a 14% share of renewable energy in total final energy consumption in 2020. The Dutch renewable energy action plan (published in summer 2010) specifies the increase in consumption of renewable electricity and transportation fuels to meet 2020 targets. It is very likely (and stated in the Dutch action plan) that both solid and liquid biomass will contribute heavily to the increasing use of renewable energy in the Netherlands in the next ten years. As the domestic biomass potential is limited, and biomass imported from both EU countries and outside the EU may be available at the same cost (or even less) than domestic streams, it is expected that the import of biomass to the Netherlands will further increase in the coming years.

Dutch policy makers also see the need for imports, but are also concerned regarding the sustainable production of bioenergy abroad. Since 2008, NL Agency executes the program: "Global Sustainable Biomass" (DBM) and in 2009 it became executive body of the program "Sustainable Biomass Import (DBI), the latter being part of the program "Biobased Economy" within the Innovation Agenda. The goal of DBM is to support developing countries to produce biomass for energy purposes more sustainably, considering the access to local and international energy market. The goal of the DBI program is to give an impulse to the development of sustainable international biomass supply chains for energy and chemical applications. In 2009 and 2010, approximately 20 million euro of subsidy was allocated to 45 projects, in which market actors and research institutes aim to increase the sustainability of biomass production in developing countries and realize import of biomass to the Netherlands.

To guarantee the import of sufficient (verified sustainably produced) biomass, it is of interest to obtain an overview of possible market and trade barriers that currently hamper the international bioenergy trade towards the Netherlands, or may do so in the future.

The aims of this study are twofold:

**1) to provide a quantitative and qualitative overview of past and current solid and liquid biomass import flows, and assess (as far as possible) to what extent this biomass was produced sustainably; and**

**2) to identify trade and market barriers for sustainable biomass in the Netherlands, and identify possible solutions.**

The quantitative and qualitative overview of the Dutch biomass market was based on scientific publications, available databases, reports by research institutes and expert interviews. To identify trade and market barriers, an expert panel was selected covering expertise on both solid biomass (mainly wood pellets), liquid

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biomass (especially bioethanol and biodiesel) and other, general bioenergy trade expertise (Dutch harbours and certifiers of biomass). The names of the market parties consulted are given in the main report in table 1. All interviews were conducted between September and November 2010.

Strictly speaking, trade barriers encompass any form of governmental or operational activity or restriction that renders the import of specific goods into a country difficult or impossible. Often, a difference is made between technical and non-technical trade barriers. The former can e.g. be strict technical standards, which prevent the import of commodities that do not meet the technical specifications. A typical example of the latter are import tariffs. However, as the interviewees predominantly mentioned more general market barriers (i.e. barriers that hinder both the use of domestic and imported biomass), it was decided to include market barriers in the analysis as well.

### **Results**

As shown in chapter 3, both imports of solid biomass (predominantly wood pellets) and liquid biofuels (ethanol and biodiesel) have increased over the past years and have reached substantial proportions. Wood pellet imports have increased continuously from 80 thousand tonnes in 2003 to 1.2 million tonnes in 2009. Biodiesel and ethanol consumption in the Netherlands was negligible before 2007, but has increased to several hundred thousand tonnes each in 2009. These are largely covered by direct imports of ethanol and biodiesel, or by imports of vegetable oil for biodiesel production in the Netherlands. Further growth of both liquid biofuel and solid biomass imports is needed to meet the biofuels blending obligation and the overall renewable energy targets of the Netherlands in 2020.

An overview of production, consumption, import and export of wood pellets and liquid biofuels is shown in figure ES-1. It is evident, that 90% of all wood pellets consumed in the Netherlands are imported; a small volume is also re-exported. For both biodiesel and ethanol, the Netherlands are mainly a major transport hub for North-West Europe, and between 700-800 ktonnes are re-exported. Note that biodiesel falls under the category monoalkylesters, but not all monoalkylesters are necessarily used as transport fuel, so the trade volumes shown in figure ES-1 should be considered possible maximum amounts of traded biodiesel. Furthermore, biogasoline is a mix of ethanol and ETBE (a chemical compound made from ethanol and tertiary butanol). The exact amounts consumed in the Netherlands are confidential, but as ethanol production in the Netherlands was negligible in 2009, it is safe to assume that almost all biogasoline consumed in the Netherlands was based on imports.



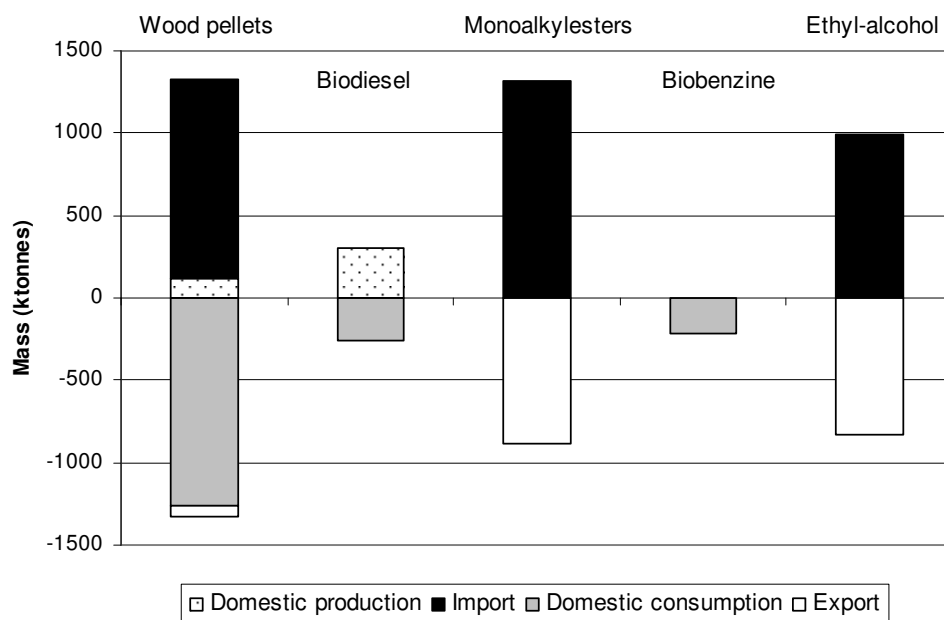


Figure ES-1 Overview of production, consumption and trade of wood pellets and liquid transport fuels in the Netherlands in 2009

As no obligatory sustainability reporting was required till the end of 2010 for solid and liquid biomass, it is not possible to give exact numbers on how much biomass imported in 2009 and 2010 was produced sustainably. For solid biomass, in 2009, the largest user of imported wood pellets reported that about 70% of their solid biomass consumed in the Netherlands was voluntarily certified to meet the Green Gold label sustainability criteria [Essent, van der Wal, 2010]. For 2010, this number even increased to an expected 85% [Schouwenberg, 2011]. For liquid biofuels, a recent study by NEa [2010] reports that 62% of all biofuels consumed in the Netherlands had some kind of sustainability certification, but the percentage of biofuels that was independently certified for RED compliance is much smaller.

#### Solid biomass

Based on interviews with Dutch market parties, the following market and trade barriers for solid biomass were identified (in order of importance):

1. Currently, internationally sourced wood pellets are the dominant source for co-firing in large-scale electricity production plants. Due to the exclusion of large scale electricity production from solid biomass under the current SDE and SDE+ support schemes, it is uncertain how the solid biomass consumption for co-firing will develop in the next three to four years. This market barrier was deemed the most import obstacle for the continuation and growth of solid biomass imports. Market parties demand clarity regarding future policy support. Next to the current (MEP) feed-in premium support system, also a mandatory share of renewable electricity or a tax on fossil fuels are mentioned as alternative support systems.
2. Regarding sustainability criteria and certification, market parties are confident that the large majority of currently traded solid biomass is sustainably produced. However, the interviewees voiced three concerns regarding how and when this

sustainability must be proven: (1) there is considerable uncertainty whether and when sustainability criteria and certification systems may be introduced on a national and/or European level, and whether this will be harmonized or not; (2) market parties fear a (possible) high administrative burden to prove of sustainability in the entire production chain (depending e.g. on the chain of custody system that will be used); and (3) one interviewee would rather not publicly disclose the origin of the (sustainably certified) biomass, due to consequent loss of a competitive advantage. Again, market parties would clearly appreciate it if Dutch and EU policy makers would clarify their plans on these issues on the short term.

3. The lack of internationally agreed technical standards for wood pellets was seen as an obstacle by market parties. Similarly, the absence of generally accepted legal standards for trade contracts is slowing down trade. Market parties have recognized this and are developing solutions themselves. Probably, these issues will be resolved within the next few years.

4. Several interviewees mentioned that the infrastructure for solid biomass in the Netherlands needs to be improved to handle large volumes. To meet (a large part of) the future renewable energy targets through co-firing biomass, the required volumes of solid biomass are enormous. Market parties have indicated that they envision up to a six-fold increase in imported volumes, and emphasize that the current infrastructure is not ready for large volumes of wood pellets or other solid biomass. This includes the lack of dedicated cheap, large scale storage facilities, preferable close to a harbour suitable for ocean vessels. Investments in infrastructure to resolve this are likely only to be made by market parties if sufficient long-term policy support is in place to assure stable/increasing volumes of solid biomass imports. As a recommendation for further research, we suggest to set up one or several scenarios how the solid biomass trade flows may develop in the coming years, and which improvements are needed (and when & where) to make this increase possible.

5. Utilisation of knowledge of Dutch market parties utilization of e.g. biomass production and trade by experts, researchers, local governments and producers could and should be improved. For example, one interviewee pointed out that in their view, the current sustainability certifications systems are too generic, and do not address the specific conditions in producing countries. Market parties indicated that they feel that they have valuable information on such conditions, but that they are not included in policy development due to lack of information exchange. This is more of an indirect trade barrier and can be an underlying problem to the other trade barriers.

6. Finally, the general negative image of bioenergy can be seen as an indirect barrier for the further development of bioenergy markets and trade. This issue will probably have to be resolved by all market actors, in cooperation with NGO's and policy makers.

#### *Liquid biofuels*

For liquid biofuels, none of the interviewees mentioned any market barriers. Apparently the continuous increasing blending obligation for biofuels over the next ten years provides sufficient certainty for the market. However, a number of trade barriers were pointed out by the interviewees (in order of importance):

1. Regarding the RED sustainability requirements, all interviewed stakeholders indicated that their traded products are sustainably produced and that (they expected that) they would likely be able to demonstrate compliance with the sustainability criteria of the RED. However, they pointed out three major barriers: (1) the implementation of RED certification schemes is behind schedule. Until November 2010, there was no certification system accredited by the European Commission available to show compliance with RED sustainability criteria in the Netherlands, and this caused much uncertainty amongst stakeholders. (2) There was also significant uncertainty amongst the market parties whether the RED criteria were final, or whether it will be possible for individual EU member states to implement additional sustainability criteria on top of the RED criteria. (3) An additional uncertainty is whether (on EU level) additional sustainability criteria will be formulated later-on, especially criteria regarding indirect land-use change which could potentially (severely) decrease the availability of suitable areas for bioenergy production. Solving the first issue is probably a matter of learning-by-doing within the coming year. For the second issue, the Dutch government should ideally announce whether it has any plans to impose additional sustainability criteria. As for the ILUC decision of the European Commission, this uncertainty will likely remain until mid-2011, when the EC has announced to report on the issue.

2. As a classical technical trade barrier, technical standards for liquid biofuels appear to be a (minor) barrier. Market parties indicated that the use of hydrated ethanol (from Brazil) and of lauric oil (from e.g. Malaysia, a by-product from palm oil production, which can be used as feedstock for biodiesel production) is excluded by EU technical standards. It is questionable whether both barriers can (and need to) be solved on the short term (see also the discussion below).

3. During the interviews, different opinions were voiced regarding the importance of import tariffs for ethanol. Some clearly saw import tariffs for bioethanol as a barrier for the further growth of market sectors that use ethanol as a feedstock. Another interviewee confirmed that import duties for ethanol can be a barrier, but did not specify whether this was currently the case. Yet another interviewee stated that import tariffs only play a marginal role, but could possibly be linked to the compliance with sustainability criteria. See below for a further analysis and discussion of this issue.

### **Discussion and conclusions**

The study has shown that the import of solid and liquid biomass to the Netherlands has increased significantly in the past years, and contributes substantially to the overall renewable energy supply in the Netherlands. For both biomass streams, traders and consumers claim that the majority of the consumed biomass was produced sustainably, but definitions of sustainability and ways to verify this vary currently widely.

We conclude that for solid biomass trade, at the time of writing, the lack of a long-term policy support system is the biggest market barrier. There is also considerable uncertainty regarding the possible introduction of sustainability criteria for solid biomass on a national and/or EU level. Given the fact that the vast majority of imported biomass is based on residue streams, the principal availability of sufficient sustainably produced biomass seems for the time being to be only a marginal concern. Other trade barriers, such as the lack of technical and

legal standards are issues which have already been identified by market parties and will likely be solved by the market within the next years. Also, the necessary investments in infrastructure could likely be carried out by the market, provided that there is sufficient security regarding stable and increasing trade flows in the future.

For liquid biofuels, market parties clearly point out issues regarding the short-term implementation of the RED sustainability criteria as major concerns, combined with worries that these criteria may be complemented with additional national criteria, or additional criteria on an EU level later-on (especially regarding ILUC). None of the interviewees questioned whether the biofuels currently imported to the Netherlands were actually (sufficiently) sustainably produced to fulfil the RED criteria. However, based on literature [NEa 2010b, Bignal, 2010], we conclude that it is a real possibility that there may be a significant lack of (verified/certified) sustainably produced liquid biofuels that meet all RED criteria in 2011. Thus, the sustainability criteria could potentially become a major trade barrier from 2011 onwards. It is remarkable that none of the interviewees has commented upon this, and is certainly an issue for further follow-up research in 2011.

The technical standards barring hydrated ethanol and lauric oil from the Dutch market can in principle be regarded as trade barriers. However, blending hydrated ethanol with gasoline for regular gasoline engines is not possible. Also, Brazil produces also large quantities of dehydrated ethanol, much more than its total ethanol exports, so this matter seems of minor relevance. Regarding lauric oil, similar claims have in the past that EU technical standards would also exclude biodiesel based on soy bean oil [Junginger et al. 2010]. In practice, large quantities of soy bean based biodiesel are used within the EU, possibly due to blending with other vegetable oils before esterification.

The import tariffs for ethanol (from many countries outside the EU) and biodiesel (for imports from the US) are by definition trade barriers. However, these barriers probably mainly affect the exporting countries. Due to the limited availability of feedstock in the Netherlands to produce ethanol and the further increasing blending quota, the Netherlands will most likely still need to import increasing volumes of ethanol and biodiesel in the future. Tariffs will likely cause less imports from the US and Brazil, and thus more imports from other countries (possibly at higher costs), ultimately leading to higher costs for the Dutch end-consumer.

# 1 Introduction

## 1.1 Background and rationale

In recent years, the consumption of bioenergy sources such as solid biomass, liquid biofuels and biogas has increased rapidly in the Netherlands. This was mainly triggered by governmental support, in the form of feed-in tariffs for electricity produced from solid biomass and by a biofuels quota for transport fuels. The replacement of fossil fuels by renewable energy sources (predominantly biomass) went up from 35.1 PJ in 2000 to 123.6 PJ in 2009 [CBS 2010-a]. In figure 1, this increase is shown. Bioenergy does include waste incineration (renewable part), co-firing in power plants, woodstoves, biogas production installations, transportation fuels and other biomass combustion. As can be seen from figure 1, roughly two-thirds of the current renewable energy supply in the Netherlands is based on various forms of bioenergy.

Avoided fossil fuel use [PJ]

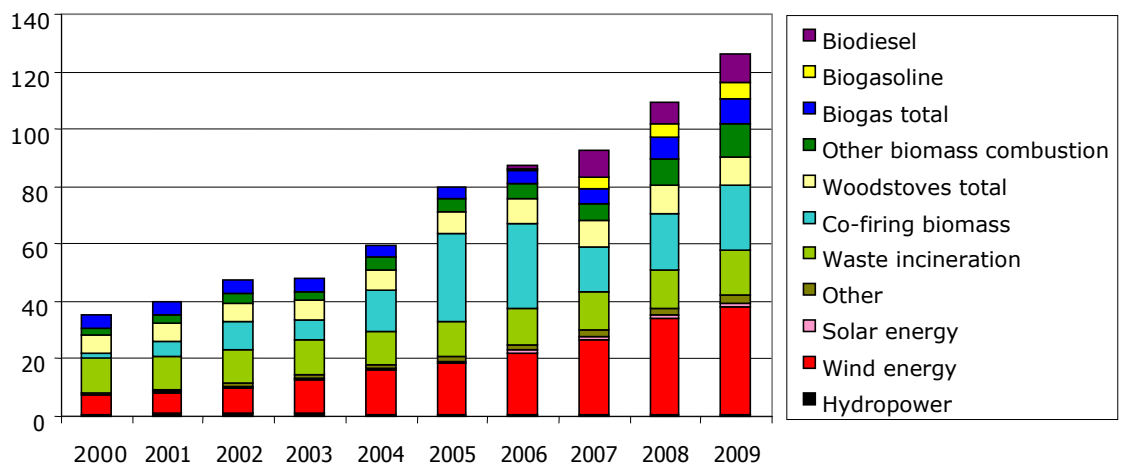


Figure 1 Avoided fossil fuel use by different sources in the Netherlands [CBS 2010-b].

However, the current energy mix in the Netherlands is still dominated by fossil fuels: natural gas (46%), mineral oils and oil products (38%) and coal (7%). Based on the obligations as laid down in the renewable energy directive of the European Commission, the Dutch government needs to realize a 14% renewable energy contribution to the gross final energy consumption in the Netherlands for 2020, compared to a share of 3.8% in 2009 [Ministry of Economic Affairs 2010] [CBS 2010-a]. A renewable energy share of 14% corresponds to 300 PJ, based on projected gross final energy consumption in 2020 of 2100 PJ [Ministry of Economic Affairs 2010].

Due to the increased use of biomass in the Netherlands and the limited availability of domestic biomass, in recent years the international trade of bioenergy increased at a rapid pace, or even faster.

International trade is mainly for transportation fuels and wood pellets for cofiring. It is expected that combustible renewable sources (liquid and solid biomass and renewable part of waste) will also be an important part of the future total renewable energy supply. Koppejan [2009] expects an increased domestic availability of biomass in 2020. This study thus projects that the amount of avoided fossil fuel due to biomass consumption for heat and electricity will increase. Four scenarios are drawn, which show that the avoided fossil fuel use due to bioenergy may vary between 100.6 PJ and 156.7 PJ in 2020, compared with an avoided fossil fuel use of 81.4 PJ in 2009. However, it is unlikely that this increase alone will be sufficient to meet the required supply of biomass; further increasing biomass imports are therefore very likely.

Dutch policy makers have realized this, but are also concerned regarding the sustainable production of bioenergy abroad. Since 2008, NL Agency executes the program: "Duurzame Biomassa Mondiaal" (DBM) and in 2009 it became executive body of the program "Duurzame Biomassa Import (DBI), both part of the program; Biobased Economy, within the agenda of Innovation. The goal of DBM is to support developing countries to produce of biomass for energy purposes more sustainably, considering the access to local and international energy market. For DBI, the goal is to give an impulse to the development of sustainable international biomass supply chains for energy and chemical applications. In 2009 and 2010, approximately 20 million euro for subsidy was allocated to 45 projects, in which market actors and research institutes aim to increase the sustainability of biomass production in developing countries and realize import of biomass to the Netherlands.

However, it is possible that the expected increasing bioenergy imports to the Netherlands may meet various barriers. IEA Bioenergy Task 40 (of which the Netherlands are task leader) has conducted a study over the course of 2009 and 2010, in which an inventory was made of potential barriers for bioenergy trade [Junginger et al 2010]. The most important categories investigated were:

- Impact of protectionist policies and tariff barriers
- Impact of technical standards / Technical barriers to trade
- Sustainability criteria and certification systems for biomass and biofuels
- Logistical barriers
- Sanitary and phytosanitary measures
- Lack of global classification and clear bioenergy trade statistics

Results from Junginger et al (2010) show that import tariffs and the implementation of sustainability certification systems are perceived by international market parties as (potentially) major barriers for the trade of bioethanol and biodiesel, while logistics are seen mainly as an obstacle for wood pellets. Development of technical standards was deemed more as an opportunity than a barrier for all commodities. Most important drivers were high fossil fuel prices and climate change mitigation policies. The study however also shows that these barriers can change over time and can also be country-specific.

To guarantee the import of sufficient (verified sustainably produced) biomass, it is therefore of interest to obtain an overview of possible market and trade barriers

that currently are hampering the international bioenergy trade towards the Netherlands, or may do so in the future.

## **1.2 Aims and scope**

The aims of this study are twofold:

**1) to provide a quantitative and qualitative overview of past and current solid and liquid biomass import flows , and assess (as far as possible) to what extent this biomass was produced sustainably; and**

**2) to identify trade and market barriers for sustainable biomass in the Netherlands, and identify possible solutions.**

The focus of this report is on the trade of bio-ethanol, biodiesel and wood pellets. These three commodities constitute the large majority of imported biomass, and their trade has rapidly increased (both imports towards the Netherlands and global trade). Also for the coming years, it is expected that these biomass types will remain the largest bioenergy commodities traded and used within the Netherlands. Biodiesel and bio-ethanol are combined as a single category 'liquid biomass' due to the many similarities in policy, trade and market actors. While also small quantities of other solid biomass are imported to the Netherlands, the vast majority of traded solid biomass consists of wood pellets. Given the differences in market actors, end-use, and trade and market barriers identified, the two categories will be discussed separately in the remainder of this study.

Regarding the quantification of biomass trade streams, the study focuses on the situation in 2008 and 2009, as data for 2010 was not yet available.

As mentioned above, the international bioenergy markets are developing rapidly, so some of the barriers may arise or vanish rapidly, while others barriers are likely to remain for some time. The barriers inventoried in this study are based on views of market parties during the autumn of 2010, and should therefore be seen to reflect the situation of that period. To evaluate whether some of the identified barriers may change over time, an update of this study is planned in 2011.

Given the expectation that the Netherlands will be a large (net) importer in the future, this study focuses on trade barriers for the import of biomass for energy purposes. Barriers for the (re-)export of biomass are not investigated.

## **1.3 Reading guide**

The main elements of this report are divided over 6 chapters. Following this introduction, chapter 2 covers the methodology section, describing the literature overview and interviews carried out within the frame of this study.

Chapter 3 gives an overview of the bioenergy markets in the Netherlands including a quantitative overview of current trade and consumption, and a qualitative description of trends and drivers. Special attention is given to the sustainability of the imported and used solid and liquid bioenergy. An attempt is made to quantify how much of the current solid and liquid biomass imports are produced sustainably, and how the market actors aim to prove the sustainable production. This chapter is predominantly based on data from literature.

Next, chapter 4 provides an overview of the market and trade barriers that Dutch market parties have identified for the trade of solid biomass in the Netherlands. The interviews conducted within the frame of this study form the basis for this overview. The analysis differentiates between trade barriers (which in principle only affect imported biomass) and general market barriers (hampering the overall trade and use of biomass). For each barrier, also the possible solutions as identified by the interviewees are discussed. Chapter 5 follows the same structure as chapter 4 to describe and discuss barriers (and solutions) for liquid biofuels trade.

Finally, in chapter 6 the results are summarized discussed, also by comparing the identified Dutch barriers to international developments. Based on the results and the discussion, a number of conclusions are drawn regarding the most important short-term and long-term barriers for sustainable bioenergy trade in the Netherlands.



## 2 Methodology

### 2.1 Bioenergy consumption and trade in the Netherlands

Chapter 3 gives an overview of the bioenergy markets in the Netherlands including a quantitative overview of current trade and consumption, and a qualitative description of trends and drivers. Quantitative data is obtained from statistical offices, (scientific) publications and additional information; when appropriate supplied by the interviewees. Statistical offices include the Central Bureau of Statistics of the Netherlands (CBS), Eurostat and EurObserv'ER. As the definitions of the offices can differ, data of the CBS is used when available to avoid statistical errors.

Trends, drivers and important characteristics of the bioenergy categories will be derived from (scientific) publications and expert opinion. Publications of Copernicus Institute (part of University Utrecht), Energy Centrum Netherlands (ECN), Dutch Emissions Authority (NEA), the GAVE program and others are used to give a total overview of the bioenergy trade in the Netherlands.

The information regarding the sustainability of the imported biomass is partially based on data from literature and partially on statements made in some of the interviews conducted in the frame of this study.

### 2.2 Interviews with Dutch market actors

The overview of trade and market barriers was obtained from interviews with different relevant stakeholders. Interviewees were selected based on their expertise of the Dutch bioenergy trade, and specifically of the investigated commodities (bioethanol, biodiesel and wood pellets). Most in-depth interviews were held in person and took between one and two hours. The interviews were then summarized, written out and sent for approval to all twelve interviewed stakeholders. All approved interviews are attached to this report (see Table 1).

During the interviews an interview questionnaire was used as guidance. This questionnaire (see appendix A) was also used to structure the written versions of the interviews. During the interviews, the interviewees were first asked to define their role in the bioenergy supply chain and the annual processed volume of bioenergy by their company. Next, the interviewees discussed the current and future bioenergy trade and market barriers, involved actors and possible solution to barriers. In the last part of the questionnaire (see Appendix A, questions 7-11) market parties were specifically asked regarding their views on sustainability criteria and certification of solid and/or liquid biofuels, and whether they considered the sourcing of sustainably produced biomass a (possible) barrier.

**Table 1: Overview of consulted market parties**

Reference	Company	Main expertise	Interview appendix
[PoR]	Port of Rotterdam	Transshipment	B
[PoA]	Port of Amsterdam	Transshipment	C

[KEVL]	KEVL, Van Leer Energy	Wood pellets	D
[GF]	GF Energy	Wood pellets	E
[Essent]	Essent trading	Wood pellets	F
[Wilmar]	Wilmar Edible Oils	Liquid biofuels	G
[NSG]	North Sea Group	Liquid biofuels	H
[Shell]	Shell	Liquid biofuels	I
[MVO]	Productschap MVO	Liquid biofuels	J
[SGS]	SGS International	Certification of biomass	K
[BFP]	BFP Biofuel Project	Bioenergy projects	L

### 2.3

#### **Definition and coverage of trade and market barriers**

The initial aim of this study was to (only) cover trade barriers. Strictly speaking, trade barriers encompass any form of governmental or operational activity or restriction that renders the import of some goods into a country difficult or impossible. Often, a difference is made between technical and non-technical trade barriers. The former can e.g. be strict technical standards, which prevent the import of commodities that do not meet the technical specifications. A typical example of the latter are economic barriers (e.g. import tariffs or duties) or administrative barriers (e.g. paperwork related to trade or sustainability) barriers. However, as the interviewees predominantly mentioned more general market barriers (i.e. barriers that hinder both the use of domestic and imported biomass), it was decided to include market barriers in the analysis as well.

## 3 Overview, drivers and trends for international bioenergy trade in the Netherlands

### 3.1 Introduction

As can be seen in figure 1, since 2000, the avoided use of fossil fuels by deploying renewable energy technologies has increased threefold due to policy stimulation for renewable energy sources. Main elements in the renewable energy mix are biomass combustion for heat or electricity production (the latter mainly through co-firing biomass in coal power plants), biogas and transport fuels (biodiesel and biogasoline). Within these bioenergy categories, international bioenergy trade is only relevant for co-firing biomass in large power plants and for transport fuels [Jonker and Junginger 2010]. This chapter provides an overview of these bioenergy markets in the Netherlands including a quantitative overview of current trade and consumption, and a qualitative description of trends and drivers. Chapter 3.2 provides an overview of the solid biomass trade (predominantly wood pellets) in the Netherlands, whereas chapter 3.2 describes the bioethanol and biodiesel trade. Special attention in both sections is given to the sustainability of the imported and used bioenergy. An attempt is made to quantify how much of the current solid and liquid biomass imports are produced sustainably, and how the market actors aim to prove the sustainable production.

### 3.2 Solid biomass trade

#### 3.2.1 *Overview of domestic production, consumption and imports*

After Sweden, Germany and Italy, the Netherlands are the fourth-largest wood pellet markets in Europe, with a steadily increasing consumption that reached about 1250 ktonne in 2009. Compared to this, the Dutch wood pellet production capacity is marginal, approximately 120 ktonne/year. This production capacity has been constant for the past few years, and given the limited availability of the main feedstock for wood pellets (sawdust from wood processing industry), no further increase in domestic production capacity is expected. Thus, more than 90% of all wood pellets consumed in 2009 were imported. Imported wood pellets for co-firing are mainly imported from Canada and the United States of America. Other, minor wood pellet streams originated in Western Europe (mainly Portugal), the Baltics, North-West Russia, South Africa and Australia (see also figure 2). In total, the net internationally sourced wood pellets amounts to 20.7 PJ, which corresponds roughly to 1.15 Mtonne in 2009. Figure 3 shows an overview of estimated wood pellet production, consumption and trade in between 2007 and 2009 in the Netherlands, while figure 4 shows the (estimated) growth of the net import (ie. Gross import – exports) of wood pellets from 2003-2009. All numbers should be considered estimates and used with care.

In table 2, an overview is given of the co-fired material in TeraJoules (TJ) for stationary installations in 2009, excluding woodstoves, digestion installations and transport fuels.

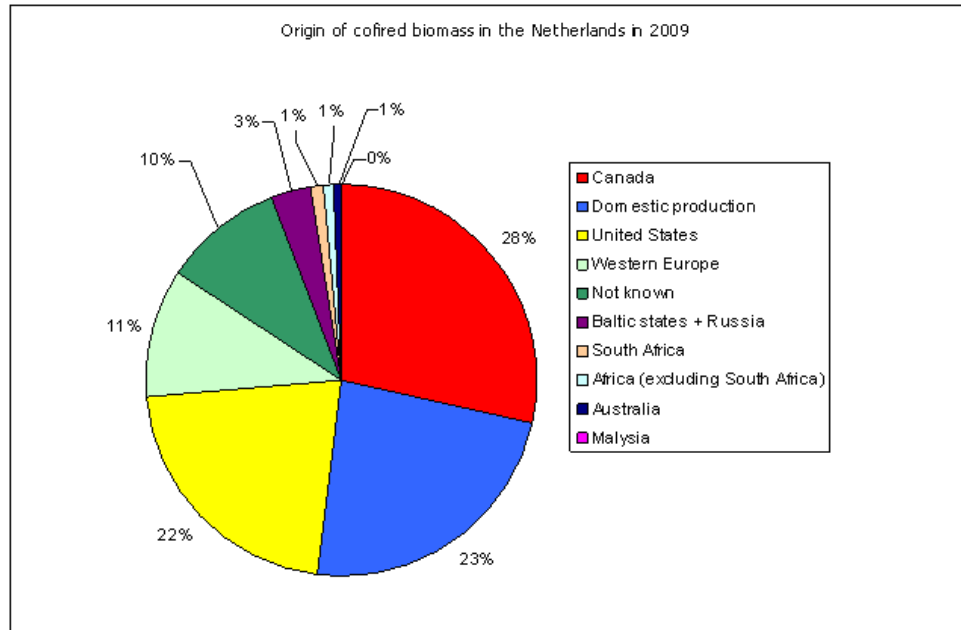


Figure 2. Overview of the origin of co-fired solid biomass in the Netherlands in 2009 [Jonker and Junginger 2010]. While the domestic biomass consists of various different kinds of solid biomass, more than 95% of the imported solid biomass are wood pellets.

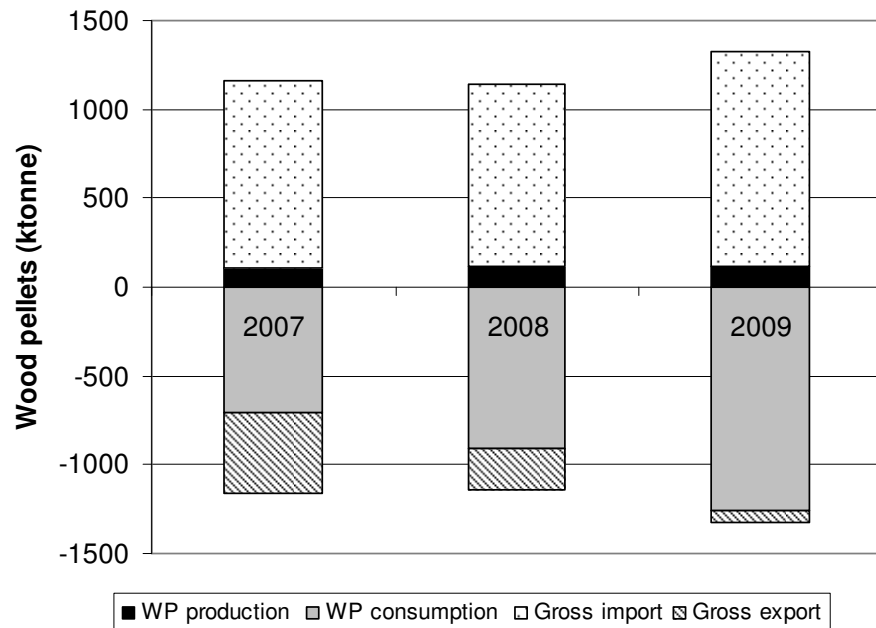


Figure 3. Overview of estimated wood pellet production, consumption and trade in between 2007 and 2009 the Netherlands. All numbers should be considered estimates.

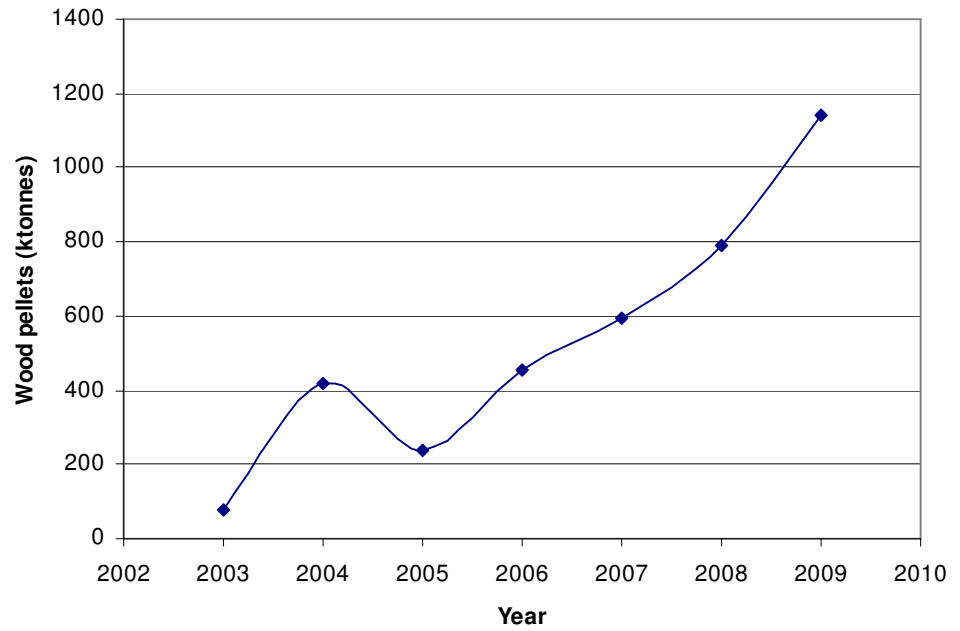


Figure 4 Estimated net imports of wood pellets to the Netherlands 2003-2009

**Table 2 Sourcing of co-fired biomass in stationary installations in the Netherlands in TJ for 2009**

	<b>Domestically sourced [TJ]</b>	<b>Internationally sourced [TJ]</b>
<b>Solid</b>		
Woody biomass		
Wood pellets	1872	20660
Wood chips	4614	-
Used wood (B- en C- hout)	5789	-
Non-woody biomass		
Directly from primary agricultural <sup>1</sup>	2324	-
From agro-industry <sup>2</sup>	937	-
Other <sup>3</sup>	2483	709
<b>Liquid<sup>4</sup></b>		
From agro-industry	1900	-
<b>Total</b>	<b>19 919</b>	<b>21 369</b>

1 For example straw and chicken manure

2 For example palm kernel shells, olive cake, soya pellets, shea nut shells, cocoa bean residues, bone meal, etc.)

3 Sludge from water clearing installations and black liquor

4 Vegetable oil and animal fat

### 3.2.2 *Drivers*

The most important driver for the use of solid biomass for electricity production by power utilities was the financial support for electricity generated on biomass. The feed-in premium provided by the national government under the so-called MEP-scheme (Milieukwaliteit ElectriciteitsProductie) was 6-7 €ct per kWh electricity produced from woody biomass. After 2006, no new projects were allowed to apply for the feed-in premium. The successor of the MEP subsidy is the SDE support scheme, in place since January 2009, which excludes large scale power plants for financial support. The SDE support focuses on small-scale electricity production (co-)fired by solid, liquid or gaseous bioenergy [EurObserv'ER 2010].

Another drivers for the use of (imported) solid biomass was the coal price, which reached over 4.5 €/GJ in mid-2008, but has declined to about 2 €/GJ in 2009. In the same period the wood pellet price fluctuating between 6-8 €/GJ. Finally, also the price of CO<sub>2</sub> makes use of biomass more attractive, as the Dutch utilities fall under the emission trading regime, and can sue biomass to reduce their GHG emissions. However, at current coal, pellet and CO<sub>2</sub> prices, the use of wood pellets is not economically feasible without the feed-in premium.

### 3.2.3 *Trends*

In the past few years, the import of wood pellets have shown a clearly increasing trend, from about 80 thousand tonnes in 2003 [Junginger et al. 2006] to 1.2 million tonnes in 2009 [Jonker and Junginger 2010]. However, it is uncertain whether this growth will continue. As stated above, the use of (imported) wood pellets for co-firing is depending on financial governmental support. However, the contracts under the MEP-scheme will expire of the period 2012-2014. If no new governmental support system is put into place, it is quite likely that the amount of imported wood pellets for use in the Netherlands will decline strongly. As at the time of writing (December 2010), the Dutch government had (yet) not announced whether and how it will support large-scale co-firing for biomass, the outlook for future wood pellet imports is highly uncertain. However, as the Dutch renewable energy targets are almost impossible to achieve without solid biomass import, it is deemed likely that sooner or later, a new support system will be put in place. Whether this will be again in the form of a feed-in premium or e.g. a quota for renewable electricity production is yet to be seen.

In case the wood pellet demand in the Netherlands will continue to grow, it is likely that the origins of future solid biomass imports will further diversify. In the past decade, wood pellet were mainly imported from East and West-Canada, and from several European countries. From 2009 onwards, the South Eats of the USA have started to produce and export large quantities of wood pellets towards North-Western Europe (i.e. Belgium, the Netherlands and the UK). Also, new wood pellet production facilities are being built in Australia, Latin America and South Africa. Thus it is likely that the trade in wood pellets will further globalize. Whether imports from these countries will also reach the Netherlands, will however also depend on the fact whether their product is sustainably produced or not.

### 3.2.4 *Current and future sustainability of imported solid biomass*

For solid biomass, compliance with sustainability criteria is currently voluntary for producers and consumers and is not related to any subsidy or investment schemes

or involved in obtaining legal permits. Therefore, no official statistics exist on how much of the imported biomass was produced sustainably, and how this was guaranteed.

However, the single-largest user of solid biomass RWE Essent (formerly Essent) developed a voluntary certification scheme: the Green Gold Label (GGL). The GGL is nowadays registered and owned by the independent Green Gold Label Foundation. According to the GGL criteria, the solid biomass consumed by Essent/RWE approximately 70-73% was certified as sustainable in 2009 [Essent, van der Wal 2010]. As biggest Dutch end-consumer, this provides an indication on the overall status of the sustainability of solid biomass imports. Note also that this does not necessarily mean that all of the remaining 27-30% is by default not sustainable. It merely means that it was not possible to certify this biomass under the GGL label, which can have several different reasons – for more information, see also chapters 4 and 6.

Furthermore, the Dutch normalisation institute NEN published the Dutch standard NTA 8080 "Sustainability criteria for biomass for energy purposes" in March 2009 [NEN, 2010]. Major reason to establish the NTA 8080 was to have a broadly supported standard with verifiable sustainability requirements. The use of biomass plays an important role in the energy transition, also in view of climate change and security of energy supply. The sustainability criteria defined by the Dutch Cramer Commission are translated into verifiable requirements in the NTA 8080. Since the summer of 2010, an organization can be certified against the NTA 8080, and thus prove by means of certification that the biomass used has been sustainably produced [Smeets, 2010]. The NEN also developed the NTA 8081, which describes the certification scheme, and which will include the 'rules' to enable certification against the requirements of the NTA 8080. The certification scheme has been validated and adjusted by means of pilots before the scheme was established. The scheme has been submitted to the Dutch Accreditation Council for acceptance. After acceptance of the Dutch Accreditation Council the NTA 8081 will be published. The certification scheme will also be submitted to the European Commission and the Dutch government for recognition as voluntary scheme to demonstrate compliance with the European Directive of the use of energy from renewable sources (2009/28/EC) [NEN, 2010].

For the future, it is possible that any governmental support for the use of solid biomass will be linked to a proof of sustainable production. Whether this will be based on (or refer to) the NTA 8080/8081, or whether also other, voluntary systems such as the GreenGold Label will be accepted as proof, is unknown.

Furthermore, a number of remarks can be made:

- As can be seen in table 1, wood pellets are the only solid biomass commodity that is currently imported. All other biomass is sourced from within the Netherlands, and basically all of it is based on domestic waste streams. Thus, the amount of this biomass that would qualify for sustainability certification (e.g. as defined under the NTA 8080) is probably (very) high.
- Wood pellets are a type of wood fuel generally made from compacted sawdust. Thus, also for this commodity, many 'hot' issues regarding the sustainability for biomass production (such as food versus fuel, direct and indirect land use etc.) are not relevant for wood pellets made from sawdust. However, as a large part of these wood pellets is transported long-distances, especially the avoided GHG



emission reduction deserves attention. In a recent paper, Sikkema et al. [2010] show that the avoided GHG emission (when substituting coal) lie between 84-92%, which are still widely above the required levels in e.g. the Cramer criteria.

- In the past 2 years, wood pellets are imported from the South East of the USA. There, wood pellets are predominantly made from plantation wood. In such a case, the entire production chain of the wood also needs to be taken into account. Very little is so far known on the overall sustainability performance of wood pellets made from plantations. However, as Jonker and Junginger [2010] report, in 2009, only a minor part (26%) were imported from the USA. In terms of sustainability, this is probably the most important trade stream to monitor in the near future.

In conclusion, it can be expected that the large majority of current feedstocks will likely meet sustainability criteria as laid down in the NTA8080 or the GGL. In chapter, 4 the possible trade barriers that may arise from sustainability criteria and certification schemes for solid biomass as perceived by Dutch market actors are discussed further. A further outlook and discussion of the international developments is provided in chapter 6.

### **3.3 Liquid biofuels trade**

#### *3.3.1 Overview of domestic production, consumption and imports/exports*

Production of ethanol in the Netherlands has decreased since 2006, and in 2009, no fuel ethanol production in the Netherlands was reported [eBio, 2010]. No data on ETBE production and consumption was available. In contrast, a number of large biodiesel production facilities have been built recently: in 2009, the Dutch capacity rose from 500 to 1300 ktonne. This capacity is however largely underexploited; in 2009 only 300 ktonne of biodiesel was produced [CBS 2010-a], equalling roughly 11.1 PJ. The Netherlands are deemed an ideal location for biodiesel production plants due to its proximity to the European mainland and its harbour suitable for transatlantic vessels. Regarding consumption, as shown in figure 1, in 2009, the Netherlands used biogasoline equivalent of 5.8 PJ fossil fuels and biodiesel equivalent of 9.8 PJ fossil fuels.

The Netherlands are also an important transit country to supply biofuels to the European mainland, and only a minor part of the liquid biofuels entering the Netherlands is also consumed here. Transshipment of biofuels in Rotterdam alone is 2.42 million m<sup>3</sup> and 2.78 million m<sup>3</sup> for biodiesel and bio-ethanol respectively, largely overshooting domestic demand [PoR]. Main trading countries for biodiesel (or biodiesel feedstock) imports in the Netherlands are Argentina, United States, Indonesia and Malaysia. Export of biodiesel is mainly to European countries, especially neighbouring countries. Bio-ethanol import is mainly imported either directly from Brazil or after a transshipment in the Caribbean region. Figures 3 and 4 provide an overview of the respective amounts bioethanol and monoalkylesters traded, and the origin / destination of the imported / exported commodities. Figure 5 shows the origin of the biofuel imported as biodiesel (i.e. part of the wider category monoalkylesters).

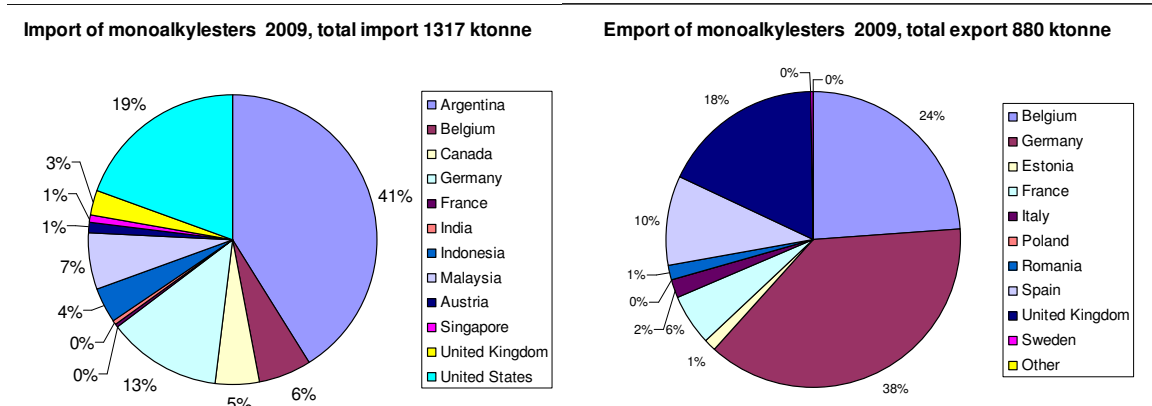


Figure 3 Overview of ethanol imports and exports in the Netherlands in 2009. Source: [Jonker and Junginger 2010]

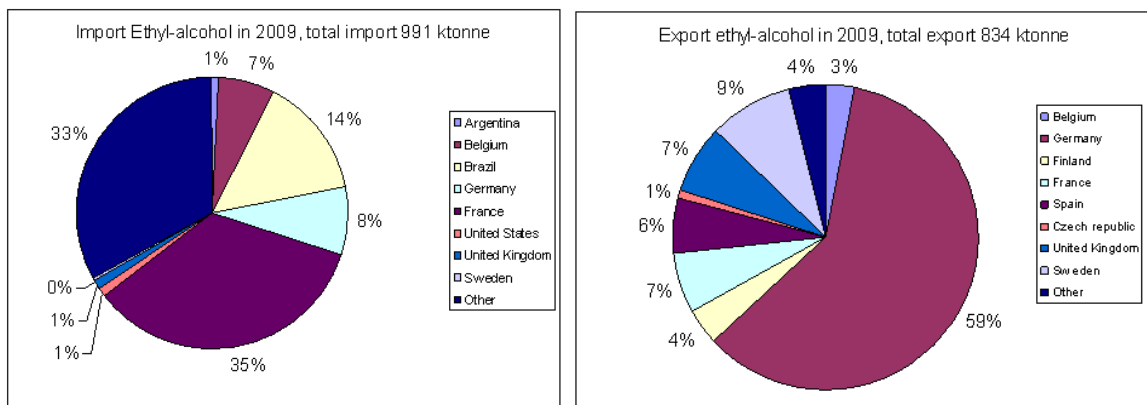


Figure 4 Overview of monoalkylesters imports and exports in the Netherlands in 2009. Source: [Jonker and Junginger 2010]

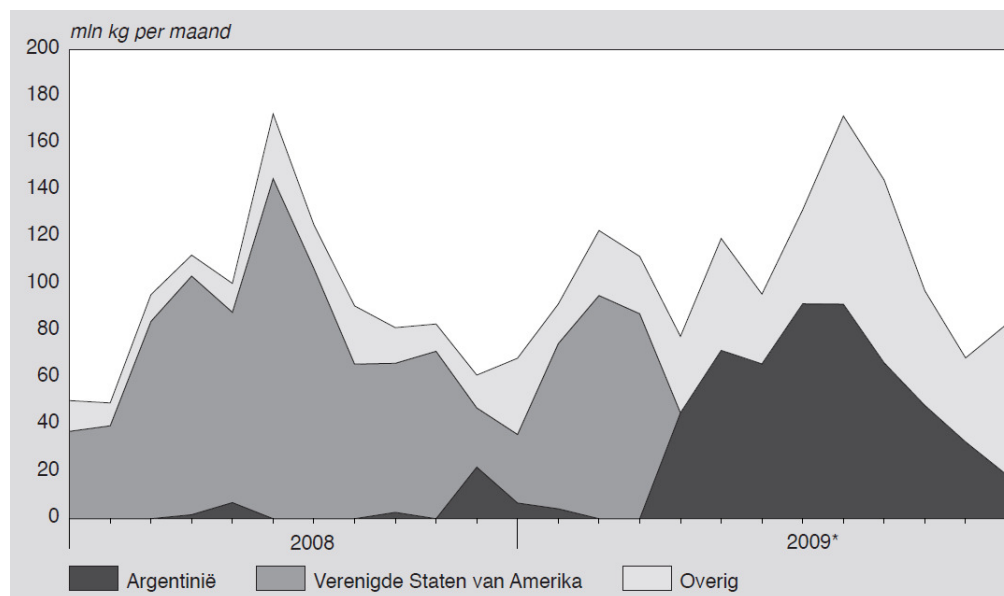


Figure 5 Overview of biodiesel imports from July 2007 to June 2009 (given in ktonnes per month) specified by country of origin. Source: [CBS 2010-a]

No quantitative data was found on which part of the biofuels consumed in the Netherlands is produced domestically and which part is internationally sourced. However, as there was no bioethanol production in the Netherlands in 2009, it is clear that basically all ethanol (either used directly as fuel or for ETBE production) was imported. For biodiesel, a significant domestic production capacity exists, so in theory, a large part of the Dutch consumption could have been produced in the Netherlands. However, it is quite likely that the vegetable oils (e.g. palm oil or soy oil) or the seeds (e.g. rapeseed or sunflower seed) required to produce biodiesel were also imported. As reported by a recent NEa report [NEa 2010b], the vast majority of feedstocks used for both ethanol and biodiesel production is produced abroad, both within the EU, and in countries such as Argentina (mainly soy beans for biodiesel), Brazil (mainly sugar cane for ethanol) and the US (mainly maize for ethanol).

### 3.3.2

#### Drivers

As indicated before, the main driver for biofuel consumption is the blending obligation as implemented under the Renewable Energy Directive 2009/28/EG (RED). The RED targets at a share of 20% renewable energy in total European energy consumption, specific for the Netherlands a share of 14% is required. For transportation fuels the RED targeted at a 10% share of renewable energy in transportation fuels in 2020 by blending biofuels, using renewable electricity or biogas. The pathway is shown in table 2. To support the development of the biodiesel and biogasoline market, a total blending obligation is implemented as are (lower) minimum blending obligation for both biofuels. The difference between the single and the total blending obligations gives flexibility to the market actors to blend the preferred biofuel. For example, in 2014, end-users have to blend a total of 5.5%, but may choose to only blend 3.5% of biogasoline with regular gasoline, and compensate this by blending more than 5.5% biodiesel with regular diesel.

Note that from the end of 2010 onwards, biofuels used to fulfil the blending obligation should meet the sustainability criteria as specified in article 17 of the RED. In a nutshell, these encompass minimum GHG emission reductions compared to fossil fuels, and the exclusion of certain land types for the production of energy crops. Furthermore, biofuels derived from waste, residues, non-food cellulose material and lignocellulose material can administratively double counted as biofuel to meet the annual blending target<sup>5</sup>. In case more biofuels are blended than required in a particular year, up tot 25% of the overconsumption can be carried-over to the next year. However, in case of biofuels carried over from 2010 to 2011, these biofuels must then comply with the RED sustainability criteria.

<sup>5</sup> Note that a mismatch in statistics can occur due to the double-counting and carry-over of biofuels. Furthermore, the supply of biogas and renewable electricity for transport can be used to meet the 10% renewable energy share as indicated by the RED. It is unknown how large the supply of electricity and biogas will become in the coming years.

**Table 2 Blending obligation of biofuels in the Netherlands for 2007-2014**

	Minimum blending obligation (%)		
	Biogasoline	Biodiesel	Total renewable transport fuels
2007	2.00	2.00	2.00
2008	2.50	2.50	3.25
2009	3.00	3.00	3.75
2010	3.50	3.50	4.00
2011	3.50	3.50	4.25
2012	3.50	3.50	4.50
2013	3.50	3.50	5.00
2014	3.50	3.50	5.50

Next to the RED, the Fuel Quality Directive (FQD) also acts as a driver. The FQD targets a 6% reduction of greenhouse gas emissions for transportation fuels consumed in 2020. By the FQD technical regulations are introduced for petrol, diesel and gas-oil.

Next to the FQD, a number of technical standards exists for biofuels, among other: EN 14214 (biodiesel), prEN 15376 (ethanol as blending component for petrol) and CWA 15293 (bio-ethanol E85). Delegations of the EU, USA and Brazil agreed to support the compatibility of technical standards for biofuels, if possible [White paper 2007].

### 3.3.3

#### *Trends*

The blending obligation for biofuels increased the consumption of biofuels in the Netherlands. Both the consumption of biogasoline and biodiesel increased, since the implementation of the obligation in 2007. Before 2007, only 4 million litres of biofuels were consumed by demonstration and pilot projects, which only contributed a negligible amount to the total bioenergy supply in the Netherlands (see figure 1). Since then, the consumption of biofuels has rapidly increased. Up until 2009, the blending obligation has been met by the Dutch fuel market. In a publication by the Ministry of Environment and Spatial Planning to the European commission the realised share of biofuels is determined, available on [GAVE 2010]. This report stated that the share of biogasoline and biodiesel in 2009 was 3.11%, and 4.22% respectively.

For the future, it is clear that meeting the increasing biofuel blending obligation, further import of either refined biofuels or raw feedstocks (such as oil seeds and vegetable oils) will be required.

3.3.4 *Current and future sustainability of imported liquid biofuels*

As described above, from December 2010 onwards, liquid biofuels will have to meet the RED sustainability criteria. Up until that moment, no mandatory reporting on the sustainability of biofuels existed in the Netherlands. Also, unlike the large solid biomass end-user, none of the major liquid biofuels end-users (or distributors) had chosen to develop own voluntary sustainability certification systems. So, while import and use of liquid biofuels has been substantial from 2007 onwards (see figures 1, 3 and 4), no official information on sustainability certification was available up until the end of 2009.

In 2010, the Dutch Emission Authority NEA so far reported twice on the sustainability of liquid biofuels produced in the Netherlands in 2010 [NEA 2010a, 2010b]. For these studies, companies supplied data on the sustainability of biofuel based on a voluntary agreement. The results are shown in figure 5 and 6 below.

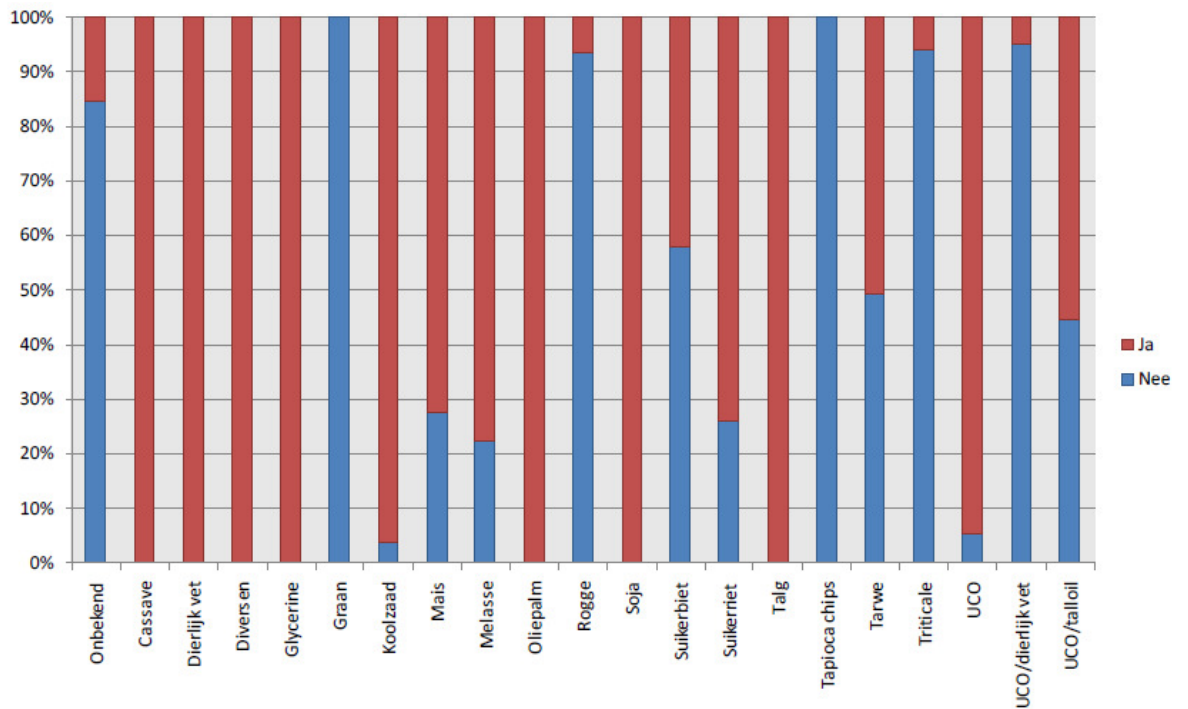


Figure 5: Share of the biofuels for which sustainable production was reported (presented for each feedstock). Source: [NEA 2010b]

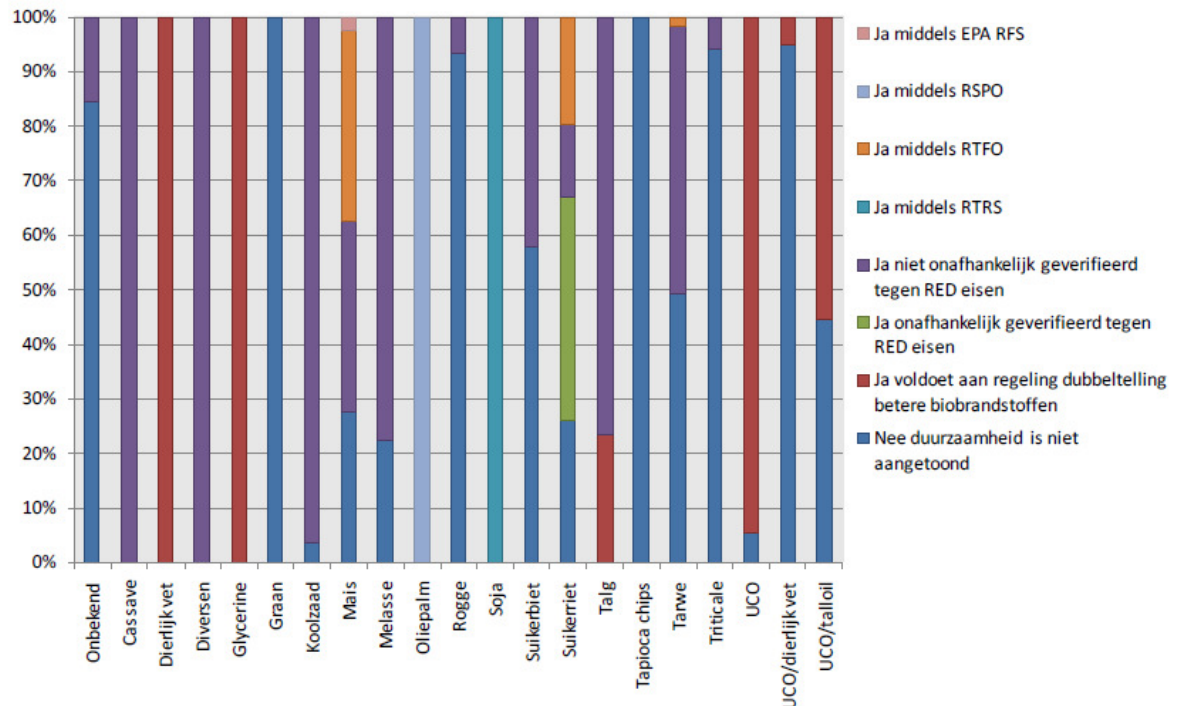


Figure 6 Ways how companies reported on sustainability of biofuels used in the Netherlands in 2010. Source: [NEA 2010b]

It follows from figure 5 that for the majority of biofuels consumed in the Netherlands, companies have used ways to demonstrate the sustainable production: Overall, for 62% of these biofuels, sustainability was reported. However, as can be seen in figure 6, the way how sustainability was reported differs strongly per feedstock. Only for a very small part (a fraction of the ethanol produced from sugar cane), the compliance with RED criteria was independently verified. For part of the ethanol from cassava, molasses and corn, and biodiesel from rape seed and tallow, the companies claimed to meet the RED criteria, but this was not independently verified. Also other, commodity- specific certification systems were used, such as the RSPO certification (for palm oil based biodiesel) and RTRS certification (for soy based biodiesel). Finally, some companies used biofuels which had been certified for sustainability under foreign governmental systems: the RTFO (used in the UK) and the EPA RFS (used in the US).

This situation will likely change in 2011, as then only biofuels independently certified against the RED criteria will be allowed to count for the blending targets in EU countries. Given the fact that only 62% of the biofuels consumed in 2010 had any kind of proven sustainability claim, and only a small amount was meeting RED criteria, it is possible that in the next year(s) it may become a problem to source sufficient (verified) sustainably produced biofuels. This will be further discussed in chapter 5 and 6.

## 4 Trade and market barriers for solid biomass in the Netherlands

### 4.1 Introduction

This chapter will give an overview of market barriers and trade barriers for solid biomass trade in the Netherlands, as perceived by Dutch market parties in the period September-November 2010. First, an overview of barriers is given which are related to the development of a solid bioenergy market in general, i.e. affecting imports but also domestic production. Next, barriers are listed which specifically affect the trade / import of solid biomass. For both types of barriers, possible solutions as indicated by the interviewees are provided.

### 4.2 Market barriers

#### 4.2.1 *Failing policy support*

This is probably the best-known and frequently voiced barrier for renewable energy development in general, and also in the frame of barriers for bioenergy trade, many of the respondents mentioned this as one of the most important ones for solid biomass trade market [PoR, KEVL, GF, Essent, BFP]. The interviewees see solid biomass as an important feedstock with large (future) potential for the production of renewable electricity. Interviewees emphasise that the consumption increase of biomass for cofiring in recent years was triggered mainly by national policy support. But, as explained in chapter 3, electricity from biomass produced in large-scale power plants is currently excluded for future financial support. This inconsistency of policy support is indicated as the most important short-term market barrier, with a very large effect on solid biomass imports in the coming years. An interviewee pointed out that without policy support a decrease in solid biomass consumption in the coming years is foreseen if financial support ends [GF].

More in general, four elements of 'failing policy support' are pointed out by the interviewees:

- Renewable energy policy was not consistent
- Renewable energy policy was not clear
- Stimulation policies were only valid for short period; no long term strategy.
- The Dutch national renewable energy policies are not in line with other EU member states.

The inconsistent policy support for (large-scale) solid biomass consumption indirectly affects the investments and further market stability and development as indicated by the interviewees. Direct and indirect effects of inconsistent policy support are ranked (if applicable) as top "trade barrier".

The interviewees indicate the implementation of a long-term renewable energy strategy supporting the production of renewable energy especially bioenergy as essential solution to the main market barrier [PoR, KEVL, GF, Essent, BFP]. Interviewees indicate that bioenergy support or policy targets should be in line with European policies to establish a level playing field for all European market actors. [BFP] expects that a stable and clear renewable energy policy would



especially be beneficial for large investments in the supply chain. A proper solution would also enable the development future small and large scale initiatives to contribute to the biomass market [Essent].

Instead of the current system of feed-in premiums, [KEVL] suggests a mandatory share of renewable energy in electricity production is put forward as possible solution to increase renewable energy consumption [KEVL]. Another solution is the implementation of a fossil fuel tax to compensate for the economic unattractiveness of renewable sources [KEVL]. A mineral fuel tax is implemented in, for example Sweden and triggered the consumption of bioenergy.

Finally, a position paper (signed by large energy utilities, biomass traders and other relevant stakeholders) on sustainable energy from biomass, was sent to the Lower House in the Netherlands in the summer of 2010 [Eon 2010]. This position paper also indicates the issues above as important barriers for market development. The position paper, in line with the recommendations above, mentions four requirements for further market development:

- Implementation of supportive policy
- Creating a structural demand for solid biomass
- Create a substantial market for biomass: logistic, financial products and services
- Guaranty sustainable supply

#### 4.2.2 *Negative public perception*

Interviewees indicate that the negative image of bioenergy can be seen as an indirect barrier for bioenergy markets and trade [PoA, KEVL]. The image of renewable energy sources, among which biomass, has an effect on public opinion and thereby affecting policymakers and renewable energy strategies of companies. The perception on biomass and its relation to food availability in developing countries, land use change and net Green House Gas (GHG) emission reduction is often wrong or biased.

This is an issue which will probably have to be resolved by all market actors, in cooperation with NGO's and policy makers, and will probably take some years to resolve. The implementation of sustainability certification could help to improve the perception of solid biomass as an energy source.

### 4.3 **Trade barriers**

#### 4.3.1 *Lack of internationally accepted technical standards / product standardisation*

Standards are used to describe technical specifications of the traded products. Homogenic quality and heating value are essential parameters for the end-users of wood pellets, which could be controlled by applying a technical standard. However, currently no (inter)national accepted or applicable technical standards are in use by market actors [PoR, PoA, KEVL, Essent]. In principal, the lack of technical standards could be seen as a general market barrier, however, as it especially concerns the lack of agreement on an international level, most interviewees mentioned this as a specific barrier for trade. The Port of Rotterdam [PoR] saw standardisation of technical specifications not so much as a major barrier for trade, but rather as an enabling measure to increase further trade.

In a recent study by van Doren [2010], market parties were asked to respond to a survey on the effect of standardisation on bioenergy markets. In line with the issues stated above, the results of the survey indicate that various standards are deemed important for market development. Especially standards for quality and sustainability were indicated as essential. The lack of technical standards or product standardisation slows down trade; due to the need of constant comparison and verification between supply and demand specifications.

Worthwhile mentioning is also the initiative by APX-ENDEX to establish an exchange for wood pellets, including a price index standard trading contracts and a continuous stock in Rotterdam [APX-ENDEX 2010]. For such an exchange, the development of wood pellets as standardised commodity is a precondition. The intended results are the reinforcement of Rotterdam (the Netherlands) as wood pellets hub and the development of a transparent spot market.

The market has identified this problem already, and is working itself on **solutions**. Initiatives for the development of EU-wide technical (and legal) standards are currently taken up by different stakeholders, including traders, producers and consumers of solid biomass, see also [Eon 2010]. Interviewees indicate that this is ongoing work, and at the time of interviewing, technical details were not available [PoR, PoA, Essent]. It is unknown if those initiatives will overcome issues related to the lack of standards.

#### 4.3.2 *Lack of internationally accepted legal standards*

Next to technical standards, legal standards / trading contract describe the non-technical issues regarding bioenergy trade, supplementary to the technical specifications as mentioned above. A barrier for trade is the lack of widely accepted legal standards, as indicated by [GF, Essent]. Due to the lack of legal standards per freight large contracts are designed which is time-consuming. This trade barrier is closely related to technical standards and the size of the solid biomass market.

To **solve** this issue, currently action is undertaken by European market actors (consumers and suppliers) to set up a standardised framework for the trade of wood pellets, including legal standards [Essent]. Market parties mentioned that the lack of legal standards is strongly related to the current small-scale and immature bioenergy markets. It is expected that with further market development and increase in traded volumes, the demand for legal standards will increase, and this barrier will then be solved by market parties themselves.

#### 4.3.3 *Sustainability criteria and certification schemes*

For solid biomass, no mandatory sustainability criteria or certification systems are currently in place in the Netherlands, as indicated in section 3. However, there is an ongoing discussion both within the Netherlands and within the EU whether mandatory sustainability criteria for solid biomass should be introduced. As sustainability criteria apply to both domestic and imported biomass, this is in principle a general market barrier. However, as argued in chapter 3, domestic biomass consists mainly of residue streams (which are likely to meet sustainability requirements), so the impact of sustainability criteria expected to be more profound on imported biomass.

All of the interviewees indicate that sustainability of traded solid biomass does not necessarily have to become a trade barrier. If sustainability criteria for the Netherlands are in line with other European countries, the interviewees do not foresee issues regarding a sustainable supply. The currently traded solid biomass and biomass potentials can meet the (expected) sustainability criteria, according to [GF, Essent, SGS, BFP, KEVL]. However, a differentiation between European and Dutch sustainability criteria can be a hurdle for market development and affect the status of the Netherlands as a trading country. The interviewees mentioned that they are not directly against strict criteria, but it should be a level playing field for all traders and consumers EU wide. Also the uncertainty whether and when (mandatory) sustainability criteria may be implemented is a hurdle for biomass trade, especially long term contracts with suppliers

Apart from producing the biomass sustainably to meet the criteria, interviewees indicate that the related administrative effort in order to demonstrate compliance with the criteria can be a barrier. It is expected that the administration for tracing to the source or origin is a good deal of work. An example is the 'track and trace' of wood waste. The tracing and documentation to the origin of waste wood is extensively although wood waste is seen as a sustainable bioenergy source.

Finally, a possible side-effect of sustainable certification is the public disclosure of the total supply chain of solid biomass, including region of origin and transport network. The production location and supply network is added value for a company and therefore confidential, as indicated by [BFP]. Companies who invested in those production regions might lose their competitive advantage.

In summary, the interviewees voiced three concerns:

- 1 uncertainty whether and when sustainability criteria and certification systems may be introduced on a national and/or European level, and whether this will be harmonized or not,
- 2 a high administrative burden to prove of sustainability in the entire production chain, and
- 3 the necessity to publicly disclose the origin of the (sustainably certified) biomass, and consequently loss of an competitive advantage.

To **solve** the first issue, different interviewees indicate that the harmonized implementation of EU-wide sustainability criteria is desired to enable international trade; domestic use and transit of solid biomass [PoR, GF, Essent]. In the absence of mandatory sustainability criteria, some market parties will continue to use voluntary systems. However, as [GF] pointed out, due to small trade volumes, related costs and different national (voluntary) schemes wood pellets producers do not acknowledge the added value of certification [GF]. Furthermore, a clear communication from the Dutch government on the short term on whether and how it plans to introduce mandatory sustainability criteria (and/or link it to policy support) would decrease the uncertainty significantly.

Regarding the second issue, the administrative effort would of course depend on the way a mandatory sustainability certification system is designed. Showing compliance with criteria in the total production chain is for some bioenergy hardly possible, as [Essent] mentioned for the example of waste wood. Simplification of tracing different biomass trade flows (e.g. through using the mass balance or 'book and claim' methods) could simplify the certification effort.

For the third concern, it would probably suffice if the proof of sustainable production only has to be delivered to e.g. a government agency, but otherwise would not become public.

#### 4.3.4 *Knowledge utilization and information exchange*

Although the international solid biomass market is described as being relatively small by the interviewees, and knowledge on biomass production and trade is available, the interviewees indicated that in their view this information was not properly or sufficiently utilized. Information exchange between experts, researchers, local governments and producers could and should be improved [KEVL, SGS, BFP]. Information exchange is more an indirect trade barrier and can be an underlying problem to the other trade barriers. For example, [SGS] pointed out that in their view, the current sustainability certifications systems are too generic, and do not address the specific conditions in producing countries. Market parties indicated that they have valuable information on these conditions, but this was not included due to lack of information exchange. Also, [KEVL] pointed out that the synchronization of national and local policies and regulations could be improved with better information exchange between policy makers [KEVL].

During the interviews, all market parties in general seemed willing to **solve** this issue by contributing to the information exchange. While it may not be necessary to increase the number of working groups further. One interviewee mentioned that for some working groups (e.g. working groups of the NEN), a relative large participation fee is required, which can be a significant barrier, especially for small-scale companies [BFP].

#### 4.3.5 *Supply of large volumes and logistical issues*

Large volumes of biomass are required for cofiring in large scale power production facilities to meet future renewable energy targets. On the supply side, a potential hurdle is the sufficient and constant supply of biomass from abroad. Bottlenecks in exporting are the capacity of pelletising machines, ocean vessels, infrastructure and road transport. An upcoming trade barrier is the utilization of different production facilities or producers to meet demand, related to technical and legal standardisation of solid biomass [PoA-KEVL]. On the demand side, storage and distribution in the Netherlands are currently limited. One of the interviewees [GF] saw the availability of storage facilities and related infrastructure for wood pellets in the Netherlands a barrier for increasing trade.

These issues on the supply side cannot be **resolved** by Dutch (market) actors. On the demand side, investments in infrastructure are likely to be made by market parties if sufficient long-term policy support is in place to assure stable/increasing volumes of solid biomass imports.

## 5 Trade and market barriers for liquid biofuels in the Netherlands

### 5.1 Introduction

In parallel to chapter 4, this chapter will give an overview of market barriers and trade barriers for liquid biofuels trade in the Netherlands, as perceived by Dutch market parties in the period September-November 2010. First, an overview of barriers is given which are related to the development of the liquid biofuels market in general, i.e. affecting imports but also domestic production. Next, barriers are listed which specifically affect the trade / import of liquid biofuels. For both types of barriers, possible solutions as indicated by the interviewees are provided.

### 5.2 Market barriers

The national (and European) biofuels market has grown in size due to the blending obligation for biofuels, in place since 2007. Biofuels are a political commodity; the consumption of biofuels is triggered by renewable energy policy targets [NSG]. None of the interviewees mentioned any market barriers. Apparently the continuous increasing blending obligation for biofuels over the next ten years provides sufficient certainty for the market.

### 5.3 Trade barriers

#### 5.3.1 *The RED Sustainability criteria*

As briefly described in chapter 3, the Renewable Energy Directive (RED) sets ambitious targets for renewable transport fuels in 2020 and puts emphasis on the implementation of sustainability criteria by member states. As of December 2010, the biofuels consumed in the EU member states will have to meet the sustainability criteria in order to count for the blending obligation.

At the time of interviewing the experts (September-November 2010), the market parties pointed out a number of issues regarding the practical implementation of the RED criteria.

First of all, the implementation of RED certification schemes is behind schedule. Before November 2010, no certification system accredited by the European Commission was available to show compliance with RED sustainability criteria in the Netherlands. This is a significant problem, as the crops which will be used as feedstock for biofuel production in 2011 are largely planted and harvested in 2010. Also, the exact procedures are unknown how compliance with RED has to be proven. Thus, it will be difficult (if not impossible) to certify crops planted in 2010.

Second, there was significant uncertainty amongst the market parties regarding the final set of sustainability criteria implemented in the Netherlands, and this was clearly perceived as a current barrier for liquid biofuels trade [Wilmar, NSG, Shell, SGS]. While some market parties [Wilmar, NSG] believe that the current set of sustainability criteria is final, others [Shell] are uncertain whether it will be possible for individual EU member states to implement additional sustainability criteria on top of the RED criteria. For example, the Cramer criteria contain both stricter criteria (e.g. avoided GHG emission levels) and additional criteria (e.g. on social aspects).

Third, an additional uncertainty is whether (on EU level) additional sustainability criteria will be formulated later-on. Especially the direct and indirect land use change is highlighted by [Shell]. The inclusion of indirect land use change (ILUC) in the sustainable criteria of the RED is currently investigated by the European Commission, and will report upon the issue in 2011. Several interviewees Shell, BFP] pointed out that ILUC criteria could potentially severely decrease the availability of suitable areas for bioenergy production.

As a final remark, all relevant interviewed stakeholders indicated that their traded products are sustainably produced and that (they expected that) they would likely be able to demonstrate compliance with the sustainability criteria of the RED. Given that for the entire market, only 62% of all biofuels consumed has some 'proof of sustainability' (see chapter 3.2), and only a small part certified independently against the RED, this is quite remarkable, and will be further discussed in chapter 6.

**Solving** the first issue is probably a matter of time, as with learning-by-doing within the coming year, these matters should gradually be resolved [SGS]. AgentschapNL and NEa are also aware of this issue, and will publish a list of sustainability certification systems which have been approved by the Netherlands [Godfroij 2010]. For the second issue, the Dutch government should ideally announce whether it has any plans to impose additional sustainability criteria, and whether it will follow the advice issued by the commission Corbey [Corbey 2010], e.g. on the unilateral introduction of ILUC factors for biofuels consumed in the Netherlands. As for the ILUC decision of the European Commission, it is unlikely that the Commission will decide prematurely on this, so this uncertainty will likely remain for the near future.

### 5.3.2 *Technical standards*

As a classical technical trade barrier, technical standards for liquid biofuels appear to be a (minor) barrier. For ethanol, the technical European specifications of ethanol used as transportation fuel differ from specifications in Brazil. For example, hydrated ethanol (which is a large part of the Brazilian production) is unable to meet the European technical specifications. As [NSG] pointed out, the reduction of moisture content is an energy intensive process, and in Brazil a significant percentage of the car fleet can drive using hydrated ethanol. Therefore, [NSG] considers the European technical specifications for fuel ethanol too strict, and de facto as a technical trade barrier.

Another example is the use of lauric oil for biodiesel production; the EU standard for biodiesel (EN 14214) excludes lauric oil due to its cold filter plugging point (CFPP) [Wilmar]. Lauric oil is obtained during the production of biodiesel from palm oil (lauric oil is oil made from the palm kernels). According to [Wilmar], the European rapeseed lobby deliberately influenced the formulation of the EU standard to effectively bar lauric oil as feedstock for biodiesel.

It is questionable whether both barriers can (and need to) be **solved** on the short term. Hydrated ethanol cannot be blended in high percentages with gasoline for normal cars - the use of hydrated ethanol would require the introduction of flexifuel cars, which are common in Brazil, but which would require significant investments in Europe. Thus, this issue goes beyond the technical trade barrier.

To allow lauric oil as feedstock for European biodiesel would require a change of the EN standard, which would also be a time-consuming process. In chapter 6, the magnitude of these barriers will be discussed further.

### 5.3.3

#### *Import tariffs*

Import tariffs for biofuels are indicated as an important non-technical trade barrier for liquid biofuels in literature [Junginger et al 2010]. At the time of writing, import tariff applied for both ethanol (192 € per m<sup>3</sup>) and biodiesel (varying between €213 and €409 per tonne, only for imports from the US) [Junginger et al 2010]. During the interviews, different opinions were voiced regarding the importance of these tariffs. The [PoR] clearly so import tariffs for bioethanol as a barrier for the further growth of market sectors that use ethanol as a feedstock. [Shell] confirmed that import duties for ethanol can be a barrier, but did not specify whether this was currently the case. [BFP] on the other hand stated that import tariffs only play a marginal role, but could possibly be linked to the compliance with sustainability criteria.

The importance of import tariffs for biofuels trade is further discussed in chapter 6. In any case, if these tariffs were to be abolished, this would have to be done on an EU-wide level, and could thus probably achieved during WTO negotiations or similar events.

## 6 Summary, discussion and conclusions

### 6.1 Summary

The aims of this study were to provide a quantitative and qualitative overview of past and current solid and liquid biomass import flows, and assess (as far as possible) to what extent this biomass was produced sustainably; and to identify trade and market barriers for sustainable biomass in the Netherlands, and identify possible solutions

As shown in chapter 3, both imports of solid biomass (predominant wood pellets) and liquid biofuels (ethanol and biodiesel) has increased over the past years and has reached substantial proportions. Wood pellet imports increased continuously from 80 thousand tonnes in 2003 to 1.2 million tonnes in 2009. Biodiesel and ethanol consumption in the Netherlands was negligible before 2007, but has increased to several hundred thousand tonnes each in 2009. These are largely covered by direct imports of ethanol and biodiesel, or by imports of vegetable oil for biodiesel production in the Netherlands. Further growth of both solid biomass and liquid biofuels imports is needed to meet the biofuels blending obligation and overall renewable energy targets of the Netherlands in 2020.

It is not possible to give exact numbers of how much of the biomass imported in 2009 and 2010 was produced sustainably, as no obligatory reporting was required in up until the end of 2010 for solid and liquid biomass. For solid biomass, in 2009, the largest user of imported wood pellets reported that about 70% was voluntarily certified to meet the Green Gold label sustainability criteria [Essent, van der Wal, 2010]. For liquid biofuels, a recent study by NEa [2010] reports that 62% of all biofuels consumed in the Netherlands had some kind of sustainability certification, but the percentage of biofuels that is independently certified for RED compliance is much smaller.

Based on interviews with Dutch market parties, the following market and trade barriers for solid biomass were identified (in order of importance):

1. Currently internationally sourced wood pellets are the dominant source for co-firing in large-scale electricity production plants. Due to the exclusion of large scale electricity production from solid biomass under the current SDE support scheme, it is uncertain how the solid biomass consumption for co-firing will develop in the next three to four years. This market barrier was deemed the most import obstacle for the continuation and growth of solid biomass imports. Market parties demand clarity regarding future policy support. Next to the current (MEP) feed-in premium support system, also a mandatory share of renewable electricity or a tax on fossil fuels are mentioned as alternative support systems.
2. Regarding sustainability criteria and certification, market parties are confident that the large majority of currently traded solid biomass is sustainably produced. However, the interviewees voiced three concerns regarding how and when this sustainability must be proven: (1) there is considerable uncertainty whether and when sustainability criteria and certification systems may be introduced on a national and/or European level, and whether this will be



harmonized or not; (2) market parties fear a (possible) high administrative burden to prove of sustainability in the entire production chain (depending e.g. on the chain of custody system that will be used), and (3) one interviewee would rather not publicly disclose the origin of the (sustainably certified) biomass, due to consequent loss of a competitive advantage. Again, market parties would clearly appreciate if Dutch and EU policy makers would clarify their plans on these issues on the short term.

3. The lack of internationally agreed technical standards for wood pellets was seen as an obstacle by market parties. Similarly, the absence of generally accepted legal standards for trade contracts is slowing down trade. Market parties have recognized this and are developing solutions themselves. Probably, these issues will be resolved within the next few years.
4. Several interviewees mentioned that the infrastructure for solid biomass in the Netherlands needs to be proved to handle large volumes. To meet (a large part of) the future renewable energy targets through co-firing biomass, the required volumes of solid biomass are enormous. Interviewees emphasize the current infrastructure is not ready for large volumes of wood pellets or others solid biomass. This includes the lack of dedicated cheap, large scale storage facilities, preferable close to a harbour suitable for ocean vessels. Investments in infrastructure to resolve this will require some time, and are likely only to be made by market parties if sufficient long-term policy support is in place to assure stable/increasing volumes of solid biomass imports.
5. Utilisation of knowledge of Dutch market parties utilization of e.g. biomass production and trade by experts, researchers, local governments and producers could and should be improved. For example, one interviewee pointed out that in their view, the current sustainability certifications systems are too generic, and do not address the specific conditions in producing countries. Market parties indicated that they feel that they have valuable information on such conditions, but that they are not included in policy development due to lack of information exchange. This is more an indirect trade barrier and can be an underlying problem to the other trade barriers.
6. Finally, the general negative image of bioenergy can be seen as an indirect barrier for the further development of bioenergy markets and trade. This issue will probably have to be resolved by all market actors, in cooperation with NGO's and policy makers.

For liquid biofuels, none of the interviewees mentioned any market barriers. Apparently the continuous increasing blending obligation for biofuels over the next ten years provides sufficient certainty for the market. However, a number of trade barriers were pointed out by the interviewees (in order of importance):

1. Regarding the RED sustainability requirements, all interviewed stakeholders indicated that their traded products are sustainably produced and that (they expected that) they would likely be able to demonstrate compliance with the sustainability criteria of the RED. However, they pointed out three major barriers: (1) the implementation of RED certification schemes is behind schedule. Until November 2010, there was no certification system accredited by the European Commission available to show compliance with RED

sustainability criteria in the Netherlands, and this caused much uncertainty amongst stakeholders. (2) There was also significant uncertainty amongst the market parties whether the RED criteria were final, or whether it will be possible for individual EU member states to implement additional sustainability criteria on top of the RED criteria. (3) An additional uncertainty is whether (on EU level) additional sustainability criteria will be formulated later-on, especially criteria regarding indirect land-use change which could potentially severely decrease the availability of suitable areas for bioenergy production. Solving the first issue is probably a matter of learning-by-doing within the coming year. For the second issue, the Dutch government should ideally announce whether it has any plans to impose additional sustainability criteria. As for the ILUC decision of the European Commission, this uncertainty will likely remain until mid-2011, when the EC has announced to report on the issue.

2. As a classical technical trade barrier, technical standards for liquid biofuels appear to be a (minor) barrier. The use of hydrated ethanol (from Brazil) and of lauric oil (from e.g. Malaysia, a by-product from palm oil production, which can be used as feedstock for biodiesel production) is excluded by EU technical standards. It is questionable whether both barriers can (and need to) be solved on the short term (see also the discussion below).
3. During the interviews, different opinions were voiced regarding the importance of import tariffs for ethanol. The [PoR] clearly sees import tariffs for bioethanol as a barrier for the further growth of market sectors that use ethanol as a feedstock. [Shell] confirmed that import duties for ethanol can be a barrier, but did not specify whether this was currently the case. [BFP] on the other hand stated that import tariffs only play a marginal role, but could possibly be linked to the compliance with sustainability criteria. See below for a further analysis and discussion of this issue.

## **6.2 Analysis and discussion of barriers for solid biomass trade**

For the developments of solid biomass trade, the lack of a clear support policy was voiced as most important concern – in sharp contrast to the liquid biofuels market. Given the importance of solid biomass imports to reach the Dutch renewable energy targets in 2020, it is likely that sooner or later, renewed policy measures will be taken. However, the longer this will take, the larger is the risk that investments in e.g. infrastructure in the Netherlands, but also possibly abroad, are postponed or cancelled. While the international wood pellet market is certainly not solely dependent on the import by the Netherlands, the (short-term) reduction of demand but (up to) one million tonnes would certainly disrupt this emerging market severely. Also, the market parties have voiced concerns that the required infrastructure to import large amounts of solid biomass needs to be developed. As a recommendation for further research, we suggest to set up one or several scenarios how the solid biomass trade flows may develop in the coming years, and which improvements are needed (and when & where) to make this increase possible.

With regard to the implementation of sustainability criteria and certification schemes, the concerns voiced by Dutch market parties are in line with those of stakeholders in other European countries. In May 2010, the union of the electricity industry (EURELECTRIC) published a position paper with a number of recommendations for policymakers [EURELECTRIC 2010]. A brief summary of the

most important issues mentioned in the paper relevant and in line with the goal of this report are:

- Biomass is a key renewable energy source in reaching 2020 targets
- EURELECTRIC fears that the development of many different national sustainability schemes will create inefficiencies and increase costs
- Criteria should be developed through an open, consultative process. This process, a dialog between policymakers and different stakeholders should start now. Harmonized, mandatory criteria will play a key role in development of the biomass market, also to create a level playing field. They should therefore be introduced as soon as possible (i.e. well before the end of 2011).

The European Commission has decided to postpone the decision whether to introduce mandatory sustainability criteria for solid biomass until the end of 2011. Until then, it recommends member states that national systems should follow the criteria laid down in the RED. However, in Belgium, already two mandatory systems exist (in Wallonia and Flanders). Also, in the UK, plans exist to introduce mandatory criteria, largely in line with the RED, but with higher (and earlier) GHG emission reduction requirements. If the Dutch government would implement yet another sustainability certification system with again different or additional criteria compared to the RED, this would create further heterogeneity in the European market and likely hamper trade.

As already briefly discussed in chapter 3, the actual sustainability of the solid biomass currently traded seems to be a minor concern. Currently, most of the solid biomass imported is (still) based on residue streams, which in general have to meet much less stringent criteria than biomass from dedicated plantations. Also, in Belgium, the utility Electrabel has been able to source large amounts of wood pellets for several years meeting the mandatory sustainability requirements imposed by the Belgian government, demonstrating that this is not a principal problem. However, there is a trend to increasingly produce wood pellets from energy plantations (e.g. pine or eucalyptus wood). In such a case, the entire production chain of the wood also needs to be taken into account, including previous land use. It is estimated that in 2009, only a small part of wood pellets are produced from plantation wood, but this could probably be the most important solid biomass trade stream to monitor in the near future.

Summarizing, a clear message by the Dutch government on its intentions on both the intended form of policy support (if any) for the next year(s), and whether this will be linked to a sustainability certification system (and if so, which system) would probably greatly increase market confidence and support the trade of solid biomass in the coming years.

The importance of the other trade and market barriers mentioned seems somewhat lower: technical and legal standards are currently developed by market parties. Also, as far as technical standards for solid biomass are concerned, CEN has already developed several standards which could be utilized by the market. [Alakangas 2010]. Also the logistical infrastructure certainly needs to be developed, but it can be expected that this is done by market parties – provided there is sufficient confidence for further market growth. Finally, knowledge utilisation and the negative public image are certainly important market barriers, but are both much broader issues than the scope of this study.

### 6.3 Analysis and discussion of barriers for liquid biofuels trade

As with solid biomass, there are major issues regarding sustainability certification of liquid biofuels. The more practical concerns regarding the actual certification on the short term are likely start-up problems to be resolved on the short term. More fundamental is the question whether additional national criteria can be imposed on top of the RED criteria. It is the understanding of the authors that according to the RED, all biofuels meeting the criteria must be allowed to count for the national blending target in each EU member state, i.e. that it will not be possible to impose additional sustainability criteria. However, the fact that the commission Corbey recently advised the government Rutte-Verhagen to (unilaterally) introduce a generic iLUC factor (as of 1 January 2011) casts doubt on the validity on this assumption [Corbey 2010].

All interviewees indicated that they thought that their biofuels were produced sustainably. This is however in contrast with the outcomes of the recent survey by [NEa 2010b], in which only 62% of all feedstocks used for biofuel consumed in the Netherlands had been certified in some form for sustainable production. This does not necessarily mean that the remainder of the feedstocks was produced unsustainably, but it is probably an indication that many producers, traders and consumers still need to step up their efforts to get their biofuels certified. More worrying however are results from the British RTFO system. In the UK, the RTFO system has been in place since 2008, and also requires mandatory reporting on amongst others GHG emission reduction and environmental performance. Bignal [2010] indicated in October 2010 that for the biofuels imported in the first half of 2010 in the UK, a mere 38% would meet the GHG emissions reduction threshold of the RED., and only 35% met an environmental standard. This fact was not discussed with the Dutch interviewees, therefore it is to some degree uncertain whether the situation will be similar in the Netherlands. Yet, also in light of the [NEa 2010b] results, it is likely that biofuels consumed in the UK and the Netherlands are largely imported from the same regions, and thus it likely that biofuels consumed in the Netherlands will score similarly compared to biofuels consumed in the UK. If indeed this is correct, it would mean that a significant share (likely more than 50%) of the current imports would not be eligible for the blending obligation. Thus, the sustainability criteria could potentially become a major trade barrier from 2011 onwards. It is remarkable that none of the interviewees has commented upon this, and is certainly an issue for further follow-up in 2011.

On the technical trade barriers for hydrated ethanol and lauric oil: these can in principle be regarded as trade barriers. However, blending hydrated ethanol with gasoline for regular gasoline engines is not possible. Also, Brazil produces also large quantities of dehydrated ethanol, much more than its total ethanol exports, so this matter seems of minor relevance. Regarding lauric oil: similar claims have in the past that EU technical standards would also exclude biodiesel based on soy bean oil [Junginger et al. 2010]. In practice, large quantities of soy bean based biodiesel are used within the EU, possibly due to blending with other vegetable oils before esterification.

The import tariffs for ethanol and biodiesel (for imports from the US) are by definition trade barriers. However, these barriers probably mainly affect the exporting countries. Due to the limited availability of feedstock in the Netherlands to produce ethanol and the further increasing blending quota, the Netherlands will

most likely need to import increasing volumes of ethanol and biodiesel in the future. These tariffs will likely cause less imports from the US and Brazil, and thus more imports from other countries (possibly at higher costs), ultimately leading to higher costs for the Dutch end-consumer.

#### **6.4 Methodological discussion**

Collecting data on traded biomass quantities is notoriously difficult due to the lack of proper statistics, the multiple possible end-uses of many biomass feedstocks, and the confidentiality issues regarding imported quantities and origins, to name just a few factors. Therefore, the number provided in chapter 3 should be regarded as (best) estimates. Nevertheless, the described trends are deemed reliable. Also on how much of the imported biomass was produced sustainably, no absolute numbers can be given – until the end of 2010, there was no mandatory reporting on the sustainability of imported biomass. Market parties use different definitions of what they deem sustainable, and also use different methods to verify whether their sustainability criteria have been met (ranging from supplier declarations to verification by independent inspections). So again, the numbers provided in this study should be treated as estimates.

Concerning the inventory of market and trade barriers, the choice was made to go for a limited number of in-depth interviews rather than e.g. an online survey. Despite the difficulty in finding the appropriate number of companies willing to participate (originally 15 interviews were foreseen), the consulted interviewees gave a good overview of the market and trade barriers. As the focus was not only on technical trade barriers the interviewees also provided information on trade conditions and market disruptions. An advantage of the semi-structured interviews was that particular points mentioned by the interviewees could be discussed on the spot in more detail. A drawback of this method is that possibly not all trade and market barriers were identified. Therefore, this study will be updated again in 2011, and the results will also be presented at the national Task 40 meetings on international bioenergy trade, to identify any possible gaps in the analysis.

#### **6.5 Conclusions**

The study has shown that the import of solid and liquid biomass to the Netherlands has increased significantly in the past years, and contributes substantially to the overall renewable energy supply in the Netherlands. For both biomass streams, traders and consumers claim that the majority of the consumed biomass was produced sustainably, but definitions of sustainability and ways to verify this vary currently widely.

We conclude that for solid biomass trade, at the time of writing, the lack of a long-term policy support system is the biggest market barrier. There is also considerable uncertainty regarding the possible introduction of sustainability criteria for solid biomass on a national and/or EU level. Given the fact that the vast majority of imported biomass is based on residue streams the principal availability of sustainably produced biomass seems to be only a marginal concern. Other trade barriers, such as the lack of technical and legal standards are issues which have already been identified by market parties and will likely be solved by the market within the next years. Also, the necessary investments in infrastructure could likely be carried out by the market, provided that there is sufficient security regarding stable and increasing trade flows in the future.

For liquid biofuels, market parties clearly point out issues regarding the short-term implementation of the RED sustainability criteria as major concerns, combined with worries that these criteria may be complemented with additional national criteria, or additional criteria on an EU level later-on (especially regarding ILUC). Based on literature, we conclude that it is also deemed possible that there may be a significant lack of (verified/certified) sustainably produced liquid biofuels that meet all RED criteria, although none of the interviewees voiced this concern. Furthermore, both technical barriers and import tariffs exist for biodiesel and ethanol, but none of them seem to significantly affect the overall biofuel trade flows to the Netherlands.

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## Interviewees

<b>Reference</b>	<b>Company</b>	<b>Main expertise</b>	<b>Interview appendix</b>
[PoR]	Port of Rotterdam	Transshipment	B
[PoA]	Port of Amsterdam	Transshipment	C
[KEVL]	KEVL, Van Leer Energy	Wood pellets	D
[GF]	GF Energy	Wood pellets	E
[Essent]	Essent trading	Wood pellets	F
[Wilmar]	Wilmar Edible Oils	Liquid biofuels	G
[NSG]	North Sea Group	Liquid biofuels	H
[Shell]	Shell	Liquid biofuels	I
[MVO]	Productschap MVO	Liquid biofuels	J
[SGS]	SGS International	Certification of biomass	K
[BFP]	BFP Biofuel Project	Bioenergy projects	L

## Appendix A Interview

### Informatie vooraf:

Dit onderzoek wordt uitgevoerd door het Copernicus Instituut, Universiteit Utrecht, in opdracht van AgentschapNL. Alle interviews zullen vertrouwelijk behandeld worden. Alle interviews zullen op 1-2 A4tjes uitgewerkt worden, en ter controle en goedkeuring voorgelegd worden. Indien gewenst kan het verslag ook vertrouwelijk blijven, en zal alleen anoniem geciteerd worden.

### Doel en scope:

Het doel van deze studie is het in kaart brengen van specifieke handelsbelemmeringen en omvang van handelsstromen in Nederland. Daarnaast zullen de geïnterviewde gevraagd worden naar oplossingsrichtingen voor de handelsbelemmeringen. De focus ligt vooral op import van biomassa naar Nederland, die primair bedoeld zijn als energiedrager, en chemie met name houtpellets, ethanol, biodiesel, en plantaardige oliën, die als grondstof voor de productie van biodiesel gebruikt (kunnen) worden. In mindere mate zullen belemmeringen voor export geïnventariseerd worden.

### Vraag 1

Bij de handel of gebruik van welk van de volgende commodities is uw bedrijf / instelling betrokken en op welke manier?

- |  | 2008 | 2009 | 2010 |
|--|------|------|------|
| • Eenheid  |      |      |      |
| • Houtpellets  |      |      |      |
| • Ethanol  |      |      |      |
| • Biodiesel  |      |      |      |
| • Plantaardige oliën, die als grondstof voor de productie van biodiesel gebruikt (kunnen) worden |      |      |      |
| • Anders, namelijk:  |      |      |      |
| • Chemie   |      |      |      |

### Vraag 2

Welke hoeveelheden is uw bedrijf in 2008 – 2009 – 2010 verhandeld / gebruikt / bij betrokken geweest? Waar kwam deze biomassa (voor zover bekend) vandaan?

### Vraag 3

Wat beschouwt u als de belangrijkste handelsbelemmeringen voor de internationale handel? Voor welk type biomassa geldt dit? Geef waardering aan (1-10, 10 zware belemmering)

1)

2)

3)

4)

5)

Vraag 4

Welke bedrijven/instellingen zijn betrokken bij deze handelsbelemmeringen? Wat is hun invloed op het wegnemen van deze belemmering?

Vraag 5

Hebt u in recent verleden handelsbelemmeringen zien opkomen of wegnemen?

Vraag 6

Verwacht u in de toekomst (belangrijke) handelsbelemmeringen opkomen of verdwijnen, tot 2020?

Vraag 7

Hoeveel van de verhandelde biomassa was duurzaam geproduceerd?

Vraag 8

Op welke manier is de duurzaamheid gecontroleerd?

Vraag 9

Hoe zal zich het aandeel duurzaam geïmporteerde / verhandelde / gebruikte biomassa in de komende jaren in uw bedrijf ontwikkelen? En wat zijn uw verwachtingen voor de markt in zijn geheel? Hoe zal dan de duurzame productie en import gemonitord worden?

Vraag 10

In hoeverre zullen de duurzaamheidscriteria een rol spelen als handelsbelemmering?

Vraag 11

Wie is betrokken bij deze criteria en daaraan gekoppelde belemmeringen en wie is betrokken bij het opkomen of wegnemen van deze belemmering?

Zijn de volgende onderdelen ter sprake gekomen in bovenstaande vragen. Zo nee, welke invloed hebben onderstaande elementen op de handel in duurzame biomassa:

Logistiek

Import / export tarieven

Technische standaard / duurzame criteria

Fytosanitaire belemmeringen

Prijsschommelingen

Rol van de overheid; faciliterend / belemmerend?

    Lokale overheid

    Nationale overheid

    Internationaal beleid

Eindvraag

Hebt u nog opmerkingen / aanbevelingen / extra opmerkingen n.a.v. dit interview?

## Appendix B Port of Rotterdam

Geïnterviewde: Wijnand Schonewille, Havenbedrijf Rotterdam  
Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht  
Datum: 20 september 2010 - 14:00 uur

### Omschrijving

Het havenbedrijf heeft tot taak de Rotterdamse haven zo effectief en efficiënt mogelijk te ontwikkelen, te beheren en te exploiteren. Daarnaast behartigt het havenbedrijf de belangen van de havengemeenschap en helpt het de concurrentiepositie van de haven te versterken. Het Havenbedrijf Rotterdam heeft ruim 1.200 medewerkers, werkzaam in uiteenlopende functies op commercieel, nautisch en infrastructureel gebied.

[[http://www.rotterdamclimateinitiative.com/nl/rotterdam\\_climate\\_initiative/over\\_ci/partners/havenbedrijf](http://www.rotterdamclimateinitiative.com/nl/rotterdam_climate_initiative/over_ci/partners/havenbedrijf); volgt niet uit interview]

### **Bij de handel of gebruik van welk van de volgende commodities is uw bedrijf betrokken en op welke manier? (cijfers over 2009)**

Houtpellets	500 000	tonne
Biodiesel	2 300 000	tonne
Bio-ethanol	2 200 000	tonne

### **Welke hoeveelheden zijn door Havenbedrijf Rotterdam overgeslagen? Waar kwam deze biomassa (voor zover bekend) vandaan?**

De exacte herkomst van de drie stromen is niet gemakkelijk te reproduceren. Biodiesel komt voornamelijk uit Argentinië, ethanol komt voornamelijk uit Brazilië. Houtpellets komen voor een belangrijk deel uit Canada.

De herkomst van bio-energiedragers (en andere handelsstromen) is voor het Havenbedrijf interessant om te weten om de logistieke planning daarop aan te passen, inclusief het aanbieden van vrachten voor de heen- of terugreis. Om zodoende kosten te drukken en het transport efficiënter te maken.

### **Wat beschouwt u als de belangrijkste handelsbelemmeringen voor de internationale handel? Voor welk type biomassa geldt dit? Geef waardering aan (1-10, 10 zware belemmering)**

Belemmering:	Waardering:
--------------	-------------

- 1) Een handelsbeperking is de fysieke opslagcapaciteit (productgebonden) 3-4
- 2) Consistent overheidsbeleid, 6-7

lange termijn duidelijkheid geeft marktvertrouwen waardoor bedrijven bereid zijn te investeren, het Havenbedrijf investeert zelf niet. Risico op investeringen voor bio-energie te groot voor bedrijven op dit moment. Het is een cirkel redenering waar we in terecht zijn gekomen; geen investeringen en dus geen marktontwikkeling en andersom.

- 3) Bio-energie moet ook in verband met een investeringsbeslissing qua (verwachte) winstmarge concurreren met conventionele (bekende) handelsstromen.

- 4) EU-Importheffingen voor bio-ethanol vormen een belemmering voor snelle verdere groei van de marktsectoren die gebruik maken van bio-ethanol als grondstof.

Standaardisatie is niet sec een belemmering voor handel, maar eerder een voorwaarde.

Overige belemmeringen gelijk aan belemmeringen in internationale handel van andere (grond)stoffen.

Als Nederland heel strikt afwijkende eisen stelt op het gebied van duurzaamheidscriteria dan kan dit wel een belemmering voor de marktontwikkeling vormen, Nederland krijgt dan bijna automatisch een uitzonderingspositie als imago opgeplakt. Dit kan ook gaan gebeuren als Nederland alleen al heel hoog inzet wat betreft duurzaamheidscriteria. Eenduidig beleid is belangrijk, ook binnen de EU. Nederland legt zich beperkingen op door af te wijken van andere afspraken in Europa, los van de kwaliteit van de afspraak.

### **Hebt u in recent verleden handelsbelemmeringen zien opkomen of wegnemen?**

Belemmering kan weggenomen worden of boet qua belangrijkheid in. Een voorbeeld: In het verleden is de voorgenomen interpretatie van regelgeving rondom oud papier te voorbarig geweest (nieuwe lijst afvalstoffen moest ingevoerd worden maar de lijst was nog niet definitief in de gehele EU) waardoor Nederland een uitzondering positie leek te krijgen. Door een lobby van o.a. Havenbedrijf Rotterdam is deze obstructie verminderd. Het grootste exportproduct is oud papier.

### **Verwacht u in de toekomst (belangrijke) handelsbelemmeringen opkomen of verdwijnen, tot 2020?**

We zijn er niet gerust op dat bioenergie goed van de grond komt; marktontwikkeling is van vele zaken afhankelijk. Deze marktontwikkeling is niet, of maar gedeeltelijk, gerelateerd aan de economische crisis. De Mercosur-onderhandelingen zullen zeker tot aanpassingen leiden op het gebied van (internationale) handel. Hierbinnen wordt gelobbeyed om importheffingen voor bio-ethanol specifiek als chemische grondstof naar een nul-tarief te brengen.

### **Hoeveel van de verhandelde biomassa was duurzaam geproduceerd?**

Niet bekend, niet opgenomen in documenten. Er is op dit moment geen grootschalige certificeringschema's voor biobrandstoffen in gebruik. Er zijn wel enkele schema's voor bijvoorbeeld palmolie en voor houtpellets, maar die spelen een kleine rol. Waarschijnlijk is een redelijk deel niet gecertificeerd maar wel duurzaam geproduceerd.

Het havenbedrijf kan niet-duurzaam geproduceerde biomassa niet tegenhouden, alles moet gebeuren op vrijwillige basis. Hieruit volgt een "Catch 22": ik wil het wel, maar ik het niet controleren (dus kan ik het eigenlijk niet). Het is belangrijk dat je niet het imago (van bedrijf of land) beschadigd; het is makkelijker om je imago te vernietigen dan op te bouwen.

Het Havenbedrijf Rotterdam steekt energie in een duurzaam imago door met klanten afspraken te maken. Het weigeren van niet duurzame producten is niet mogelijk en omdat de haven verdient aan overslag is dit ook niet wenselijk.

### **Op welke manier is de duurzaamheid gecontroleerd?**

-

**Wie is betrokken bij deze criteria en daaraan gekoppelde belemmeringen en wie is betrokken bij het opkomen of wegnemen van deze belemmering?**

-

**Hebt u nog opmerkingen / aanbevelingen / extra opmerkingen n.a.v. dit interview?**

Het Havenbedrijf Rotterdam is een actieve speler (binnen de mogelijkheden en wensen van het bedrijf) in de bio-energie markt:

Het havenbedrijf heeft tijd en energie gestoken in de ontwikkeling van de bio-energie markt, bijvoorbeeld de ontwikkeling van de NTA 8080, de totstandkoming van een prijsindex voor houtpellets en de samenwerking met APX Endex (hetgeen moet leiden tot standaardcontracten voor handel).

APX Endex is een belangrijke ontwikkeling, het zorgt voor handelscontracten en continue voorraad van houtpellets in de haven van Rotterdam. Hierdoor komt een 'knip' in de logistieke keten waardoor de markt transparanter wordt. Bilaterale afspraken worden minder noodzakelijk en zullen kunnen afnemen, en er kan minder van voorkennis gebruik gemaakt worden. Dit initiatief zet zich in om toekomstige, na marktontwikkeling, handelsbelemmeringen weg te nemen. Op basis van beleid (verplichtingen) maakt het Havenbedrijf prognoses van de over te slaan producten om klanten te adviseren en in te spelen op marktontwikkelingen.

Naast handelsbelemmeringen kent de bioenergie markt diverse marktbelemmeringen:

Ten opzichte van de andere handelstromen is bio-energie een kleine markt.

Interpretatie van EU-beleid kan handel moeilijker maken. Wellicht kan het verschil in interpretatie van de diverse EU landen een barrière opwerpen, zelfs als bijvoorbeeld Nederland het beleid goed uitvoert.

Een marktbelemmering is ook de afzetmogelijkheden van bio-energie; als er meer afzetmarkten zijn zal er ook meer vraag zijn naar een handelssysteem.

## Appendix C Port of Amsterdam

Geïnterviewde: Marcel Gorris, Commercial Manager Bulk Logistics, Havenbedrijf Amsterdam

Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht

Datum: 13 september 2010 - 14:00 uur

### **Omschrijving Haven Amsterdam:**

In opdracht van het gemeentebestuur beheert, exploiteert en ontwikkelt Haven Amsterdam de Amsterdamse haven: ruim 1.900 hectare havengebied (haventerreinen, kades, wegen, spoorwegen, sloten en groen) en 600 hectare vaarwater. Haven Amsterdam wil een betrouwbare haven zijn en de economische bedrijvigheid en werkgelegenheid in Zeehavens Amsterdam op een duurzame manier regisseren.

Zeehavens Amsterdam bestaat uit de havens van Amsterdam, Zaanstad, Beverwijk en Velsen/IJmuiden.

Haven Amsterdam heeft drie hoofdtaken:

1. optimalisatie van de dienstverlening en het vestigingsklimaat in de havenregio. Daarbij richt zij zich op bestaande klanten, het aantrekken van nieuwe ladingstromen en vestigingen en op marketing en promotie.
2. aanleg en onderhoud van de infrastructuur, vernieuwen van de haven en het beheer van het Amsterdamse havengebied Westpoort.
3. bevordering van een vlotte, veilige en milieuverantwoorde afwikkeling van het scheepvaartverkeer van 40 kilometer buiten de kust bij IJmuiden tot aan de Oranjesluizen, onder meer door regelgeving en handhaving.

Direct overgenomen uit [Haven Amsterdam jaarverslag 2009]

### **Bij de handel of gebruik van welk van de volgende commodities is uw bedrijf / instelling betrokken en op welke manier?**

Binnen de haven, als grondeigenaar en regisseur van de bedrijvigheid in de haven, is Haven Amsterdam betrokken bij de overslag van houtpellets, bio-ethanol, biodiesel, grondstoffen voor biodiesel en andere biomassa stromen (o.a. Palm Kernel Expeller, koffiehusk en energie pellets). In de toekomst wordt de overslag van bio-energie dragers belangrijker voor de Amsterdamse haven.

### **Welke hoeveelheden zijn bedrijven in de haven van Amsterdam in 2008 – 2009 – 2010 verhandeld / gebruikt / bij betrokken geweest? Waar kwam deze biomassa (voor zover bekend) vandaan?**

De hoeveelheden overgeslagen biomassa is afhankelijk van informatie van de klant, maar is vaak moeilijk te scheiden van andere olieproducten of agrarische handelsstromen. Op dit moment is het lastig te achterhalen hoe groot de stromen bio-energie zijn en waar deze bio-energie vandaan komt. In de toekomst wil het havenbedrijf meer inzicht krijgen in de actuele overslagcijfers en de prognoses voor de toekomst, daar is statistiek erg belangrijk voor. Daarbij wordt samengewerkt met collega havens en het ministerie van EZ. De herkomst en bestemming van biomassa is niet noodzakelijk om te weten, maar is wel belangrijk om te weten als ketenregisseur.



**Wat beschouwt u als de belangrijkste handelsbelemmeringen voor de internationale handel? Voor welk type biomassa geldt dit? Geef waardering aan (1-10, 10 zware belemmering)**

Belemmering:

Waardering:

- |   |   |
|---|---|
| 1) Leveringsgarantie; volume en frequentie van levering   | 8 |
| 2) Kwaliteit van levering (verbrandingswaarde)  | 1 |
| 3) Duurzaamheid van producten (duurzaamheidscriteria)   | 6 |
| Haven wil geen waakhond zijn op het gebied van de duurzaamheid van de overgeslagen producten. In de toekomst kan dit wel een rol spelen in de totale verduurzaming van de haven en het havengebied. Afdwingen van duurzaamheid van producten zal waarschijnlijk eerder door andere partijen (eindverbruikers biomassa en overheid) gedaan worden dan door de haven. |   |
| 4) Fysieke veiligheid (bijvoorbeeld brandveiligheid)  | 6 |
| 5) Nieuwheid van product, in relatie tot vergunningen en dergelijke:  | 5 |
| Hoe daar mee om te gaan, sommige bedrijven / instellingen hebben daar moeite mee.   |   |
| 6) Publieke opinie / imago biomassa, "Food for fuel" discussie  | 8 |

De logistiek is geen technische belemmering, de mogelijkheden zijn er wel degelijk. Havens hebben ervaring met op- en overslag van olie en agrarische producten, ook de faciliteiten zijn aanwezig. Haven brengt stakeholders (eindverbruikers van biomassa, handelaren, producenten etc.) met elkaar in contact en helpt bij ontwikkeling en ingebruikname van havenfaciliteiten en het wegnemen van hindernissen.

**Welke bedrijven/instellingen zijn betrokken bij deze handelsbelemmeringen? Wat is hun invloed op het wegnemen van deze belemmering?**

Overheid is kaderstellend voor productie en gebruik van biomassa stromen en heeft indirect invloed op de handelsbelemmeringen. De producenten en eindverbruikers van bio-energie spelen een belangrijke rol voor belemmering 1, 2, 3, 5 en 6.

De logistieke dienstverleners spelen een rol bij de fysieke veiligheid.

**Hebt u in recent verleden handelsbelemmeringen zien opkomen of wegnemen?**

Een interessant voorbeeld is de opslag van cacao in het havengebied:

Naar aanleiding van brand is de compartiment ruimte teruggebracht. Na diverse gesprekken is de compartiment ruimte weer omhoog gebracht: deze barrière is dus weer weggenomen. Hiervoor is het havenbedrijf Amsterdam in gesprek gegaan met betrokken partijen: brandweer, overheid, en dergelijke. Een concreet voorbeeld met bio-energie heeft zich nog niet voorgedaan. Maar ook daar is bijvoorbeeld brandgevaar een belangrijk issue en kan op vergelijkbare wijze worden weggenomen.

**Verwacht u in de toekomst (belangrijke) handelsbelemmeringen opkomen of verdwijnen, tot 2020?**

Een goede maatschappelijke discussie plus cijfermatige onderbouwing en communicatie kunnen diverse belemmeringen wegnemen, hierna kan de bio-energie markt zich snel ontwikkelen. Deze markt is gebaseerd op toekomstige kennis en toekomstig energiebeleid (kadervormend). Marcel ziet over het

algemeen juist belemmeringen afnemen. De haven ziet geen belemmeringen voor toekomstige ontwikkeling van de bio-energie markt bij zichzelf en verwacht dat andere belemmeringen afnemen in de toekomst.

**Hoeveel van de verhandelde biomassa was duurzaam geproduceerd?**

Het havenbedrijf heeft (nog) geen inzicht in de hoeveel van de doorgevoerde biomassa duurzaam geproduceerd is, de omvang is nog gering. Dit is simpelweg geen onderdeel van de uitgewisselde data betreffende vracht, zie vraag 2. De verantwoordelijkheid ligt bij derden; producent en consument van bio-energie.

**Op welke manier is de duurzaamheid gecontroleerd?**

De haven controleert niet de duurzaamheid van de biomassa op dit moment. Als de markt ontwikkelt zal er wellicht gevraagd worden naar de herkomst en kwalificatie op het gebied van duurzaamheid van de vrachtstroom. De haven volgt wel de ontwikkelingen op het gebied van duurzaamheid. Duurzaamheid criteria zullen (waarschijnlijk) niet opgelegd worden aan de haven. Wellicht uit maatschappelijk oogpunt kan de haven vragen/eisen dat de vrachtstroom (deels) duurzaam is.

**Wie is betrokken bij deze criteria en daaraan gekoppelde belemmeringen en wie is betrokken bij het opkomen of wegnemen van deze belemmering?**

Overheid is kaderstellend. Consumenten zullen kunnen afdwingen hoe zwaar de duurzaamheidcriteria worden en dus hoe zwaar de belemmering kan worden.

**Hebt u nog opmerkingen / aanbevelingen / extra opmerkingen n.a.v. dit interview?**

Haven heeft faciliterende rol voor biomassa handel door het meeinvesteren (niet zelfstandig investeren) in oplossingen in de logistieke keten binnen het havengebied. In het kader van de benadering van de hele keten kan haven ook buiten haar gebied, bijvoorbeeld in herkomstlanden, betrokken zijn in investeringen.

Brief naar de tweede kamer. Haven wil actief de bio-energiemarkt bevorderen gezien de huidige omvang van de op- en overslag van energie in de haven van Amsterdam. Hiervoor neemt de haven actief deel in gesprekken met partners (informatie-uitwisseling, bijvoorbeeld medewerking aan een brief naar de tweede kamer van alle Nederlandse havens).

## Appendix D KEVL, Van Leer Energy B.V.

Geïnterviewde: Ton Smetsers, Van Leer Energy B.V. Koninklijke Eduard Van Leer Group

Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht

Datum: 17 september 2010 - 10:00 uur

### **Omschrijving Van Leer Energy B.V.**

Als onderdeel van Koninklijke Eduard van Leer Group handelt Van Leer Energy B.V. in hout-pellets en levert voornamelijk aan energie-bedrijven.

Bij de handel of gebruik van welk van de volgende commodities is uw bedrijf / instelling betrokken en op welke manier?

Van Leer Energy B.V. handelt in ongeveer 600 000 ton houtpellets per jaar.

### **Welke hoeveelheden zijn door Van Leer Energy B.V. verhandeld? Waar kwam deze biomassa (voor zover bekend) vandaan?**

Van Leer Energy B.V. produceert zelf houtpellets in Canada en zijn betrokken bij de productie van hout-pellets in Portugal en Zuid-Afrika. Er wordt niet in ethanol of biodiesel gehandeld.

De residustromen in Nederland spelen een verwaarloosbare rol in de productie van biomassa en zijn daardoor geen onderdeel van de handelcommodities van Van Leer Energy B.V.

### **Wat beschouwt u als de belangrijkste handelsbelemmeringen voor de internationale handel? Voor welk type biomassa geldt dit? Geef waardering aan (1-10, 10 zware belemmering)**

Belemmering: Waardering:

1) Overheidsbeleid; subsidieverstrekking, milieublend en geen eenduidig EU beleid, overheid stuurt 95% van de markt aan 8-9

Het echt probleem is de onbereikbare doelstelling van 20% duurzame energie in 2020, de handelsbelemmeringen van duurzame biomassa zijn een afgeleid probleem. De oorzaken van een onbereikbare doelstelling wordt veroorzaakt door:

- Ieder land in de EU heeft eigen doelstelling en aanpak op het gebied van duurzame energie.
- Ongelooflijk hobbyisme van de nationale overheden
- Volkomen onbetrouwbare overheid

Andere zaken die een rol spelen binnen de houtpellet markt zijn:

- 1) Homogene kwaliteit
- 2) Constante levering van groot volume
- 3) Kennis van productie van biomassa

### **Welke bedrijven/instellingen zijn betrokken bij deze handelsbelemmeringen? Wat is hun invloed op het wegnemen van deze belemmering?**

De overheid (nationaal en Europees) moet komen met heldere regelgeving wat in lijn is met andere EU landen. Voorkom dat landelijk beleid wordt gedwarsboomd door provinciaal, lokaal beleid of individueel beleid. Er zijn diverse voorbeelden te

noemen waar duurzame productie is tegengehouden door lokale of individuele initiatieven. Schaf de subsidies af en verplicht (energie) bedrijven een, zo nodig oplopend, percentage "groen" te produceren. Laat de bedrijven bepalen welke grondstof ze kiezen om "groen" te produceren, de overheid moet zich herin afzijdig houden. Subsidies maken de verkeerde mensen rijk en kost de overheid, en dus indirect de burgers, miljarden.

Door een verplichting in te voeren voor energiebedrijven gaat de kostprijs van elektriciteit omhoog, maar de consument gaat waarschijnlijk evenveel, of zelf minder betalen dan nu (indirect) via subsidie en belasting betaald wordt. De overheid moet zich bezighouden met goede regelgeving; de gelegenheid scheppen voor de productie en consumptie van biomassa, en de controle daarop. De wetenschap moet zich bezighouden met de ontwikkeling van goede brandstoffen en techniek.

**Hebt u in recent verleden handelsbelemmeringen zien opkomen of wegnemen?**

In recent verleden heeft de EU geen helder beleid uitgezet, ieder voor zich. Daardoor zijn er veel (goed bedoelde) initiatieven ontplooid die in de toekomst (veel) te duur zijn en/of een verwaarloosbare rol spelen in energieproductie. De kennis van de benodigde schaal voor biomassa productie is te gering aanwezig.

**Verwacht u in de toekomst (belangrijke) handelsbelemmeringen opkomen of verdwijnen, tot 2020?**

Wanneer de overheden komen tot een duidelijk en stabiel beleid zal de markt zich ontwikkelen, voor houtpellets zijn er niet of nauwelijks technische belemmeringen. Laat de markt zich ontwikkelen; het instrument van vraag en aanbod zal zijn werk doen. Het ontwikkelen van een goed lopende markt duurt misschien wel 25 jaar, de overheid heeft hierin een kaderstellende, sturende rol.

Op dit moment staat de handel onder druk, als er geen goed beleid (om de doelstelling in 2020 te halen) komt zal de handel onderuit gaan.

**Hoeveel van de verhandelde biomassa was duurzaam geproduceerd?**

-

**Op welke manier is de duurzaamheid gecontroleerd?**

De houtpellets van Van Leer Energy B.V. komen uit een gecertificeerd bos (Canadese overheids-certificering met herplantingsverplichting), welke certificering is niet bekend. Veel van de verhandelde houtpellets komen uit geselecteerd bossen met certificering. Het afzetten van houtpellets uit niet-gecertificeerde bossen valt buiten de normale werkzaamheden van Van Leer Energy B.V.

**Wie is betrokken bij deze criteria en daaraan gekoppelde belemmeringen en wie is betrokken bij het opkomen of wegnemen van deze belemmering?**

De duurzaamheidscriteria zijn geen belemmeringen voor de houtpellet markt, als de criteria reëel en praktisch blijven. Het is onmogelijk om de Nederlandse normen voor bijvoorbeeld arbeidsomgeving op te leggen aan de diverse productiegebieden.

Het verschil in de criteria tussen Europese landen kan een belemmering zijn; immers de houtpellet handel is internationaal.

### **Hebt u nog opmerkingen / aanbevelingen / extra opmerkingen n.a.v. dit interview?**

Op de volgende pagina's staat een uitgebreide uiteenzetting van de oorzaken en gevolgen van het verkeerde Nederlandse beleid.

Ton Smetsers, Van Leer Energy B.V. / Koninklijke Eduard van Leer Group

#### Afgeleid probleem

Handelsbelemmeringen Biomassa, (-ethanol, -biodiesel)

#### Echte probleem

Onbereikbaarheid doelstelling 20% in 2020

#### Oorzaken

- Ieder land in de EU heeft eigen doelstelling en aanpak
- Ongelooflijk hobbyisme van de nationale overheden
- Volkomen onbetrouwbare overheid

#### Redenen

1. Is 't wel waar? Is er een broeikas effect? Kunnen we daar iets aan doen? En hoe zonder onze concurrentiepositie in onbalans te brengen
2. Daardoor geen heldere Europese regelgeving, ieder voor zich. Lopende het proces zien we wel hoe 't zich ontwikkeld. Als 't waar is en de anderen 't ook doen, kunnen we gaandeweg beleid ontwikkelen. De "markt" zal dan wel regelend werken.
3. Regering/politiek zoekt dan (altijd) naar "maatschappelijk brede basis" d.m.v. leuke, spontane, zo weinig mogelijk geld kostende oplossingen

*Er is dus, na Kyoto, rond het jaar 2000, globaal een richting, een marsroute uitgezet, zonder te weten wat het concrete doel en welke wegen daarbij het best bewandeld zouden kunnen worden.*

4. Overheid zoekt bij verkeerde gesprekspartners naar antwoord en oplossing
5. Wetenschap en adviesorganen idem. Willen geen "verkeerde" oplossing naar opdrachtgever brengen. Onvoldoende kwalitatieve en kwantitatieve inbreng van de wetenschap.
6. Daardoor vooral abstracte benadering in brede lange-termijn vergezichten. Nu nog niet maar straks, met tweede, derde generatie brandstoffen, techniek wel.
7. Bovenmatige, goed bedoelde invloed van lagere overheden en milieclubs.
8. Producenten en handel zijn verdachte partijen waar bij voorkeur niet mee wordt gesproken. Terwijl zij de concrete uitvoerders van het beleid moeten zijn.

*De overheden weten 't niet, de helpers – met name de wetenschappers – geven geen richting aan en op iedere kruising op de vermeende route staan milieclubs die de chauffeur, (de overheid en ook nog eens zonder rijbewijs) een andere weg aangeven.*

*De brandstofproducenten, de energieproducenten en de handel zitten achterin de bus en roepen naar de chauffeur hoe te rijden maar worden meestal volkomen als "opportunistisch en pragmatisch" weggezet en genegeerd.*

9. Subsidie wordt gaandeweg veranderd, verlaagd en afgeschaafd of naar de verkeerde partijen gebracht. Onzekerheid alom.

10. In "echte" wereld ontstaan fricties en dreigt bankroet. De mensen die het beleid concreet moeten uitvoeren hebben veel vertrouwen verloren of zijn intussen buiten gevecht geraakt.

*De chauffeur is verdwaald, de weg volkomen verloren. De bus zit met schade vast in de berm en niemand weet meer wat te doen.*

#### Aanpak

Er is een broeikas effect dat moet worden aangepakt of het is er niet. Doen we daaraan mee of doen we 't niet. En als het er is, hoe pakken we het dan concreet en effectief aan.

1. Gezamenlijk Europees beleid is grootste noodzaak. Het idee dat wij wat anders moeten doen dan b.v. de Duitsers of de Belgen, is een grove over/onderschatting van onszelf en de anderen. Bovendien wordt de zo gevreesde verslechtering van de concurrentiepositie in de hand gehouden en van nationaal niveau naar Europees niveau gebracht.
2. Houd op met pappen en nathouden. Laten we de rug recht en duidelijk zijn in beleid. En sta niet toe dat elke burger of elke plaatselijke milieuclub kan gaan dwarsliggen. Zorg voor 'n eenduidig, zo mogelijk Europees milieubeleid. Voorkom dat het landelijke beleid wordt gedwarsboomd door provinciaal beleid of nog erger, door lokaal en soms individueel beleid, waardoor plannen soms jaren vertraagd worden op grond van niks.
3. Houd op met het verstrekken van subsidies. Dat maakt de verkeerde mensen rijk en kost de overheid – en dus indirect de burgers – miljarden. Bovendien, en dat is een heel oud fenomeen waar ook het Europees landbouwbeleid aan ten onder is gegaan, zullen de prijzen zich onmiddellijk aanpassen aan het niveau van de subsidie.
4. Verplicht de energieproducenten om een bepaald, zo nodig oplopend percentage "groen" te produceren. Die verplichting moet worden gesteund door een forse boete indien er niet aan voldaan wordt. Zonder uitzondering. Of doe zoals bijv. Zweden, belast het gebruik van minerale grondstoffen zodanig dat niemand erover peinst om die meer dan strikt noodzakelijk te gebruiken. Dat kost de overheid geen geld, maar levert op.
5. Laat de "markt" z'n werk doen. Het instrument van vraag en aanbod zal z'n werk doen. De prijzen voor de groene brandstof, en dus ook de kostprijs van de elektriciteit zullen zich, via een open concurrentie, optimaliseren. De consument gaat ongetwijfeld meer betalen voor de elektriciteit maar niet meer, waarschijnlijk zelfs minder dan nu – indirect – via subsidie en de belasting betaald wordt. Ter informatie: de huidige consumentenprijs voor elektriciteit is ongeveer €0.22 per kWh. Daarvan is slechts ongeveer 0.11€ per kWh de kostprijs van stroom, inclusief het huidige gebruik van biomassa, zon en wind en de winst van het energiebedrijf. De rest is ca. 0.03€ transport en ca. 0.08€ belasting.
6. De overheid moet zich niet bemoeien met de wijze waarop de energiebedrijven die groene stroom gaan produceren. Laat dat die bedrijven zelf maar uitzoeken. Dat kunnen ze veel beter dan de overheid. Daarmee komt er ook een einde aan de subsidiëring van te dure, veel te dure en ongelooflijk veel te dure vormen van groene energie productie. Ter informatie; wind- en zonne-energie, getijde en andere centrales maar ook ethanol- en biodieselproductie.
7. De overheid moet zich bezighouden met ontwikkeling van goede brandstoffen en techniek. Schaf alle horizontale overleg-, inspraak-, stuur- en andere meewerkorganen af en ga over tot het voeren van een duidelijk beleid.

En laat de prijsbepaling van brandstof, van systeem, van techniek aan de markt over.

De overheid moet de weg goed bewijzen.

*De chauffeur moet worden vervangen door iemand met rijbewijs (de markt) die in staat is z'n eigen, meest optimale route te rijden. De overheid moet controleren of alles volgens de regels van veiligheid etc. verloopt. Dat komt ten goede aan alle passagiers.*

Vrijdag 17 september 2010

## Appendix E GF Energy B.V.

Geïnterviewde: Roeland Reesinck, Director GF Energy, Rotterdam  
Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht  
Datum: 20 september 2010 - 11:00 uur

### **Omschrijving GF Energy**

GF Energy is an international trader and producer of sustainable wood pellets and other forms of solid biomass. We serve both the buyers of solid biomass in their sourcing & supply needs as the biomass producers in marketing, sales and logistics.

GF Energy management has a strong background in international logistics and energy investment, supported by strategic shareholders.

[bron: website GF Energy, volgt niet uit interview]

### **Bij de handel of gebruik van welk van de volgende commodities is uw bedrijf / instelling betrokken en op welke manier?**

GF Energy verhandelde in 2010, 200 000 ton, in 2011 zullen de leveringen doorgroeien naar boven de 300 000 ton. Deze omvang is voor het vermarkten van houtpellets; deels handel en deels het vertegenwoordigen van producenten; via GF Energy.

### **Welke hoeveelheden zijn door GF Energy verhandeld? Waar kwam deze biomassa (voor zover bekend) vandaan?**

Belangrijkste herkomstgebieden zijn Australië, Letland en het Verenigd Koninkrijk en vanaf volgend jaar Canada. De groei van de handel is met name te danken aan het afsluiten van meerjarige contracten in recent verleden (2008-2009). Voor de komende 2 jaar is GF Energy somber; er is geen groei in de vraag naar houtpellets.

### **Wat beschouwt u als de belangrijkste handelsbelemmeringen voor de internationale handel? Voor welk type biomassa geldt dit? Geef waardering aan (1-10, 10 zware belemmering)**

Belemmering: Waardering:

1) Gebrek aan vraag van houtpellets, er is genoeg aanbod 10

De grote frustratie van de markt is het gebrek aan vraag, hoewel de potentie van houtpellets voor duurzame energie duidelijk aanwezig is. Er is momenteel een overschot aan productiecapaciteit. Bijstoken van houtpellets is op dit moment de goedkoopste bron voor duurzame elektriciteit en toch neemt de overheid onvoldoende maatregelen voor het stimuleren van bijstoken van houtpellets. Het aandeel duurzame energie kan snel stijgen door gebruik te maken van houtpellets. Dit heeft ook een keerzijde; het inzetten van houtpellets om de doelstellingen in 2020 te halen heeft voor beleidsbepalers geen prioriteit op dit moment.

2) Aanbod van goedkope opslag en aanverwante infrastructuur 3

Veel aanbod van goedkope opslag en overslag van houtpellets in Nederland is gewenst om de kosten van houtpellets laag te houden.

3) Commodity; 6



Als houtpellets een standaard commodity (met index) worden zou dat de handel wel degelijk bevorderen. Momenteel wordt er hard gewerkt om van houtpellets een gestandaardiseerde commodity te maken, dit is lastig maar kan de houtpelletmarkt stimuleren.

4) Uniforme duurzaamheidscertificering 3-4

Niet het voldoen aan de criteria is een probleem, maar de administratie plus het bezoek van certificeringbureaus (wanneer van toepassing), mede door de verschillende criteria van EU landen, is een belemmering. Sommige houtpellet producenten zijn niet klaar of zien de meerwaarde niet voor een audit van certificeerder. Intra-Europese duurzaamheidsnormen zijn gewenst.

**Welke bedrijven/instellingen zijn betrokken bij deze handelsbelemmeringen? Wat is hun invloed op het wegnemen van deze belemmering?**

De overheid speelt vooral bij belemmering 1 een grote rol, voor belemmering 3 zullen zij vooral moeten meedenken en de markt stimuleren om de eerste hobbel te passeren. Om de vraag naar houtpellets te vergroten dient de overheid een kader te stellen voor duurzame energie

Het lijkt logisch dat de haven in Rotterdam de belangrijkste schakel in de logistieke keten wordt voor de Europese houtpellet markt. Als de Nederlandse overheid de groei van de op- en overslag mogelijkheden in Rotterdam stimuleert heeft dit (zeker op langere termijn) een positieve invloed op de markt in Nederland. Havens (met name Rotterdam) en aanverwante bedrijven moeten de draaischijf voor houtpellets worden in Europa, hiervan kunnen meer bedrijven in Nederland profiteren.

Voor belemmering 4 spelen de overheid en de markt beide een rol.

**Hebt u in recent verleden handelsbelemmeringen zien opkomen of wegnemen?**

-

**Verwacht u in de toekomst (belangrijke) handelsbelemmeringen opkomen of verdwijnen, tot 2020?**

GF Energy maakt zich zorgen over de ontwikkelingen in de biomassa markt. Als de MEP-SDE subsidie wegvalt en de eerder genoemde belemmeringen blijven bestaan bestaat de kans dat de houtpellet markt krimpt, dit geeft nog meer spanningen op de markt.

**Hoeveel van de verhandelde biomassa was duurzaam geproduceerd?**

Honderd procent van de houtpellets is duurzaam geproduceerd.

**Op welke manier is de duurzaamheid gecontroleerd?**

NTA 8080, FSC, Belgisch systeem waarbij audits worden gedaan door SGS  
Duurzaamheidscriteria kunnen opgenomen worden in standarisatie van houtpellets.

**Wie is betrokken bij deze criteria en daaraan gekoppelde belemmeringen en wie is betrokken bij het opkomen of wegnemen van deze belemmering?**

Uniformiteit en afstemming van Europees en Nederlands beleid is belangrijk om deze belemmering weg te nemen of te verminderen.

**Hebt u nog opmerkingen / aanbevelingen / extra opmerkingen n.a.v. dit interview?**

Prijsschommelingen en import- exporttarieven van houtpellets zijn geen handelsbelemmerende factor.

## Appendix F Essent trading international

Geïnterviewde: Jorrit Hachmer, Manager biobrandstoffen RWE Supply & Trading  
Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht  
Datum: 16 september 2010 - 15:00 uur

### **Omschrijving Essent/RWE/ Essent trading:**

Essent is een energiebedrijf dat gas, elektriciteit, warmte en energiediensten levert aan consumenten en bedrijven. Nederland en België zijn onze thuismarkten. Een groot deel van de energie die Essent levert, produceren we zelf. In de productie van duurzame energie zijn we de grootste van Nederland. Essent is onderdeel van het internationale energieconcern RWE.

Dankzij de steun van RWE kan Essent veel meer investeren in duurzame energie in Nederland. De doelen van Essent:

- het aandeel groene energie vergroten tot 25% in 2020;
- de energie-efficiëntie van centrales verhogen van 42,5% naar 50% vóór 2020;
- beter dan gemiddeld presteren op de uitstoot van SO<sub>2</sub> en NO<sub>x</sub>;
- en een CO<sub>2</sub>-arme energiecentrale ontwikkelen door afvang en opslag van CO<sub>2</sub>.

De groothandelonderneming Essent Trading is onderdeel van Essent en heeft zijn hoofdkantoor in Genève (Zwitserland). Essent Trading is op het Europese vasteland erkend marktleider op het gebied van de handel in energie.

[Overgenomen van <http://www.essent.nl>, is niet volgend uit het interview]

### **Bij de handel of gebruik van welk van de volgende commodities is uw bedrijf / instelling betrokken en op welke manier?**

Houtpellets	900 000 ton/jaar
Houtchips	250 000 ton/jaar
Gerecycled hout	100 000 ton/jaar
Diversen (met name UK)	200,000 ton/jaar

Er worden geen agri-residuen meer verhandeld in Nederland; door onderscheid wat gemaakt wordt bij subsidies door de Nederlandse overheid tussen residuen en houtpellets. In de UK worden agri-residuen gelijk behandeld als hout pellets en het UK volume bestaat deels uit agri-residuen (PKE, Olive cake). Geen of nauwelijks handel in ethanol en biodiesel voor de Nederlandse markt, wellicht in de toekomst.

De vergunningen, technische haalbaarheid en duurzaamheid voor vloeibare brandstoffen spelen hierbij een rol.

### **Welke hoeveelheden is uw bedrijf in 2008 – 2009 – 2010 verhandeld / gebruikt / bij betrokken geweest? Waar kwam deze biomassa (voor zover bekend) vandaan?**

Het overgrote gedeelte komt uit Noord-Amerika. De herkomst is wel bekend, maar niet openbaar. Het overgrote gedeelte van de handel is voor gebruik binnen Essent/RWE, ongeveer 10 - 15% wordt doorverkocht. De afname in Nederland van houtpellets kan technisch gezien zeker nog groeien, maar is afhankelijk van beleidsmaatregelen.

### **Wat beschouwt u als de belangrijkste handelsbelemmeringen voor de internationale handel? Voor welk type biomassa geldt dit? Geef waardering aan (1-10, 10 zware belemmering)**

Belemmering:	Waardering:
1a) Technische standaards (product specificatie)	7
1b) Juridische standaards (standaard contractvormen, handelscontract)	7
1c) Duurzaamheids standaards	8
2) Gebrek aan duidelijk en stabiel overheidsbeleid	9

Hierdoor zijn er maar een beperkt aantal spelers op biomassa markt / liquiditeit / prijstransparantie. Een goed beleid zorgt voor een ondernemersklimaat waar grote en kleine markt initiatieven zich kunnen ontwikkelen.

3) Indirect handelsbelemmering: negatief imago van biomassa rondom duurzaamheid  
Imagoprobleem heeft invloed op beleid en markt betreffende biomassa

Essent trading is in overleg met andere grote energiebedrijven om de handelsbelemmeringen rondom de 3 vormen van standaards (deels) weg te nemen of te verkleinen. Dit heeft tijd nodig.

**Welke bedrijven/instellingen zijn betrokken bij deze handelsbelemmeringen? Wat is hun invloed op het wegnemen van deze belemmering?**

Belemmeringen 1a en 1b kunnen door de markt zelf oplost worden. Belemmeringen 1c en 2 moeten duidelijk door overheidsbeleid worden opgelost; duidelijkheid scheppen en niet per land verschillend. De verschillende eisen van EU landen werken handelsbelemmerend op ogenschijnlijk voor de hand liggend gebruik van biomassastromen. Nederland markt wordt beïnvloed door de internationale markt, Europees beleid is nog een lappendeken en beïnvloed de Nederlandse markt.

**Hebt u in recent verleden handelsbelemmeringen zien opkomen of wegnemen?**

In de afgelopen jaren is de regelgeving achteruit gegaan, onduidelijkheid over subsidie en doelstellingen neemt eerder toe dan af. Toename van duurzaamheidseisen vindt plaats en dat ook nog eens ongecoördineerd. Daardoor is een verscheping biomassa met bestemming x niet geschikt om door te verkopen in land y. Dit is een puur administratief probleem en werkt zeer handelsbelemmerd.

Wel kennen de diverse marktpartijen elkaar beter.

**Verwacht u in de toekomst (belangrijke) handelsbelemmeringen opkomen of verdwijnen, tot 2020?**

De politiek kan niet om biomassa heen om de duurzaamheids doelstellingen te halen, zeker niet gezien de prijs en aanbod van andere duurzame energiebronnen. Er zal dus een duidelijk beleid moeten komen om de groei van biomassa te faciliteren.

**Hoeveel van de verhandelde biomassa was duurzaam geproduceerd?**

De biomassa van Essent is 100% duurzaam, maar 70% is daadwerkelijk gecertificeerd door een externe partij. De overige 30% is ondoenlijk om te oogmerken als duurzaam volgens de certificering, bijvoorbeeld het recyclen van

afvalhout is een waardeketen die zich niet leent voor het "track & tracé" tot aan de bron. Honderd procent is volgens de huidige regels die Essent zichzelf heeft gesteld niet haalbaar. Om tot 100% te komen moeten bepaalde stromen anders behandeld worden dan het duige "track & tarce" en dat is mogelijk zonder concessies te doen aan de onderliggende duurzaamheid. Beter is het als dit Europees gebeurt.

**Op welke manier is de duurzaamheid gecontroleerd?**

GreenGold label

Control Union

Probleem bij duurzaamheid is niet het voldoen aan de criteria zelf, maar de administratie (het bewijzen van duurzaamheid tot de bron) is soms lastig. Overheden moeten meer gelijke duurzaamheidscriteria opstellen om de (internationale) handel te bevorderen.

**Hebt u nog opmerkingen / aanbevelingen / extra opmerkingen n.a.v. dit interview?**

-

## Appendix G Wilmar Edible Oils B.V.

Interviewee: Jonathan Wheeler, Wilmar Edible Oils  
Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht  
Datum: 23 September 2010, 10:00 hour

### Company description

Wilmar International:

"We are engaged in the businesses of oil palm cultivation, oilseeds crushing, edible oils refining, consumer pack edible oils processing and merchandising, specialty fats, oleochemicals, biodiesel, fertilisers and soy protein manufacturing, rice and flour milling, and grains merchandising. Our business strategy involves building an integrated business model which captures the entire value chain of the agricultural commodity processing business, from origination, processing and transportation to the branding, merchandising and distribution of a wide range of agricultural products"

[[http://www.wilmar-international.com/business\\_index.htm](http://www.wilmar-international.com/business_index.htm) follows not from interview]

### How is your company involved in the trade of bioenergy commodities?

Wilmar is a producer of Biodiesel (FAME) in Asia and a supplier of feedstock to many biodiesel plants in Europe. Wilmar is also a producer of solid biomass products from agricultural waste such Palm Kernel Shells, Oil Palm Empty Fruit Bunches and Palm Fibers.

Wilmar is a producer of sugar and bioethanol in Australia.

### How much of these products did the Wilmar group trade in recent years? Where did the bioenergy come from?

Specific traded volumes cannot be disclosed. The feedstock for FAME is from Malaysia and Indonesia as is the case for solid biomass.

**What do you (and your company) consider as most important trade barriers for international bioenergy trade? For which type of biomass are those barriers valid?** Please indicate the importance of the barriers on a scale from 1 to 10.

Trade barrier	Importance
No specific trade barriers for the Netherlands.	

Although a number of trade and market constraints exist:

1) A lot of money, resources and time has been invested by the industry to meet sustainability criteria, up until this year each European country had their own requirements. We welcome the standardisation of these under the Renewable Energy Directive (RED) and hope this represents a consistent and stable criterion. We do not see this as a trade constraint; previously it felt like a constraint because the criteria kept changing. Palm oil will be able to meet the RED criteria.

2) Another issue is the standard for biodiesel (EN 14214) which lists 25 technical parameters that Biodiesel must meet. This standard excludes lauric oils as a

feedstock. If lauric oils could be used this could provide cheaper FAMES for the EU market. Currently the CFPP of Palm biodiesel in the EU can only if FAME from other feedstock is blended in.

3) In some countries there is a production quota, which is negative for overseas producers of FAME.

**Which companies / institutes are concerned with those trade barriers and what is their influence on the barriers.**

Technical standards are managed by the EU standards department; each state is allowed to define the cold flow properties seasonality such as the CFPP (cold filter plugging point). The higher the CFPP the more palm oil that can be blended. Did you experience in recent history new trade barriers or existing barriers lose importance rising or trade barriers lose importance.

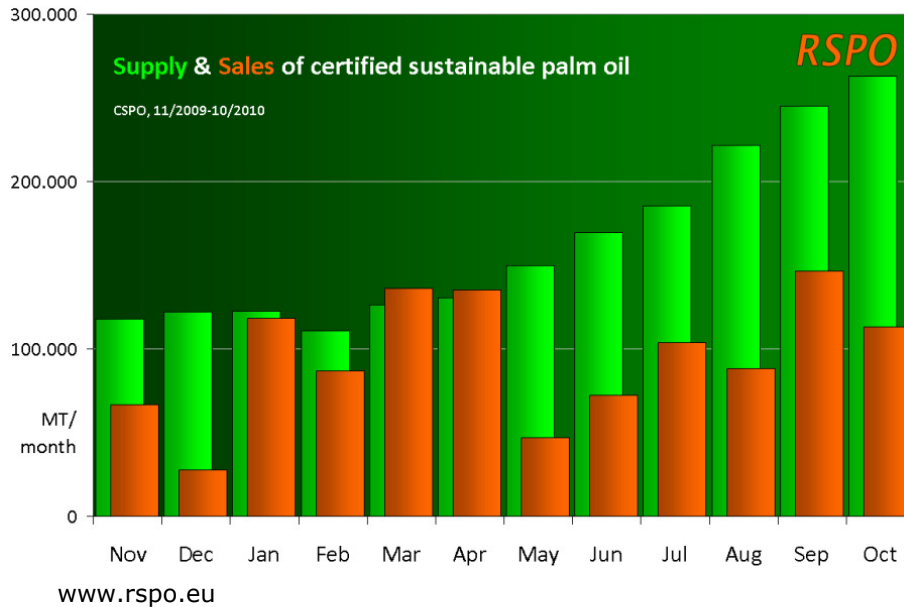
In 2008 the EU set high import taxes for biodiesel from the US, this was to prevent subsidized US produced biodiesel from undermining non-subsidized European and other Foreign biodiesel production. This was an important barrier to protect the industry.

**What do you think will be the most important trade barriers in the near future, and up to 2020?**

Sustainability criteria, under RED the criteria will get stricter, this will restrict some sources supplying the European market. This is not a negative trade barrier, it helps the industry grow using sustainable sources only.

**How large is the share of sustainable bioenergy in the total traded volume and how is the sustainability checked?**

Until the RED is implemented there are many different definitions of sustainable biofuel in Europe, once RED is implemented it will be easier to measure the volume, indeed under RED only sustainable product is permitted. There are several different schemes before RED, one such is the Round Table on Sustainable Palm Oil (RSPO), this supplies sustainable palm oil to food and bioenergy users. Unfortunately not all customers are demanding sustainable palm oil in Europe, to date only 12% of certified sustainable palm oil is being used.



**Who is involved in the sustainability criteria and related trade barriers and who can limit the influence of the barriers?**

RED sustainability is managed by DG-Energy.

**Additional information**

Sustainability strategy of Wilmar

“Our sustainability endeavour will be driven by:

- adoption of best industry practices and standards in the production of our products;
- responsible management of the environment
- empowerment of local communities.

The Roundtable on Sustainable Palm Oil (RSPO), the United Nations Global Compact (UNGC) and continual stakeholder engagement will form the basis on which we seek to achieve our sustainability goals”

There is a lot of work being done on the image of palm oil as sustainable bioenergy source by Wilmar and other palm oil industry stakeholders.

A trade barriers can also be an opportunity for a company or industry.



## Appendix H North Sea Group BV

Interviewee: Onofre Andrade, North Sea Group  
Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht  
Datum: 21 September 2010, 15:00 hour

### **Company description**

North Sea Group is a key player on the Western European downstream oil market. The company combines storage and distribution with the international trading and sale of mineral oils and biofuels.

The customers, including major oil companies, the international shipping industry, trading houses and resellers, have relied on the product quality and market-oriented approach of North Sea Group for decades. By expanding into Asia and South America, the European company is further broadening its position on the increasingly global oil market, paying careful attention to issues of safety, sustainability and the environment.

The Group's commercial divisions trade in all mainstream mineral oil products such as heavy fuel oil, automotive diesel, heating oil, marine diesel, kerosene and mogas. Over the past few years biofuels have become a key new product group for North Sea Group.

North Sea Group was founded in January 2009 to coordinate the merger between all divisions. Today the Group employs over 300 people.

[<http://www.northseagroup.com/en/about/company-overview> follows not from interview]

### **How is your company involved in the trade of bioenergy commodities?**

No wood pellets. Biodiesel and bio-ethanol are main bioenergy commodities in trade portfolio. Specific trading and blending volumes unknown.

### **How much does North Sea group traded in recent years? Where did the bioenergy come from?**

North Sea Group has, like other fuel blending companies, an obligation to blend a fix percentage (currently 4.25%) of biofuels in the processed fossil fuels volumes. North Sea Group tries to source only sustainable biofuels, or feedstocks for biofuels. North Sea Group participated in a voluntary agreement (intentieverklaring) with approximately 15 other companies to report the sustainability of the commodities traded.

Sourcing sustainable sugarcane ethanol from Brazil is amongst the priorities of the group.

**What do you (and your company) consider as most important trade barriers for international bioenergy trade? For which type of biomass are those barriers valid?** Please indicate the importance of the barriers on a scale from 1 to 10.

Trade barrier	Importance
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1) Development of New Bioenergy policies

Bioenergy is a political commodity: biofuels market is heavily impacted by governmental policies. An important aspect here is the lack of clarity about new policies and lack of a harmonised EU wide policy. The certification of bioenergy (with its complexity and related costs), is a key issue in the current EU RED

(Renewable Energy implementation). NSG hopes the government continues to hear public claims for the development of a low Green House Gas emission economy.

The government works in two levels: the legislation itself and the use / implementation of legislation. There is sometimes a mismatch between the legislation and the practical applicability of it.

2) Lobby of local EU producers, market protection of locally produced biomass, which limits international trade. This lobby influenced the EU policy and, indirectly, the trade in the Netherlands.

3) Standardisation of the product is still a problem in the development of a global Biofuels market. For example, the EU specification for water content makes it almost impossible for most Brazilian ethanol producers to comply with.

**Which companies / institutes are concerned with those trade barriers and what is their influence on the barriers.**

**Did you experience in recent history new trade barriers or existing barriers lose importance rising or trade barriers lose importance**

**What do you think will be the most important trade barriers in the near future, and up to 2020?**

#### **Definition of a unrealistic iLUC factor**

#### **Certification Schemes that are too complex and expensive and impossible for imported (from outside EU) to comply with.**

There is no certification scheme at this moment for biofuels. A sustainability scheme is a key part of renewable energy policy. If the (Dutch or EU) sustainability schemes are too complex or too costly, it will not be implemented. Why does it take so much time to set up the Dutch NTA for sustainability of biofuels while the German REDcert took only 2 months to set up? There is no justification for the time being used currently to set up the NTA. The bureaucracy around sustainability certification is the main issue not the sustainability of bio-energy itself.

#### **How large is the share of sustainable bioenergy in the total traded volume?**

Goals for North Sea Group sustainable biofuels:

Year	% of North Sea Group biofuels supply	
	Best-in-class sustainable material	Advanced biofuels
2011	15%	5%
2015	50%	10%
2020	100%	20%

#### **Who is involved in the sustainability criteria and related trade barriers and who can limit the influence of the barriers?**

Governments, independent certification bodies, economic operators in the several Biofuels chains.

In the end you need to comply with the RED and local legislation (in land of production).

**Additional information**

The involved governmental organisation (AgentschapNL, tax institute /belastingdienst, etc.) can improve their efficiency in dealing with Biofuels. Bioenergy is for most of those organisations new, and therefore the knowledge about for example certification scheme is limited. This should improve in the future.

Logistics can be a barrier in the bioenergy production countries; in the Netherlands (a biofuel consumption country rather than production) there seem to be no logistical barriers.

Import and export tariffs are part of the legislation. A stable and international Biofuels legislation could prevent that new barriers around import and export tariffs.

In the EU RED sustainability criteria, some feedstocks are automatically defined as not suitable for production of Biofuels (e.g. soy for Biodiesel). We believe that we could bring our expertise to help improve supply chains of Biofuels (including Biodiesel from Soy) to make them complying with EU min 35% GHG savings.

North Sea Group was the first supplier to receive a certificate for sustainability by the government for their E85 blended gasoline.

## Appendix I Shell

### **Description company / interview partner:**

Shell Nederland Verkoop.

### **Can you give information on the traded volumes of bioenergy commodities in your company?**

Shell is committed to transparent reporting on the carbon and sustainability characteristics of biofuels. Unfortunately we are unable to publish volume information as it is commercially sensitive.

### **Where (which country / continent) did the bioenergy come from?**

Due to the size of our operations in the USA, if we look at Q1 2010, on a global level 59% of our bio component was corn based.

**What do you consider as the most important trade barriers per commodity?** Indicate the effect of the barrier on trade on a scale from 1-10; 10 being a severe barrier.

The following issues can serve as trade barriers (in no particular order and without ranking):

- Import duties on bioethanol
- Lack of approved certification schemes in order to demonstrate compliance with EU Renewable Energy Directive (RED)
- Different implementation plans of RED by EU member states
- Different specifications for biofuels across Member State countries

### **Do you see in the near future (up to 2020) trade barriers disappear or coming up?**

Indirect land use change (iLUC) is an issue, across the whole agricultural and forestry system, that should be tackled by policymakers. In the context of biofuels, we believe that there are some iLUC risks associated with production and that these can be mitigated. iLUC policy in Europe is, as yet uncertain. There are risks that iLUC policy could become a significant trade barrier.

### **How much of the traded / sold bioenergy was sustainable bioenergy?**

All bio component volumes bought met Shell's sustainability clauses. Please refer to our enclosed sustainability policy for further details.

### **How was the sustainability checked? Is a sustainability certificate (or other document/statement) involved?**

Shell's sustainability clauses which are part of every contract negotiation are contractually binding. We have a policy of "know your customer". By engaging extensively with our suppliers etc and asking searching questions we aim to source our bio components in a responsible manner. Where we already have reporting obligations in other EU member states we already received quite some carbon and sustainability data. We carried out some spot checks and audits versus data supplied during 2010 and aim to improve these controls in the coming year. With RED legislation being introduced over the next 12 months the documentation around sustainability will increase. There should be some mechanism to ensure

that this does not become unnecessarily burdensome and that there is alignment amongst member states.

## Appendix J Productschap MVO

Interview confidential.

## Appendix K SGS International

Geïnterviewde: Francois Ducarme, SGS Belgium  
Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht  
Datum: 11 oktober 14:00 uur

### **Omschrijving SGS.**

As the world's leading inspection, verification, testing and certification company, we provide competitive advantage, drive sustainability and deliver trust. Recognised as the global benchmark for quality and integrity, we employ over 59,000 people and operate a network of more than 1,000 offices and laboratories around the world.

SGS helps to improve quality, safety, performance and efficiency for the following industries: Agricultural, Automotive, Consumer Testing, Environmental, Industrial, Life Science, Minerals, Oil, Gas & Chemicals, Systems & Services Certification, Governments & Institutions.

[<http://www.nl.sgs.com/about-us-nl>, volgt niet uit interview]

### **Welke hoeveelheden biomassa worden door SGS gecertificeerd?**

SGS is betrokken bij de verificatie van rond de 250 ktonne houtpellets die verscheept worden naar Nederland. Voor de Benelux is dit 1 miljoen ton. Het betreft hier specifiek houtpellets die gebruikt worden als biobrandstof voor de elektriciteitsproductie.

Echter bij het certificeren van bio-ethanol en biodiesel voor Nederlandse gebruikers is SGS niet betrokken. In Duitsland wordt dit wel reeds gedaan. SGS Duitsland certificeert biobrandstoffen namelijk onder het ISCC schema (duurzaamheidsschema onder de Renewable Energy Directives). SGS Duitsland heeft een aantal Nederlandse biobrandstofproducenten onder ISCC gecertificeerd. Voorlopig is ISCC alleen in Duitsland goedgekeurd, en nog niet op Europees niveau vastgelegd.

Nederland bevindt zich op dit moment in een transitiefase. Er is voorsnog geen duurzaamheidschema goedgekeurd onder de Renewable Energy Directives voor vloeibare biobrandstoffen.

### **Wat beschouwt u als de belangrijkste handelsbelemmeringen voor de internationale handel? Voor welk type biomassa geldt dit? Geef waardering aan (1-10, 10 zware belemmering)**

Belemmering: Waardering:

1) Onduidelijkheid over beschikbare RED-conform certificeringschema's 7  
Hoogstwaarschijnlijk komt hier binnen enkele maanden duidelijkheid over. Momenteel zijn verschillende initiatieven bij de Europese commissie ingediend om goedgekeurd te worden.

Verschillen tussen vaste en vloeibare biomassa:

- De controle van vaste biomassa ligt nog volledig onder controle bij de individuele EU-landen. In de nabije toekomst zal voor Nederland waarschijnlijk de Cramer criteria gaan gelden (bijvoorbeeld via de NTA 8080).
- Bij houtpellets is de traceerbaarheid moeilijk. Een pellets is een restproduct en afkomstig vanuit een afvalstroom binnen een andere industrie. Hierdoor bestaat er geen vast verband tussen de specifieke pellets en het productiegebied.

- Bij vloeibare biomassa is het wachten op een definitief certificatiesysteem die onder de RED goedgekeurd wordt. Veel bedrijven, voornamelijk in de olie-industrie, wensen een uiteindelijke gekozen systeem die in meerdere landen geldig is. Tot op heden is er geen certificatiesysteem die op Europees niveau heersend is.

In de meeste gevallen zal het voldoen aan de RED-criteria geen probleem opleveren. Echter het bewijzen van de conformiteit aan de hand van RED-criteria zal wel lastig zijn (o.a. omwille van de traceerbaarheid).

2) Het is moeilijk om vaststaande criteria te verifiëren op bepaalde niveaus in de keten. 4

Het is lastig om toegang te krijgen tot, of het beoordelen van elk onderdeel van de keten. In het bijzonder zijn dit de eerste stappen van de keten (productie van ruw materiaal). Voor vaste biomassa geldt dit specifiek voor bosexploitatie en bij vloeibare biomassa zijn dit voornamelijk de boeren en producenten van biobrandstof grondstoffen.

3) Kennis van het product en van de verificatie-/ certificatieinitiatieven in de gehele productieketen van biomassa 4

Voornamelijk in het begin van de keten is de kennis, relevantie en toepassingsmogelijkheden van het eindproduct gering. Dit geeft enige moeilijkheden voor certificering.

### **Welke bedrijven/instellingen zijn betrokken bij deze handelsbelemmeringen? Wat is hun invloed op het wegnemen van deze belemmering?**

Voor vaste biomassa verschillen de eisen per land. Er is namelijk geen EU-beleid. De nationale overheden zijn dus betrokken bij het opstellen van criteria rondom duurzaamheid. Voor Nederland worden de Cramer criteria waarschijnlijk leidend. SGS heeft de indruk dat het eisenniveau van de Cramer criteria vrij hoog is in vergelijking met andere duurzaamheidssystemen, en in het bijzonder RED-criteria. Voor vloeibare biomassa gelden de RED-criteria welke als doel hebben om een eenduidig beleid te geven die geldig is voor alle EU-landen. De toekomst zal uitwijzen hoeveel belemmeringen er weggenomen worden door de RED. Voor vaste en vloeibaar biomassa geldt dat de criteria die van toepassing zijn op de eerste stappen in de productieketen; bijvoorbeeld 'land use change' en de boeren en landeigenaren van productiegebieden, lastiger te verifiëren zijn dan criteria die later in de productieketen aan bod komen.

### **Verwacht u in de toekomst (belangrijke) handelsbelemmeringen opkomen of verdwijnen, tot 2020?**

In de toekomst zal er meer biomassa gecertificeerd worden. Simpelweg omdat de overheid een beleid bepaald aangaande duurzame biomassa. Belangrijk is hoeveel en hoe snel duurzaamheidssystemen onder de RED-criteria worden goedgekeurd.

### **Hoeveel van de verhandelde biomassa was duurzaam geproduceerd?**

Dit is afhankelijk welke standaarden gebruikt worden. Voor houtpellets bestaan er verschillende verificatie-/certificatie-initiatieven. Welke uiteindelijk leidend wordt is nu nog onduidelijk. Voor vloeibare biomassa is het momenteel onbekend hoeveel massa duurzaam geproduceerd is, mede dankzij uitblijvende certificeringschema's. Echter op dit gebied lijkt genoeg duurzaam productie potentiaal aanwezig te zijn.



Meerdere certificeringschema's zijn niet direct een handelsbelemmering, mits de verschillende schema's elkaar accepteren en samenwerken.

**Op welke manier is de duurzaamheid gecontroleerd?**

Er zijn diverse systemen aanwezig om duurzaamheid te laten controleren (wat ook gedaan wordt door SGS).

Het gaat hierbij voornamelijk om inspecties van productie-eenheden ten aanzien van broeikasgasemissies, traceerbaarheid en andere duurzaamheidsaspecten te verifiëren.

De entiteit die geverifieerd/gecertificeerd worden zijn dus de productie-eenheden, en niet de individuele biomassa batches.

**Wie is betrokken bij deze criteria en daaraan gekoppelde belemmeringen en wie is betrokken bij het opkomen of wegnemen van deze belemmering?**

Dat is een samenwerking tussen alle belanghebbenden: producenten, consumenten en de overheid. In de praktijk zien we de mensen van landbouw minder vaak rond de tafel zitten voor het opzetten van duurzaamheidscriteria. SGS werkt zelf in sommige gevallen mee om een specifieke methode voor certificering op te stellen (bijvoorbeeld : rondtable for sustainable biofuels, pilot projects binnen ISCC, college van deskundigen NTA8080, normalisatiecommissie CEN TC 383)

**Hebt u nog opmerkingen / aanbevelingen / extra opmerkingen n.a.v. dit interview?**

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## Appendix L BFP International

Geïnterviewde: Marc de Boer, BFP International B.V. / Rotterdam Biomass  
Commodity Network  
Interviewer: Gert-Jan Jonker, Copernicus Instituut, Universiteit Utrecht  
Datum: 11 oktober 10:00 uur

### **Omschrijving BFP en RBCN.**

BFP International B.V. and its subsidiary BFP Africa B.V. are biomass commodity traders and project developers sourcing biomass commodities for their clients for the production of next generation biofuels and bioenergy. Taking into consideration all aspects of true sustainable development, sound commercial and financial entrepreneurship as well as creating rewarding business for our clients, investors, participants and local communities in the countries where our projects take place

[<http://www.biofuelprojects.com/index.html> volgt niet uit interview]

Het RBCN is een initiatief van het Rotterdam Climate Initiative om een netwerkplatform te bieden aan commerciële partijen actief in de handel in biomassa commodities dan wel biomassa gebruiken in de Rotterdamse haven en regio of van de Rotterdamse haven gebruik maken voor de aan- en doorvoer van biomassa.

[<http://www.rbcn.nl/> volgt niet uit interview]

### **Bij de handel of gebruik van welk van de volgende commodities is uw bedrijf / instelling betrokken en op welke manier? Waar kwam deze biomassa (voor zover bekend) vandaan?**

BFP handelt in houtige biomassa, o.a. hout pellets. Voor biodiesel positioneert BFP zich tussen producenten en eindgebruikers van grondstoffen voor biodiesel. De markt voor houtige biomassa is in 2004 en 2005 enorm opgekomen, na het wegvallen van de subsidie is deze markt weer opgedroogd.

BFP richt zich voornamelijk op productstromen uit Oekraïne, Rusland en Afrika. Het inkoopnetwerk bestaat uit lokale mensen die de lokale markt en gebruiken kennen. Dit netwerk bepaald het bedrijfssucces.

### **Wat beschouwt u als de belangrijkste handelsbelemmeringen voor de internationale handel? Voor welk type biomassa geldt dit? Geef waardering aan (1-10, 10 zware belemmering)**

Belemmering:

Waardering:

1) Openbaar maken van herkomst bio-energie binnen duurzaamheids certificering  
6

Voor diverse handelsstromen is BFP gebaat bij anonimiteit over de herkomst. Voor concurrenten is het anders gemakkelijk om de boeren en producenten te lokaliseren en de handel over te nemen. BFP wil alleen de havenlocatie vrijgeven om zodoende de tijd en energie, die in het tot stand komen van het handelsnetwerk is gaan zitten, terug te verdienen.

BFP zou er bij gebaat zijn om tussen landen bilaterale afspraken te maken over hoeveel biomassa er duurzaam geproduceerd kan worden in een land, in plaats van het duurzaamheids certificeringssysteem zoals nu voorgesteld wordt. Doordat nu de hele productieketen betrokken is bij de certificering kunnen er fouten

ontstaan en is het vragen om creatief boekhouden. Bilaterale afspraken voorkomt ook dat bedrijven de herkomst van biomassa openbaar moet maken.

2) Wisselend en onduidelijk overheidsbeleid 8

Door de wisselende overheidsdoelstellingen stagneren de investeringen van bedrijven in de bio-energiemarkt. Bedrijven durven niet te investeren omdat de investering niet terugverdient kan worden als het beleid veranderd of ingetrokken wordt. Het lijkt of overheidsbeleid afhankelijk is van publieke opinie. De overheid moet voor de komende jaren een praktisch haalbare duurzame energie strategie bepalen op basis van lokale markt mogelijkheden. De overheid zou in plaats van luimakende subsidies in te stellen de accijnzen moeten aanpassen; hogere accijnzen voor fossiele brandstoffen en lagere accijnzen voor biofuels. Dit vormt al een enorme stimulans voor biobrandstoffen.

Het overheidsbeleid (lokaal en nationaal) moet in de toekomst gelijk getrokken worden met Europees beleid zodat de concurrentie positie van Nederland niet wordt aangetast.

3) Moeilijk om te investeren in biomassa projecten 8.5

Het is lastig om banken / investeerders te vinden die geld willen investeren in een deel van de logistieke keten; van productievelden tot de haven in productielanden. Veel potentieel is aanwezig in landen met slechte logistieke mogelijkheden. Bedrijven kunnen door de afwezigheid van overheidsgaranties de banken en investeerders ook geen garantie bieden.

MdB: Om biomassa te handelen heb je controle over het product nodig. Hoe dichter je bij de bron zit, hoe meer controle je hebt over de prijs, de producenten en de logistiek. Met name de logistiek in origine is een bij uitstek geschikt instrument om de biomassa stromen te beheersen en daarmee de lokale producenten aan je te binden. Dat is van strategisch belang voor de handel. Juist het investeren in origine is voor Nederlandse firma's, die daar toch voor de handel van afhankelijk zijn, heel moeilijk geworden omdat het NL beleid op financiering, subsidiering en overheidsgaranties in het agrarische segment enorm zijn teruggebracht. Daarmee is het onmogelijk geworden voor de middelgrote pionierende bioenergie bedrijven om de benodigde feedstock en biomassa stromen voor duurzame energie productie veilig te stellen. Daarmee plaatst NL zich uit de handel in biomassa terwijl we daar juist heel veel kennis, ervaring en bestaande relatienetwerken in hebben. Dit is tevens strategische belemmering voor NL wat zich wil en kan profileren als de biomassa hub van Europa, daar is wel een levendige handel en daarmee verticale integratie van handelsstromen een belangrijke voorwaarde.

**Welke bedrijven/instellingen zijn betrokken bij deze handelsbelemmeringen? Wat is hun invloed op het wegnemen van deze belemmering?**

Duidelijk, langjarig overheidsbeleid waarbij duurzame energie gestimuleerd wordt is essentieel voor het wegnemen van de handelsbelemmeringen.

**Hebt u in recent verleden handelsbelemmeringen zien opkomen of wegnemen?**

-

**Verwacht u in de toekomst (belangrijke) handelsbelemmeringen opkomen of verdwijnen, tot 2020?**

Het punt van indirect land use change is een lastig punt en is op dit moment te streng voor bio-energie productie. Zoals BFP de regels interpreteert is het moeilijk om productie land te vinden dat wel voldoet aan de eisen voor ILUC. Het voldoen aan andere duurzaamheidscriteria vormen geen belemmering.

**Hoeveel van de verhandelde biomassa was duurzaam geproduceerd?**

De verhandelde biomassa is duurzaam geproduceerd, niet duurzaam produceren heeft uiteindelijk altijd een hogere prijs.

Op dit moment is de biomassa van BFP duurzaam gecertificeerd. De afzetmogelijkheden voor niet duurzaam gecertificeerde biomassa is aanwezig voor BFP. De handel van BFP is momenteel zo ingericht dat er binnen een half uur bepaald moet worden of er op de aanbieding van een biomassa producent wordt ingegaan of niet. Hierdoor kiest BFP ervoor om geen tijd te spenderen aan het naast elkaar leggen van duurzaamheidscertificaten van de geleverde biomassa en de duurzaamheidseisen van klanten.

Nederland hoeft op het gebied van duurzaamheidseisen niet het braafste jongetje van de klas te zijn, trek de eisen gelijk met andere EU landen en met minerale olie. Voor minerale olie gelden op dit moment opvallend genoeg geen duurzaamheidseisen.

**Wie is betrokken bij deze criteria en daaraan gekoppelde belemmeringen en wie is betrokken bij het opkomen of wegnemen van deze belemmering?**

-

**Hebt u nog opmerkingen / aanbevelingen / extra opmerkingen n.a.v. dit interview?**

Import / export tarieven spelen een marginale rol, de markt zal dit zelf oplossen. Het is misschien wel mogelijk om duurzaamheidseisen af te dwingen via importtarieven.

Nederland heeft als handelsland een enorme kans in de internationale biomassa handel, mede door de omvang van de agrarische en petrochemische sector, de aanwezigheid van een grote haven en de aanwezige en actuele kennis en ervaring met agri commodity handel en de vaak jarenlang opgebouwde netwerken van betrouwbare leveranciers en supply chains.

Kennisbenutting is laag, de handelaren in biomassa handel worden niet serieus genomen of de mogelijkheden zijn beperkt; er moet betaald worden om mee te mogen praten met werk- en praatgroepen.