

BioTrade2020plus

Supporting a Sustainable European Bioenergy Trade Strategy

Intelligent Energy Europe
IEE/13/577/SI2.675534

Deliverable 6.4

Report of Workshops

-Policy options for Sustainable biomass-

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The BioTrade2020plus Project

Objectives

The main aim of BioTrade2020plus is to provide guidelines for the development of a **European Bioenergy Trade Strategy for 2020 and beyond** ensuring that imported biomass feedstock is sustainably sourced and used in an efficient way, while avoiding distortion of other (non-energy) markets. This will be accomplished by analyzing the potentials (technical, economical and sustainable) and assessing key sustainability risks of current and future lignocellulosic biomass and bioenergy carriers. Focus will be placed on wood chips, pellets, torrefied biomass and pyrolysis oil from current and potential future major sourcing regions of the world (Canada, US, Russia, Ukraine, Latin America, Asia and Sub-Saharan Africa).

BioTrade2020plus will thus provide support to the use of stable, sustainable, competitively priced and resource-efficient flows of imported biomass feedstock to the EU – a necessary pre-requisite for the development of the bio-based economy in Europe.

In order to achieve this objective close cooperation will be ensured with current international initiatives such as IEA Bioenergy Task 40 on “Sustainable International Bioenergy Trade - Securing Supply and Demand” and European projects such as Biomass Policies, S2BIOM, Biomass Trade Centers, DIA-CORE, and PELLCERT.

Activities

The following main activities are implemented in the framework of the BioTrade2020plus project:

- Assessment of **sustainable potentials of lignocellulosic biomass** in the main sourcing regions outside the EU
- Definition and application of sustainability criteria and indicators
- Analysis of the **main economic and market issues of biomass/bioenergy imports** to the EU from the target regions
- Development of a dedicated and **user friendly web-based GIS-tool** on lignocellulosic biomass resources from target regions
- **Information to European industries** to identify, quantify and mobilize sustainable lignocellulosic biomass resources from export regions
- **Policy advice on long-term strategies** to include sustainable biomass imports in European bioenergy markets
- **Involvement of stakeholders** through consultations and dedicated workshops

More information is available at the BioTrade2020plus website: www.biotrade2020plus.eu

About this document

This report corresponds to D6.4 – Workshop report of BioTrade2020+. It has been prepared by: CENER and VITO, with the contribution of WIP, IINAS, Utrecht University and Imperial.

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Work package	WP6
Task	Task 6.6
Lead contractor for this deliverable	CENER
Authors	Ines del Campo, David Sánchez, Luc Pelkmans and Nathalie Devriendt
Collaborations	Rainer Janssen, Dominik Rutz, Martin Junginger, Leire Iriarte and Rocio Diaz-Chavez

Dissemination Level		
PU	Public	x
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services):	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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0.1	20/07/15	Preliminary version	Finished

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1. Introduction

BioTrade2020plus aims at strengthening links and information exchange between stakeholders involved in international sustainable biomass trade. For this reason among the several dissemination activities scheduled during the course of the project under task 6.6 of WP6, the following events were initially scheduled:

- Collection end-users tool requirements¹.
- Midterm and cooperation IEA Bioenergy workshop (M8- October 2014, Brussels).
- Final Dissemination workshop (M30, August 2016, Brussels).

However, due to the necessity of getting more stakeholders inputs especially regarding WP5, the consortium decided to arrange a specific workshop in order to discuss about **policy options for sustainable biomass trade**.

The following report aims at describing the main issues (organization, celebration and outcomes) from the Workshop on Policy Options for Sustainable Biomass Trade held on June 3rd in Vienna as a side-event of the 23rd European Biomass Conference.

¹ This action was considered as a workshop in the Annex 1- Description of the work. Finally, in order to get a higher impact was replaced by personal interviews in the 22th European Biomass Conference and Exhibition (for more details, see deliverable D4.2. of the project).

2. Workshop on Policy Options for Sustainable Biomass Trade

2.1. Workshop objective

One of the objectives of the BioTrade2020+ project is to propose appropriate long-term strategies and support frameworks which can form a basis for a balanced approach between promoting the use of domestic biomass, while also keeping markets open for sustainable imports of biomass.

2.2. Workshop organization

The workshop was held in Messe Wien – Congress and Exhibition Centre in Vienna the 3rd of June 2015, Wednesday from 15:00 to 19:00. It took place on the occasion of the 23rd European Biomass Conference & Exhibition (EUBCE 2015) in Vienna, Austria.

It was organized by BioTrade2020plus consortium lead by VITO and supported by WIP. Fifty people participated in the workshop, the attendants list and a copy of the programme can be found in the Appendix 2. The total number of the attendees was 50 people from 16 European countries and from other parts of the world (México, Malaysia, Korea, Rusia, Mozambique, India, etc.).

2.3. Workshop minute

After a short introduction by **Rainer Janssen (WIP)**, the moderator before the coffee break, the workshop began with an introduction of the BioTrade2020+ project by **Ines Del Campo (CENER)**. The project is currently half way with most tasks fully active. Within the project it is very important to have interaction with stakeholders. More details about the project are available on the project website (www.biotrade2020plus.eu).



Heinz Kopetz (WBA) was invited as speaker, external to the project (*although being involved in the Advisory Board of the project*), to give his view on potential opportunities of biomass trade. He took two starting points which are decisive for future trends: (1) climate change mitigation policies which will need get more serious in the next decades ('carbon budget approach') and (2) population growth and economic development, specifically in Africa and in Asia, resulting in a higher need of land for food. Kopetz stressed that biomass is in the first place a local issue, so countries should first consider local use. Looking at the natural resources in the different continents, he concluded that *Africa* will need to use their



land and biomass for their own needs, *Asia* will rely on imports, *Europe* will need to use its available land and resources better (including Russian resources), the *Americas* could have room for export, in particular Canada and Latin America. The US would have limited export potentials, if they implement serious climate policies. *Oceania's* potential is limited due to climate restrictions.

Mind that global supply of biomass for energy is expected to rise from 54 EJ in 2010 up to 125-150 EJ in 2035. Within the EU a lot can be produced with dedicated energy crops and agricultural residues.

The basic principles of biomass use should be (1) efficient use (use residual heat of power plants!) and (2) sustainability (don't use more biomass than is grown). The carbon absorbed and released by biomass is part of the natural carbon cycle (opposite to fossil). Bioenergy is one of the only renewable energy sources which can be delivered on demand. So it is complementary with other RE sources.

Questions:

- Role of improving energy efficiency and reducing energy demand?

It is recognized that this is complementary with renewable energy. Nevertheless with growing economies in developing countries a growing energy demand in these regions can also be anticipated.

Leire Iriarte (IINAS) presented the methodology of the case studies carried out in the BioTrade2020+ project to determine sustainable potentials in the sourcing regions. She also presented interim results of the case study in Southeast US. Focus is on pellets from forest residues and thinnings. There is not much space for expansion of forest plantations. For woody energy crops it is assumed that these will mainly be used for thermal domestic applications. The current surplus of forest biomass in the SE-US is estimated around 20 million tonnes (od), according to the estimates of Pöyry. In the past years pulp and paper demand declined, but this seems to have stabilized again. The longer term availability for export will depend on US demand for wood products and energy so renewable energy policies will play a relevant role. All these variables will be assessed by means of different scenarios.

Martin Junginger (Utrecht University) presented the results of a case study in Kenya. Of the total potential, 2/3 consisted of sugar cane residues (straw is currently not being used). There is no land available for energy crops and there is a shortage of fuel wood (with on-going deforestation). Agricultural yield is one of the most important factors for the potential.

Junginger stressed that ground truthing is needed to look at the local situation (what happens currently with the biomass and land). Another uncertain factor is how the Kenyan energy system will develop on the longer term.



Questions:

- How is sustainability currently taken into account for the potentials?

The most important restriction is the amount of residues which should be left in the field. In principle this depends on the soil type.

- Are there similarities with the other countries in Africa?

Mozambique has also been analysed and the situation is clearly different from Kenya (climate, rainfall). The key factor is agricultural productivity.

Africa can't be generalised. Each country/region has its particularities.

- Exogenous factors: improving agriculture:

This seems to be a crucial factor, but the question is what we can do to make this happen. The main drivers are agricultural prices and access to capital. There are synergies with bioenergy, but bioenergy is clearly not the main driver for improving agriculture. Dedicated approaches are needed.

After the coffee break, **Luc Pelkmans (VITO)** introduced the topic of policy options, starting with an overview of opportunities, risk and barriers of international biomass trade. For opportunities and risk distinction was made between importing regions (EU) and sourcing regions. These items were also part of the on-going international survey (<http://www.surveygizmo.com/s3/1979784/Biotrade2020plus>). Some preliminary trends of the survey were highlighted. A list of policy options was presented; participants could provide their opinion on these policy options in a short questionnaire as an introduction to the panel discussion. 27 participants handed over a filled-in questionnaire (see Annex 4).



All workshop presentations are available at: <http://www.biotrade2020plus.eu/news-events.html>

2.4. Pannel discussion

The subsequent panel discussion focused on these policy options, which two central questions: (1) How to ensure sustainable biomass sourcing, (2) How to avoid displacement of local use. The following people were part of the panel:

- Heinz Kopetz, World Bioenergy Association (chairman of WBA, global organisation dedicated to supporting and representing the wide range of actors in the bioenergy sector).
- Rocio Diaz-Chavez, Imperial College, UK (expert in sustainability assessments for South-America, Asia and Africa; originally from Mexico).
- Rainer Janssen, WIP Renewable Energies, Germany (experience in biomass projects in Africa and Latin America)
- Serge Braconnier, CIRAD, France (working on production and use of biomass in local regions, worldwide)
- Iris Lewandowski, University of Hohenheim, Germany (working on energy crops in Europe and abroad; past work experience at Utrecht University and Shell, with a broad international view)
- Kees Kwant, Netherlands Enterprise Agency, Ministry of Economic Affairs, the Netherlands (chairman of IEA Bioenergy; involved in the Dutch debate on sustainable biomass)
- Peter Canciani, Central European Initiative (CEI) (intergovernmental organisation, supporting the development of sustainable biomass value chains *in South-East Europe*)



We had a very lively debate. The main debated points are summarized below.

Summary of the main points discussed:

- **Local use of biomass** should have priority, but there are clear opportunities in international markets, in particular for certain regions (e.g. Americas) – it is necessary to map where there is potential for exports, depending on sustainability requirements and local strategies for using the biomass themselves. It will be



difficult to prevent displacement, but in fact all we do creates displacement. Is it a bad thing if local actors respond to changing market demands? Of course if multinationals displace local actors this is a different issue. The question is if policies need to steer the local priority or should we leave it to the markets.

- **Agricultural improvement** in developing countries is key, predominantly for food production, but it can also provide opportunities for energy. There can be synergies between food and energy. Capacity building in good agricultural (and forestry) practices is very important, but a longer term effort. There was much discussion on African countries, but it is clear that Africa's opportunities in terms of biomass are merely for their own use, less for international trade. Nevertheless, examples from the past have shown that capacity building in sustainable production (e.g. through certification) is possible if markets require this.
- There are different positions in terms of **sustainability criteria** for solid biomass (on EU level). Some views defend that sustainability of forest biomass is already covered through MS regulations, and an additional requirement from the energy sector would create an extra administrative burden. Voluntary schemes (e.g. as developed by SBP) could then cover imported biomass. Other countries, which rely to a great extent on imports, would like to see a uniform EU system of sustainability requirements. The main discussion (with NGOs) is about imported biomass; there is a need to safeguard the sustainable supply of these resources. Mind that these safeguards will also be needed when a biobased economy further develops. It is crucial to have transparency about imported biomass. The discussion on sustainability criteria is actually about capacity building and creates an awareness on how to produce biomass in a sustainable way. Mind that making criteria over strict may just block further developments, which is in the interest of fossil industries. It is important to find a good balance. In the end we should come to a system that sustainability criteria are valid, no matter what application the biomass is produced for.
- An extra proposed sustainability criterion is to consider if sourcing regions are also putting efforts in **mitigating their own GHG emissions**. This can be part of bilateral agreements. It needs to be seen if this is WTO compliant.
- **Listing of no-go areas and feedstocks** are popular instruments for policy makers but care should be taken. Situations are usually not black-white, and may change over time. In this, identifying and promoting replication of "best practices" might be helpful.

3. BioTrade2020plus Consortium

CENER – National Renewable Energy Centre, Biomass Department, Spain

Project Coordinator BioTrade2020plus

Contact persons: David Sánchez González & Inés del Campo Colmenar

Imperial – Imperial College London, Centre for Environmental Policy, United Kingdom

Contact persons: Dr Rocio Diaz-Chavez

DLO – Alterra, Wageningen University and Research, The Netherlands

Contact persons: Dr Gert-Jan Nabuurs & Dr Berien Elbersen & Dr Wolter Elbersen

IINAS – International Institute for Sustainability Analysis and Strategy GmbH, Germany

Contact person: Leire Iriarte & Uwe Fritsche

VITO - Flemish Institute for Technological Research, Belgium

Contact persons: Luc Pelkmans

UU - Utrecht University, Faculty of Geosciences, Energy & Resources, Copernicus Institute of Sustainable Development, The Netherlands

Contact persons: Dr Martin Junginger & Thuy Mai-Moulin

WIP- WIP Renewable Energies, Germany

Contact persons: Dr Rainer Janssen & Dominik Rutz



4. Appendix 1: Workshop programme

Wednesday, 3 June 2015 (15:00-19:00)

15:00 Welcome to the Workshop

Rainer Janssen, WIP Renewable Energies, Germany

15:10 BioTrade2020+ - Introduction and Activities

Ines Del Campo, CENER, Spain

15:30 Global Biomass Resources – Potential Opportunities for Trade

Heinz Kopetz, World Bioenergy Association (WBA)

16:00 Results of BioTrade2020+ Case Studies

Leire Iriarte, IINAS, Spain

Martin Junginger, Utrecht University, Netherlands

16:30 Coffee Break

17:00 Opportunities, Risks and Barriers of International Biomass Trade

Luc Pelkmans, VITO, Belgium

17:30 Panel Discussion on Policy Options

- **How to ensure sustainable biomass sourcing?**
- **How to avoid displacement of local use?**

Moderation: Luc Pelkmans, VITO, Belgium

Panellists:

Heinz Kopetz, World Bioenergy Association

Rocio Diaz-Chavez, Imperial College, UK

Rainer Janssen, WIP Renewable Energies, Germany

Serge Braconnier, CIRAD, France

Iris Lewandowski, University of Hohenheim, Germany

Kees Kwant, Netherlands Enterprise Agency

Peter Canciani, Central European Initiative (CEI)

18:30 Summary and Conclusions

Luc Pelkmans, VITO, Belgium

5. Appendix 2: Participant List

First Name	Last Name	Company/organisation	Country
Stefano	Amaducci	UCSC (Università Cattolica del Sacro Cuore)	Italy
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Philippe	Barré	Imerys	France
Tina	Beuchelt	ZEF (Center for Development Research - University Bonn)	Germany
Serge	Braconnier	CIRAD	France
Jan	Bünger	Danish Energy Agency	Denmark
Peter	Canciani	CEI (Central European Initiative)	Italy / Central Europe
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Jorge	Cristobal	EC-JRC	EU
Jean-François	Dallemand	EC-JRC	EU
Cristina	de la Rúa	CIEMAT	Spain
Inés	Del Campo	CENER	Spain
Nathalie	Devriendt	VITO	Belgium
Rocio	Diaz-Chavez	Imperial College	UK / Mexico
Berien	Elbersen	DLO-Alterra	Netherlands
Wolter	Elbersen	WUR	Netherlands
Ana Luisa	Fernando	FCT-UNL (University of Lissabon)	Portugal
Chun Sheng	Goh	Utrecht University	Netherlands / Malaysia
Katarzyna	Golkowska	LIST (Luxembourg Institute of Science and Technology)	Luxembourg
Ruben	Guisson	VITO	Belgium
Leire	Iriarte	IINAS	Spain
Rainer	Janssen	WIP	Germany
Martin	Junginger	Utrecht University	Netherlands
Gerald	Kalt	Austrian Energy Agency	Austria
Cosette	Khawaja	WIP	Germany
Heinz	Kopetz	World Bioenergy Association	global
Nike	Krajnc	SFI (Slovenian Forestry Institute)	Slovenia
Kees	Kwant	RVO (Netherlands Enterprise Agency), Ministry of Economic	Netherlands

		Affairs	
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Iris	Lewandowski	Univ. of Hohenheim	Germany
Ricardo	Martins	Imperial College	Mozambique
Robert	McQuillan	Lafarge	Ireland
Rita	Mergner	WIP	Germany
Calliope	Panoutsou	Imperial College	UK
Eleni	Papazoglou	Agricultural University of Athens	Greece
Luc	Pelkmans	VITO	Belgium
Svetlana	Proskurina	Lappeenranta University of Technology	Finland / Russia
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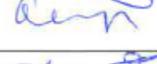
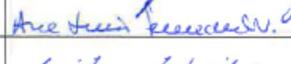
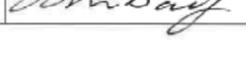


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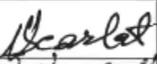
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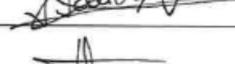
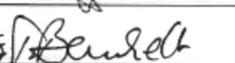
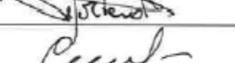
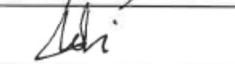
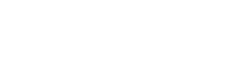


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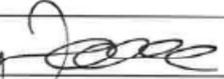
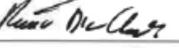
23rd European Biomass Conference & Exhibition



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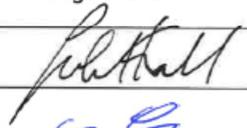
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