

TASK 40: Sustainable International Bio Energy Trade: securing supply and demand

Overview of the task

The objective of Task 40 is to investigate what is needed to create a “commodity market” for bio-energy. By means of the international platform of IEA combined with industrial parties, governmental bodies and NGO’s, the task will contribute to the development of sustainable bio-energy markets on short and on long term and on different scale levels (from regional to global).

Furthermore, the ambition is that this platform can set the agenda and initiate a host of new activities relevant for developing biomass potentials worldwide.

The future vision on global bio energy trade is that it develops over time into a real “commodity market” which will secure supply and demand in a sustainable way; sustainability brings a key factor for long-term security.

Participating countries (status end 2005):

- Belgium, Brazil, Canada, Finland, Netherlands, Norway and Sweden (full members)
- Italy and the UK (observer status)
- FAO and the World Bank (affiliated international bodies)

Task leaders:

André Faaij (scientific coordinator)

Copernicus Institute, Utrecht University, the Netherlands

Martijn Wagener (until October 2005), Alf van Weereld, Peter-Paul

Schouwenberg (from November 2005 onwards),

Essent Energy, -s-Hertogenbosch, the Netherlands

Beginning of 2005, Rob Remmers from Essent had to withdraw from task leadership due to job changes within the company. His role was taken over by Martijn Wagener. In October 2005 Martijn Wagener had to withdraw from task leadership as well for the same reason, and Alf van Weereld and Peter-Paul Schouwenberg took over his work within task 40. The joint task coordination of Utrecht University and Essent remains unchanged.

At present, the participating countries in Task 40 are Belgium, Brazil, Canada, Finland, the Netherlands, Norway and Sweden. Italy and the UK will all join the task as full members in January 2006. Already over 2005, these countries have been represented in the various task events over the past year. Furthermore, with Germany joining the IEA Bioenergy programme, it is expected that Germany may join Task 40 as well as observer over the next few months. In addition two international institutions, FAO and the World Bank are affiliated to the task and participate actively in the activities. Also UNCTAD has shown interest to cooperate with Task 40 in the future.

Operating Agent:

Erik Wissema, Ministry of Economic Affairs, the Netherlands

Kees Kwant, SenterNovem, the Netherlands (Alternate)

The task leaders direct and manage the work programme. A National Team Leader from each country is responsible for coordinating the national participation in the Task.

For further details on Task 40, please refer to Appendices 2-5 inclusive; the Task 40 website www.fairbiotrader.org and the IEA Bioenergy website www.ieabioenergy.com under 'Our Work: Tasks'.

Progress in R&D

Task meetings and workshops

Two major workshops have been organised in 2005. The first one was organized jointly between IEA Bioenergy Task 40, the Energy and Poverty Thematic Group of the World Bank and IEA Bioenergy Task 29. The workshop was organised during the Annual Energy Week of the World Bank which will allow for the inclusion of Energy Week participants, many of whom are from developing countries that might directly benefit from this initiative and from the expertise represented by the IEA Tasks involved. It aimed to explore the links between international bio-energy trade and socio-economic development and how sustainable bio-energy production for the world market could be realised. This involved the following elements such as the socio-economic implications and benefits of bio-energy use (by Task 29) and the impacts of international bio-energy trade; how does international trade contribute to sustainable development and how can this be secured (by Task 40). Besides an overview of expertise on areas dealt with by the respective networks and organisations, a key element of the workshop was to discuss in a roundtable setting how projects involving development of rural areas and biomass production could be realised and organised. Based on the contributions and results of this workshop, a special issue of the Energy for Sustainable Development (ESD) will be published in March 2006.

After the workshop with Task 29, preparations started for the combined Task 30, 31 and 40 event in Campinas, Brazil in November-December 2005. The joint workshop consisted of three days. The first day included presentations from Task 30 on e.g. the development of sustainable SRC systems to date, presentations from Task 31 on e.g. sustainable forestry management and industrial scale production of biomass for energy, and presentations from various international bodies such as UNCTAD, UNEP and FAO. On day two, Task 40 illustrated the experience of international biotrader on e.g. company perspectives on developing international bio-energy markets. In addition on day two and three a business forum on sustainable international bio-energy trade was organized specifically focused on Brazilian industry, with major representatives from the Brazilian forestry and bio-ethanol sectors, as well as selected international players. Topics that were discussed during the workshop covered amongst others the Brazilian experiences with sugarcane and eucalyptus, and the future Brazilian alcohol and biodiesel programs, barriers for trade from both exporting and importing countries, necessity and development of sustainability criteria for biomass, and existing certification systems and their applicability to biomass trade. Finally, on Saturday an excursion to a Eucalyptus plantation and research centre was organized. In total, about 70 participants from different countries and global organisations contributed to a very successful event.

The presentations given at these workshops and meeting reports can be downloaded from the Task 40 website www.fairbiotrader.org.

The Task had two formal internal meetings in 2005, both preceding the workshops mentioned below. During these task meetings, the progress regarding

the various deliverables was presented and plans were made on how to continue the Task in a potential second triennium. In addition, a number of Task members convened for working meeting during the 14th European biomass conference in Paris in October 2005.

An overview of task activities and task meetings held in 2005 and scheduled for 2006 is provided below:

Date	Location	Description & status
March 2005	Washington (World Bank).	Joint workshop with IEA Task 29 on socio-economic impacts and benefits of international bio-energy trade as side-event on Energy Week,.. (combined with internal task meeting)
Okt 2005	Paris	Working meeting at the European Biomass Conference in Paris 17-21 October 2005
Dec 2005	Campinas, Brazil	Sustainable biomass production systems for export and certification combined effort with Tasks 30 and 31 (combined with internal task meeting)
Jan 2006	Utrecht, Netherlands	Future Visions of Biomass Trade – workshop jointly organised by Task 40 and EUBIONETII
April 2006	Trondheim, Norway	Joint event with Task 38 on bio-energy trade, GHG accounting and emission trading (combined with internal task meeting)
August 2006	Vancouver Canada	Participation with joint workshop of Tasks 29, 31 and 39 (under consideration)
Sept./Oct . 2006	Finland	Internal end of Task meeting, possibly combined with open workshop. Suggested topic: "Business opportunities for European Forestry & Bioenergy industry in Russia" in cooperation with EUBIONETII

Work Programme

An overview of the work program of Task 40 is given in the table below, including an overview. In the section deliverables, the various outputs which have been delivered in 2005 are listed.

Area	Execution by;	Key deliverables scheduled
1. Market experience:	Sweden (support by all members)	<ul style="list-style-type: none"> Country reports (all members) Business Forum Edited final synthesis report based on the country reports.
2. Strategic advice on barriers, opportunities and strategy	Netherlands (support by all members).	<ul style="list-style-type: none"> Conference paper "towards a strategic advice", presented at the 14th European biomass conference, oct. 2005 Strategic advice on how to develop and support bio-energy trade, e.g. for the EC, IEA Exco, FAO, to be delivered over spring 2006.
3. Modelling markets	Norway, Netherlands, Finland	<ul style="list-style-type: none"> Aimed for setting up research project(s). Now linked to e.g. VIEWLS, ENFA
4. Supply chain	Finland, Canada,	<ul style="list-style-type: none"> Case studies

analysis	Norway (Sweden, Netherlands)	<ul style="list-style-type: none"> • Reports on Finnish, Canadian and Norwegian case studies
5. Certification systems	Netherlands, FAO, UK	<ul style="list-style-type: none"> • Subject at Campinas, Brazil workshop • Input for strategic advice to IEA • Review paper on existing certification system and possible design of biomass certification systems
6. Pilot projects	World Bank / FAO; Netherlands, UK, Canada	<ul style="list-style-type: none"> • Plan of action/work programme on setting up pilot projects, based on e.g. initiatives of the World Bank • Selection of potential projects. • Subject at Washington workshop
7. Case studies; impact analysis	FAO, Netherlands, UK, World Bank	<ul style="list-style-type: none"> • Concrete case studies, in particular in developing countries • Subject at Washington workshop
8. Evaluation of markets (Ethanol)	Brazil; UK, Canada	<ul style="list-style-type: none"> • Report on Brazilian ethanol market • Other commodities are being considered
9. Dissemination	Netherlands (support by all members)	<ul style="list-style-type: none"> • website • information leaflet • contribution to newsletters • numerous lectures at international workshops and conferences

Task 40 was in its second year of operation in 2005. The work on the various deliverables is in good progress, with some preliminary deliverables already finished in 2005, such as several country reports, the extension of the Tasks website, preparation of the Tasks colour leaflet and a preliminary strategic advice, presented at the 14th European biomass conference in October. In addition, the two workshops organised provided valuable input for deliverables such as biomass certification (deliverable 5) and possible pilot projects and case studies (deliverables 6 & 7). For the logistic chain deliverable, several case studies have already been carried out while others are still in progress. Further activities in 2005 include the preparations for a special Issue of the Journal Energy for Sustainable Development on bio-energy trade and sustainable development, which is due to be published in early 2006.

Over the course of 2006, a number of key deliverables will be finished, such as the synthesis report based on the various country report, a more extensive strategic advice, three reports on logistic chain studies in Canada, Finland and Norway respectively and an evaluation of the Brazilian ethanol market. At the meeting in November 2005, the ambition was voiced to publish some of these key documents in a special issue of Biomass & Bioenergy.

Collaboration with other tasks/Networking

As described under "task meetings/workshops", several events have been organized jointly activities with IEA Task 29, 30 & 31. A joint workshop with Task 38 is scheduled for April 2006, focussing on GHG emission trading vs. physical biomass trade. In addition, Task 40 will most likely contribute to join a workshop organized by Task 29, 31 and 39 planned for August 2006 in Canada. In addition, a biomass trade scenario workshop will be organized by Jussi Heinimö (NTL Finland) in January 2006, which includes participants from EUBIONET-II and Task 40. Furthermore, the last Task meeting in 2006 will be in Finland. At this meeting, another workshop wit EUBIONETII is envisioned, possibly on the European Forestry & Bioenergy industry in Russia. All these events clearly confirm the cross-cutting character of T40.

The work of Task 40 has been presented for several audiences, such as the a meeting of German NGO's in Bonn in May, 2005, where Iris Lewandowski and Martin Junginger presented Task 40, and participated in a panel discussion. Furthermore, during 2005, André Faaij presented Task 40 at occasions such as:

- Heinrich Böll Stiftung and European Climate Forum, April 2005, Berlin, Germany
- ICCEPT and SEI workshop, April 2005, London, UK
- IEA/OECD meeting, June 2005, Paris, France
- DoE/EC meeting, July 2005, Washington D.C., USA
- Global Environmental Fund (GEF) meeting, August 2005, New Delhi, India
- IIASA , September 2005, Laxenburg, Austria
- 14th European Biomass conference, Paris 17-21 October 2005.

Website

The website has been developed over 2005, and will be further expanded over 2006. Over the first half of 2005, visitor numbers have been increasing strongly, and have stabilized around 1600 visitors per month. The information dissemination is also well underway, and still increasing. Out of the many presentations, meeting reports, county reports etc., the top ten documents were downloaded each over one hundred times per month on average between August and December 2005. For an overview of the publications available on the website, see appendix 3.

Main additions to the website in the spring and summer of 2005 were the introduction of the individual Task 40 members and various documents (e.g. presentations from the Washington and Campinas meetings, various country reports, the task leaflet etc).

Deliverables

In 2005, the following deliverables were supplied:

- Several country reports (dev. 1)
- Conference paper 'towards an strategic advice' for the 14th European Biomass Conference(dev. 3)
- Further extended website (dev. 9)
- Full color Task leaflet (dev. 9)

- Organisation of two workshops (with Task 29 in Washington and with Task 30 and Task 31 in Campinas)
- Progress reports to the ExCo
- Minutes of the Task meetings
- Contribution to the coloured section of the IEA bioenergy annual report (with Task 38)

Reports and papers published in 2005 by task 40 (appendix 3)

Minutes of the task meeting in Washington, USA, March 2005.

Minutes of the task meeting in Campinas, Brazil, 28-29 November 2005.

Progress Report to ExCo55, Copenhagen, Denmark, May 2005.

Progress Report to ExCo56, Dublin Ireland, October 2005.

Faaij, A., Junginger, M., Wagener, M., van den Weereld, A., Schouwenberg, P.P., Kwant, K., Hektor, B., Ling, E., Risnes, H., Klokk, S., Leistad, O., Walter, A., Ranta, T., Heinimö, J., Bradley, D., Rosillo-Calle, F., Woods, J., Best, G., Utria, B., Grassi, A., Peksa, M., Ryckmanns, Y., Opportunities and barriers for sustainable international bio-energy trade: towards an strategic advice. Paper presented at the 14th European Biomass Conference & Exhibition Biomass for Energy, Industry and Climate Protection, Palais des Congres, Paris, France, 17-21 October 2005, p. 4.

Batidzirai, B., Faaij, A., Smeets, E., Biomass production and export opportunities for Mozambique. Paper presented at the 14th European Biomass Conference & Exhibition Biomass for Energy, Industry and Climate Protection, Palais des Congres, Paris, France, 17-21 October 2005, p. 4.

Smeets, E., Faaij, A., and Lewandowski, I. The impact of sustainability criteria on the costs and potentials of bioenergy production. An exploration of the impact of the implementation of sustainability criteria on the costs and potential of bioenergy production, applied for case studies in Brazil and Ukraine. Report NWS-E-2005-6. ISBN 90-73958-00-8 May 2005, pp.103.

Junginger, M., Faaij, A. Sustainable International Bio Energy Trade: securing supply and demand. IEA Bioenergy Task 40 leaflet, Copernicus Institute, October 2005, p.8.

Junginger, M., Faaij, A., IEA Bioenergy Task 40 Country report for the Netherlands. Copernicus Institute for Sustainable Development - Utrecht University, NWS-E-2005-31, July 2005. Pp. 56 + Appendices

Bradley, D. Canada Biomass-Bioenergy Report, Country report for IEA Bioenergy Task 40. Sept 16, 2005, Climate Change Solutions, pp. 20.

Heinimö, J., Ranta, T., International biofuels trade in Finland: a review of the status and future prospects. Paper presented at the 14th European Biomass Conference & Exhibition Biomass for Energy, Industry and Climate Protection, Palais des Congres, Paris, France, 17-21 October 2005, p. 4.

Ranta, T., Lahtinen, P., Elo, J., Laitila, J., The regional balance of wood fuel demand and supply in Finland. Paper presented at International Bioenergy in Wood Industry Conference and Exhibition, Jyväskylä, Finland, 12-15 September 2005.

Wagener, M. Co-firing in The Netherlands: The need for a secure supply. Paper made for the IEA Bioenergy ExCo55 meeting, Copenhagen, Denmark, 25th May 2005.

Key participants (appendix 4)

Operating Agent:

Erik Wissema, Ministry of Economic Affairs, the Netherlands
Kees Kwant, SenterNovem, the Netherlands (Alternate)

Task leaders:

André Faaij (scientific coordinator)
Copernicus Institute, Utrecht University, the Netherlands
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Essent Energy, 's-Hertogenbosch, the Netherlands

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List of Members:

Brazil	University of Campinas	Arnaldo da Silva Walter
Brazil	CENBIO	Jose Roberto Moreira
Canada	Climate Change Solutions	Douglas Bradley
Finland	Lappeenranta University of Techn.	Tapio Ranta
Finland	Lappeenranta University of Techn	Jussi Heinimö
Netherlands	Copernicus Institute-Utrecht Univ.	André Faaij
Netherlands	Copernicus Institute-Utrecht Univ.	Martin Junginger
Netherlands	Essent Energy	Martijn Wagener
Netherlands	Essent Energy	Peter-Paul Schouwenberg
Netherlands	Essent Energy	Alf van Wereeld
Norway	Enova SF	Håvar Risnes
Norway	Enova SF	Øyvind Leistad
Sweden	TalOil AB	Bo Hektor
Sweden	Sveaskog	Erik Ling

Observers in 2005:

Belgium	Laborelec/Electrabel	Yves Ryckmans
Italy	ETA-Florence	Angela Grassi
Italy	ETA-Florence	Malgorzata Peksa
UK	Imperial College	Jeremy Woods
UK	Imperial College	Frank Rosillo-Calle

Cooperation with

World Bank	Boris Utria
FAO	Gustavo Best

All observers have announced they will join task 40 as full members from 2006 onwards.

Contact information (appendix 5)

Operating Agent: The Netherlands

Operating agent	Erik Wissema Ministry of Economic Affairs Directorate General for Competition and Energy PO Box 20 101 2500 EC Den Haag, The Netherlands	Phone: +31-70-3797718 Fax: +31-70-3796358 E-mail: e.w.j.wissema@minez.nl
Alternate operating agent	Kees Kwant (Alternate Operating Agent) SenterNovem PO Box 8242 3503 RE Utrecht, The Netherlands	Phone: +31-30-2393458 Fax: +31-30-2316491 E-mail: k.kwant@novem.nl
Task leader (scientific)	Andre Faaij Copernicus Institute for Sustainable Development, Utrecht University Heidelberglaan 2, 3584 CS, Utrecht, the Netherlands	Phone: +31-30-2537643 Fax: +31-30-2537601 E-mail: a.faaij@chem.uu.nl
Task leader (administrative)	Alf van Weereld & Peter-Paul Schouwenberg Essent Energy Trading Statenlaan 8 5223 LA 's-Hertogenbosch, the Netherlands	Phone: +31-73-8531203 Fax: +31-73-8531596 Email: peter-paul.schouwenberg@essent.nl alf.vanweereld@essent.nl