

TASK 40

Sustainable International Bioenergy Trade – Securing Supply and Demand

Progress Report

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**Prepared by
André Faaij and Peter-Paul Schouwenberg, Task Leaders
and Martin Junginger**

PROGRESS REPORT FOR TASK 40

INTRODUCTION

This is the seventh progress report of Task 40 under the Bioenergy Agreement, prepared for ExCo59 25-27 April 2007 held in Golden, Colorado, United States.

The proposal for this Task was prepared in 2003 and formally submitted and presented to ExCo52, held in November 2003 in Campinas, Brazil, where it was accepted as a new Task under the Bioenergy Agreement. During the first triennium, the kick-off meeting of this new Task was held on 19-20 January in Deventer, the Netherlands, where the work programme was discussed with the new team and various activities started-up. During the first open event of Task 40 in October 2004 in Rome, a more final work programme was agreed upon with concrete deliverables a time schedule and allocated partners per deliverable. After that, the membership still expanded. Belgium, Italy, the UK, and Germany became full members in 2006 (Germany as recently as May 2006). In 2006, the participating countries in Task 40 were the Netherlands, Sweden, Norway, Brazil, Belgium, Germany Finland, Canada, Italy, and the United Kingdom. In addition, the FAO is affiliated to the Task. In its first triennium, Task 40 has (amongst others) organised six open workshops (often jointly with other international networks), published a large number of key deliverables, and disseminated the information of these events and deliverables via numerous oral presentations during international conferences and workshops, full-colour paper leaflets and a website (www.bioenergytrade.org).

During, the ExCo58 meeting, the proposal for prolongation of Task 40 for a second triennium was unanimously approved. The kick-off meeting for the new triennium was held on 20-21 February in Utrecht, the Netherlands, where the work programme was discussed with the T40 national team leaders and various activities were started-up.

The Task is jointly led and coordinated by André Faaij (Copernicus Institute, Utrecht University) and Peter-Paul Schouwenberg (Essent). Martin Junginger (Copernicus, UU) is assisting and logistically supporting the Task. Over the summer of 2006 Rob Remmers (Essent) joined the Task leadership team. Kees Kwant (SenterNovem) is Operating Agent for the Task.

This progress report will both summarise the achievements of the first triennium, and briefly outline the preliminary plans for the second triennium.

OBJECTIVE

Background and rationale of Task 40

Essential drivers for bioenergy trade are security of supply, economics, environmental (GHG mitigation and other) and development at large especially for rural areas (in developing countries). Opportunities for trade also arise due to: mismatches between local fuel resources seldom matches local demand, imbalances in technology, experience and know-how. Differences in rules, regulations, and institutions vary, e.g., in different countries, changes in the conditions of competing systems (e.g., oil prices) and unexpected events, hurricanes, fires, leading to unexpected availability of biomass resources.

Biomass markets are developing fast, but are also immature and many barriers remain. In some markets, prices of biomass resources and fuels are already rising, including indirect effects on price of raw material prices for e.g. the forest industry as well as on food (e.g. sugar). Biomass markets are still immature and this is in particular true for the demand side of the market; many biomass markets, e.g. for solid fuels, rely on policy objectives and incentives, that prove to be volatile.

It is in particular important to develop both supply and demand for biomass and energy carriers derived from biomass in a balanced way and avoid distortions and instability that can threaten investments in biomass production, infrastructure and conversion capacity. Our understanding of how this is best organised and managed is still relatively poor. Biomass markets are poorly mapped and only very limited analyses work, statistics and modelling exercises are available.

In some arenas a fierce debate takes place on the sustainability of large scale use of biomass and international trading. Different perspectives and strategies emerge on how biomass and bioenergy markets should be governed and supported and how the sustainability of the resources and use can be secured (e.g. through certification). Securing that biomass produced in other parts of the world is supplied on a truly sustainable basis requires the development of criteria, project guidelines and a certification system that is supported on an international level. Clearly, the strongly growing demand for biomass and biofuels make clear that there is a growing need to develop biomass resources and exploit biomass production potentials in a sustainable way.

Eventually, biomass may develop into a commodity market, which could have multiple benefits, such as much improved market stability and competitive prices. However, also the sustainability of large scale biomass production and trading has to be secured and choices on the governance of developing biomass markets is now at a critical stage. At this very moment, fundamental policy choices can still be made on how biomass markets can be supported steered, controlled, and governed.

Objectives and Scope

The core objective of the Task is to support the development of a sustainable, international, bioenergy markets, recognising the diversity in resources, biomass applications.

Developing a stable, international, and sustainable bioenergy market is a long-term process. The Task aims to provide strong contributions to such (policy making) decisions in the coming years for market players, policy makers, international bodies as well as NGO's. It aims to do so by providing high quality information and analyses, providing overviews of developments, be a linking pin between different arenas involved in the debate, a clearinghouse for information and by targeted dissemination activities.

The Task aims to provide an outstanding international platform to make inventories of available information and experience, provide new analyses and set the agenda and initiate a host of new activities relevant for developing sustainable biomass markets and trade worldwide.

Trade remains the essential component of the work, but the understanding of developing the demand and supply side for biomass is essential on regional and national level as well. In addition, entrepreneurs and policy makers are now dealing with development of regional or national biomass markets in a quickly developing international context. The balance between opening up markets, removing barriers and at the same time building capacity to develop regional resources and demand is raises complex questions in many situations and requires serious attention. Exchange of information on bioenergy experiences between parties and countries in different stages of market development is thus very important.

Such a work scope addresses several key priorities raised by ExCo, recognising that biomass supplies, their sustainability, and a working market are key issue for bioenergy at large.

Key elements of the work programme and outputs are:

1. Improve the understanding of biomass and bioenergy markets; this includes the description of ongoing developments, support development of statistical material, understanding factors that influence supply and demand for biomass on shorter and longer term as well as learning lessons from comparable other markets (such as food, fodder, forestry products, etc.).
2. Analyse the possibilities to develop biomass resources and exploit biomass production potentials in a sustainable way, including supply chains and required logistics and transportation operations.
3. Coherent analysis of biomass markets by modelling and scenario analysis; dynamic demand and supply models of bioenergy that takes influencing factors (pricing, actual demand, stocks, energy use for long distance transport) into account.
4. Analyse the impacts of biomass utilisation and trade and develop frameworks to secure the sustainability of biomass resources and utilisation. Evaluation of the political, social, economic, and ecological impacts of biomass production and trade, also in relation to specific sustainability criteria. Contributing to certification procedures and development of best practice guidelines, especially for integrating the production of biomass for energy and subsequent export into agricultural and agro-forestry systems, including developing countries.
5. High quality dissemination by means of a key international platform (with a diverse range of stakeholders) for bioenergy trade and markets. Findings of the Task are translated in analysis and advice for industry and entrepreneurs, policy makers and other stakeholders. This includes capacity building (e.g. course material, website based material and workshops), a (hand) book like publication on biomass markets (examples of countries and commodities) on trade chains, certification, etc. Dedicated meetings and targeted paper for decision makers (national policy level and international bodies as WTO, UN, etc.), digital newsletter and expansion of the library function of the website www.bioenergytrade.org (clearinghouse role).

All activities of the Task aim at generating and disseminating information on technical and on barriers and solutions for developing biomass markets. In its first triennium, collaboration has already been implemented with Task 29 in March 2005, Task 30 and 31 in December 2005 and Task 38 in April 2006.

Also for the future we thrive for continued cooperation with these Tasks, but also with other Tasks of the IEA Bioenergy programme, such as Task 32, 33, 34 and 39 (see also section activity meetings)

OPERATING AGENT / TASK LEADER

Operating Agent is the Netherlands agency for energy and the environment (*SenterNovem*), represented by Kees Kwant. The alternative operating agent for the Task is the Ministry of Economic Affairs, represented by Erik Wissema. The Task Leadership is shared between Andre Faaij of the Copernicus Institute for Sustainable Development (Department of Science, Technology and Society) of the Utrecht University in the Netherlands and Peter-Paul Schouwenberg from the Dutch Utility Essent Sustainable Energy in the Netherlands. Rob Remmers (Essent) joined the Task leadership team from the side of Essent. Martin Junginger (Copernicus Institute) is giving structural and logistical support to Task 40.

PARTICIPATION

During, the ExCo58 meeting, the proposal for prolongation of Task 40 for a second triennium was unanimously approved. Belgium, Finland, Germany, the Netherlands, Norway, Sweden, and the UK all indicated they would participate. Since the ExCo meeting, also Canada has reaffirmed its continued participation in Task 40. Brazil and Italy have indicated their willingness to stay within Task 40, but so far, no official confirmation has been received. In addition, the Food and

Agricultural Organization (FAO) is affiliated to Task 40. Up-to-date information is given under 'contact information'.

BUDGET

A summary of the financial statement of Task 40 is presented in Table 1. Funds received for 2006 amounted to US\$131,250. Due to the additional joining of Italy and the UK in 2005 and Germany in 2006, additional funds were available. Thus, it was possible to formulate several new smaller activities under deliverables 3 (modelling markets) and 8 (evaluation of markets), see also below. Overall a closing balance of 23,465.14 Euro was carried forward to 2007.

Table 1: Summary financial statement over 2006

	Euro
Balance carried forward from 2005	94,820.83
Total funds received in 2006	105,987.24
Funds received from IEA Bioenergy Secretary in 2006	
Total Expenditures in 2006	177,342.93
Salaries/benefits	134,300.00
Materials/supplies	2,432.51
Travel	17,461.91
Other expenditures	23,142.51
Closing balance carried forward to 2007	23,465.14

All calculations are based on the exchange rate of December 29th 2006: 1 US\$ = 0.75982 Euro

Unchanged is the ambition to secure other funds to support Task activities. EU funding, World Bank support to carry out relevant research in the context of the work programme of Task 40 and various national funds are considered. As the ExCo has recently adapted the Implementing Agreement to allow sponsorship of non-country institutions, in 2006 the World Bank has been asked to consider sponsorship of the Bioenergy Implementing Agreement. So far however we have not received an answer upon this proposal.

ACTIVITY MEETINGS

Activities in 2005 included a workshop with Task 29 in Washington and Task 30 and 31 and 40 event in Campinas, Brazil. Activities in 2006 included a workshops in Utrecht on 'Future Visions of Biomass Trade', a joint T38 and T40 workshop in Trondheim, Norway on the advantages of the bioenergy various trading possibilities, and a joint workshop with (amongst others) Eubionet2 in Lappeenranta, Finland, on the forestry sector and Russia. Full reports can be found on the Task 40 website and in previous progress reports. The presentations given at these workshops and the full meeting reports can be downloaded from the Task 40 website www.bioenergytrade.org. A full overview of all public activities organised by Task 40 during the 2004-2006 triennium is given in Table 2.

Table 2: Overview of all public activities organised by Task 40 in 2004-2006

Date	Location	Status	Note
January 19-20, 2004	Deventer, the Netherlands	Completed	Kick-off meeting; overview of expertise, discussion and finalisation of work programme and deliverables.
May 13, 2004	Rome, Italy	Completed	Informal Task meeting, discuss progress on planning and participation.
October 26-28, 2004	Rome, Italy (FAO)	Completed	Business Forum on bioenergy trade; open meeting of two days hosted by FAO + internal T40 meeting
March 16-18, 2005	Washington DC (World Bank).	Completed	Socio-economic impacts and benefits of international bioenergy trade. Combined event with Task 29 and the Energy Unit of the World Bank. Organised as a side event during the Energy Week of the World Bank. + internal T40 meeting.
October 2005	Paris, France	Completed	Oral contributions to the 14 th European Biomass Conference (with ETA-Florence), presentation of the strategic advice paper, distribution of the Task 40 information leaflet
November 28-December 2, 2005	Campinas, Brazil	Completed	Combined effort with Tasks 30 and 31, Business Forum on biotrade with Brazilian industry and covering sustainable biomass production systems for export and certification. The workshop was preceded by a 2 day internal Task meeting to discuss progress of several key deliverables of the work programme
January 31, 2006	Utrecht, the Netherlands	Completed	Workshop 'Future Visions of Biomass Trade' in cooperation with EUBIONET
April 3-7 2006	Trondheim, Norway	Completed	Joint event of Task 38 and Task 40 on bioenergy trade, GHG accounting, and emission trading. The workshop was preceded by a 2 day internal Task meeting to discuss progress of several key deliverables of the work programme.
October 23-27 2006	Lappeenranta, Finland, and study tour to Russia (St. Petersburg and surroundings)	Completed	Lappeenranta University of Technology, Finnish Funding Agency for Technology and Innovation (Tekes), ClimBus Technology Programme, Task 40, and EUBIONET II jointly organise an international seminar on developing bioenergy markets focusing on forest sector and Russia. The workshop will be preceded by a 1.5 day internal Task meeting to meeting to finalise all deliverables of the 2004-2006 triennium and plan the 2007-2009 triennium.

Scheduled Meetings and events in 2007

For 2007, a large number of activities have been scheduled, and the first large event has already been organised. On 19-20 February 2007, Task 40 and EUBIONET organised a joint workshop on biomass policies and trade in Rotterdam, The Netherlands. The aim of the workshop was to look for improvement of bio energy policies in Europe by discussing arising issues and by learning from experiences in other countries. Workshop topics included trade of solid biomass and trends in the market, sustainability certification for bio-energy and chain management, new developments in bio energy policies and the potential for energy from (biogenic) waste. Also, the workshop featured a tour through the harbour of Rotterdam and (on Tuesday) a field trip to the Essent Amer power plant, where large quantities of biomass are co-fired. About sixty participants joined the workshop. Of the participants, more than half came from abroad. All workshop presentations are available at the T40 website (www.bioenergytrade.org), and the minutes and a summary of the main outcomes will be published soon.

Two more major events are planned for 2007: a workshop as side-event to the biomass conference in Berlin in May 2007 on "ensuring increasing and sustainable biomass production: the importance for international bioenergy trade", and a major workshop in Canada in September 2007. Also, a minor contribution (2-3 presentations) is planned to the Synbios conference in Stockholm, Sweden. An overview of Task activities scheduled so far for 2007 is provided below in table 2. Further preliminary plans for the 2008-2009 are summarised in Table 4.

Table 3: Overview of Task activities scheduled do far for 2007

Date	Location	Status	Description
19 - 20 February 2007	Rotterdam, the Netherlands	Completed	Joint workshop with Eubionet2 on policy, biomass certification and biomass trade, including field trip to Essents Amer power plant co-firing wood pellets
20-21 February 2007	Utrecht, the Netherlands	Completed	1,5 day internal Task 40 Kick-off meeting of the new triennium, finalisation of working schedule
10 May 2007	Berlin, Germany	In preparation	Workshop on international bioenergy trade during the biomass conference: "Ensuring increasing and sustainable biomass production: the importance for international bioenergy trade"
11 May 2007	Berlin, Germany	In preparation	1 day internal Task meeting
23-24 May 2007	Stockholm, Sweden	In preparation	2-3 Short contributions to Synbios conference on topics such as resource assessment, logistics and trade of pyrolysis oil
Tentatively 10-14 September 2007	Toronto, Canada	In preparation	Topics to be defined, keywords are highlight opportunities to utilise biomass for export, make trade easier & free up forest biomass for export; possibly include field trips to Dynamotive and Iogen plants

Table 4: Rough outline of possible events for the period 2008-2009

Suggested date	Content of event	Parties/ Tasks involved and suggested location
Spring 2008	Workshop on co-firing/large scale power generation markets and related supply systems and technologies	Possible joint event with Task 32, 33. Belgium/Netherlands
Autumn 2008	A high level event aimed towards the key international bodies as UNCTAD, FAO, WB, UNECE, WTO, etc. to provide an agenda for stimulating/facilitating open and sustainable trade, including certification and standardisation issues.	In collaboration with FAO, WB, UNCTAD, UNEP, a.o. Geneva
Winter 2008	Workshop with key modellers (including market parties) on biomass resource and market studies from different arena's; setting an agenda for further work and identifying tools and results that can be used by further work of the Task.	Dedicated workshop Italy
Spring 2009	On future supplies, supply lines, trading and market formation for 2 nd generation biofuels (synfuels and ethanol)	Possible joint meeting with Tasks 39 and 34. United Kingdom
Autumn 2009	A follow up with on sustainable biomass production and supplies and potentials for the international market on providing the knowledge base for sound certification; including the development of pilots and demonstrations in DC's.	Tasks 29, 30, 31 and 38

PROGRESS

See other sections (e.g. deliverables and activity meetings)

DELIVERABLES 2004-2006 TRIENNIUM

The list below summarises the deliverables/work packages covered by the Task. This list is based on both the discussions and written input from various parties. Each "deliverable leader" provided a (draft) work plan + proposal for contents, type of deliverable (report, case studies, etc.). The list covers the key objective, the type of inputs required or available, the actual products and crude time planning, and the final result.

1. Market experience

Obtain an overview of current trading experiences and markets as well as potential future markets.

Responsible partners: Coordination by Sweden and the Netherlands, support from all T40 members

Deliverables:

- a. Country reports (all members); various reports are available on the website www.bioenergytrade.org.
- b. Business Forum Rome (expanded with other business fora during this triennium).
- c. Edited final synthesis report based on the country reports; coordination and integration work is taken up by Sweden. Task management (Junginger and Faaij) will support drafting of a final report over 2006.

Progress and final deliverables: In regard to the market experience (deliverable 1), a total of eight country reports (Belgium, Brazil, Canada, Finland, Norway, Sweden, the Netherlands and the UK) have been published. Several of these reports have also been updated during the first triennium. Data from all these country reports has been collected from all Task members, and a synthesis report was prepared, comparing the biomass production, utilisation and especially the trade in the Task 40 member countries. Two products (wood pellets and ethanol) were highlighted in detail. The synthesis report and several of the country reports have been submitted for the special issue of Biomass and Bioenergy (see also deliverable 9 dissemination).

2. Strategic advice on barriers, opportunities and strategy

Compile a strategic document that covers:

- Inventory of barriers (technical, logistic, economic, organisation, regulatory) and opportunities for developing working biomass and bioenergy markets and (international) trade.
- A distinction should be made between direct biomass imports for energy and indirect imports (e.g. biomaterials)
- Linkages to (emerging) carbon markets should be incorporated (such as the European Emission Trading System).
- Formulate strategies to cope with those barriers.

Responsible partner: Netherlands (supported by all partners).

Deliverables:

- A Strategic review document, which also serves as input for strategic advice to IEA Bioenergy (and other bodies). A conference paper with preliminary findings was presented during the biomass conference in October 2005.
- Strategic advice on how to develop and support bioenergy trade, e.g. for the ExCo. Largely a compilation of the results from various deliverables; delivered in November 2006.

Progress and final deliverables: The strategic advice was being written in several iterative phases. A first draft was set up by the Dutch partners, and distributed amongst the Task members. All Task members have the opportunity to comment and edit this draft in a first round until the end of September. Then, a conference paper was written on basis of all the input, which will be presented in Paris in October 2005. Based on further input from the conference, the strategic advice was then further elaborated, and presented at the internal Task meeting in Brazil at the end of 2005. Based on a second round of comments the final Strategic advice was presented and approved at the Trondheim meeting, and was sent to the 57th ExCo meeting. Several ExCo members had a number of comments on this document. Most of these recommendations were incorporated in the final document. Finally, after the written approval of all national Task leaders, the document was published as 'recommendations for bioenergy trade' as a Task 40 deliverable in November 2006 (see

also the publication list). A shortened version of the document was also published as technical report in November 2006.

3: Modelling markets:

This activity should provide insight in the development of biomass resources and supplies in relation to market demand; e.g. by applying various (modelling) tools. The analyses should evaluate the importance of different developments for international bioenergy trade. The key of such an analysis could consist of a combination of modelling approaches and compile an integrated model that could do the job on different levels of detail.

Responsible partners: Norway (Risnes, Solberg a.o.), Netherlands (Faaij) and Finland (Ranta, Heinimo) pursue funding possibilities (national) for research activities.

Deliverables: One or more project proposals (EU, combined national funds) coordinated by T40 members (and, if approved, the results of such a study). For the EC, one of the coming calls will be considered.

Progress and final deliverables: So far, no suitable calls was identified to submit a proposal to for modelling biomass markets. However, other outputs for this deliverable outputs will be:

- The results of the 'Future Visions on biomass trade' workshop held in Utrecht in January 2006, organised by Jussi Heinimö. A conference paper will be available. See also under 'activity meetings' above.
- No suitable tender was identified or call was identified to submit a proposal on modelling bioenergy trade. However, using the extra budget available in 2006, a review of existing models and their suitability for bioenergy trade. The work was lead by Norway (Birger Solberg), supported by the Netherlands. This work has been carried out between autumn 2006 and spring 2007. A draft report was presented at the Task meeting in Utrecht. A final (and externally reviewed) report of about 40 pages will be prepared for the Berlin meeting.

4: Supply chain analysis (including forestry chains).

This work covers performance evaluations (techno-economic) and further development/optimisation of long distance bioenergy supply chains, in particular sea transport. This could especially be approached by doing concrete case studies of chains and transport systems. Following suggestions and considerations are raised:

Responsible partners: Coordinating group by Canada, Finland, Norway; (supported by Sweden, Netherlands).

Deliverables:

- Case studies; being carried out in 2004-2005
- Different report of the various case studies.

Progress and final deliverables: Studies have being carried out in the summer and fall of 2005, in Norway, Finland and Canada. In Canada, data was being collected on bio-oils, pellets and ethanol from woody biomass. Also, the UK, contributed a study on co-firing. All these reports are available for download on the Task 40 website. Furthermore, with the additional budget available in 2006, an effort was possible to write a synthesis paper, summarising and combining the lessons and conclusions from the individual countries. This paper was submitted to biomass and bioenergy to be included in the special Task 40 issue on international bioenergy trade (see also 9. dissemination)

5: Certification systems:

Certification, standardisation and terminology for sustainable bioenergy trade.

Responsible partner: Netherlands, with FAO, UK (EC is expected to participate when membership would be secured).

Deliverables:

- The Campinas workshop in November/December 2005 on sustainable biomass production systems in Brazil in combination with Task 30 and 31 (short rotation coppice and sustainable forestry)
- Synthesis report from Task 40 and input for strategic advice to ExCo. Report will be drafted over the summer of 2006, coordinated by Utrecht University.

Progress and final deliverables: One report by Lewandowski et al. has been published on the possible criteria and indicators for biomass certification systems based on a comparison of other certification systems. The possible social and environmental impacts of biomass production depending on different certification/sustainability criteria have been evaluated for Brazil and the Ukraine by Utrecht University (Smeets et al., to be published shortly on the website). Furthermore, the issues around certification have been discussed at the programme for the Brazil workshop, including planned contributions from FAO, UNCTAD and WTO. A summary of the results is available on the Task 40 website.

As an additional output, the Copernicus Institute and The University of Campinas published an extensive report on the sustainability of ethanol from sugar cane produced in Brazil, its compliance with newly-defined Dutch sustainability criteria for biomass and potential additional costs to meet the most demanding sustainability criteria. This report will also be available on the Task 40 website.

These results were (amongst others) used as input for the final result of this deliverable, a scientific paper for Biomass and Bioenergy; though it can also be published in leaflet form to reach a broader audience. The article covers biomass certification systems, related certification systems in agriculture and forestry, policy developments within the T40 member countries on certification (mainly the Netherlands, the UK and Belgium), potential barriers to biomass certification systems and options on how to further introduce biomass certification. This work was mainly carried out by the Netherlands (Jinke van Dam, Martin Junginger, Andre Faaij) and co-authored with FAO (Gustavo Best and Ingmar Jürgens) and Germany (Uwe Fritsche). A preliminary draft was distributed to over 100 experts for comments. After having received their comments, a final version was submitted to the special issue of Biomass and Bioenergy.

6: Pilot projects:

Identify possibilities for pilot- and demonstration projects and aim for supporting their development; especially in developing countries (e.g. Africa). Key output for the shorter term should be a work plan, which describes how pilot projects are set-up in an international setting and what is needed from organisational and financial point of view. The World Bank and FAO have prime experience in this field.

Responsible partner: World Bank / FAO; Netherlands, UK, Canada

Deliverables:

- Plan of action/work programme on setting up pilot projects.
- Selection of potential projects.
- First feasibility study(s) to be developed over 2005 by World Bank.

- Subject for March 2005 event hosted by World Bank in Washington during the Energy Week in combination with Task 29 on socio-economic aspects of bioenergy trade and potential contribution to (rural) development

Progress and final deliverables: The possibilities for pilot- and demonstration projects and aim for supporting their development have been discussed in detail during the Washington meeting. The meeting report and the PowerPoint presentations are available on the Task 40 website. However, as the World Bank no longer formally participates within Task 40, no further activities were realised for this topic.

7: Case studies; impact analysis:

Provide insight (e.g. through case studies and best practice examples) in the socio-economic and ecological impacts of biomass production and trading schemes and demonstrate how bioenergy trade can contribute to general (sustainable) development targets.

Responsible partners: FAO, Netherlands, UK, World Bank

Deliverables:

- Concrete case studies, in particular in developing countries. More material is made available from studies in the Netherlands, the UK and Sweden.
- Event during the Energy Week of World Bank in Washington in combination with Task 29 on socio-economic aspects of bioenergy trade and potential contribution to (rural) development.
- Subject for fall 2005 event possibly in Brazil in possible combination with Task 30 and 31 (forestry and short rotation coppice).

Progress and final deliverables: As case studies, the possible social and environmental impacts of biomass production have been evaluated for Brazil and the Ukraine by Utrecht University (Smeets et al., to be published shortly on the website). The socio-economic and ecological impacts of biomass production and trading schemes have been discussed in detail during the Washington meeting. The meeting report and the power point presentations are available on the fair biotrade website. Furthermore, articles for a Special Issue of the Journal Energy for Sustainable Development on international bioenergy trade and sustainable development have been published, which are largely based on contributions made during the World Bank event. The special issue has been published in March 2006. Also the joint workshop with Task 30 and 31 at the end of 2005 in Brazil dealt with these topics. Regarding concrete case studies in developing countries, hopes are that the FAO will contribute more input in the 2007-2009 triennium.

8: Evaluation of markets (Ethanol and other commodities):

This work should evaluate major emerging markets for bioenergy trade focusing on specific commodities. Focus lay first on ethanol. Other commodities currently assessed are pellets and bio-oil.

Responsible partners: Brazil; UK, Canada (others when other commodities are going to be addressed).

Deliverables: A full English report.

Progress and final deliverables: The focus of the research is on evaluating markets for fuel ethanol trade and, more specifically, on the Brazilian experience on large-scale fuel ethanol production and exports. As long as this evaluation is successful, Task 40 can continue with assessing other commodities, like pellets, vegetal oils, bio-oil, or electricity.

The ethanol market research has been conducted in the context of an M.Sc. dissertation that was presented by February 2006 at State University of Campinas. The research has been structured in

five parts, besides the final conclusions that aim at the critical analysis recommendations. The final ethanol market study, an English report about 50-60 pages long, was published in January 2007. A more compact version of the report was also submitted to the special issue of Biomass and Bioenergy.

As funds were available for the remainder for 2006, it was decided at the Trondheim Task meeting to carry out two additional market studies:

1. A European market study for (pyrolysis) bio-oil, carried out by Doug Bradley (Canadian NTL). The supply side covers an analysis of Canadian production locations and major locations offshore (e.g. South Africa, Brazil and Europe itself). The analysis includes the own domestic demand and the potential for export. The demand side analysis focuses on Europe. The study was finished in 2006 and is available for download on the Task website.
2. The second market study is on pellets and sawdust. This study is currently carried out by ETA Florence, Lappeenranta University and the University of Campinas. Results will be presented during the meeting in Berlin.

9: Improved communication, raising awareness, networking, and information exchange on the fields covered by the Task.

Responsible: Netherlands (Task leader), supported by all T40 members

Deliverables:

- Website distribution; the website www.bioenergytrade.org is developed further over the reporting period and visiting number are growing considerably (see below)
- Active distribution of results to dedicated audiences, etc.

Progress: The website was continuously developed further and expanded further over the course of 2006. Main changes to the website were the addition of a members-only section, and a database through which all documents can be searched and retrieved.

Over the course of the first triennium, the number of visitors and the amount of data downloaded have increased impressively. The number of visitors has risen to almost 5000 per month, and in top months, up to 4000 MB of data have been downloaded from the website, as can be seen in figure 1. Over the last year, the top ten documents are downloaded each over one hundred times per month, some of them even several thousand times within a month. Popular downloads are for example the workshop summaries and presentations, and (newly added) country reports. For example, the Finnish country report was downloaded over 5000 times since May 2006. In February 2006, the market studies on bio-oil and ethanol, the sustainability assessment of Brazilian ethanol, the UK co-firing report and the overview on biomass certification were all downloaded over 1000 times.

For an overview of the publications available on the website, see the end of this section.

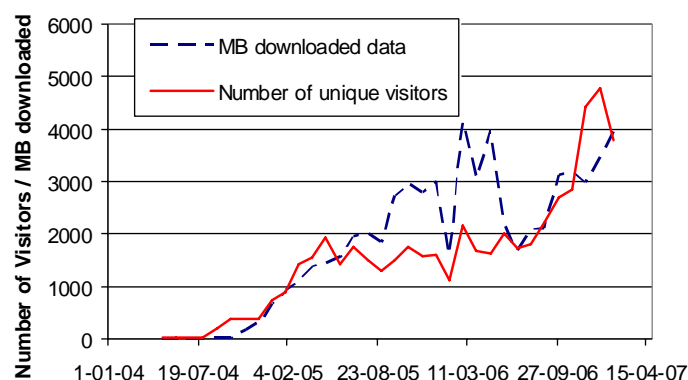


Figure 1: Statistics of the Task 40 website www.bioenergytrade.org (April 2004 – February 2007)

A key output of the Task so far is the Special Issue of the Journal Energy for Sustainable Development on international bioenergy trade and sustainable development that has been published in March 2006. The articles are largely based on contributions made during the World Bank event.

Furthermore, it was decided that a number of key deliverables of Task 40 will be published in a special issue of Biomass and Bioenergy. In total, ten articles have been submitted to biomass and Bioenergy in January 2007 including several country reports and the synthesis report, articles on supply chains and biomass certification systems. The targeted publication date is the second quarter of 2007.

The Task 40 leaflet has been finished in October 2005. Due to large popularity, a second edition was printed and distributed in April 2006. Furthermore Task 40 and Task 38 jointly contributed the coloured section of the IEA Bioenergy annual report. Finally, a stand-alone leaflet was currently by T38 and T40 containing the summary of the joint workshop held in April 2006 and the contribution to the final report. For 2007, another update of the popular T40 leaflet is planned.

DELIVERABLES 2007-2009 TRIENNIUM

As the new triennium has just started, no fixed set of deliverables has been formulated yet. However, during the kick-off meeting in Utrecht in February 2007, a set of eleven preliminary areas of work were formulated:

- I. Forest supply systems
- II. Country report (updates)
- III. Develop meaningful statistics on international bioenergy trade
- IV. Market studies
- V. Case studies on sustainable production and supply of solid and liquid biomass for energy
- VI. Sustainability criteria/ certification review
- VII. Demand analysis: Co-firing, heat, CHP, liquid biofuels, ExCo priority,
- VIII. Re-address barriers
- IX. Impact of policies
- X. Modelling of biomass trade
- XI. Dissemination

Some of these areas are already covered in the workshops held/planned in Rotterdam, Berlin and Toronto over the course of 2007. For all areas, more concrete plans will be elaborated during the Berlin and Toronto Task meetings in May and September 2007.

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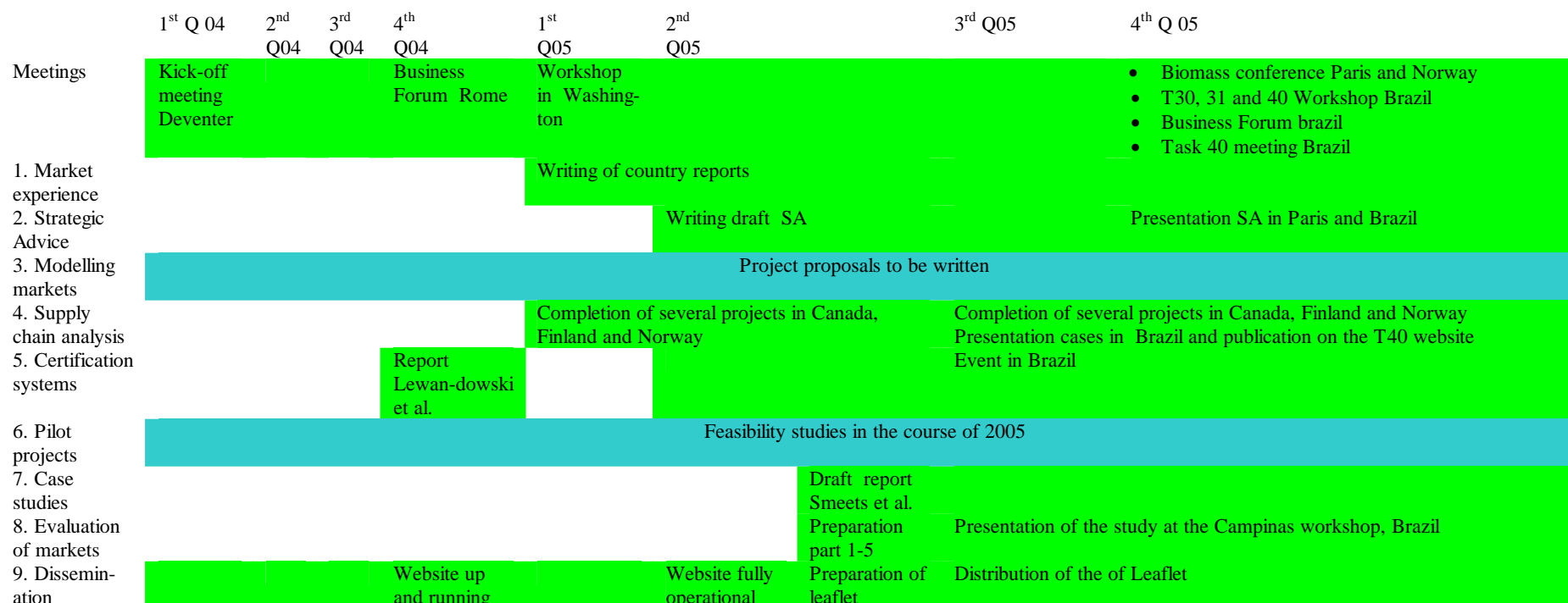
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Note that there is also a multitude of presentations available from workshop etc., which have not been listed here.

Overview of progress achieved and planned activities for the various deliverables (The table is continued on the next page for 2006)

Gantt diagram (Green = Progress achieved, yellow = in progress / planned activities, blue= partially delayed activities, red = delayed activities)



	1 st q 06	2 nd Q 06	3 rd Q 06	4 th Q 06
Meetings	<ul style="list-style-type: none"> Task 40 meeting Norway T38 and 40 Workshop Norway 			End of Task meeting (Lappeenranta, Finland)
1. Market experience		Publication of additional/updated country reports	Publication of additional/updated country reports	Publication of synthesis report
2. Strategic Advice	Finishing SA		Review of ExCo comments	Publication of final report
3. Modelling markets	Future Visions on biomass trade' workshop		Review study of biomass market models	
4. Supply chain analysis			Publication of certification paper	
5. Certification systems			Project proposals	
6. Pilot projects			Feasibility studies	
7. Case studies				
8. Evaluation of markets		<ul style="list-style-type: none"> Publication of ethanol market study Market study on pyrolysis oil Market study on pellets and saw dust 		
9. Dissemination	Publication of ESD special issue			Publication of Biomass and bioenergy special issue (spring 2007)

CONTACT INFORMATION OF THE TASK MEMBERS

Country	Contact person	Address
Belgium	Yves Ryckmans	Dr. Yves Ryckmans Laborelec/Electrabel Rodestraat, 125 B - 1630 Linkebeek +32 (2) 382 03 03 yves.ryckmans@laborelec.com
Brazil (not yet confirmed for 2007-2009 triennium)	Arnaldo Walter (NTL) (UNICAMP) Jose Moreira (CENBIO)	State University of Campinas 13083-970 Campinas, Sao Paulo Brazil tel: +55-19-3788-3283 fax: +55-19-3789-3722 e-mail: awalter@fem.unicamp.br National Reference Center on Biomass - CENBIO R. Francisco Dias Velho 814, Sao Paulo, SP 04581-001, Brazil bun2@tsp.com.br Tel: +55-11-55311844, Fax: +55-11-55353077
Canada	Douglas Bradley	Doug Bradley President, Climate Change Solutions 69 Fulton Avenue Ottawa, Ontario, Canada K1S 4Y7 (613) 730-1999, (cell) (613) 290-1728 douglas.bradley@rogers.com
Finland	Tapio Ranta Jussi Heinimö	Lappeenranta University of Technology Department of Energy and Environmental Technology P.O. Box 181 FIN 50101 Mikkeli Finland Tel: +358-15-355-6820 / 0936, Fax: +358-15-355-6365
Germany	Uwe Fritsche	Coordinator, Energy and Climate Division Oeko-Institut (Institute for applied Ecology), Darmstadt Office Rheinstr. 95, D-64295 Darmstadt, Germany tel +49-6151-8191-24 fax +49-6151-8191-33 u.fritsche@oeko.de
Netherlands	Andre Faaij, Martin Junginger (UU) Peter-Paul Schouwenberg (Essent)	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 Essent Energy Trading Willemsplein 4 5211 AK 's-Hertogenbosch P.O. Box 689; 5201 AR 's-Hertogenbosch The Netherlands Phone: +31-73-8531733 Fax: +31-73-8531578 Cell : +31 6 55112468 E-mail: peter-paul.schouwenberg@essent.nl
Netherlands	Kees Kwant (Operating Agent)	SenterNOVEM PO Box 8242 3503 RE Utrecht tel. + 31 30 239 3458, fax + 31 30 231 6491 e-mail k.kwant@novem.nl

Country	Contact person	Address
Netherlands	Erik Wissema (Alternate Operating Agent)	Ministry of Economic Affairs Directorate General for Competition and Energy PO Box 20 101 2500 EC Den Haag tel. +31-70-379-7718, fax +31-70-379-6358 e-mail e.w.j.wissema@minez.nl
Norway	Øyvind Leistad Birger Solberg	Enova Abelsgate 5, 7030 Trondheim, Norway Phone: +47-73-190-430 Fax: +47-73-190-431 E-mail: oyvind.leistad@enova.no INA, UMB, P.O. Box 5003, NO-1432 Ås, Norway E-mail: birger.solberg@umb.no Telephone: +47 64 96 57 28; Fax: +47 64 96 58 02
Sweden	Bo Hektor (TallOil AB)	TallOil AB Klarabergsviadukten 70, D7 S-111 64 Stockholm Sweden Tel: +46 (0)8 109915, Fax: +46 (0)8 109923
United Kingdom	Frank Rosillo-Calle / Jeremy Woods	ICCEPT Imperial College London Room 4.02 RSM Building Prince Consort Road Kensington Campus London SW7 2BP, UK Tel. 44 (0) 20 7594 73 15 E-mail: f.rosillo-calle@ic.ac.uk
Affiliated International bodies		
FAO	Gustavo Best / Ingmar Jürgens	Senior Energy Coordinator Environment and Natural Resources Service Food and Agriculture Organization of the United Nations Rome, Italy Tel: +39 0657055534, Fax: +39 0657053369 Email: Gustavo.Best@fao.org