2nd Joint Newsletter

FP7 twin projects BEE and CEUBIOM

September 2010

Please note the pre-announcement of the final public presentation of project results of the two projects (on page 8) at the

Biomass Assessment Conference

The potential of biomass for energy in Europe and European countries – assessments, assessment methodologies & harmonisation of assessments

8. Nov. 2010, Brussels, Club of the University Foundation

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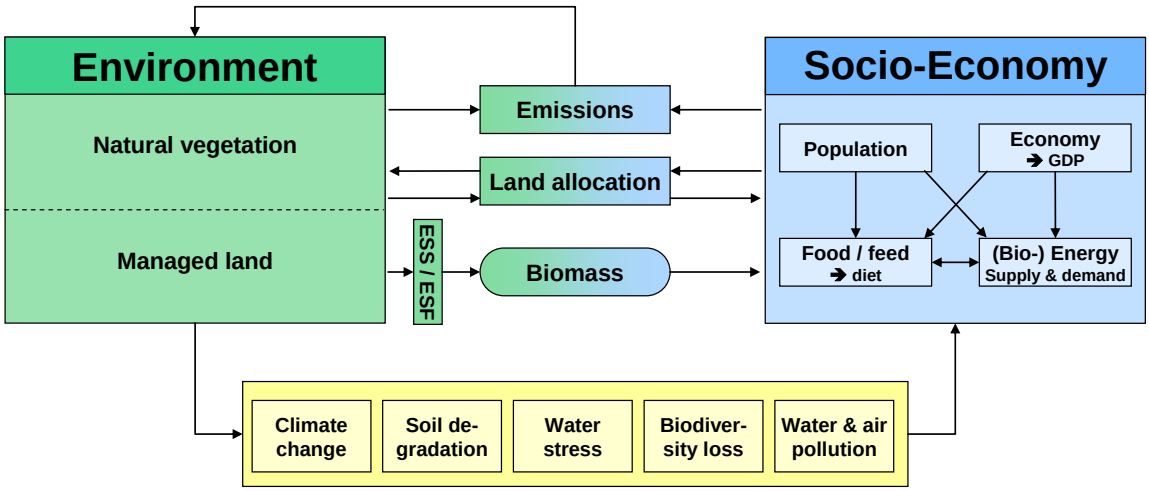
This newsletter was prepared in a joint initiative between the two FP7 twin projects 'Biomass Energy Europe' (BEE) and 'Classification of European Biomass Potential for Bioenergy Using Terrestrial and Earth Observation' (CEUBIOM). The newsletter intends to inform users and providers of biomass resource assessments about the projects' activities and results, and about upcoming international events related to bioenergy.

BEE Methods handbook reviewed

The second and final version of the Methods Handbook is nearly finished. The methods handbook contains best practices and harmonised methods to assess the availability of biomass, covering the forestry, agricultural and waste sectors. The methods handbook includes detailed guidelines on how and which sustainability aspects could be integrated in the different types of resource assessments.

Environmental, social and economic impacts and feedbacks of bioenergy production



In May 2010, several external parties were invited to review the first version of the methods handbook. It resulted in valuable contributions from amongst others the European Topic Centre on Sustainable Consumption and Production, the Joint Research Centre, the Deutsches Biomasse Forschungszentrum, and the European Commission. Altogether, the reviews covered the whole Methods Handbook. We would like to thank the external reviewers very much for their support.

Next to the external review, illustration cases have been developed (see p.3), thereby testing the practical applicability of the presented methods. In many cases, based on the findings during performance of the illustration cases, the descriptions of the methods and the data sources have been further refined.

The results of the external review and the inputs from the illustration cases were combined with a regular internal review. In the coming weeks, the Methods Handbook for the support of users (policy makers, companies) and producers (scientists, consultancies) of biomass resource assessments will be finalised, and will be made publicly available by the end of 2010.

Martijn Vis, BTG Biomass Technology Group BV

Illustration of Method and Data Handbooks in specific assessments

Within Work Package 6 of the BEE project the assessed and harmonised methods analysed by the BEE partners will be applied to very specific demonstration cases. The work is currently still ongoing. For September 2010 results are expected for cases applied to Croatia, Finland, Former Yugoslavian Republic of Macedonia, Ukraine, and the European Union.

Objectives of the Illustration Cases

The aim of the Illustration Cases is to demonstrate the application of biomass resource assessments for different methods at different geographical scales with the harmonised BEE approach presented in the Method and Data Handbooks. The main focus is on the illustration and validation of the applicability of the methodological recommendations. Criteria for the assessment are reliability of the estimated potential numbers and comparability among methods.

Expected results of the assessment

In general the Illustration Cases will deliver biomass resource potentials for the study regions. At least available areas and potential biomass supply at different levels will be made available for further use and comparison with other assessments. The applicability of the analysed sustainability criteria will also be part of the assessment. However, data gaps and methodological challenges with respect to the proposed methods will also be documented as a reality check of the proposed harmonised methods. Results will emphasise where data gaps still exist, and how they can be filled. The illustration cases will also show the limits to harmonisation of methods and thus present differences in biomass potentials that are merely due to the application of different methods.

European Illustration Case as an overarching demonstration and evaluation

The Illustration Cases cover Croatia, Finland, Former Yugoslavian Republic of Macedonia, Ukraine, and the European Union. The case of the EU27 is most interesting with respect to the comparison of different methods. The assessment will not only cover all biomass types from all three sectors (forestry, agriculture and waste), but also cover a wide range of methods, simultaneously applied to the same area of the 27 EU Member States. Methods include statistical approaches, geographically explicit analyses and the application of integrated land use models. This will allow a comparison and consistent evaluation of the proposed BEE methods across potentials. The comparison of statistical data bases, potential maps and model simulations of future demand for biomass for bioenergy will give insight into constraints to the theoretical potential and lead to a more consistent picture of potential biomass supply in Europe.

Hannes Böttcher, International Institute of Applied Systems Analysis (IIASA)

Overview of coverage of biomass assessment methods and biomass types in the EU27 Illustration Case (E=Energy crops; F=Forestry biomass; A=Agricultural residues; W=Waste; T=Total)

Possible assumptions and constraints	Potential			
	Theoretical	Technical	Economic	Implementation
Statistical analysis	EFAWT	EFAWT		(Current use)
Spatially explicit analysis	EF	EF		
Energy-economics and energy-system model analysis	EFA T	EFA T	EFA T	
Integrated assessment model analysis	EFA T	EFA T	EFA T	EFA T

Combination and harmonisation of EO & terrestrial methods

Work on a harmonised approach of biomass assessment of the CEUBIOM project (Work Package 4) has been underway since March 2009 and is employing the information provided by the deliverables of previous work (WP2 and WP3) on biomass estimation methods using earth observation (EO) and terrestrial data. This is the core work package that will deliver the harmonised approach of biomass estimation in October 2010, just before the project ends in November 2010.

Acquisition of terrestrial data is a very costly and time-consuming operation. In order to avoid these hindrances, each partner has conducted a survey on the available data from their respective countries, in terms of biomass availability, both for the forestry and agricultural sector. The available statistics at a national and even European (EUROSTAT) level could be used in a harmonised methodology, reducing the cost and the time required to produce an estimate of biomass availability.

In addition to the data survey, potential users of a harmonised method were contacted in each country, represented in the project by the partners. Representatives from those users were interviewed and answered questions regarding their requirements in terms of the characteristics of the product (format, accuracy, cost, frequency), the type of information needed and how this information would be used. The opinion of the users is essential in the process of formulating the harmonised methodology. Another round of feedback from these users will be obtained and incorporated in the final results, once the harmonised methodology has been developed.

Chariton Kalaitzidis, Mediterranean Agronomic Institute of Chania

Suggested harmonised approach

One of the major products of the CEUBIOM project, will be a harmonised methodology employing EO data for estimation of biomass for bioenergy potential. The methodology will deal with forest, agriculture, grasslands and energy crops.

For each vegetation type, two methodologies will be proposed. A basic approach will employ widely available statistical data, as well as EO datasets which are routinely captured by other national or EU activities (CORINE, geoland2 products). The basic approach will consists of simple steps for combining EO and statistical data for the estimation of biomass potential.

The advanced method will employ more detailed data, both EO and terrestrial. EO data processing will require a higher degree of familiarity but the overall method will be more adaptable to the particular needs of the users. The report will be published at the end of September 2010 and will be available at the CEUBIOM website.

Chariton Kalaitzidis, Mediterranean Agronomic Institute of Chania

First steps for future biomass/EO research

Identifying existing data and research gaps has also been tackled in the CEUBIOM project. A platform was launched a year ago, which serves as a forum of discussions between partners and other scientists, in an effort to identify the existing gaps between current and proposed methodologies, further needs of the users and other potential sources of data. A report on the existing research gaps will be published in the following months, highlighting the research paths that must be followed, in order to increase the efficiency of estimation of biomass potential.

Chariton Kalaitzidis, Mediterranean Agronomic Institute of Chania

e-Learning Tool

In order to inform and educate the public with the information required to understand the methods of estimating biomass potential an online e-training programme is currently under development. The web-based tool aims to inform the public on the harmonised approach of formulating a hybrid method, employing both EO and terrestrial data. It also addresses the requirements and hindrances as well as the benefits of employing a hybrid approach. The tool will be released at the end of the project.

Chariton Kalaitzidis, Mediterranean Agronomic Institute of Chania

Discussion Platform

An online discussion platform of the CEUBIOM Project has been opened to discuss issues related to biomass for energy and participating in the discussions on harmonising biomass resource assessment. Current discussion topics include:

- Questionnaires and surveys;
- Harmonised European EO and terrestrial methods;
- Common Innovative EO methodology for biomass assessment;
- Identification of barriers of EU harmonised approaches;
- European biomass dataset;
- Research roadmap;
- Stakeholder interaction, policy framework;
- Role of biomass in energy planning;
- Forest biomass and its role in the renewable energy strategies.

The discussion platform is open to all interested parties at:
http://ceubiom.acsys.it:8080/web/guest/home

Gaetano Pace, Advanced Computer Systems

International Symposium on Biomass Assessment Methods

Brussels, 15 April 2010

The International Symposium on Biomass Assessment Methods was held on the 15th of April 2010. It was co-organised by the CEUBIOM and BEE projects and was hosted at the premises of European Commission, in the building of DG RESEARCH in Brussels. The aim of the symposium was to gather parties with an interest on the use of biomass for bioenergy and the methodologies available for the estimation of biomass potential.

More than 80 registrations were made for this one-day symposium, representing 25 countries. Participants included members of the two project consortia but a large number of attendants originated from countries outside the consortia, such as Albania, Serbia, Spain, France and the UK.

Opening of the International Symposium on Biomass Assessment Methods

The first half of the day consisted of three presentations from invited speakers outside both consortia: Mr. Christopher Prins provided a presentation on the availability of wood in Europe with regards to the competition between energy and other uses; Dr. Berien Elbersen covered the issue of methods of assessing biomass potential from agriculture and energy crops in Europe; and the third presentation, by Dr. Ralph Overend, provided an insight on the manner with which biomass for bioenergy is dealt with in the USA and the policies that are in place considering this issue.

The second half of the symposium concerned the two projects, CEUBIOM and BEE. Presentations were provided by the project co-ordinators Mr. Balazs Bodo and Dr. Matthias Dees respectively, on the overall aims and progress of the projects, followed by presentations of partners from the consortia, concerned with the major deliverables of the project. Following the presentations, discussions took place focusing on the methods and current work of the two projects. Despite the common focus of the two projects, the different perspectives and methodologies were underlined.

The symposium served as a stepping stone for the discussions that took place the following day on the workshop on biomass for bioenergy, organised by the EC (see http://ec.europa.eu/research/energy/eu/news/events_en.cfm?event=16-04-2010).

Chariton Kalaitzidis, Mediterranean Agronomic Institute of Chania

Upcoming events

6th International Conference on Biomass for Energy

Kiev, Ukraine, 14-15 September 2010

The conference will be the biggest meeting on the bioenergy issue and will be held in Kiev. The conference will address: biomass resources; R&D; demonstration and market implementation of bioenergy technologies; strategy, policy, economy and environmental issues. The Conference is held every year and brings together about 200 participants from Europe, USA, Canada, Japan, Ukraine, Russia and other newly independent states. The Conference attendees include representatives of science, industry, business and local authorities. The Conference is organised by the Institute of Engineering Thermophysics and SEC Biomass. The Conference Chairman is Dr. Jens Bo Holm-Nielsen (Center for Bioenergy and Green Engineering, Institute of Energy Technology, Aalborg Universitet, Denmark).

Within the conference there will be one session with a special focus on BEE results.

More information can be found at: http://www.biomass.kiev.ua/conf2010/eng/index.html

Tetiana A. Zheliezna, SEC Biomass

Western Balkan Workshop on Harmonization of methodologies for estimation and sustainable incorporation of biomass and other resources in municipal and national strategies for energy development

Skopje, Macedonia, 4 November 2010

In the frame of dissemination activities of the BEE project, a regional workshop is planned, coordinated by the Macedonian Geothermal Association (MAGA) and the Northwest Energy Agency of Croatia.

The workshop is organised into four sessions: (1) presentation of the results of BEE for harmonisation of methodologies for biomass estimation; (2) estimation of biomass energy potential for different consisting elements (forestry, agricultural residues, production of biofuels and urban waste); (3) estimation of energy potential of other RES in order to determine the importance of biomass one; and (4) possibilities for sustainable incorporation of biomass energy resource in the local and regional strategies for development.

Each session shall begin with an introductory presentation by a renowned expert, followed by presentations of local and other Western Balkan countries and discussion of participants. The last session consists of presentations and discussion of BEE experts and participants for possibilities for wider incorporation and financing of biomass resources in local and regional plans for development. At the end, a common document with recommendations to decision makers in Western Balkan countries shall be accepted.

Stakeholders from all Western Balkan countries shall be invited for participation and presentation of own situation and problems. Support of the Macedonian Ministry for Science and Education and Energy Agency is expected. The number of participants shall be limited to about 50.

Kiril Popovski, Macedonian Geothermal Association (MAGA) kpopovski(at)mac.com

Biomass Assessment Conference – The potential of biomass for energy in Europe and European countries – assessments, assessment methodologies, harmonisation of assessments

Brussels, on 8 November September 2010, Club of the University Foundation

The conference will focus on the findings of the projects CEUBIOM and BEE and further projects, initiatives and bodies that work on the assessment of biomass for energy in Europe and European countries. A dedicated invitation to the conference will be sent to all recipients of the newsletter and further interested parties.

Matthias Dees, University of Freiburg

More information on the projects

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