

**S2Biom dissemination conference**  
**“Sustainable biomass potentials in SEE: the added value**  
**of S2Biom Toolset for untapping sustainable biomass**  
**potentials in SEE”**

**On the occasion of the 2<sup>nd</sup> South East European**  
**Conference on Sustainable Development of Energy, Water**  
**and Environment Systems (SDEWES)**

**16 June 2016, Piran, Slovenia**

## **Conference SUMMARY**

**Deliverable D10.12b**



## About S2Biom project

The S2Biom project - Delivery of sustainable supply of non-food biomass to support a “resource-efficient” Bioeconomy in Europe - supports the sustainable delivery of non-food biomass feedstock at local, regional and pan European level through developing strategies, and roadmaps that will be informed by a “computerized and easy to use” toolset (and respective databases) with updated harmonized datasets at local, regional, national and pan European level for EU-28, Western Balkans, Moldova, Turkey and Ukraine. Further information about the project and the partners involved are available under [www.s2biom.eu](http://www.s2biom.eu).

### Project coordinator



### Scientific coordinator



### Project partners



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## Presentations of the conference

All presentations held at the S2Biom dissemination conference are available at the project website under: <http://www.s2biom.eu/en/10-news-events/27-workshops.html>.

## Introduction

The main aim of S2Biom project is to support the sustainable delivery of non-food biomass feedstock at local, regional and pan-European level through the elaboration of strategies, roadmaps and a web-based planning toolset basing on updated harmonized data referring to EU28, Western Balkans, Turkey and Ukraine.

S2Biom has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration (FP7). The project started in September 2013 and will be implemented until November 2016. The Consortium gathers 31 partners from 16 countries.

The main activities of S2Biom are:

- Analysis of the biomass potential and respective conversion pathways
- Analysis of policy frameworks and application of sustainability criteria in EU28 and neighbouring countries
- Development of a web-based interactive tool and material for the support of the economy, research and policy for local, regional and national stakeholder.
- Development of transnational Strategies, Roadmaps and Toolbox for a resource-efficient bioeconomy in Europe

In order to achieve these goals, S2Biom is building upon relevant information from recent and ongoing EU projects, and through direct collaboration with key stakeholders from policy, industry and markets. Also, a set of validation case studies are being carried out.

The project is building up a concise knowledge base both for the sustainable supply and logistics of non-food biomass for the development of technology and market strategies to support the development of a "resource efficient" bioeconomy for Europe. This includes industrial processes for manufacturing biomass-derived goods/products as well as energy conversion, both for large scale and small scale units.

## Summary of the S2Biom Dissemination Conference

The Second S2Biom Dissemination Conference, held in the framework of the [2<sup>nd</sup> South East European Conference on Sustainable Development of Energy, Water and Environment Systems](#) (SDEWES), aimed to keep stakeholders and the scientific community up-dated on progress and results of S2Biom project as well as to collect feedback from a broad qualified audience. The Conference has been tailored as a half-day side event within the 2<sup>nd</sup> SEE SDEWES Conference in order to reach out to a large audience of experts and practitioners from South-East European Countries.

More than 30 participants joined the S2Biom dissemination conference (see in Figure 1).



**Figure 1: Participants of the S2Biom dissemination conference in Piran, Slovenia**

The conference was organized in 3 sessions.

During the **first session**, the project partners provided detailed insight into the structure and functionalities of the computerized planning and optimization toolset that has been developed by S2Biom. Participants had the possibility to interact with key experts to fully appreciate the characteristics of the *Viewing Tool* (GIS-based mapping), of the *Matching Tool* (conversion pathways), of the *LocaGISStics Tool* (logistics and chain design) and of the *BeWhere Tool* (optimization).



**Ludger Wenzelides (FNR) and Peter Canciani (CEI) welcoming and opening of the conference**



**Presentation of the Professor Neven Duic, SDEWES**

S2Biom toolset consists of the following tools:

- Biomass **viewing and cost supply** tool;
- tool for **matching biomass and conversion technologies 'Bio2Match'**;

- tool for viewing **market demand and policies** for biomass for bioenergy and biobased products;
- tools **'BeWhere'** and **'LocaGIStics'** for optimal design and evaluation of **biomass supply chain logistics** and networks at local, national and European scale.

These tools are embedded in a General User Interface (GUI) to facilitate easy and widespread use of S2Biom results by stakeholders. The current status of the GUI, biomass viewing and cost-supply tool as well as detailed user instructions, including how to access the toolset have been presented.



**Berien Elbersen (DLO) presenting S2Biom Toolset and 'Bio2Match' tool**



**Bert Annevelink (DLO) presenting 'LocaGIStics' tool**

**'Bio2Match'** tool guides the user in an interactive and attractive manner to the optimal match between biomass resources and conversion technologies. Each conversion technology has specific biomass input requirements, while the composition and characteristics of biomass at roadside varies widely. Some biomass types can be used in many different technology options, while others are hard to process or will need extensive pre-treatment. The matching tool uses extensive information from the S2Biom databases to show the user which types of biomass can be processed by which technologies to certain end-products, and thereby helps the user to find an optimal supply chain.

**'LocaGIStics'** (Local Assessment tool for design and loGIStics of biomass delivery chains) tool allows to design optimal biomass delivery chains, particularly taking account of different logistical organizations of the chain at regional level and analyse in a comparative way (for different biomass delivery chains) the spatial implications and the environmental and economic performance. It takes account of the biomass cost-supply information, the conversion and pre-treatment technology options and especially the (novel) logistical concepts of biomass hubs and yards. In relation to environmental impacts it takes account of the indicators and guidelines for assessing the overall sustainability performance for bioeconomy value chains.

**'BeWhere'** tool supports the development of EU-wide and national strategies to develop an optimal network of biomass delivery chains. 'BeWhere' provides as output a network of existing and suggestions for new to be developed biomass conversion chains according to optimal selection of technologies, their location and capacity, the costs of each segment of the supply chain, the total bio-energy and biomaterial demand (depending on which

technologies can be feasibly included in the tool), avoided emissions at different geographical levels (regional, national and European level). Solutions from 'BeWhere' on new to be developed biomass conversion chains can be used as input to the 'LocaGIStics' tool for further design and evaluation of biomass delivery chains at local level.



**Sylvain Leduc (IIASA) presenting 'BeWhere' tool**



**Ruben Guisson (VITO) presenting policy database and its implications for SEE**

'BeWhere' aims to provide optimal solutions for matching the total bioenergy demand at national or regional scale to a total bioenergy supply at lowest total cost and GHG emissions. 'LocaGIStics' then provides support for refining the 'BeWhere' solution while reaching optimal economic and environmental performance per installation and full biomass delivery chain, taking account of more sophisticated logistical concepts and looking at the wider suit of environmental emissions including detailed land based emissions and changes in Carbon stock.

In order to contribute to the implementation of extensive Bioeconomy potentials in Central, East and South East Europe, the **second session** of the event has been tailored so to provide extensive overview of the strategic case studies that in the framework of S2Biom have been implemented in SEE. In particular, experts from Slovenia, Croatia, Romania and Greece, illustrated the specific activities that have been carried out at local level.



**Nike Krajnc (SFI) presenting case study implemented in Slovenia**



**Boris Cosic (SDEWES) presenting case study implemented in Croatia**



**Georgiana Birau (ROSENC) presenting case study implemented in Romania**



**Chrysovalantis Ketikidis (CERTH) presenting case study of biomass co-firing in lignin plants**

Besides quantitative overviews, particular attention has been devoted to methodological aspects, including the utilization of the S2Biom Toolset in combination with existing models. An overview of the policy database elaborated by the project and its implications for SEE has also been provided.

In the **third session**, participants had the opportunity to test the S2Biom Toolset and interact with the project experts.

## Annex I – Agenda



**Second S2BIOM Dissemination Conference**  
16 June 2016, Piran, Slovenia

**SUSTAINABLE BIOMASS POTENTIALS IN SEE**

The added value of S2BIOM toolset  
for untapping sustainable biomass potentials in SEE

**INTRODUCTION: THE CONTRIBUTION OF S2BIOM TO UNTAPPING SUSTAINABLE BIOMASS POTENTIALS IN SEE**

13.30-13.40	Welcome and overview of S2BIOM Project	<i>Peter Canciani, CEI Ludger Wenzelides, FNR</i>
13.40-14.00	Sustainable supply of non-food biomass for a resource efficient bio-economy: review of the state-of-the-art	<i>Ilea Dzane, WIP</i>
14.00-14.20	Sustainable biomass as a driver for green growth in SEE	<i>Neven Duic, SDEWES</i>

**SESSION 1: OVERVIEW OF THE S2BIOM TOOLBOX**

14.20-14.30	Introduction	<i>Ludger Wenzelides, FNR</i>
14.30-14.50	<b>THE VIEWING TOOL</b> Mapping of the biomass availability and cost supply curves	<i>Berien Elbersen, DLO-Alterra Igor Staritsky, DLO-Alterra</i>
14.50-15.10	<b>THE MATCHING TOOL</b> Matching biomass with conversion technologies for energy and bio-based products	<i>Berien Elbersen, DLO-Alterra</i>
15.10-15.30	<b>THE CHAIN DESIGN TOOL</b> Overview of main logistical components and concepts and presentation of the LocaGIStics Tool	<i>Bert Annevelink, DLO-Alterra</i>

**COFFEE BREAK**

16.00-16.20	<b>THE OPTIMISATION TOOL</b> Presentation of the BeWhere Tool for optimal technology, location and capacity of bioenergy production plants	<i>Sylvain Leduc, IIASA</i>
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**SESSION 2: POLICY IMPACT AND CASE STUDIES FROM SEE**

16.20-16.45	S2BIOM policy database overview and implications for SEE	<i>Ruben Guisson, VITO</i>
16.45-17.00	Case Study: Slovenia	<i>Nika Krajnc, SFI</i>
17.00-17.15	Case Study: Croatia	<i>Boris Cosic, SDEWES</i>
17.15-17.30	Case Study: Romania	<i>Georgiana Birau, ROSENC</i>
17.30-17.45	Case Study: Co-firing in SEE	<i>Chrysovalantis Ketikidis, CERTH</i>
17.45-18.00	Discussion & Conclusions	<i>Ludger Wenzelides, FNR Peter Canciani, CEI</i>

**SESSION 3: TOOLSET VALIDATION**

18.00-19.30	Live testing / toolset validation	
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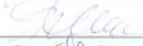







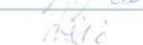
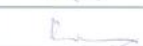








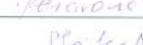
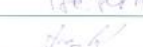
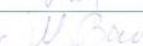

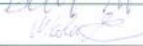









## Annex II – List of Participants

2<sup>nd</sup> S2BIOM Dissemination Conference

SUSTAINABLE BIOMASS POTENTIALS IN SEE

*The added value of S2BIOM toolset for untapping sustainable biomass potentials in SEE*

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