S2Biom

SUSTAINABLE BIOMASS POTENTIALS IN SEE, Piran, 16 June, 2016

Overview of S2BIOM Tool Box and demonstration of tools for mapping of the biomass availability and cost supply curves

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ALTERRA WAGENINGEN UR




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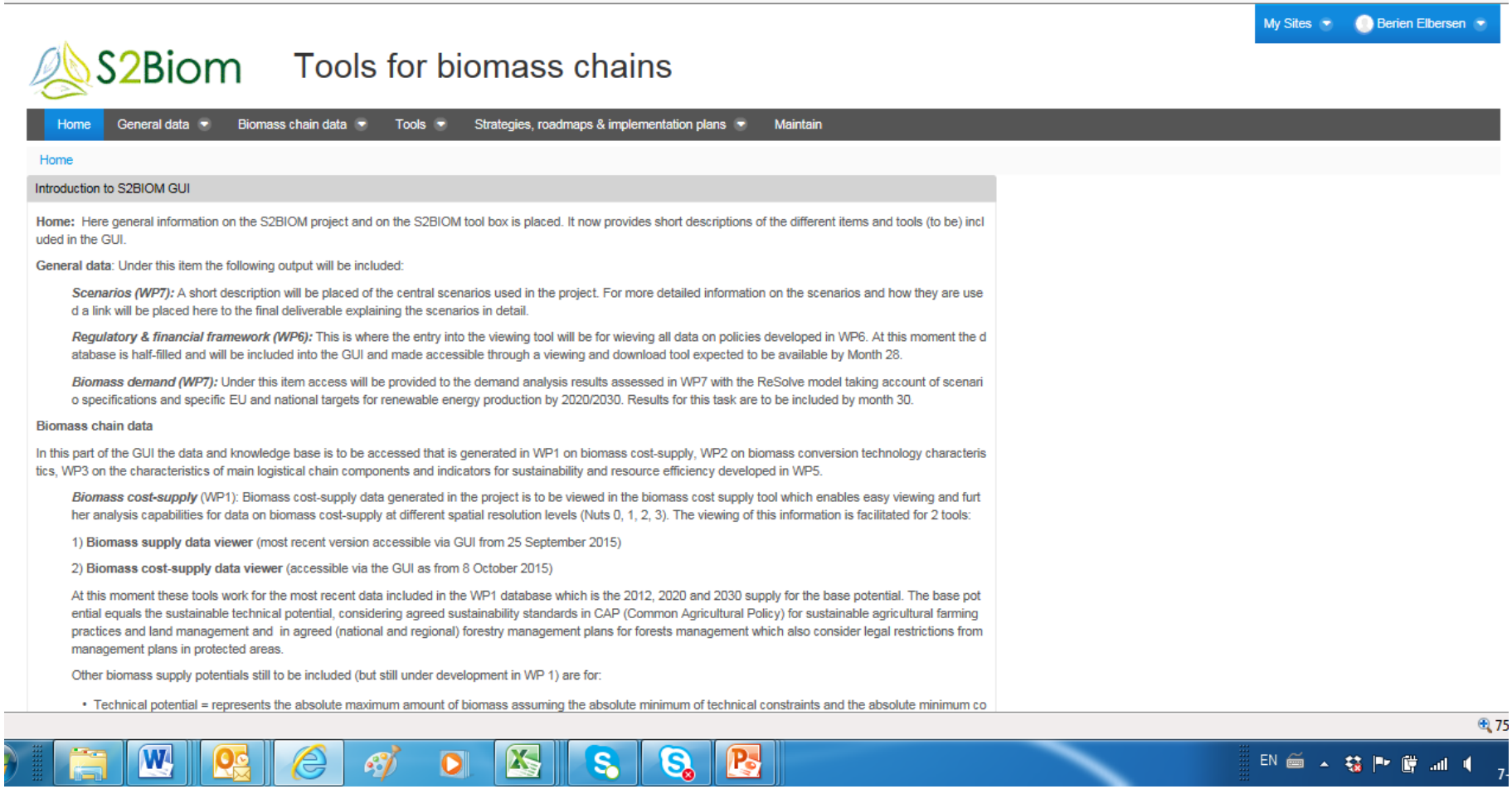
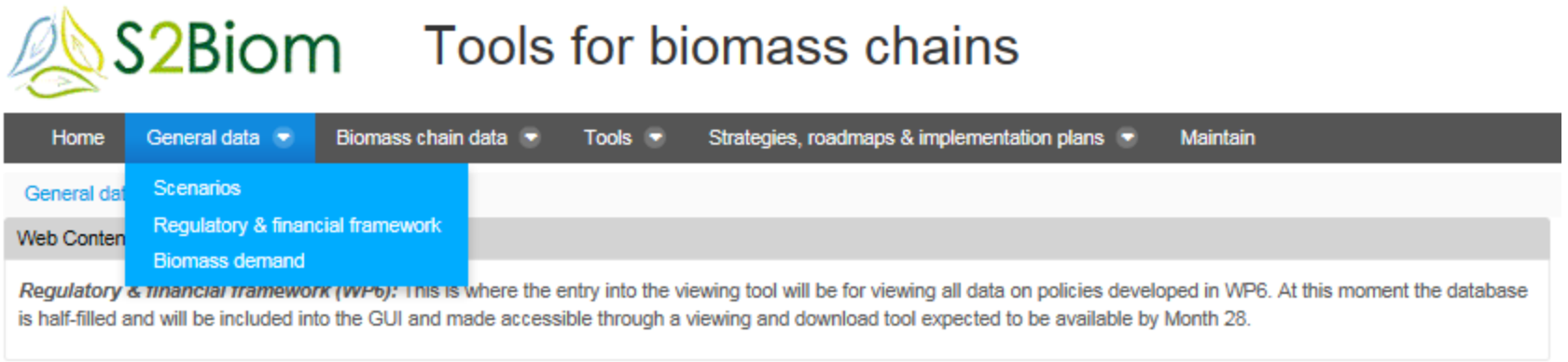
S2BIOM tool box

- **Should contain all results of the project**
  - Well structured
  - Interactive
  - Practical and to the point
  - No need to read long reports, but background reports should also be accessible through the tool

General User Interface



General user interface



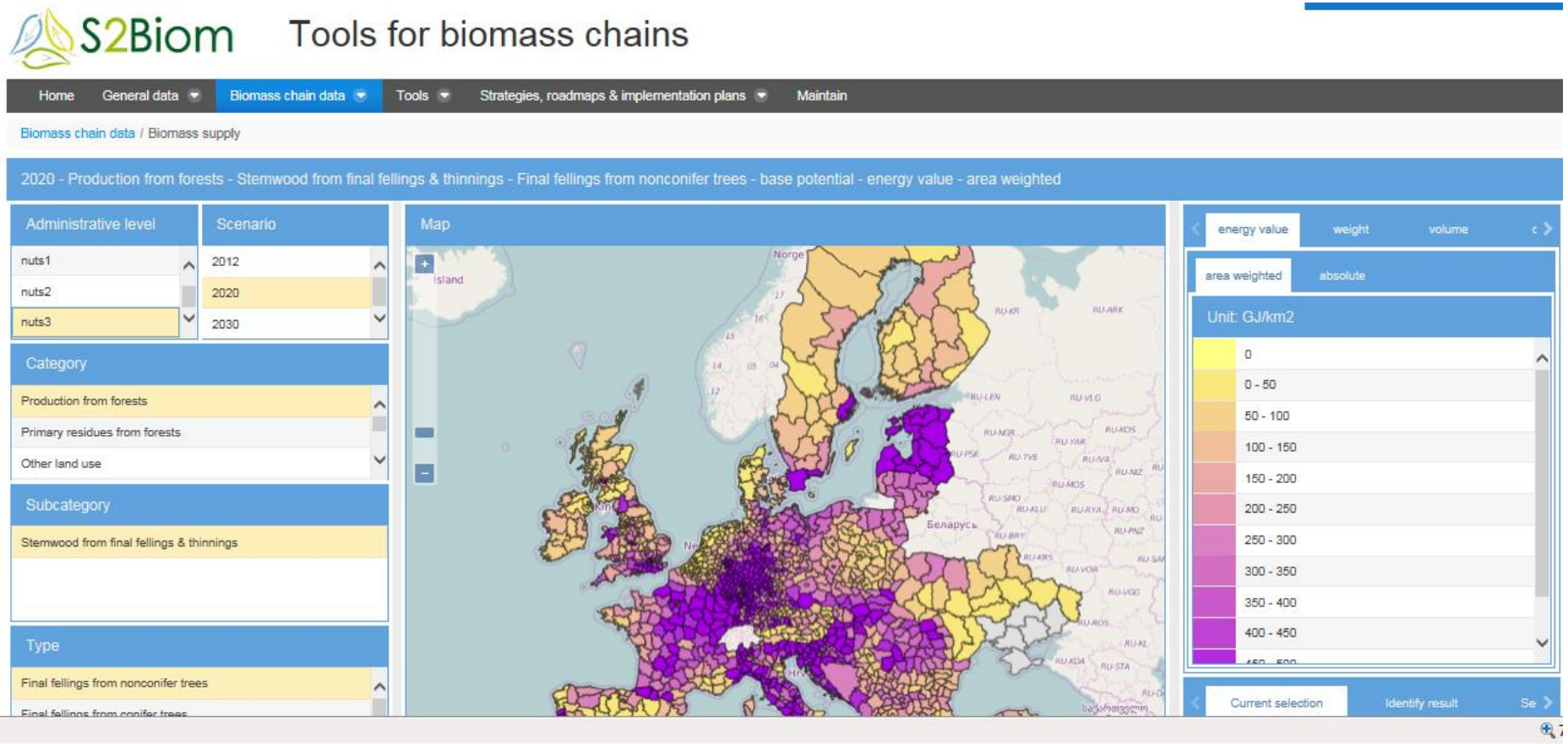
General data
- Scenarios (WP7)
- Regulatory & financial framework (WP6)
- Biomass demand (WP7)

General user interface

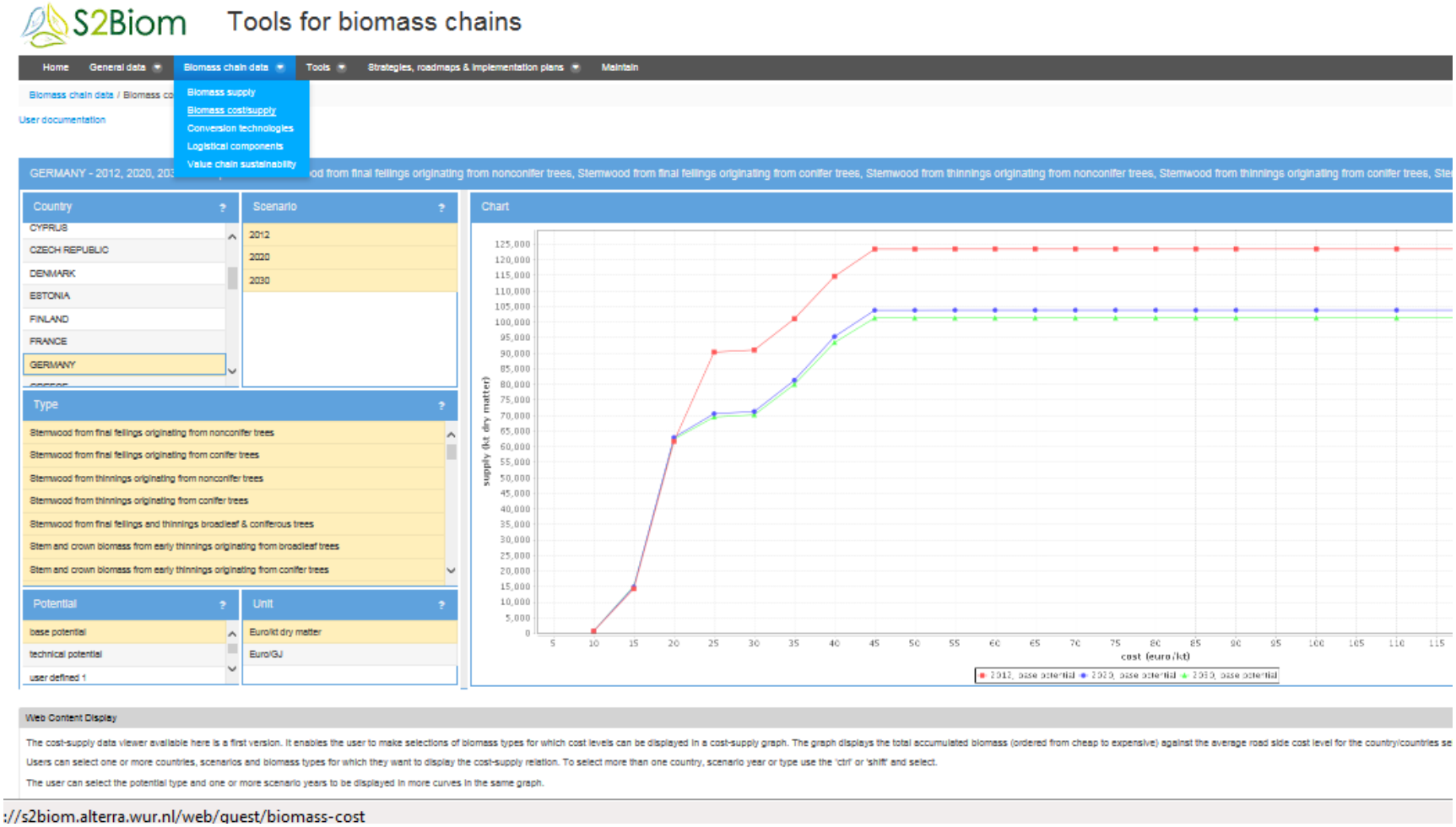
Biomass chain data

- Biomass supply viewer
- Biomass cost-supply viewer
  - Domestic biomass
  - Imported biomass
- Conversion technologies (WP2.1 & WP4.2)
  - Thermal conversion processes
  - Chemical conversion processes
  - Bio-chemical conversion processes
  - (Biobased) products/building blocks
- Logistical components (WP3.1 & WP4.2)
- Value chain sustainability (WP5)

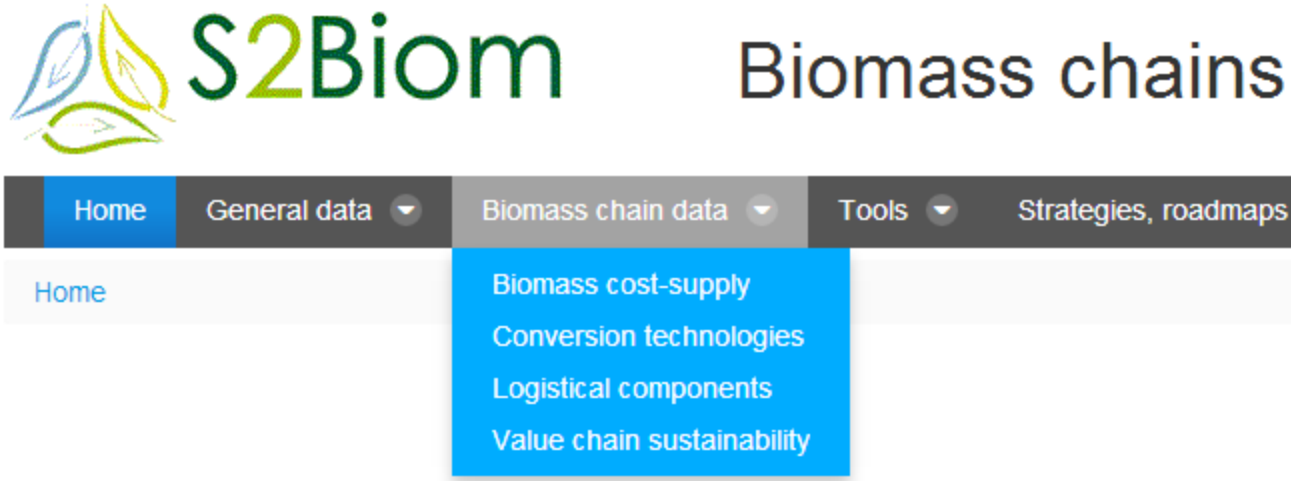
Cost-supply viewing tool



Cost-supply viewing tool



General user interface



Biomass chain data
- Biomass cost-supply (WP1)
  - Domestic biomass
  - Imported biomass
- Conversion technologies (WP2.1 & WP4.2)
  - Thermal conversion processes
  - Chemical conversion processes
  - Bio-chemical conversion processes
  - (Biobased) products/building blocks
- Logistical components (WP3.1 & WP4.2)
- Value chain sustainability (WP5)

Database screen 1

Maintain / Logistics

My Sites 0 Bert Annevelink

Edit Example with explanation (please do not change)

GENERAL PROPERTIES

Commercial name	(required) Example with explanation (please	Level of commercial application	mention general description of the status
Main category	Communition (size reduction)	Year of first implementation in practice	2005
Subcategory	Chipping: disk chipper	Estimated number of systems in operation since introduction	200
Image url	www.producer.com/example_machine/picture.jpg	Current Technology Readiness Level in 2014	Level 9, System ready for full scale
Most common/suitable applications	processing wood residues after harvesting	Expected Technology Readiness Level in 2030	Level 9, System ready for full scale

Main operating principle

In this box may include any information about the operating principle of the logistical component, but also about relevant information that you cannot enter in the other data fields

References

commercial: www.producer.com/description_machine_type
scientific: authorname(s), year (the full references of scientific papers will be stored in external reference word doc)
other: websites, magazines, etc.

TECHNICAL PROPERTIES

Energy demand	3.2	MJ/t	Number of full load hours per year	(h)	1600
Type of energy needed	Diesel		Maximum load volume of transport system	(m^3)	
Other input demand	none		Maximum load weight of transport system	(t)	0
Pre-treatment efficiency	0.96	(output/input)	Typical lifetime of equipment	(years)	7
Input processing capacity	150	m3/h	Labour requirements pre-treatment	0.0133	h/t
Storage capacity for input		m3	Labour requirements storage		h/t
Storage capacity for output	20	m3	Labour requirements transport		h/t
			Transportability	Mobile	

Save and proceed | Cancel

Database screen 2

BIOMASS INPUT SPECIFICATIONS

Acceptable biomass input groups: Wood | - | Crop: straw | - | -

Received (intermediate) biomass type: Branches

Minimum particle size input: length (mm) 1000 | width / diameter (mm) 50 | height (mm) 50

Maximum particle size input: length (mm) 5000 | width / diameter (mm) 300 | height (mm) 300

Moisture content input (%, wet base): Minimum 20 | Maximum 60

Bulk density input (kg/m^3, wet base): Minimum 100 | Maximum 300

Maximum input level of contamination with exogenous material (%, dry base):

Maximum ash content input (%, dry base): 1.5

BIOMASS OUTPUT SPECIFICATIONS

Indication of follow up process(es): Transport | - | - | - | -

Delivered (intermediate) biomass type: Wood chips

Dimensions: P16S: 3,15 mm < P < 16 mm | Fine fraction: F05: < 5 %

Moisture content output (%, wet base): Minimum 20 | Maximum 60

Bulk density output (kg/m^3, wet base): Minimum 200 | Maximum 400

Maximum output level of contamination with exogenous material (%, dry base):

Maximum ash content output (%, dry base): 1.5

FINANCIAL AND ECONOMIC PROPERTIES

Specific investment costs of equipment, included auxiliaries: (€) 60000

Operation and maintenance costs: 1.25 €/t

- Calculation method: Effective operation time

Storage costs: €/t

Loading costs: €/t

Unloading costs: €/t

Transport costs per kilometer: (€/km)

Transport costs per tonne: (€/t)

Transport costs per load: (€)

Transport costs fixed: (€)

Infrastructure needed: Connection to road network

Edited by: Hugo de Groot, Bert Annevelink

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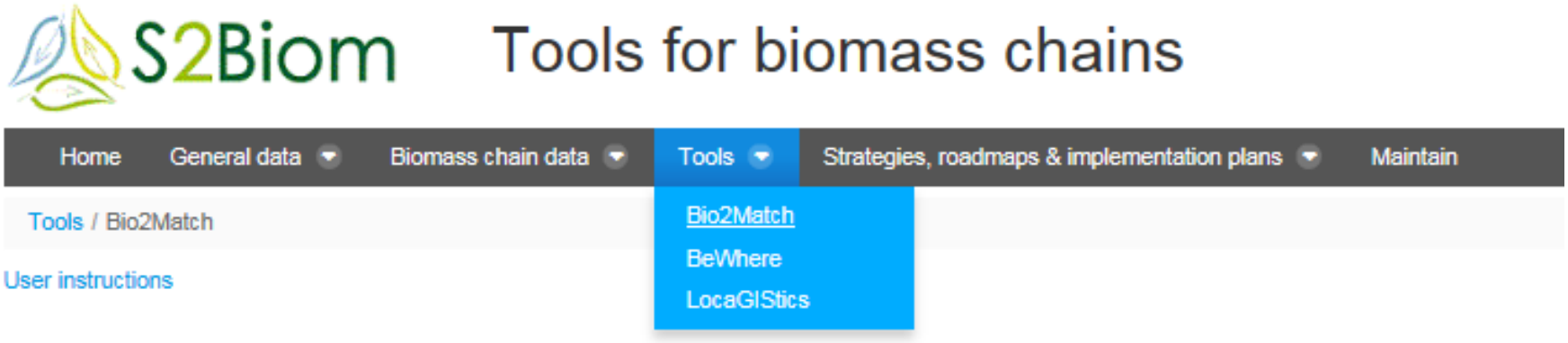
General user interface



Tools:

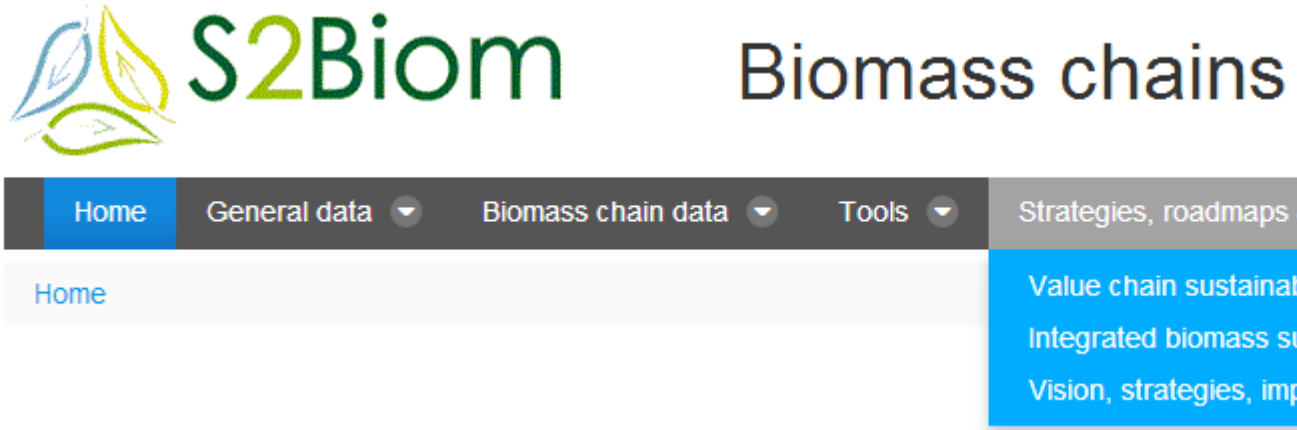
Bio2Match: Biomass & conversion pathways matching (WP2 &3)

Full chain assessments (WP4.3&4.4)

EU wide-national and regional assessment tool (**BeWhere**)

Local assessment tool (**LocaGIStics**)

General user interface



Strategies, roadmaps & implementation plans

Value chain sustainability (WP5)

Integrated biomass supply chain assessment (WP7)

Vision, strategies, implementation plans and R&D Roadmap (WP8)

Testing the tool:

s2biom.alterra.wur.nl

Test login provided:

demo

helsinki

THANK YOU FOR YOUR ATTENTION!

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QUESTIONS?