Evaluation and validation of sustainability and traceability tools

Grant Agreement N°	691763	**Acronym**	BIOMASUD PLUS
Full Title	Developing the sustainable market of residential Mediterranean solid biofuels		
Work Package (WP)	WP 6. Implementation and validation of the improved BIOMASUD certification system requirements and tools Task 6.4. Evaluation and validation of sustainability and traceability tools		
Authors	Alicia Mira Uguina, Pablo Rodero Masdemont (AVEBIOM); Diego Rossi, Valter Francescato (AIEL); Peter Prislan, Nike Krajnc, Matevž Triplat, Anica Simčič (GIS); Teresa Almeida, Sonia Figo (CBE); Mahmut Ateş, Berrin Engin (Tubitak); Emmanouil Karampinis, Ioanna Kanaveli (CERTH); Boris Pavlin, Hajdana Rukavina (ZEZ)		
Document Type	Deliverable D.6.4		
Document Title	Report of the evaluation and validation of sustainability of sustainability and traceability tools		
	CO	Confidential, only for members of the Consortium (including the Commission Services)	
	PU	Public	X
	PP	Restricted to other programme participants (including the Commission Services)	
	RE	Restricted to a group specified by the Consortium (including the Commission Services)	

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No. 691763

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No. 691763

Disclaimer

The content of the publication herein is the sole responsibility of the publishers and it does not necessarily represent the views expressed by the European Commission or its services.

While the information contained in the documents is believed to be accurate, the authors(s) or any other participant in the BIOMASUD PLUS consortium make no warranty of any kind with regard to this material including, but not limited to the implied warranties of merchantability and fitness for a particular purpose.

Neither the BIOMASUD PLUS Consortium nor any of its members, their officers, employees or agents shall be responsible or liable in negligence or otherwise howsoever in respect of any inaccuracy or omission herein.

Without derogating from the generality of the foregoing neither the BIOMASUD PLUS Consortium nor any of its members, their officers, employees or agents shall be liable for any direct or indirect or consequential loss or damage caused by or arising from any information advice or inaccuracy or omission herein.

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No. 691763

Contents

1. Introduction and Objectives 4

2. Main Modifications 5

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No. 691763

1. Introduction and Objectives

During task 4.3. of the BIOMASUD project an on-line platform http://trazabilidad.ciemat.es/ (although by this moment is in a provisional "pre-production" domain Http://trazabilidad.grupotercerafase.com) was developed to keep record of data related with batches and traceability (quantity, date of production, type of biomass, GHG emissions, etc.). The idea was to add some capabilities to the platform and keeping all the data about quality and sustainability in one database.

The objective of is that producers' staff can easily calculate and upload on the platform all the sustainability and quality data without wasting too much time and without the necessity to hire expert personnel to do it. As specified in the proposal, the design must be very intuitive and easy to use so all producers can make use of it.

The features that have been included to the BIOMASUD platform are:

- New sustainability criteria defined in task 4.1.
- The **GHG calculation** tool developed in task 4.2. with the new calculation methodology in line with RED II Directive is included in the platform to calculate the GHG emissions along the supply chain.
- The **energy balance** calculation with the improved methodology developed in task 4.2. is included in the platform to calculate the energy balance along the supply chain.

Sensible information about the certified companies will not be accessible for the general public and only users with special profiles will be able to access.

Within task 6.3 "Commissioning of the system on the market: pilot label granting", in every country where the consortium has been implementing the BIOmasud certification system, the partners have been organising pilot audits to test in the field the new requirements of the certification and bringing the feedback to the definitive version of the handbook and make its implementation feasible in the reality.

The partners responsible for the BIOmasud certification in all countries will have to use the BIOmasud sustainability and traceability tools developed in WP4 to pilot biofuel producers and traders to whom the label is being granted in Task 6.3. This pilot exercise was used in order to validate and, when necessary, to improve or adapt the tools to the different pilot cases that can be observed.

The result of this task is a revised sustainability calculation tool that will be incorporated to the renewed BIOmasud certification system (web application in Task 4.3)

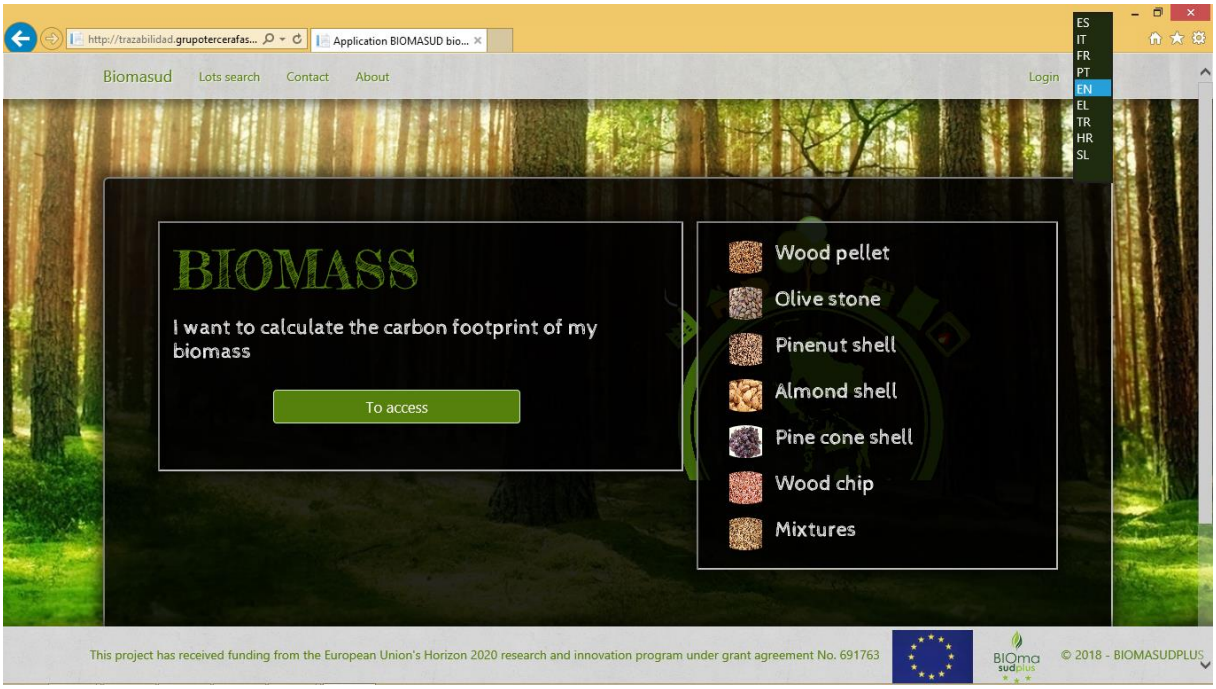
2. Main Modifications

With the feedback of the partners implementing BIOmasud certification in their respective countries we have collected the main modifications or adds that have been introduced in the On-line platform.

Still in this test phase, the platform is on the domain of TFS, partner of the project and the one specialized in programming this kind of applications http://trazabilidad.grupotercerafase.com. Once corrections will be finished it will be transferred to http://trazabilidad.ciemat.es and linked to the certification's WEB.

On the following pages we can find the most important modifications:

- **Translations**: Now the platform is available in all the languages where BIOmasud is being implemented: Spain, Italy, France, English, Portuguese, Greece, Slovenian, Croatian and Turkish. Corrections to the mentioned languages have been continuously correcting during these last months



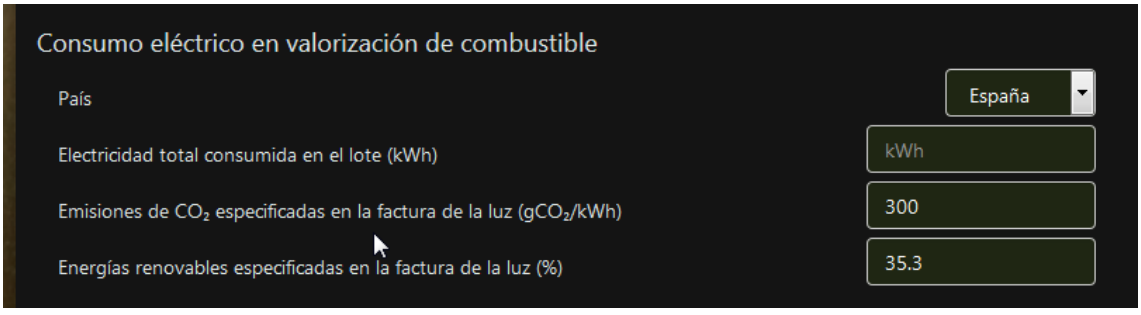
- Errors in some buttons like "edit" and "back" that were not working properly. Sometimes you couldn't edit the profile and if you tried to come back to the previous page it didn't work neither. They were corrected and now it's working ok.

- There are different profiles: owners of the scheme, auditors, companies and general public. The permissions of each one were stablish so there wouldn't be a confidentiality issue.

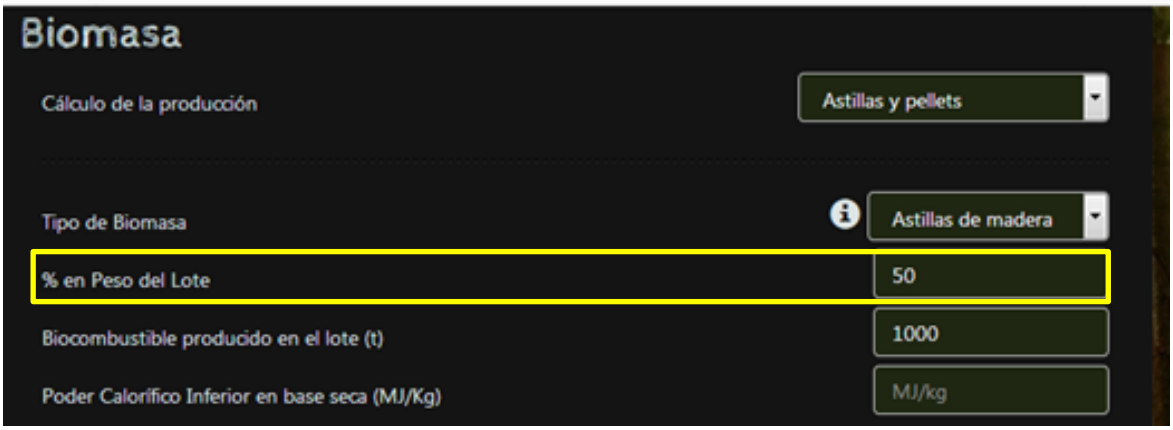
- In order to facilitate the entrance of data. After several pilot audit we proposed an easier way to enter all the information required to calculate the GHG. Now a new function to duplicate the lots and being able to change only the relevant information has been implemented.

- Error when creating certain kind of users with the owner profile. There was an error message although then the user was actually created.

- Some data entering was simplified because some general data were repeated and now only are requested once. For example the data consumption is the same for all the lot, it is therefore not necessary to enter it every time in every component of the lot.



- There was an incongruence as the producer is request to enter the % in mass of every component of the lot and it could be more than 100%. Now a limitation has been implemented



- Some verifications were made to assure the fulfilment of the new data protection regulations (GDPR) that entered in force in May 2018

- Some calculations were corrected in the GHG calculation (in the diesel emission factor for the transport). There was a problem in the formula with the units so the results were wrong.

- When creating or erasing an user, under some conditions there was an error message

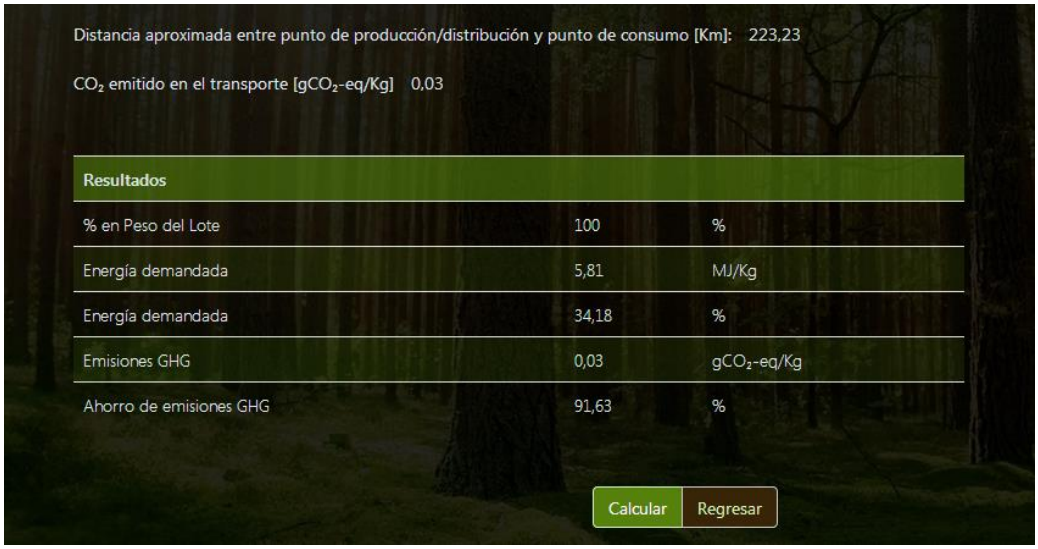
- Regarding calculation.
    - The part "From production to the end user" is an estimate (it is not real) but it helps the producer / distributor to know in an estimated way the energy consumed and the emissions in a part of the supply chain (from the producer to the consumer final) so when the final consumer enters the application in the part "Search for lots" should not take into account this data (The part "From production to the end user") if not in that case should be to take into account for both the "energy demanded" and the "CO2 emitted in transport [gCO2-eq / Kg]"
        a) Distance from the producer to the establishment of purchase and quantity transported

b) Distance from the purchase establishment to the point of consumption and quantity acquired

Through the following factors, the corresponding part is calculated, to points a and b previously described, both for "energy demanded" and for "CO2 emitted in transport":

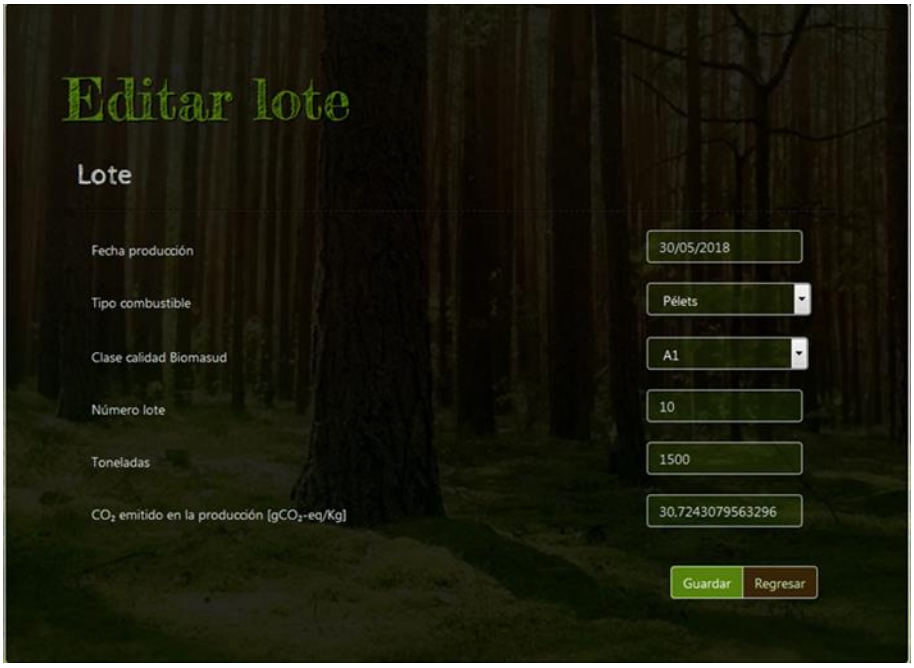
Factors	**Emissions** ($gCO_{2\text{-}eq}$/t.km)	**Energy** (MJ/t.km)
Diesel truck 40 t MS (road transport)	81,95	0,872
Diesel truck 12 t MS (road transport)	176,18	1,875
River transport	37,76	0,402
Maritime transport	17,77	0,189
Train transport	24	0,122

In the results, both for the energy demanded and for the GHG emissions, the corresponding should be added, to points a and b previously described, for transport, calculated as explained above, and in the data of the batch it will have to be subtracted the part "From production to the end user" which is an estimate (it is not real).



- Now the "edit" button works but it does not let you edit any of the batch components.

Only allows to change data of the batch in general (screenshot below)



- Checked that the distance between the purchase establishment and the point of consumption was NOT well calculated. The procedure has been reviewed.