

NEWSLETTER June 2024

We are happy to bring you a summary of what we have been doing recently!

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New protocol for the implementation of forest management models

A new protocol has been designed to quantify indicators of ecosystem services of pilot sites for climate change adaptation. The protocol describes the different sampling methods depending on the structure and composition of the stands where the actions will be carried out.

One variable that the protocol considers is the appearance of the tree stem. The visual appearance of the tree is annotated, and the appropriate code (from 1 to 9) is registered using the shape of the stem as its main characteristic (Figure 1). Classes 1 and 2 may correspond to dead trees, e.g. trees attacked by scoliotics with a part of the leaves remaining.

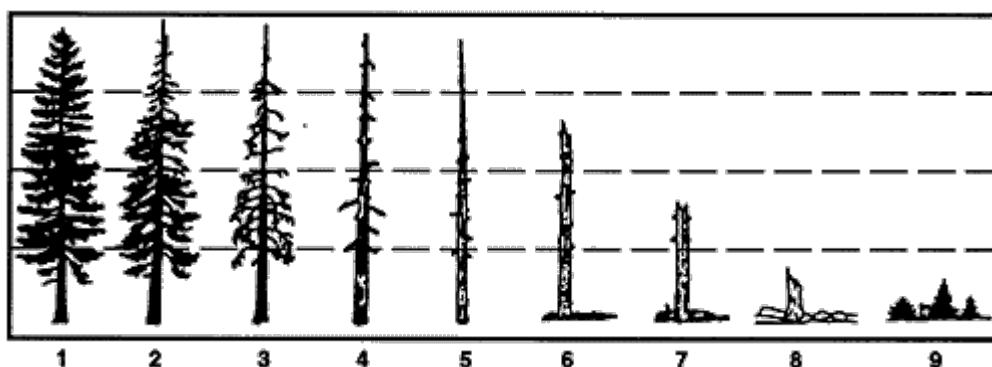


Figure 1. Classification code from 1 to 9 using the shape of the stem.

Distances between strata were estimated from the top of the lower stratum to the height of the upper stratum where there is sufficient accumulation of live foliage to contribute to vertical fire spread. Dead fuel was only considered if there was sufficient accumulation of material of less than 6 mm in diameter. The following measures (shown in Figure 2) were also recorded for the forest typologies analyzed.

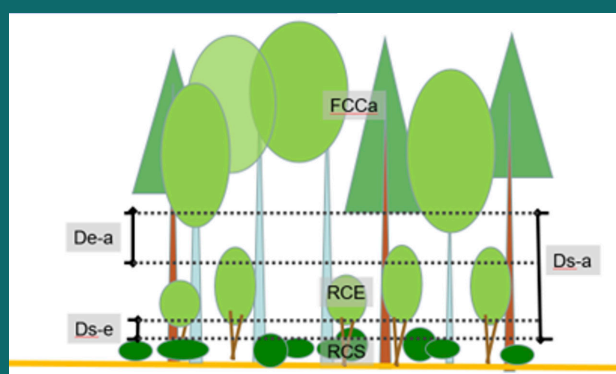
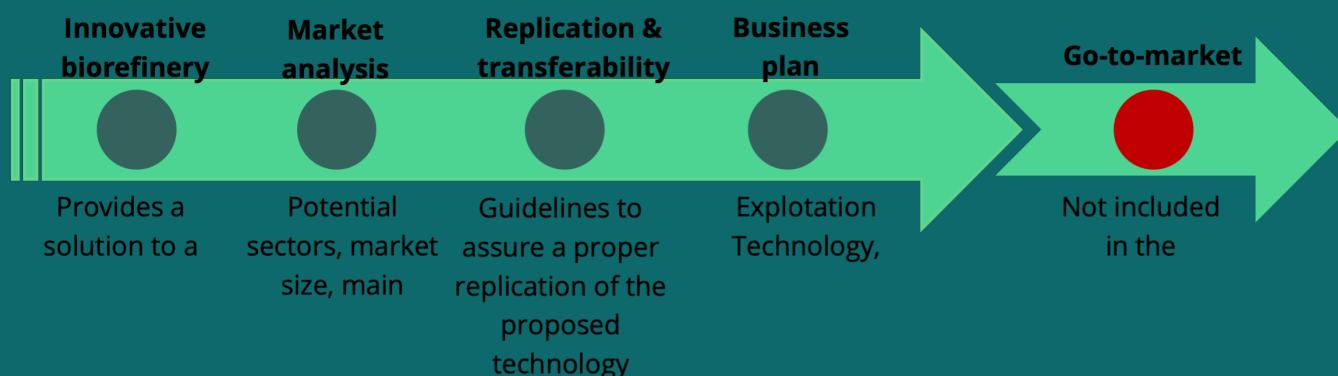


Figure 2. Distances between strata from the top of the lower stratum to the height of the upper one.

Replicability and transferability plan almost finished

The LIFE Bioreformed replicability and transferability plan provides the information to develop a demonstration and Business plan, by following the steps outlined in Figure 3. For the evaluation of the biorefinery replicability plan, a process of up to 200 kg/h of biomass has been considered. In addition, other parameters such as mill capacity, software, and sensor Integration, have been evaluated to provide training to operators on the use of the machinery. By implementing these actions, the scalability plan addresses the identified obstacles without increasing the overall production capacity. Instead, it focuses on enhancing efficiency, monitoring capabilities, and overall system reliability. This approach should contribute to the success of the technology within the current production requirements.



LIFE Bioreformed's 8th Coordination Meeting!

With the aim to coordinate and discuss the progress on various actions of the project, including the presentation of all summarized results from every group, the consortium celebrated its 8th coordination meeting at the CTFC on the 6th of February of 2024.

Spreading the word of LIFE BIOREFORMED

Our colleague Mireia Mora has carried out a three-month research stay in the Manuel Garcia-Pérez research group at Washington State University (Figure 4). The work performed involved the separation and characterization of the oligomeric fraction of pyrolysis liquids (bio-oil) (Figure 7), focusing on the low molecular weight pyrolytic lignin (Figure 6) to optimize separation methods of these types of compounds.



Figure 4. View of the main front of Washington State University.

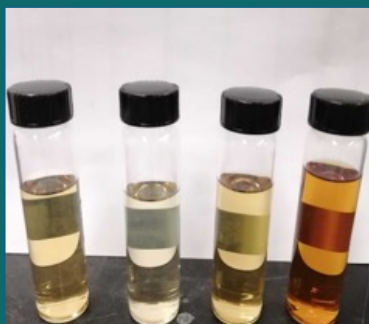
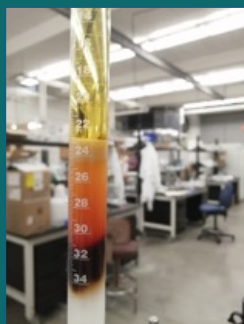


Figure 5. Pyrolytic liquid.

Figure 6. Column loaded with pyrolytic liquid

Figure 7. Products obtained from pyrolytic liquid separation.

Save the date!

The end of the LIFE Bioreformed project is near, to bring together everyone involved in the project and spread the word, we're organizing a final event, which will be held under the umbrella of the BIT congress in Lleida in September 2024.

Stay tuned for more information and join us!



**Do not forget to stay tuned following our [twitter account](#)
You can contact us at info@lifebioreformed.eu**

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