Questions to USC

Interview with María Teresa Moreira and Sofía Estévez Rivadulla

In the BIORECER Project, USC has been responsible for identifying the environmental and circularity criteria needed to evaluate biological raw materials. Considering the specific characteristics of each of the sectors targeted by the project: what was the main obstacle you encountered when you started identifying these criteria? Which criteria have been the most challenging to identify?

Currently, the ITC Standards Map database includes 357 certification schemes, while the Ecolabel Index lists 456 ecolabels. Taking this into account, the first difficulty we encountered was determining how many of these schemes could be relevant to the sectors involved in the BIORECER project framework on biological raw materials.

Once the available documents were selected, a major issue arose: some sectors, such as fisheries or wastewater and waste treatment, lack sufficient certification schemes with publicly accessible information to determine a representative set of criteria.

European legislation was used to establish minimum requirements for both sectors. In the broader European context of the bioeconomy, another obstacle was defining the structure of the evaluation framework, as principles, criteria, requirements, and indicators are presented very differently across sectors and certification schemes. Additionally, during the review of the aforementioned documentation, it was identified that the main limitation in the identification of criteria is related to the evaluation of circularity.

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In the process of identifying the circularity (16) and sustainability (17) criteria, to what extent has the participation of the BIORECER case studies helped you to narrow down the number of criteria?

The delimitation of the requirements and criteria has been approached in three different ways: (1) identifying their recurrence across certification schemes, (2) the existence of applicable legislation related to the requirement, and (3) the creation of qualitative questionnaires for case study representatives (experts in their sector) to assess the feasibility of obtaining information on these criteria, which could later be used in the calculation and selection of indicators. For this reason, the use of case studies has been vital in determining the technical feasibility of criteria that could be assessed not only qualitatively but also quantitatively.

USC has analysed the different environmental impact assessment methodologies within the various sustainability standards applicable to bio-based products. What has USC contributed in relation to these methodologies?

Most environmental assessment methodologies are applicable at the product or process level, but they do not fully capture the overall performance at the corporate level or within a value chain. Furthermore, they do not allow for a clear connection to be established between legislative requirements (and other more advanced ones) and progress in terms of sustainability and circularity. In this context, USC has proposed the use of quantitative indicators correlated with the requirements of the bioeconomy sector. Therefore, certification schemes, which are normally evaluated qualitatively, can be translated into quantifiable scores capable of providing a measurable result.

Certification processes are more designed for the initial phases of the life cycle (production/distribution), but they seem to have difficulties adapting to end-of-life processes. Do you agree with this statement? Could you please explain your answer?

Most certification schemes are able to adequately represent the raw material extraction process. The majority focus on the agricultural and forestry sectors, while in the water sector the emphasis has mainly been on water purification. Regarding end-of-life processes, the main concerns have been resource recovery and emissions resulting from treatment. These issues have been incorporated into certification schemes as part of the production and distribution phases, but they have not been addressed as an independent phase that should be evaluated considering the best available techniques and the possibility of establishing synergies through industrial symbiosis.

In your report, you have identified both quantitative and qualitative indicators. Why do you think there is a greater tendency to use qualitative indicators in certification schemes?

We believe the use of qualitative indicators has been more widespread for several reasons: (1) the greater difficulty associated with collecting the data required for quantitative indicators, as some cannot be directly measured with current monitoring systems and require manual measurements and staff availability; (2) a quantitative system demands a deeper understanding of all aspects of the company and/or process, which may raise concerns about data security and confidentiality, especially when access to sensitive information is needed; (3) if the system is not properly computerized, it can lead to increased certification costs.

How will the end consumer perceive the criteria you have identified for the Project?

Within WP2, the selection of criteria has been carried out based solely on their technical feasibility (for example, the possibility of calculation). However, all proposed criteria come from widely applied and recognized sources, such as established certification schemes and current legislation, which have been accepted at various stages of the value chain across different sectors. For this reason, the integration of all these requirements into a unified biological certification scheme will likely be well received, as it promotes harmonization and clarity of information.