

TEMPLATE

Output factsheet: Strategies and action plans

Version 1

Project index number and acronym	CE1125, CIRCE
Lead partner	ARPAV
Output number and title	Output O.T2.4.1 Circular economy business models supporting cross value chain by-products remanufacturing
Responsible partner (PP name and number)	PI RERA SD
Project website	https://www.interreg-central.eu/Content.Node/CIRCE2020.html
Delivery date	

Summary description of the strategy/action plan (developed and/or implemented)

For the area of the Split-Dalmatia County two circular economy business models supporting cross value chain by-products remanufacturing are developed.

- 1) exploitation of fish by-products with the aim of obtaining high-value raw materials for the pharmaceutical market
- 2) composting waste from olive oil production - olive mill pomace.

The First CE business model analyzed an alternative way of managing fish by-product with the aim of valorizing the most valuable components of fish tissue and fish oil as input material in the production of omega 3 concentrate, a high-value product of the pharmaceutical and food industries. Model envisages simple and inexpensive methods to extract fish oil from the waste producer and the food additive manufacturing industry.

The Second CE business model analyzed the valorisation of olive pomace with the aim of producing a high-value compost (fertilizer), which would close the loop between olive cultivation and olive processing waste and thus return biological material back to the agricultural land.

Max. 2.000 characters

NUTS region(s) concerned by the strategy/action plan (relevant NUTS level)

HR035, Splitsko-dalmatinska županija

Expected impact and benefits of the strategy/action plan for the concerned territories and target groups

Partial processing of the fish tissue by-product at the fish processing facility's very location would facilitate immediate fish by-products processing. The First CE scenario enables great financial opportunity for exploiting fish by-products. This technological solution includes the possibility of introducing additional standards in the processing of animal by-products from which higher-value raw materials for other industries can be produced and extraction from the raw by-product by a wet reduction process has a rather small contribution to environmental footprint.

The Second CE solution would close the loop between olive cultivation and olive processing waste and thus return the biological material back to the agricultural land. In addition to organic farming, due to the use of the produced compost in olive groves, olive growers would also achieve significant financial benefits due to the reduced need for industrial fertilizers. The aforementioned is all together an effective driving force for creating a closed loop system.

Max. 1.000 characters

Sustainability of the developed or implemented strategy/action plan and its transferability to other territories and stakeholders

In Split-Dalmatia County and other coastal counties of the Republic of Croatia, many small to medium fish processing companies and olive oil production companies are in operation. Due to its simplicity, the proposed CE solutions can be replicated to these territories. The sustainability of the developed bussiness model is provided by organizing a training cycle in Split-Dalmatia County with pilot industries, utility companies and business intermediaries / industry representatives as well as by developing the Split-Dalmatia County Action Plan for the improvement of standards, practices and organizational models for the expansion of the secondary raw materials market in the light of the development of local industrial organizations' business models.

Max. 1000 characters

Lessons learned from the development/implementation process of the strategy/action plan and added value of transnational cooperation

The lack of collaboration between industry representatives represents a major obstacle for the implementation and therefore raising awareness on the benefits of circular economy is a precondition for further development of the concept by interested stakeholders. Transnational cooperation, that includes the application of the interpolated set of transnational-based analytic tools such as LCA and LCC methods as well the joint matrix for the business plan, has enabled knowledge exchange and provided insight into best practices to address different challenges of circular economy. Key barriers and benefits identified in partners' business models could be a starting point for Croatian small and medium enterprises for adopting analyzed CE solutions. Many circular economy-related issues are 'borderless' and thus are best solved on a cooperative basis which results with profitable and sustainable business models.

Max. 1000 characters

References to relevant deliverables and web-links If applicable, pictures or images to be provided as annex

- D.T1.4.2 Local plans to prioritize interventions
- D.T2.2.3 Report of PEF-compliance environmental scenarios including LCA analysis
- D.T2.3.3 Report of mid-term economic scenarios to check profitability of new by-products markets
- D.T2.4.1 Matrix of concrete circular economy machtmakings within each industrial area
- D.T2.4.2 Analysis & interpretation and interpolation of remanufacturing donors & recipient companies
- D.T2.4.3 Design of the circular economy business model as driver for the pilot tests (AT3.2) for each area

For pictures, further info and images, please refer to the websites:

<https://www.circe2020-wiki.eu/>

<https://www.interreg-central.eu/Content.Node/CIRCE2020.html>