



Circular economy: from ideas to market-ready innovations

Carmen Mena Abela as Head of Sector EASME B.2.1 “Eco-innovation” of H2020 programme

The idea of “closing the loop” of product lifecycles through eco-design and greater recycling and re-use, to bring benefits for both the environment and the economy, is at the core of the circular economy policy of the European Union.

Indeed, one of the [six priorities](#) of the von der Leyen Commission is the [European Green Deal](#), that is the EU new growth strategy to boost the efficient use of resources by moving to a clean and circular economy, restore biodiversity and cut pollution. Next to it, the new [Circular Economy Action plan](#) (adopted in March 2020) and the [revised Waste Framework Directive](#) (already adopted by the Juncker’s Commission in 2018) provide an updated legal framework to facilitate the transition to a circular economy.

At political level, the Executive Vice President of the European Commission for the European Green Deal, Frans Timmermans, leads the group of Commissioners, working towards the transition to a circular economy – Stella Kyriakides (Health and Food Safety), Adina Vălean (Transport), Kadri Simson (Energy), Virginijus Sinkevičius (Environment, Oceans and Fisheries), Janusz Wojciechowski (Agriculture), Elisa Ferreira (Cohesion and Reforms).

The political priorities that steer the transition towards a circular economy are translated into policy mainly by the EC Directorates-General for Research & Innovation and for Environment. In turn, the policies are implemented through projects monitored – by the Executive Agency for Small and Medium-sized Enterprises ([EASME](#)) and other EC services.

It is in EASME that I lead the “Eco-innovation” sector, set up to monitor projects on circular economy, water and waste financed by calls for proposals under the Societal challenge 5 “[Climate Action, Environment, Resource Efficiency and Raw Materials](#)” of Horizon 2020. In our portfolio we have around 90 projects financed with over €450 million.

My team of 15 passionate and highly qualified professionals works throughout the whole project life-cycle: from the evaluation of the proposals to the preparation of the grant agreements with the selected consortia, up to monitoring and advising the project implementation. In addition, we organise events and publications to showcase

project results and build a bridge between research community on one side and industry and investors on the other.

In the period 2018-2020 a number of projects ended and I was privileged to see how bright ideas, that were only words in the proposals few years earlier, became first prototypes and finally market-ready innovations. I visited demonstration sites all over Europe and I was always proud to see how a group of committed beneficiaries (researchers, industrial partners, project managers, and all other parties involved) succeeded to transform ideas in new products or services.

To showcase the achievements of our beneficiaries, we recently produced four publications where coordinators explain how their projects contribute to the circular economy and to the modernization of the water sector.

- [Innovative technological solutions for ensuring Europe's present and future water security](#) (available in Spanish as "[Tecnologías innovadoras para garantizar la seguridad hídrica de Europa ahora y en un futuro](#)") features ten of our water projects that pioneered new methods to ensure water security and an adequate supply for all. Water management is a key sector for Spain and indeed the country is well represented: four of these projects were coordinated by Spanish organisations. Universidad Politecnica de Madrid coordinated [MASLOWATEN](#) (MARket uptake of an innovative irrigation Solution based on LOW WATER-ENERgy consumption), Labaqua [CYTO-WATER](#) (Solution for rapid detection and quantification of microorganisms in industrial and environmental waters), IMDEA Water [iMETland](#) (purification of wastewater in small communities), and Facsa-Gimeno Group [REMEB](#) (Eco-friendly ceramic membrane bioreactor based on recycled agricultural and industrial wastes for waste water reuse).
- [Circular economy innovations for industrial and urban waste management](#) (available in Spanish as "[Soluciones innovadoras para la gestión de los residuos urbanos e industriales](#)") features six projects that will help transform our economy and society and decouple industrial growth from environmental impacts. Also waste management is an important sector for Spain. Half of these projects were coordinated by Spanish organisations: [FISSAC](#) in the construction value chain (Acciona Construccion), [URBANREC](#) for urban bulky waste (AIMPLAS - Asociacion De Investigacion De Materiales Plasticos Y Conexas), and [Waste4Think](#) for smart waste management (Fundacion DEUSTO).
- [Digitalisation through the ICT4WATER cluster to boost innovation in the water sector](#) (available in Spanish as "[Digitalización mediante ICT4Water para impulsar la innovación en el sector del agua](#)"). This publication features twelve projects that are members of the [ICT4Water cluster](#), a hub of around 60 EU-funded research and innovation projects on ICT applied to various water management cycles. Among them, [INCOVER](#) (coordinated by Asociacion de Investigacion Metalurgica del Noroeste) developed innovative and sustainable technologies for a resource

recovery-based treatment of wastewater, and [INTEGROIL](#) (coordinated by Acciona Agua) developed smart water treatment solutions to increase water reuse in the oil and gas industry.

- [Water innovation for Africa: Sustainable solutions for water management](#) (available in Spanish as “[Soluciones sostenibles para la gestión hidrológica en África](#)”) features projects in research and innovation that address water-related challenges in Africa. The importance of EU-Africa cooperation has been reaffirmed in March 2020 in the Joint Communication by the European Commission and the High Representative for Foreign Affairs and Security Policy, that proposed the basis for a new strategy with Africa. The Communication sets out proposals to intensify cooperation through partnerships in five key areas, one of which is the green transition.

As mentioned, we also organised matchmaking events aimed at bridging the gap between projects and the business world. For example, in the [Investor café](#) to promote market-ready water innovations, projects’ representatives made a business pitch in front of private investors, banks, and other financial institutions, to promote their innovations. In this event, [MASLOWATEN](#) (the project on irrigation coordinated by the Universidad Politecnica de Madrid, with other five Spanish beneficiaries and demonstration sites in Alaejos and Villena) won the “Best pitch Award”. In the same event [ColFeroX](#), a start-up supported by the project [REGROUND](#), was invited by the [EIT Raw Materials](#) to join their entrepreneurship accelerator programme. Two of the start-up founders, also researchers from the University of Duisburg-Essen (that coordinated the project), graduated successfully from the programme. Also this project demonstrates the Spanish expertise in the water sector - three out of the seven beneficiaries are based in Barcelona or Donostia/San Sebastian.

Finally, we also gave visibility to our projects by co-organising sessions in big events such as the [World Circular Economy Forum](#), the [Research and Innovation Days](#) organised by the Directorate-General for Research & Innovation, the [Amsterdam Water Innovation Week](#) and the [Water Innovation week](#) in Porto.

If I look back at the last six years I worked in EASME, I see that the circular economy gained momentum and reached the top of the European Commission’s policy agenda. I am proud of being part of this process, until now in EASME and from mid-September as newly appointed Head of Unit “Circular Economy and Industrial Leadership” in the Joint Research Centre in Sevilla. I will bring the richness of experience gained in EASME into this new challenging chapter.

Discover more

We want investors, stakeholders and citizens to know about the great results achieved by brilliant researchers and visionary innovators with the EU supports. To discover

results and demonstration sites in your country, or if you are curious to know consortia partners for possible new projects, visit the [EASME data hub](#) and the [CORDIS](#) repository.