

Six Model Regions Show the Way to a Sustainable EU Chemical Industry

The final conference of the [European Sustainable Chemicals Support Service \(ESCSS\)](#) took place in Brussels on 14 September 2017 at the [European Chemical Regions Network \(ECRN\)](#), with presentations from 6 EU 'Model Regions' and an introduction of the Self-assessment tool developed through the initiative. The European Commission and ECRN have decided to jointly disseminate the results of the Initiative 6 Model Demonstrator Regions, with the support of the Consortium, including [Cefic](#), [CIRCE](#) and [PNO](#). The event has attracted great attention with more than 140 registrants, among which more than 30 different regional authorities.

The aim of the initiative, launched in February 2016, was to encourage investments in sustainable chemicals production in Europe that will contribute to the development of the circular economy, for example by taking advantage of locally available feedstock such as biomass and urban waste.

Delegates were welcomed by Renatka Krcova, the Director of ECRN, who described “sustainable chemicals as a key element of the EU’s industrial strategy” and the ESCSS as a significant step in raising awareness of it.

This was echoed by Carlo Pettinelli, Director, Consumer, Environmental and Health Technologies at the European Commission’s Internal Market, Industry and SMEs DG (GROW), who said the initiative had been a “success story for the regions” and key to the Commission’s Circular Economy Action Plan to boost jobs and environmental protection. He also underlined that “Industrial sustainability and environmental protection must go hand in hand.”

Mr. Daniel Collet, Inspector General of the Competitiveness and Innovation Department for the Wallonia Region, and a Member of the Executive Board of ECRN also emphasised the importance of regional aspects of industrial growth within the wider EU growth strategy and the need for regions to benchmark their activities to identify strengths and weaknesses. He saw the ESCSS projects as “contributing greatly to future EU competency mapping.”

Mr. Amadeu Altafaj i Tardio, representing the President of the European Committee of the Regions (CoR) agreed saying that sustainable industrial development in the EU regions was essential and that the CoR actively supports exchange of best practise and cooperation between regions. He saw the ESCSS as “an excellent example of a concrete outcome of multilevel governance” and that we should do more, similar projects.

Online Self-Assessment Tool for all European Regions

An important outcome of the ESCSS initiative is a self-assessment tool, which will be available soon on the DG GROW website for all 250 EU regions to assess their investment readiness levels to produce chemicals in a more sustainable manner.

The assessment tool was revealed at the conference by Ignacio Martin, Project Coordinator and Innovation Manager at [CIRCE](#), the Spanish Research Centre for Energy Resources and Consumption. The tool is designed to help any region to understand how they could attract more chemical industry investments through a focus on use of biomass and waste to produce high-value sustainable chemicals. It is based on eight critical key success factors (KSFs) for establishing a viable sustainable chemical industry. The KSFs are:

- Long term stability and availability of feedstock
- Infrastructure to handle feedstock and production
- Access to finance
- Skilled workforce, technical expertise, training
- Existence of support institutions
- Strength and availability of regional markets
- Entrepreneurship
- Public support policies

The six “model demonstrator regions” that took part in ESCSS initiative have been directly involved in developing the tool. Representatives from Andalusia (Spain), Groningen-Drenthe (The Netherlands), Scotland (United Kingdom), South and Eastern Ireland (Ireland) and Wallonia (Belgium) took the floor at the conference to present their experience from the initiative in a session moderated by Jose Manuel Gonzalez from the Centre for the Development of Industrial Technology (CDTI) in Spain. The sixth model region is Kosice (Slovakia). The strengths of each of these regions are very different, which provided the opportunity to exchange experience and leverage their achievements.

The experiences from this initiative will be shared with other interested European regions to provide practical guidance on how to strengthen cross-sectorial cooperation between chemical industries and other industries and sectors, notably, agriculture, forestry, energy intensive industries, waste management and recycling. This will help many regions in Europe to move towards a circular and low-carbon economy by using renewable resources for chemicals production. In this line, a video presented by Groningen-Drenthe region - [North4Bio initiative](#) - is now accessible for those who would like to learn about the steps taken by the region to achieve cross-sectorial cooperation and sustainable chemical industry.

Some of the recommendations made by the presenters of the “model regions” at the conference are to “focus on your particular value proposition” (Lynsey Dunbar from Scotland), “involve industry” (Pieter-Jan Bouwmeister from Groningen-Drenthe), “bring all stakeholders, be inclusive” (Kevin O’Connor, South and Eastern Ireland), “include the regulatory framework” (Concepcion Cobo Gonzales, Andalusia) and “work not only at

regional, but also at European and global level” (Philippe Gabant, Wallonia). The desire to continue the network and share experience was echoed by all of them.

Regional lessons

A dedicated panel of guest regions addressed the question of how to implement similar initiatives across Europe in a session moderated by Dr Osazuwa Osawaru from the Industrial Chemistry Research Institute in the Mazovia region of Poland. The invited regions Catalonia (Spain), East Flanders (Belgium), Central Ostrobothnia (Finland), Brittany (France), and Emilia Romagna (Italy) echoed the ambition for networking and learning from each other.

Maria Dolores Nuñez representing Catalonia said that it was unimaginable to think of “Europe without a chemicals industry” but there was a need to “green” the industry and that required a better understanding of the sector and all the actors that need to be involved. Linda Verdonck from East Flanders saw the need to create new synergies between unrelated sectors, support new infrastructure, share risk and encourage specific investment initiatives. The representative of the Finnish Central Ostrobothnia region, Teppo Rekilä, announced that they are making a visit to study the experience of the Dutch model region Groningen-Drenthe, while Daniela Sani from Italy’s Emilia Romagna region highlighted the use of EU’s Structural Funds to invest in sustainable chemistry facilities. Brittany’s Stéphanie Guillotin highlighted the excellent research in her region covering both green and blue biomass feedstocks. She emphasised the need for finance for demonstration plants including purification facilities to enable the scale up of processes towards commercialisation: this was a common theme for many of the speakers.

Considering the Future – Public and Private Financing

The final session of the conference focused on the EU programmes, initiatives and financial instruments, which can be used by the regions for investing in sustainable chemistry. The session was moderated by Pierre Barthélemy, [Cefic](#) Research and Innovation Director, who stated that: “Sustainable chemistry is high on the industry agenda” citing the success of both [SusChem](#) and the [SPIRE public-private partnership](#).

Jose Ruiz Espied from the European Commission’s DG Agriculture and Rural Development (AGRI) described the important role of agriculture in bioeconomy innovation and value creation. Several funding instruments supported by DG AGRI, [especially rural development programmes](#), are relevant for bioeconomy investments and still underused. Regions are therefore able to seize these opportunities.

Katja Reppel from the European Commission’s DG Regional and Urban Policies (REGIO) focused on the [Smart specialisation strategies \(S3\)](#) integrated in current cohesion policy to maximise impact on growth and jobs. The next steps in S3 development aim to make regional innovation actions more dynamic he said and

improve synergies between funding instruments. She also encouraged participants to visit the [Thematic S3 platform established by the Joint Research Centre](#), which provides lots of data relevant to sustainable chemicals producers.

Nikos Pantalos from DG GROW highlighted the importance of the [Smart Specialisation Platform for Industrial Modernisation \(S3P-Industry\)](#). He praised the self-assessment tool developed by ECSS as “just the tool we need to identify the opportunities” for investment and thought a range of similar tools was required for other sectors.

Tomasz Calikowski from the Bio-based Process and Products Unit of the European Commission’s DG for Research and Innovation (RTD) gave a perspective on how the bioeconomy policies impact on DG RTD activities. He highlighted that the next [bioeconomy calls under Horizon 2020](#) would be published in mid-November. One of the ways to access the EU research funding is via the [BioBased Industries Joint Undertaking \(BBI JU\)](#).

Nelo Emerencia from the BBI JU’s representing the [BioBased Industries Consortium \(BIC\)](#) stated that the key element of BBI JU strategy is building new biobased value chains that keep European leadership and investment on our continent. Investment at regional level is important, but funding is fragmented, and to maximise impact there is a need to combine EU funds. [Guidelines to combining BBI and European Structural and Investment Funds](#) (ESIF) have already been published by the BBI JU and a new study on accessing EU financial instruments for large biobased industries is coming out in October.

The final presentation came from Oliver Cusworth of the [European Investment Bank \(EIB\)](#), which is the EU’s long-term lending institution. “To reap the full benefit of the circular economy means we must move faster, but this has risk, and needs banks to work outside their usual comfort zone,” he said, explaining why and how the [EIB invests in circular economy projects](#).

There were three current focus areas for EIB funding that were relevant to sustainable chemicals: utilisation of sustainable feedstock, improved recyclability, and improved production processes. These are areas where the EIB was seeing increasing volume of investment year after year. He also highlighted the InnovFin initiative that specialised in smaller, higher risk projects. A dedicated [bioeconomy thematic platform is planned under InnovFin](#). He also said that the EIB had funded lots of projects, but recognised that investment gaps existed. There is now a clear need to redesign EU investment tools to enhance interregional cooperation.

Modernisation ambassadors

Closing the conference, Luisa Prista, Head of Unit Chemicals, Consumer, Environmental and Health Technologies at DG GROW congratulated all who contributed to the success of ESCSS phase one and stressed that it provides a good methodology to move forward. The Commission sees a reinvigorated industrial strategy

as a priority, she said, by exploiting industrial symbiosis and all types of innovation, including services and societal innovation. She looks to the six demonstration regions to “develop their potential” and “become ambassadors for modernisation of the chemical industry in Europe.”

A second phase of the ESCSS initiative will focus on facilitating the recovery and reuse of Gaseous Industrial Effluents (GIEs), such as CO, CO₂, NO_x, SO₂, H₂ originating from energy intensive industry sectors like steel or cement, for use as non-fossil feedstock for sustainable chemicals production.