

# “Bioeconomy is now irreversible”

**CIRCULAR ECONOMY** Following the presentation of the European Commission’s Circular Economy package many stakeholders wondered if the previous ambitious bioeconomy strategy will be absorbed into the package. EuroBiotech asked John Bell, the man responsible for the bioeconomy strategy in DG Research & Innovation, about his views.

**EuroBiotech** Only two weeks after the very first Global Bioeconomy Investment Summit took place in Brussels, Spanish renewable energy and biofuel giant Abengoa has entered insolvency proceedings. Is the vision of a flourishing bioeconomy still intact?

**Bell** *The Commission’s vision of a flourishing bioeconomy has not changed. Progress towards building a European Bioeconomy is now irreversible. While news of a company in difficulty is never welcome, other companies have been announcing new investments. Building the bioeconomy is a medium and long-term task, and progress will not always be smooth. There is much potential that has not yet been realised because there are many bioeconomies as there are regions. Currently, biomass is partially underexploited, as many waste streams are not used in an optimal way. Besides, the biomass potential can be upgraded by closing the yield gap, increasing productive land, introducing new or improved species that may or may not be generated by various biotechnological advances, and introducing new processing technologies. Of course, all these options will require careful analysis in order to avoid negative environmental consequences. The Commission’s goal is indeed to ensure a sustainable bioeconomy that delivers multiple benefits, as described in the European Bioeconomy Strategy.*

**EuroBiotech** The adoption of the European Bioeconomy Strategy in 2012 was



**JOHN BELL** is Director for Bioeconomy, DG Research & Innovation. This includes Horizon 2020, the Bioeconomy strategy, the Bio Based Industries JU, Blue Growth, Food and Nutrition Security research and innovation for a total budget of €3.7bn. Bell has been a European Commission official since 1993. He completed his Doctorate at St John’s College, Oxford University in 1993.

driven by the recognition that fossil resources are finite. However, since then oil prices have dropped from over US\$100 to about US\$30 today. How can

you secure the interest of investors and the industry in this situation?

**Bell** *The underlying need to move our economy away from its dependence on fossil-based resources has not changed. Indeed the unequivocal message from the COP21 negotiations is that governments will now set the policies to incentivise the transition to a climate-smart economy. The bioeconomy has a strong potential to be a big part of the solution. But this is not automatic. It requires substantial further investment in research and innovation in primary production (agriculture), as well as in food and nutrition, bio-based processing and bioenergy. The Commission’s public-private partnership with industry – the Bio-Based Industries Joint Undertaking – is a major step in the right direction. More broadly, the Investment Plan for Europe presented by the European Commission is a package of measures to unlock public and private investments of at least €315bn over the next three years. It consists of three strands: mobilising investment finance without creating public debt; supporting projects and investments in key areas, including research and innovation; and removing sector-specific and non-financial barriers to investment. The Commission is working to ensure a favourable environment for research and innovation, as well as for investments in the bioeconomy. The use of renewable marine resources in a sustainable manner is, for example, one of the areas where Europe is at a global advantage.*

**EuroBiotech** There was only moderate feedback on the first call of the Joint Undertaking BBI. What can be done to attract more interest?

**Bell** We are developing Widening Participation Strategy that will target those countries, regions and stakeholders that have so far proven to be less active. A number of information days were organised across the EU in 2015, for example in Bucharest, Porto, Dublin, and Warsaw. And of course we make sure that the BBI gets a high profile in major events and conferences related to bio-base industries. In addition, the joint undertaking has established a new partnering platform on the BBI website as well as a help desk with quick response times for prospective project partners.

**EuroBiotech** This year, the Commission will review the EC's bioeconomy strategy and action plan. What do you expect from that evaluation?

**Bell** The review will provide the Commission with the facts and figures on how the strategy has been implemented over the last three years, which will enable us to robustly underpin decisions about the future orientation of the strategy. We are currently renewing membership of the European Bioeconomy Panel after three years. We want to ensure that there is inclusive, balanced representation of stakeholders on the Panel, so they are well placed to identify opportunities for joint,

broadly supported actions. Likewise, together with the colleagues of the Commission's Joint Research Centre (JRC), we are also updating the work programme for the European Bioeconomy Observatory, identifying new data needs that have to be addressed. Further steps to be taken will be identified after the review has been concluded at the end of 2016.

**EuroBiotech** In December, the European Commission (EC) presented its Circular Economy package and action plan. How will it impact the attractiveness of bioeconomies in the member states?

**Bell** The Circular Economy package identifies biomass and bio-based products as one of five priority areas for action. On the legislative side, it proposes the separate collection of biowaste as well as a concurrent ban on landfill of waste that is separately collected. Both measures should send strong signals to companies exploring innovative uses of biowaste. In addition, the Package announces the development of guidance on the cascading use of biomass and promises to ensure coherence and synergies with the circular economy when examining the sustainability of bioenergy under the Energy Union. It also makes a commitment to assess the contribution of the 2012 Bioeconomy Strategy to the circular economy and if necessary update it, and recognises the importance of investments in integrated

bio-refineries. Using resources more efficiently will bring new growth and job opportunities.

**EuroBiotech** What role does the bioeconomy play in terms of sustainability and decarbonisation along with other EC policies such as the Renewable Energy Directive and the CE package?

**Bell** One of the challenges of the bioeconomy for a policy-maker is that it lies at the intersection of many policy areas. One of my tasks internally within the European Commission is to represent the innovation-driven bioeconomy at the policy-making table. That is what we have done for example in the preparation of the 2015 Circular Economy package, and it will also be important in the context of the forthcoming renewable energy package. As far as energy is concerned, it is important that policy can support business models that are based on integrated biorefineries. That is the case of one of the first flagship projects financed by the BBI – a €17 million grant for the demonstration of an integrated biorefinery in Sardinia that can produce a variety of chemicals as well as inputs for food, feed and energy. Additionally, the Commission is also starting activities on the "European Sustainable Chemicals Support Service" to six Model Demonstrator Regions, including bio-based chemicals in their scope.

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**“Sohettes” biorefinery in Pomacle-Bazancourt. 1: starch/glucose production (Chamtor), 2: sugar refinement (sucrerie cooperative), 3: distillery (Christanol), 4: industrial biotech demonstration unit (A.R.D. Biodemo), succinic acid production (BioAmber), 5: Agro-industry research & development, active cosmetic ingredients (Soliance), 2<sup>nd</sup> generation bioethanol pilot factory (Futerol), production of green surfactants (Wheatoleo), white biotech centre of excellence**

**EuroBiotech** How will the EC measure sustainability in order to get feedback on the success of its policies?

**Bell** The European Commission has sustainability indicators and thresholds in place for the sustainability of biomass as part of the Renewable Energy Directive, Community Agricultural Policy (CAP) and the Sustainable Forest Strategy (SFS) and different certification schemes with Commission approval do already operate. In addition, the Commission passed a number of mandates for bio-based products to the European Committee for Standardisation (CEN). The European Commission has established a Bioeconomy Observatory that provides data on the bioeconomy, including on sustainability, and is also implementing a new mandate to provide data and analysis of biomass flow, supply and demand. But collecting data on the bioeconomy in general, including on its sustainability dimension, remains a big challenge. For that reason we are proposing to finance new research under Horizon 2020, for example on methods for the collection of statistical data on bio-based industries and bio-based products. For the circular economy, a lot of relevant data has already been collected by Eurostat, and for the Resource Efficiency Scoreboard and the

Raw Materials Scoreboard. On that basis, the Commission will work with the European Environment Agency and in consultation with Member States to propose a simple and effective monitoring framework for the circular economy. The European Commission’s 2016 Work programme contains a new initiative on “Next steps for a sustainable European future”. The aim is to set out a new approach to ensure Europe’s economic growth and social and environmental sustainability beyond the 2020 timeframe, taking into account the internal and external implementation of the United Nations Sustainable Development Goals.

**EuroBiotech** Some statistics suggest that the majority of biobased chemicals and plastics will be produced in Asia instead of in Europe. What can Europe do to stay/become globally competitive?

**Bell** Some of the key issues are sustainable biomass supply at competitive prices, policy coherence and predictability, and the development of market demand. We continue to work on all these fronts, through research and innovation and through other policies. The European Commission is committed to ensuring the continued stimulus to research and innovation in the bioeconomy, notably

through Horizon 2020, where funding for related actions is nearly €3.8bn. To be successful, we need Europe to act at all levels of governance. That is why it is so important that an increasing number of EU Member States have already developed national bioeconomy strategies, such as Finland, Germany and the Netherlands. Regions are increasingly taking up the bioeconomy in their smart specialisation strategies. The EU regions will have to play a leading role in mobilising regional/local stakeholders, raising awareness and exchanging knowledge on new opportunities, creating incentives using their European Structural & Investment Funds (ESIF), encouraging new partnerships and fostering synergies and complementarities with the H2020 programme, facilitating investments and deployment by creating the right ecosystem and policies. The European Fund for Strategic Investments (EFSI) – for instance – has already started financing projects in the real economy as well as SMEs and start-ups. By the end of 2015, the EIB estimates that the EFSI mobilised around €50bn of investment in Europe.

**EuroBiotech** Most recently, the 1<sup>st</sup> Global Bioeconomy Summit took place in Berlin. What was the most important message you took home from the meeting?

**Bell** Globally, the bioeconomy is moving quickly and competitively “from niche to norm”. The first Global Bioeconomy Summit confirmed that the bioeconomy is expanding dynamically and in diverse ways at all levels of government and society. It is clear that the bioeconomy as a concept is taking the shape of a science and sustainability driven movement that is increasingly solutions focused. There is no single bioeconomy, rather an increasing diversity of emerging bioeconomies, where diverse bio-resources are being reconfigured to catalyse solutions to climate, emissions, waste, reindustrialisation, energy, rural incomes and biodiversity valorisation in new value chains. The bioeconomy is thus increasingly transforming sustainability from a static boundary condition, into a motor of growth, value, security and clean industry. ■

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