

Bridging the gaps for a 'circular' bio-economy: selection criteria, bio-based value chain and stakeholder mapping

Supplementary information

Table S1: Bioeconomy initiatives and strategies analysed for the second round of the value chain assessment and selection

Member state	Scheme	Year	Emphasis	Nature of initiative
Austria	Eco-Electricity act	2011	Renewable energy generation	Policy and implementation
Czech republic	Czech republic bioeconomy initiative	2013	General plan for bioeconomy	Action plan
Denmark	Growth plan for water, bio and environmental solutions	2013	Knowledge and production based for bio-based product, create a market pull	Innovation and creation of demand
Estonia	Development Plan on the Promotion of Biomass and Bioenergy Use for 2007–2013	2015-2021	Development of domestic biomass for bioenergy use and reduce dependence on fossil energy	Action plan
EU	Marine Strategy Framework Directive	2015-2020	Fisheries	Policy
EU	Circular Economy Package	2015-2020	Creating industrial symbiosis between various sectors and closing the material loop	Implementation
EU	Climate change strategy	2015-2030	Increase share of renewable, clean energy while reducing overall energy footprint. Develop adaptive capacity to the effects of climate change	Implementation
EU	Single Market strategy	2015	Not precisely targeting bioeconomy development but has relevant measures	Policy strategy including a number of measures
EU	Promotion of sustainable mobilisation of wood	2007-ongoing	Policies for management of wood resources	Policy and implementation

EU	Energy Union	2014-ongoing	Energy security and efficiency	Policy and implementation
Finland	Rural Development Programme of Mainland Finland	2007-2013	Not precisely targeting bioeconomy development but has relevant measures	Identifying innovative measures to fund and develop further
France	New Industrial France Policy	2013	Industrial bioeconomy plan	34 Industrial plans available to promote the industrial sector down the green chemicals and energy path
France	National waste plan	2014-2020	Waste reduction targets	Plan and implementation
France	French Chemical industry road map	2013	-	-
France	Action plan for wood processing industries	2013	Sustainable forestry resource management : research and innovation	-
Germany	New Products: made from nature	2012	Inform business community of the significance and opportunities of bio-based products (sourced from natural renewable material)	Information
Germany	National research strategy: bioeconomy 2030	2013	Inform business community of the significance and opportunities of bio-based products (sourced from natural renewable material)	Policy
Germany	Quality check-Sustainability standard project	2013	Product labelling on product's sustainability performance	Labelling / information
Germany	National Action plan for substance recovery from	2009-2010	Research and development of techniques to recover	Information/ research strategy

	renewable raw material		useful material from biomass and application	
Germany	Biorefineries road map	2012	Development of an awareness on the present and future bio refining technologies	Information
Hungary	National Environmental Technology Innovation Strategy	2011		Industrial sector implementation
Ireland	TEAGASC: The agriculture and food development authority	2008	Research and innovation in the agri-food sector via stakeholder engagement	Research and innovation investment
Ireland	Ireland waste management policy	2012-ongoing	Policies and implementation for waste management	
Italy	Italian Bioeconomy strategy	2014-2020	Policy framework to prioritise funding for bio-based industries and agro-food sector	Policy
Italy	Environmental Annex to the Stability Law	2014	Circular Economy via Green Public Procurement (GPP)	Policy
Italy	Environmental minimum criteria - Green public procurement National Action Plan	2016	Companies and service providers to the public authority are required to adopt this to apply for public tenders	Policy
Italy	National programme for waste reduction	2016	50% share of "green purchases"; valorisation of agri-sector by-products;	Potential measure
Latvia	Bioeconomy strategy under development	-	-	-
Netherlands	Program Biobased Economy (BBE)	2012	Technological innovation and market development along all biomass value chains, mainly vegetable and animal biomass for non-food applications	Co-ordination and management function within the government

			(materials, chemicals, energy and biofuels)	
Netherlands	Biorenewables Business Platform (BBP)	2010	Sustainable production of biomass, sustainable import chains, co-production of biochemical, biomaterials and biofuels, production of green gas, innovations in biochemical	Multi-stakeholder platform promoting structural changes in the agro and industrial sectors and in the energy supply
Netherlands	Platform Agro-Paper Chemistry	2011	Lignocellulose as a raw material. Chemical building blocks from plants. Protein cascading	Industrial partnership of agrifood, paper and chemical industries
Netherlands	Bio based Business accelerator	2012	Energy, waste & organic residues, materials, (fine) chemistry, food, agro, water and green space	Network of companies, governments, knowledge institutions and intermediaries / service providers
Netherlands	Dutch Biorefinery Cluster	2014	Concept of total merit of the raw materials and residual flows: Water, fiber, protein and minerals, etc	Multi-stakeholder initiative driven by business with support of research institutions and government agencies
Netherlands	Action plan for increasing resource efficiency	2012	General material use efficiency	Action plan
Slovenia	Strategy of Agriculture	2012-2020	Focus on food-security, sustainable production, products from agri-food industry other than food and feed and sustainable rural development	Action plan
Slovenia	Rural development plan	2014-2020	Sustainable supply and use of renewable energy sources and agri-food resources	Action plan

Spain	Spanish Bioeconomy strategy – 2030 Horizon	2016	Strategic advancement and maintenance of competitiveness in efficient use of agricultural by-products and agro-forestry products like wood, cork, resin and timber for paper and other bio-based products. Potential for use of agricultural by-products comes from responsible intensification and sustainability of the primary food production systems	Implementation
Sweden	Swedish Research and Bioeconomy strategy	2012	General bioeconomy plan	Research and innovation strategy ; No strategy available as yet.