



A Bioeconomy for Europe

Using resources from land and sea
for a post-petroleum economy

**"Innovating for Sustainable Growth:
A Bioeconomy for Europe"**

**WBC Steering Platform on
Research
Belgrade, 6 December 2012
Towards a Bio-Economy**

**European Commission
Research and Innovation DG
Biotechnologies, Agriculture and Food**

<http://ec.europa.eu/research/bioeconomy/>

This presentation shall neither be binding nor construed as constituting commitment by the European Commission

Building a Bioeconomy for Growth in Europe

- **The Policy and Economic context:
A bioeconomy for growth**
- **The EU Bioeconomy Strategy and
Action Plan:
What is at stake and what to do**

European Commission Communication on Innovating for Sustainable Growth: A Bioeconomy for Europe

- 13 February 2012** *Adoption and presentation by the **European Commission***
- 15 February 2012** *Presentation to the **European Council Research Working Party***
- 21 February 2012** *Presentation to the **Competitiveness Council** (lunch debate)*
- 26-28 March 2012** *Danish Presidency - associated
Conference
“*Bioeconomy in Action*”*



"It is particularly important that research and innovation policy interacts more strongly with other policy areas and vice versa in order to drive the bioeconomy"

The Bioeconomy: An EU priority

EU 2020 Strategy:

Smart growth

Sustainable Growth

Inclusive Growth



Building
a sustainable
Bioeconomy for
Europe



Innovation Union:
Turning innovative
ideas into products
and processes for
growth and job
creation.



A cornerstone of the EU economy...

In 2010, the Bioeconomy represented :

- **2 trillion € annual turnover**
- **1 trillion € value added, ±9 % GDP**
- **22 million jobs, ± 9% of the EU's workforce**

<i>Sector</i>	<i>Annual turnover (bil€)</i>	<i>Employment</i>
<i>Food</i>	965	4,400
<i>Agriculture</i>	381	12,000
<i>Paper/Pulp</i>	375	1,800
<i>Forestry/Wood ind.</i>	269	3,000
<i>Fisheries and Aquaculture</i>	32	500
<i>Bio-based industries</i>		
Bio-chemicals and plastics	50 (est.)	150 (est.)
Enzymes	0.8 (est.)	5 (est.)
Biofuels	6	150
Total	2,078	22,005



... with high GROWTH potential

By 2025, € 4.7 billion research funding associated to the Bioeconomy Strategy under Horizon 2020 could generate:

- **130 000 new jobs (800 000 jobyears)**
- **45 billion € value added in bioeconomy sectors (10x return)**

Further growth is expected from other – direct and indirect – public and private investments in all parts of the bioeconomy.

2010

2 trillion € annual turnover
1 billion € value added, ±9 % GDP
22 million jobs, ± 9% EU's workforce

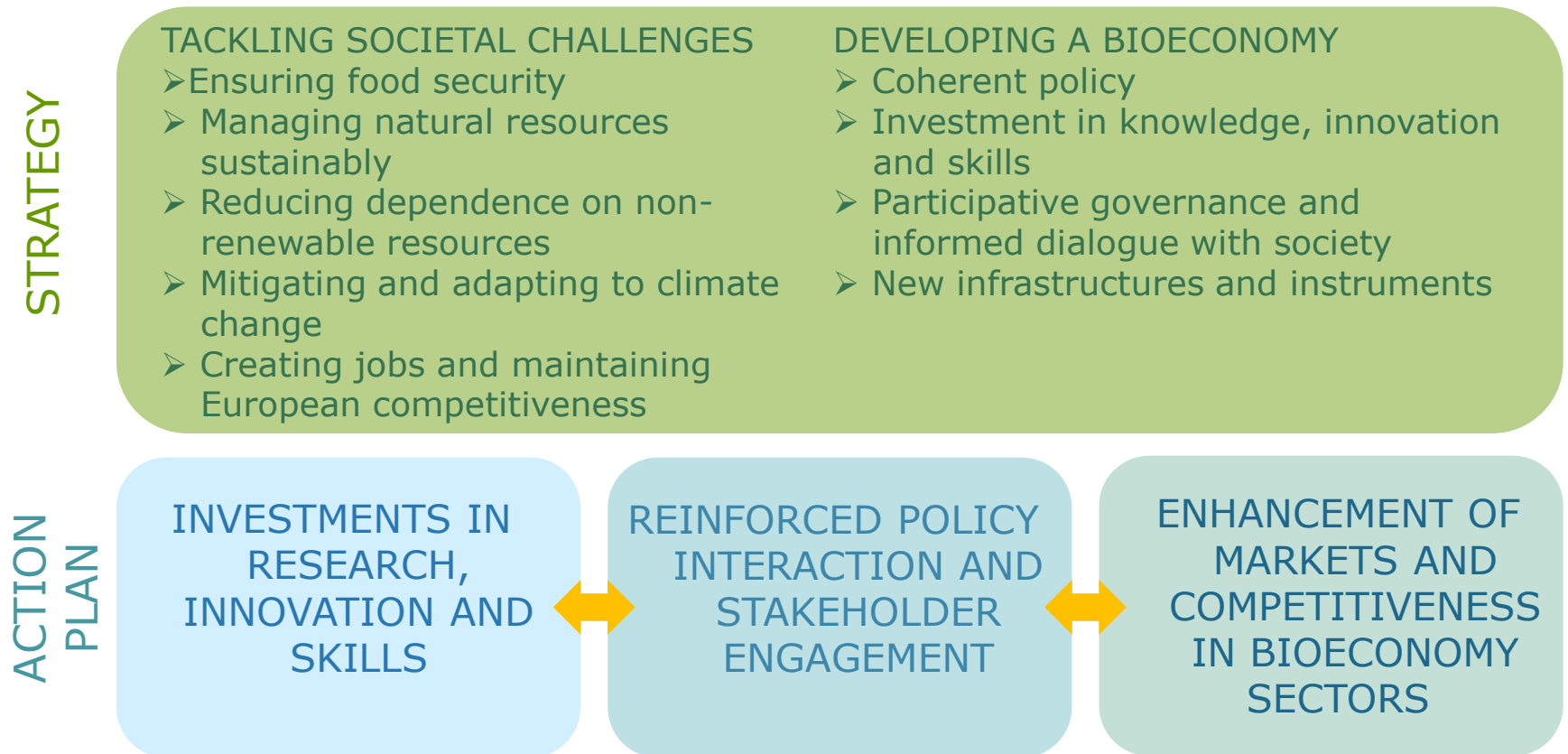
**€ 4.7B RESEARCH
UNDER HORIZON2020**

2025

130 000 new jobs
45 b€ value added in bioeconomy sectors

Source: "Innovating for Sustainable growth: a Bioeconomy for Europe", European Commission Communication COM 2012(60) and Staff Working Document

The Bioeconomy Strategy and Action Plan



Bioeconomy Action Plan



In the framework of **Europe 2020**, the Strategy "**Innovating for Sustainable Growth: a Bioeconomy For Europe**" promotes sustainable production of renewable resources from land and sea and their conversion into food, bio-based products, biofuels and bioenergy.

3 sets of **ACTIONS** to implement the Bioeconomy Strategy in Europe

**INVESTMENTS IN RESEARCH,
INNOVATION AND SKILLS**

**REINFORCED POLICY INTERACTION
AND STAKEHOLDER ENGAGEMENT**

**ENHANCEMENT OF MARKETS AND
COMPETITIVENESS IN BIOECONOMY
SECTORS**

EU Institutions

Member States
and Regions

Stakeholders
public & private sectors

International
partners &
organisations

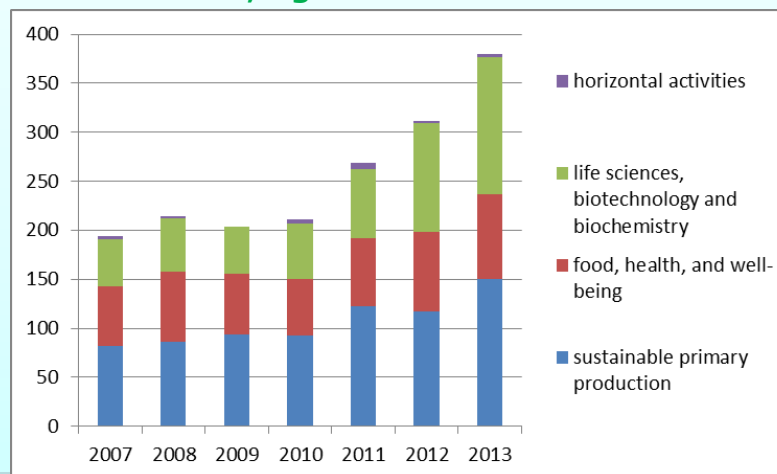
1. INVESTMENTS IN RESEARCH, INNOVATION AND SKILLS

- Ensure substantial EU and national funding and private investments for bioeconomy research and innovation; public-public and public-private partnerships; support to bio-clusters
- Increase the share of multi-disciplinary and cross-sectoral research and innovation; provide scientific advice to policy making
- Promote the uptake and diffusion of innovation in bioeconomy sectors; create feedback mechanisms on regulation and policy;
- Build the human capacity required to support growth and integration of bioeconomy sectors;

Shifting towards Horizon 2020



FP7 Cooperation Theme 2 €1,9 Billion for Food, Agriculture and Fisheries and Biotechnology



WP2013, bridging with Horizon 2020:

Orientation papers: https://ec.europa.eu/research/participants/portal/page/fp7_documentation

Call publication: July

Info Day: Brussels 16 July 2012, on-line registration :

<http://www.b2match.eu/biobro2012>

Proposal for Horizon 2020

€4,7 Billion for tackling EU bioeconomy challenges

€ 600 Million for fostering EU industrial leadership in biotechnologies

The Bioeconomy throughout Horizon 2020



European
Commission

Europe 2020 Priorities

International cooperation

European Research Area

Shared objectives and principles

Tackling Societal Challenges

- Health, demographic change and wellbeing
 - Food sec., sust. agri., mar. res. & bioeconomy
 - Secure, clean and efficient energy
 - Smart, green and integrated transport
 - Supply of raw materials, resource efficiency and climate action
 - Inclusive, innovative and secure societies
- EIT will contribute to addressing these challenges*

Creating Industrial Leadership and Competitive Frameworks

- Leadership in enabling and industrial technologies (Biotechnology,...)
- Access to risk finance
- Innovation in SMEs

Excellence in the Science Base

- Frontier research (ERC)
- Future and Emerging Technologies (FET)
- Skills and career development (Marie Curie)
- Research infrastructures

Simplified access

Common rules, toolkit of funding schemes

Coherence with other EU and MS actions

2. REINFORCED POLICY INTERACTION AND STAKEHOLDER ENGAGEMENT

- Create a **Bioeconomy Panel** to enhance synergies and coherence between policies. Participative governance and **informed dialogue**: foster participation of researchers, end-users, policy-makers and civil society;
- Establish a **Bioeconomy Observatory** and develop forward-looking and modelling tools;
- Support the development of **regional and national bioeconomy strategies**;
- Develop **international cooperation** to jointly address global challenges (e.g. food security, climate change);

Establishing a Bioeconomy Information System and Observatory

to follow the evolution of

bioeconomy research and innovation, markets, policies and their impacts

- Support existing databases and develop new databases and indicators for bioeconomy impacts analyses.
- Link the system to a global monitoring systems to follow the world-wide developments and impacts of the bioeconomy.
- Review regularly the progress and delivery of EU and national/regional bioeconomy strategies.
- Produce regular foresights and forecasts and updates of ex-ante impacts assessments for the bioeconomy.
- Contribute to the mapping of EU, national and regional bioeconomy activities and infrastructures, policies, research and innovation capacities as well as public and private investments in research and innovation.

3. ENHANCEMENT OF MARKETS AND COMPETITIVENESS IN BIOECONOMY SECTORS

- Provide knowledge-base for sustainable intensification of primary production; improve understanding of biomass/biowaste availability and demand;
- Promote the setting up of networks for integrated and diversified biorefineries; establish a PPP for bio-based industries;
- Support expansion of new markets; facilitate green procurement for bio-based products;
- Develop science-based approaches to inform consumers about product properties.



Through policy interaction and stakeholder engagement, coherent investments in Research and Innovation under the Bioeconomy Strategy...

Increase the resilience, sustainability and productivity of the food supply chain

Reduce dependence on fossil resources and addresses climate change

Foster European Industries competitiveness, creating growth and jobs

***GMES can play a significant role
for the Bioeconomy Strategy and Action Plan***



- **More info on the Bioeconomy at:**
<http://ec.europa.eu/research/bioeconomy>
- **FP7 FAFB Orientation Paper 2013 now available at:**
https://ec.europa.eu/research/participants/portal/page/fp7_documentation
→ Orientation papers 2013 → Cooperation
- **10 July: Publication of 2013 Call**
- **More info on EU2020 and Horizon 2020 at:**
http://ec.europa.eu/europe2020/index_en.htm
http://ec.europa.eu/research/horizon2020/index_en.cfm
- **More info on EU Budget – Myths and Facts:**
http://ec.europa.eu/budget/explained/myths/myths_en.cfm



- Action Plan on Bio-economy rest on 3 pillars:
 - Investments in research, innovation and skills
 - Reinforced policy interaction and stakeholder engagement
 - Enhancement of markets and competitiveness in bio-economy
- All relevant for WBCs given pre-accession status
- In particular Action 8: 'Develop international cooperation on bio-economy research and innovation to jointly address global challenges, such as food security and climate change, as well as the issue of sustainable biomass supply (from 2012).'
- Thus: (1) link with new strategy on International cooperation (2) importance to attend SCAR and SFIC and (3) preparing acquis