The EU Bioeconomy Observatory

Meeting of the Nordic Bioeconomy WG

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Stockholm, Sweden

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JRC at a glance

JRC: a Directorate General of the European Commission

President José Manuel Barroso — **College of Commissioners**

Commissioner Geoghegan-Quinn
Research, Innovation and Science

Joint Research Centre (JRC) — **DG Research and Innovation**

JRC Director-General
Vladimir Sucha

JRC at a glance

European Commission

JRC Mission and Role

… is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

JRC is the European Commission's in-house science service and the only DG executing direct research;
providing sound and relevant scientific input to European policy making

Serving society, stimulating innovation, supporting legislation

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JRC at a glance

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Quick facts (2013)

- Established in 1957
- 3068 permanent and temporary staff as of end 2013
- 1388 scientific publications
- Budget: €393 million of outgoing expenses in 2013

JRC Sites

7 JRC Scientific Institutes (in 5 Member States) + Headquarters (in Brussels)

- IRMM – *Geel, Belgium*
  Institute for Reference Materials and Measurements
- ITU – *Karlsruhe, Germany*
  Institute for Transuranium Elements
- IET – *Petten, the Netherlands and Ispra, Italy*
  Institute for Energy and Transport
- IPSC – *Ispra, Italy*
  Institute for the Protection and Security of the Citizen
- IES – *Ispra, Italy*
  Institute for Environment and Sustainability
- IHCP – *Ispra, Italy*
  Institute for Health and Consumer Protection
- IPTS – *Seville, Spain*
  Institute for Prospective Technological Studies

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- **JRC project**
- **Cooperation with Nordic WG**

Policy Context: the EU Bioeconomy Communication

On 13 February 2012, the European Commission adopted a Communication (COM(2012)60) **« Innovating for Sustainable Growth : a Bioeconomy for Europe »**

The Communication presents **a Bioeconomy Strategy and Action Plan** « *whose goal is to emphasise the importance of the bioeconomy for Europe in addressing major societal and economic challenges and to create a more favourable environment for its realisation* ».

What is the Bioeconomy (in the EU)?

See EU Communication on the Bioeconomy (COM(2012)60)

- The Bioeconomy encompasses the "***production of renewable biological resources and the conversion of these resources and waste streams into value added products such as food, feed, bio-based products and bioenergy".***

- It includes:
  - agriculture, forestry, fisheries, food, pulp and paper production
  - as well as parts of chemical, biotechnological and energy industries

Bioeconomy Observatory - Mandate

- ***Action No 6: Establish a Bioeconomy Observatory*** *in close collaboration with existing information systems* ***that allows the Commission to regularly assess the progress and impact of the bioeconomy*** *and develop forward-looking and modelling tools.*

- **March 2013: month 1 of a 3-year JRC project "to set up a Bioeconomy Observatory" :** up to Q1-2016 to have a fully operational Bioeconomy Observatory in place

  Project acronym: BISO (Bioeconomy Information System Observatory)

- **Same focus as EU Bioeconomy Strategy on three pillars :**

  1. **"Research"** (Investments in Research, Innovation and Skills)
  2. **"Policy"** (Reinforced policy interaction and stakeholder engagement)
  3. **"Markets"** (Enhancement of markets and competitiveness in bioeconomy)

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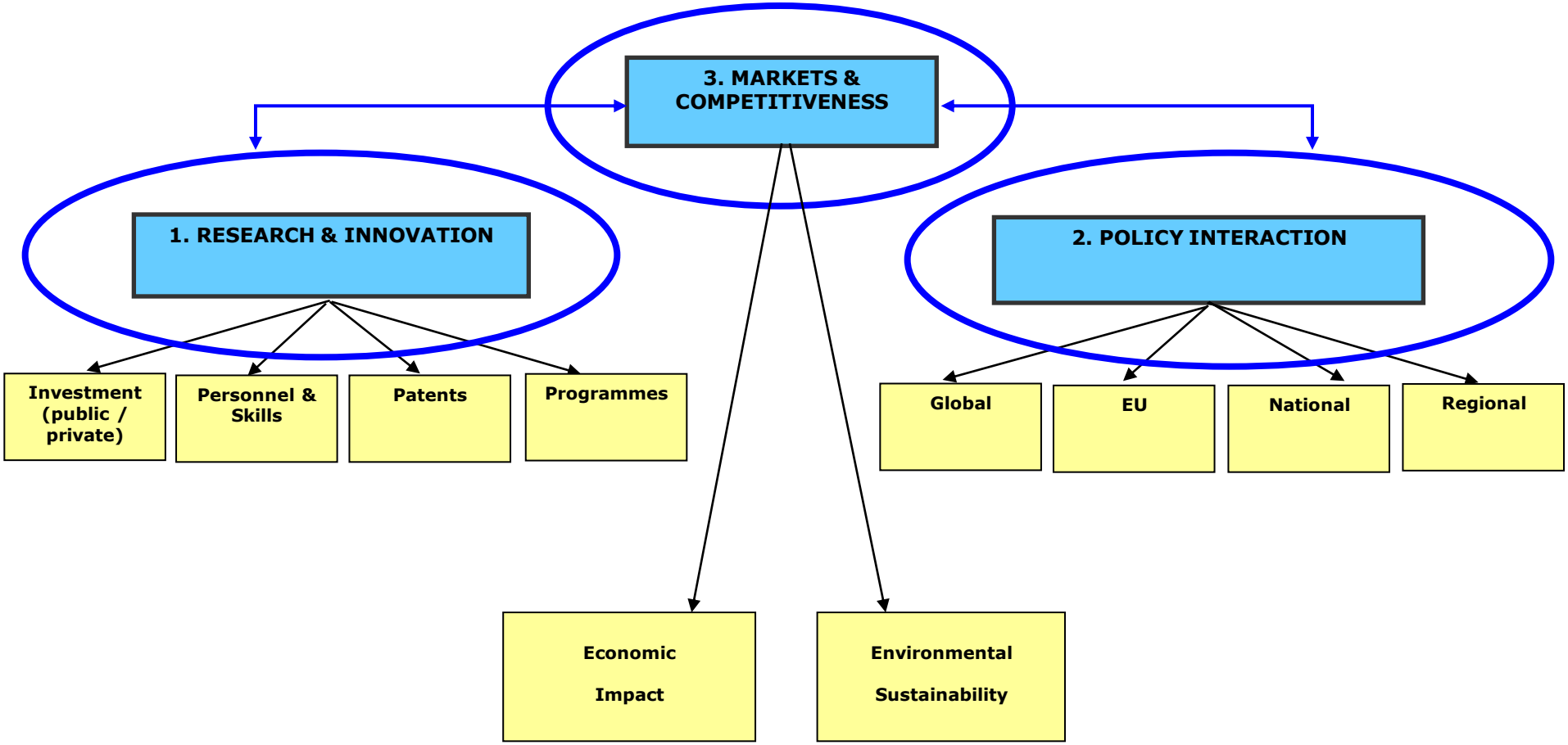
Bioeconomy Observatory – 3-pillar structure



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Bioeconomy Observatory: key dates

- **In short:**
  - **Year 1 (Q2-2013-Q1-2014): preparation** (methodology definition)
  - **Years 2-3 (Q2-2014-Q1-2016): implementation** (data collection, data analysis, data dissemination)

- **November 2013: Stakeholders Roundtable No1** (on planned methodology)
- **Q1-2014:** pilot website V1 (+ confirmed methodology)
- **October 2014:** Stakeholders Roundtable No2 + upgraded website V2
- **Q1-2015:** first Bioeconomy Observatory annual report (Y-2014)
- **September 2015:** Stakeholders Roundtable No3
- **Q1-2016: Bioeconomy Observatory fully operational**

JRC Bioeconomy Observatory Project Team

1. **JRC Headquarters** (Unit A.2, Brussels) lead for:
    - Project Management
    - **"Research" pillar**
    - **"Policy" pillar**
    - Bioeconomy Observatory website
    - Stakeholders Relations

2. **JRC Institute for Prospective Technological Studies** (Unit J.4, Sevilla) lead for:
    - **"Market" pillar** – sub-pillar **"economic impact"** (data management and modelling; industry surveys)

3. **JRC Institute for Environment and Sustainability** (Unit H.8, Ispra) lead for:
    - **"Market" pillar** – sub-pillar **"environmental sustainability"** (sustainability assessment tools like Life Cycle Assessment LCA)

Bioeconomy Observatory project : Actors

- **JRC BISO Project Team**

  1. JRC Headquarters (Unit A.2, Brussels)
  2. JRC Institute for Prospective Technological Studies (Unit J.4, Sevilla)
  3. JRC Institute for Environment and Sustainability (Unit H.8, Ispra)

- **"Partners" of the Bioeconomy Observatory**

  1. **EU Commission**
  2. ***EU Member States and Regions***
  3. **International organisations** (e.g. OECD, FAO, IEA)
  4. **(selected) non-EU countries**
  5. **Stakeholders** (academia, industry, civil society…), including bioeconomy stakeholders fora like the Bioeconomy Panel and the Bioeconomy PPP

Bioeconomy Research Monitoring

Objectives: collect quantitative data and qualitative information on "bioeconomy research"

- Mainly at EU and Member States level (+ also for some selected regions and non-EU countries)

- Indicators related to 4 bioeconomy research areas:

1. R&D investment (public and private)
2. R&D Personnel and Skills
3. Patents
4. Research and Innovation programmes

Bioeconomy Research Monitoring

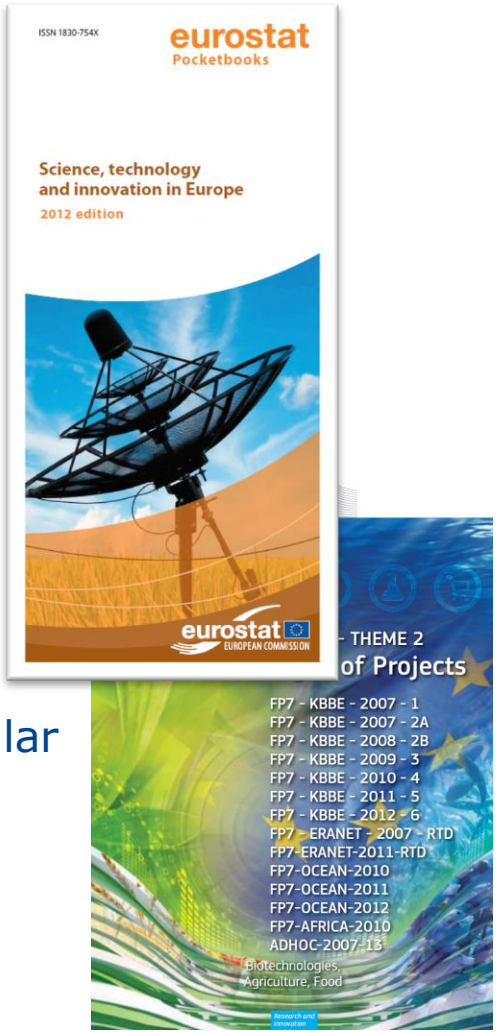
Data collection approach:

- Use existing statistics (eg Eurostat STI data on R&D investment, R&D personnel) for "bioeconomy-relevant" economic sectors

- Use existing lists of "bioeconomy-relevant" research projects (eg EU level through Cordis database)

But all data not directly available from existing databases (eg info on national bioeconomy research like national public funding or programmes for bioeconomy) **so additional information sources will be needed** in particular from Member States

Information sources:
mainly EU Commission and Member States
(also key EU regions + key non-EU countries)



Bioeconomy Policy Monitoring

Objectives: collect qualitative information on "bioeconomy policy" initiatives

Mainly at EU and Member States level

Also "some" collection of "bioeconomy policy" information for:

- Selected key/bioeconomy leading **EU Regions**
- Selected key/bioeconomy leading **non-EU Countries**

Data collection approach: interaction with policy-makers

in various "bioeconomy areas" (incl. a broad range of policies like research, agriculture, fisheries, industry, environment, energy…)

+ automated web monitoring (selected key words and links)

Information sources:

mainly EU Commission and Member States

(also key EU regions + key non-EU countries)

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Bioeconomy Market Monitoring

- **Objectives :** describe, quantify and analyse the development of various bioeconomy sectors from a socio-economic point of view

- **Collect quantitative data on bioeconomy markets** like:
  - **Biomass supply** e.g. volumes of primary and secondary resources available and used in bioeconomy (like biomass from agriculture, forestry, marine, waste and by-products)
  - **Bio-based production** in bioeconomy sectors like food/feed, bio-energy, bio- based industries including structural industry indicators (like operators, volume and value of production, jobs...)

- **Collect qualitative analytical information** (eg drivers and constraints in developing bio-based products)

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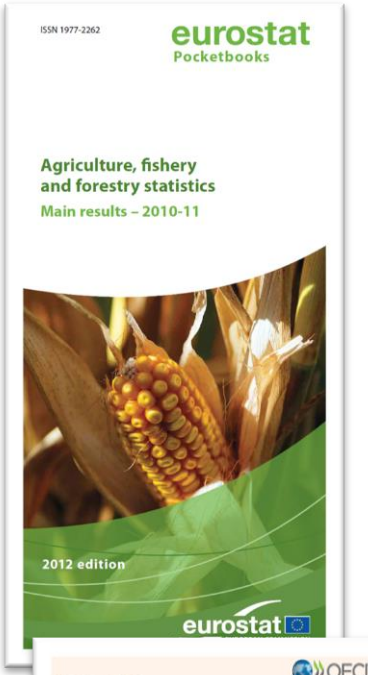
Bioeconomy Market Monitoring

Data collection approach: use existing trade databases and (adapted) existing concepts and tools of the integrated Agro-economic Modelling Platform (iMAP) from JRC

But **all market data not available in existing databases** e.g. "hybrid" sectors (partly bio-based) like chemical sector

Information sources: in addition to **existing trade databases**, data gaps to be filled in with additional market data from industry (**industry surveys, market studies)**



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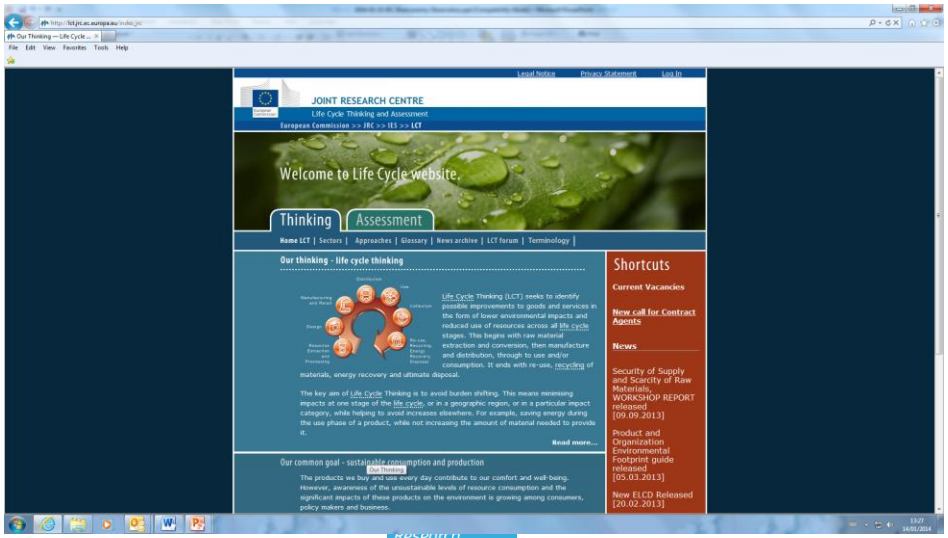
Bioeconomy Sustainability Assessment

Objectives: collect qualitative information to contribute to knowledge-base on environmental sustainability of bioeconomy

- Develop key environmental indicators for bio-based value chains
- Sustainability assessment of some bio-based products and value chains

Approach: use of existing concepts and tools for environmental sustainability assessment like Life Cycle Analysis (LCA)



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National Bioeconomy Monitoring

Objectives: collection of **national** data and information related to:

1. Bioeconomy Research (eg public R&D investment in bioeconomy)
2. Bioeconomy Policy (eg national bioeconomy strategy)
3. Bioeconomy Markets (eg national market studies)

Data Collection Approach: in addition to existing EU databases (eg Eurostat) national data and information supplied by interaction with:

- **Relevant EU committees** where Member States work on bioeconomy (eg Standing Committee for Agricultural Research (**SCAR**))
- **National Member States authorities** bilaterally
- **"Relevant" national bioeconomy groups like Nordic WG?**

Note: **same** objectives/approach **for selected bioeconomy regions**

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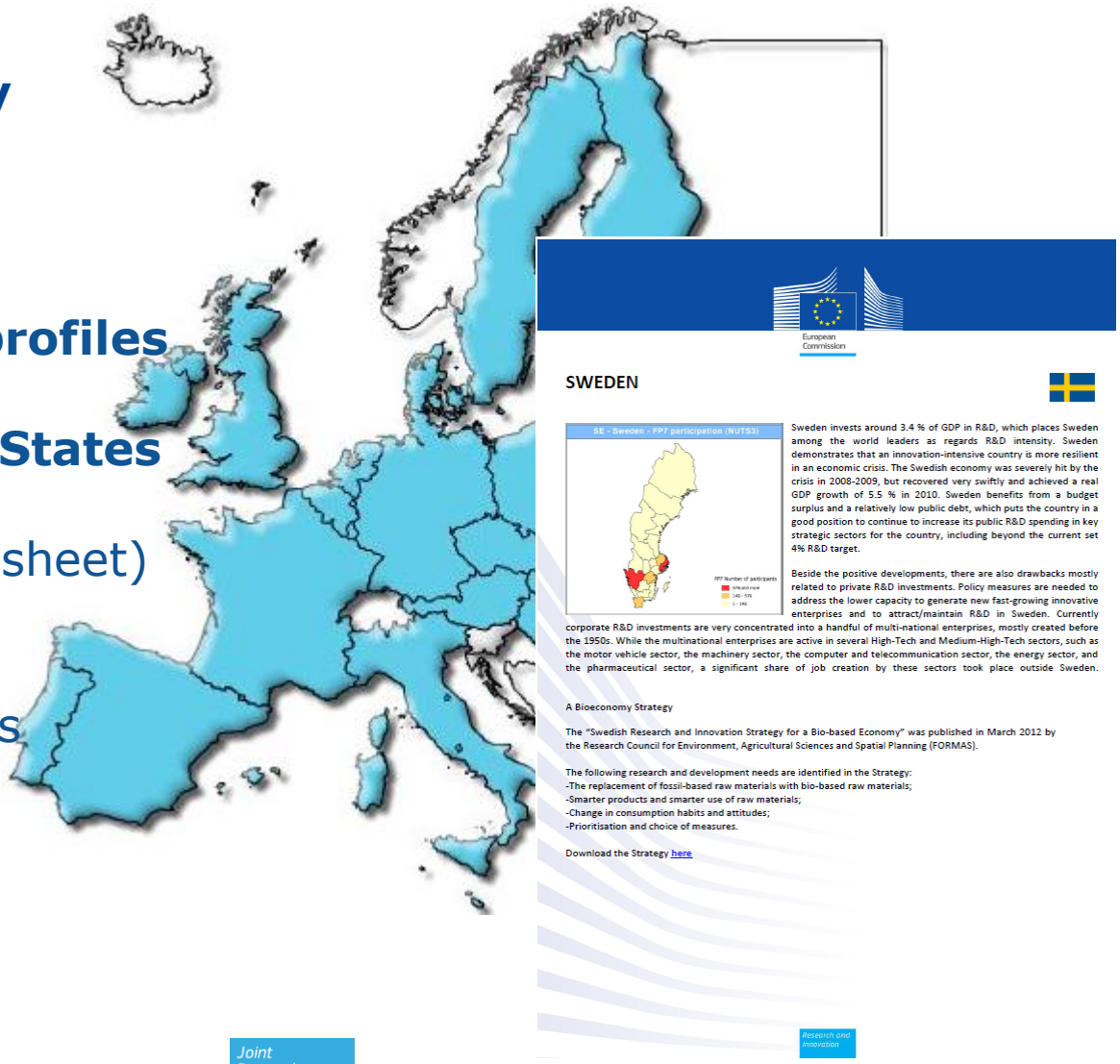
National Bioeconomy Data Collection

National bioeconomy profiles

for the EU 28 Member States

(based on template fact sheet)

Same for selected bioeconomy regions



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Interaction with Nordic WG on Bioeconomy

- **Comments:** Nordic WG comments on Bioeconomy Observatory welcome at JRC-Bioeconomy-Obs@ec.europa.eu (general comments on expectations or specific comments on draft methodology report)
- **Data/information:** supply of "Nordic bioeconomy" data and information, at national (or regional) level, welcome on:
    - Nordic Bioeconomy research information (eg public funding/projects)
    - Nordic Bioeconomy policy initiatives (eg bioeconomy strategies)
    - Nordic Bioeconomy markets (eg market studies)

Note: data from Nordic WG helpful to produce relevant national (or regional) bioeconomy profiles

- **Contacts:** identification of "Nordic Bioeconomy Contact Points" for Bioeconomy Observatory

Follow-up contact:

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