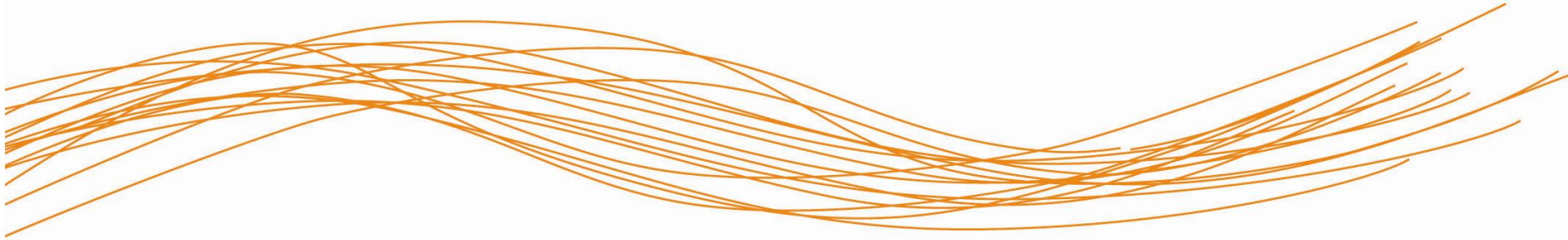




# EU policies and instruments to support research and innovation in plant sciences and production



**ESA 2010 Annual Meeting  
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# A new political context for Research and Innovation The EU 2020 Strategy

**Europe 2020: a European strategy for smart, sustainable and inclusive growth - COM (2010) 2020**

**Smart growth: developing an economy based on knowledge and innovation**

**Sustainable growth: promoting a more resource efficient, greener and more competitive economy**

**Inclusive growth: fostering a high employment economy delivering social and territorial cohesion**





Seven **flagship initiatives** within the "Europe 2020" strategy. 2 are directly relevant to the wider area bio-economy area:

**"Innovation Union"**: Improve framework conditions and access to finance research and innovation and ensure that innovative ideas can be turned into products and services.

**Communication from 6 October 2010**: Key elements include

- launching European Innovation Partnerships between EU and national levels: "Healthy Aging" (decided); "Agricultural Productivity and Sustainability (proposed as potential partnership)
- intensifying existing research initiatives and completing the European Research Area (ERA).

**"Resource efficient Europe"** (including biodiversity objectives and sustainable use of resources) to help decouple economic growth from the use of resources, support the shift towards a low carbon economy, increase the use of renewable energy sources, modernise transport sector and promote energy efficiency.



## Policy actions: A strategic agenda for the sustainable Bioeconomy

- DG RTD will prepare a **Communication on Sustainable Bio-Economy** (expected mid-2011).
- The Communication will provide a vision and action plan for a **sustainable and innovative European bio-economy** by 2020. Some of the main elements will be:
  - Completion of the European Research Area in the bio-economy sectors;
  - Improving framework conditions for **innovation in the bio-economy sectors**;
  - Integrating the **bio-economy approach** into the forthcoming reform of the Common agricultural policy and **Common fisheries policy** as well as in waste treatment legislation;
  - Encouraging the reforms of the Member States' R&D and innovation systems to enable the development of the bio-economy at national level



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# Who are we? 7th Framework programme (2007-2013)

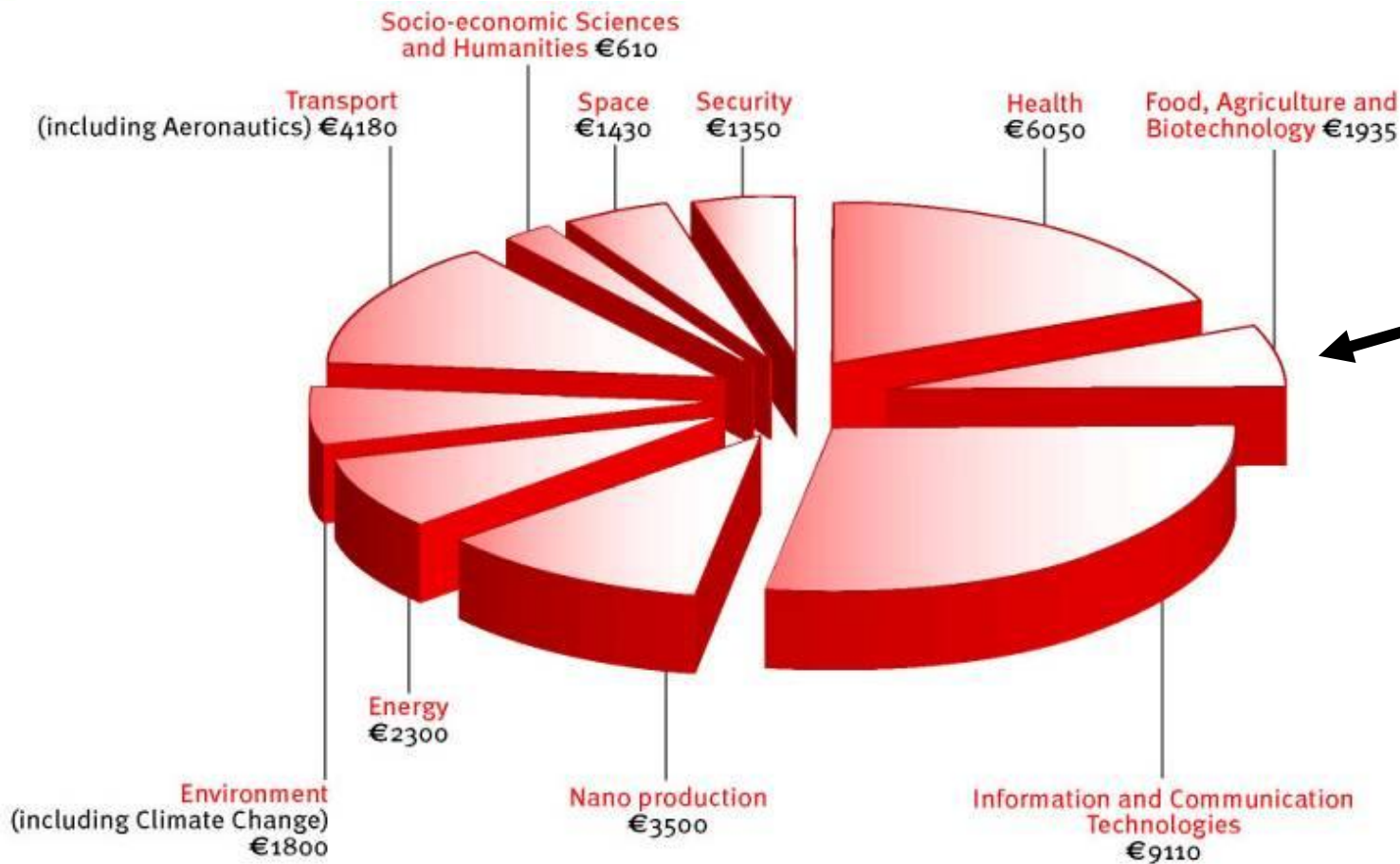


## Specific Programmes: Total 53 billion €





# Cooperation – Collaborative research







## KBBE - Activity 2.1

Sustainable food production and management of biological resources from land, forest and aquatic environments



## KBBE - Activity 2.2

“Fork to farm”: Food, health and well being



## KBBE - Activity 2.3

Life sciences, biotechnology and biochemistry for sustainable non-food products and processes

Research for Agriculture, Food and Biotechnologies under the concept of the **Knowledge Based Bioeconomy (KBBE)**



# Activity 2.1 - Structure

## Sustainable production and management of biological resources from land, forest and aquatic environments



### KBBE - Activity 2.1

Sustainable food production and management of biological resources from land, forest and aquatic environments

- Enabling research (e.g. 'omics, bioinformatics, systems biology) for plants, animals, microorganisms
- Production systems for agriculture, forestry, fisheries and aquaculture
- Animal health, production and welfare
- Support to policies



Plants – Crops for food and feed -  
Forest – resources, e.g. soil, water, biodiversity





# Rationale of plant research under activity 2.1

Drivers:



Food security



Climate change



Resources

Issues/  
Objectives:

Productivity/Yield

Environment  
(biotic, abiotic)

Sustainability,  
(resource efficiency)

Maintaining/ increasing  
yield, diversification of  
production

Adaptation to and  
mitigation of climate  
change effects

Nutrient uptake,  
water use  
efficiency, genetic  
resources

addressing

Topics

**Input !!!**

12 Main lines for plant/forest/resources



- **36 official ETPs (for plant sciences “Plants for the Future”)**
- **Strategic Research Agendas developed by ETPs are source of topic ideas within FP7 Work Programme.**
- Recent evaluation study on ETPs (2009) by experts and publication of report «***Strengthening the role of European technology platforms in addressing grand challenges*** » (*ETP expert group, october 2009*)
- **Recommendations of the expert group’s report:**
  - To enlarge ETP scope to include innovation and education
  - To cluster ETPs work around societal challenges
  - To broaden the membership (funding agencies & national/regional authorities, end users, NGOs, SMEs...)



The following main messages were delivered at the Conference within the "EU 2020" context:

- **Cross-ETP collaborations in order to move from technological networks to platforms delivering innovation:**

Cooperation does already take place (ex: BECOTEPS initiative) but it could be reinforced especially if grand challenges are to be identified. Engage stakeholders more actively

- **Focus on grand challenges**

It requires prior definition of strategic goals by public authorities

- **ETPs & Innovation**

They are already active but could become even more active: standards, market regulation, procurement, access to capital – and IP!

- **Improved coordination is considered important**

with national governments, across industrial sectors, across EU initiatives

- **Willingness to further mobilise European SMEs**



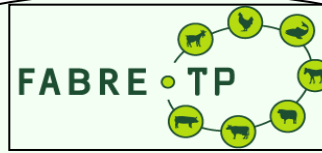
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European Fisheries

New

Farm Animal Breeding



[www.fabretp.org](http://www.fabretp.org)



<http://etp.ciaa.be>

Industrial biotechnology



[www.suschem.org](http://www.suschem.org)

BIOFUELS

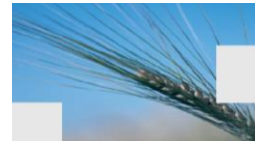


[www.biofuelstp.eu](http://www.biofuelstp.eu)



[www.forestplatform.org](http://www.forestplatform.org)

Plants for the Future



[www.epsoweb.org](http://www.epsoweb.org)

Global Animal Health



[www.ifah.be/Europe/EUPlatform/Platform.htm](http://www.ifah.be/Europe/EUPlatform/Platform.htm)

**Technology platforms to support the development of a Knowledge Based Bio-Economy (KBBE)**

European Aquaculture



[www.eatip.eu/](http://www.eatip.eu/)

Agriculture Engineering Technologies



[www.manufuture.org](http://www.manufuture.org)





**Within first 5 calls (5th not closed yet!):**

**55 projects**

Funding about **180m€**

Biggest “share” of projects allocated to Main lines “*Enabling research*” and “*Plant health*”

### **Topic examples with relevance to breeding**

Under “*Enabling research*”:

- Meiosis
- Epigenetics
- Wheat, rosaceae and conifer genomics
- Root signalling and development under abiotic stress conditions
- Cross-talk between biotic/abiotic stress signalling pathways

Under “*Sustainable production*”:

- Improvement of drought tolerance and water use efficiency
- Improvement of nutrient use efficiency
- Flowering time
- Conservation and characterisation of Crop Wild Relatives
- Improving low-input cropping systems through breeding and management
- Berry production
- Forest tree breeding





## Future orientations for EU research funding within new political context (innovation)

1. To support realisation of the European Research Area: Projects are requested to contribute to **knowledge transfer, dissemination and take-up of results**
2. **Increasing SME participation** in FP7: Calls for proposals with ring fenced budgets for Industry/SMEs
3. **Initiatives centred on the 'grand challenges':**  
Implementation of Joint programming initiatives (climate change & agriculture, food security and potentially on "healthy and productive seas and oceans" ...)
4. Encouraging Bio-economy ETPs as relevant partners for identification of **industry research related needs** (example BECOTEPS joint project of several ETPs)



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# Thank you for your Attention

## **Innovation Union communication:**

[http://ec.europa.eu/research/innovation-union/index\\_en.cfm?pg=keydocs](http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=keydocs)

## **Other sources of information:**

**FP 7:** [http://cordis.europa.eu/fp7/home\\_en.html](http://cordis.europa.eu/fp7/home_en.html)

**DG RTD:** <http://europa.eu.int/comm/research/>

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