



European
Research Area

EUROPEAN
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Theme 2

Food, **A**griculture and **F**isheries, and **B**iotecnology

K n o w l e d g e - B a s e d B i o - E c o n o m y (K B B E)



FP7 Information Event

Towards Integration into the European Research Area

Parliament Assembly Building, Sarajevo, 23rd April 2009

Food,
Agriculture and **F**isheries,
and **B**iotecnology

Knowledge-Based Bio-Economy (KBBE)

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European Commission

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Presentation Outline

- **Overall Structure of FP 7**

- Theme 2 ‘Food, Agriculture, Fisheries and Biotechnology’
 - Rationale, Objectives, Activities
 - Work Programme, Call Approach
- Coordination of research efforts in the KBBE sector
 - The SCAR Committee & KBBE-Network
 - ERA-NETs & Technology Platforms



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European Research Area

The 7th EU Framework Programme (2007-2013)

Total Funding 53 billion €



Specific Programmes

Cooperation – Collaborative Research	€32.365 m
Ideas – Frontier Research	€7.460 m
People – Human Potential	€4.728 m
Capacities – Research Capacity	€4.217 m
JRC, non nuclear	€1.751 b
JRC, nuclear	€0.517 b
EURATOM	€2.234 b

Food,
Agriculture and **F**isheries,
 and **B**iotechnology
 Knowledge-Based Bio-Economy (KBBE)

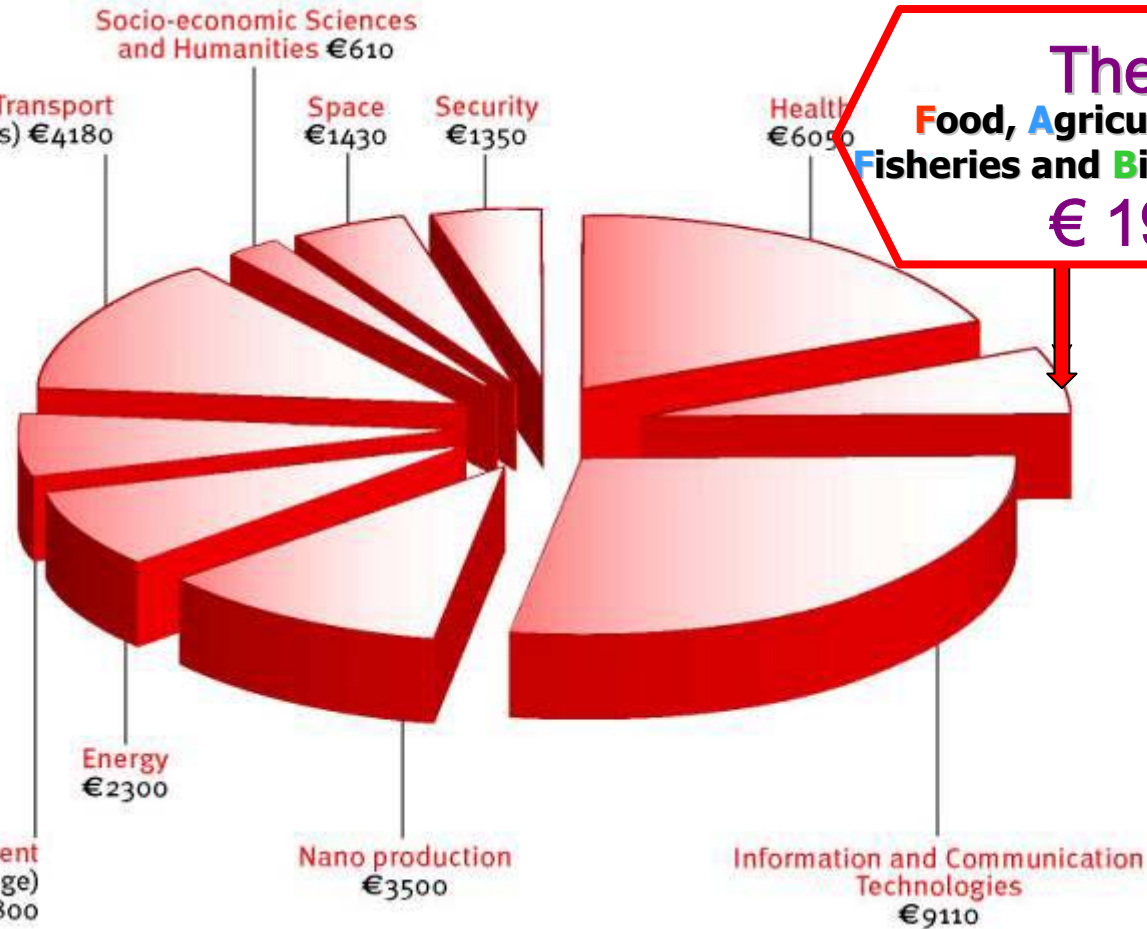




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European Research Area

Cooperation programme – 10 thematic areas



Theme 2
Food, Agriculture and Fisheries and Biotechnology
€ 1935M

Food, Agriculture and Fisheries, and Biotechnology
 Knowledge-Based Bio-Economy (KBBE)





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Theme 2 – RATIONALE

Knowledge-Based Bio-Economy (KBBE)



How could life-sciences and biotech research contribute to the Lisbon objectives on economic growth, employment, sustainable development?

By building a Knowledge-Based Bio-Economy (KBBE), bringing together all stakeholders to develop the basis for new eco-efficient and competitive bio-based products

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Knowledge-Based Bio-Economy (KBBE)

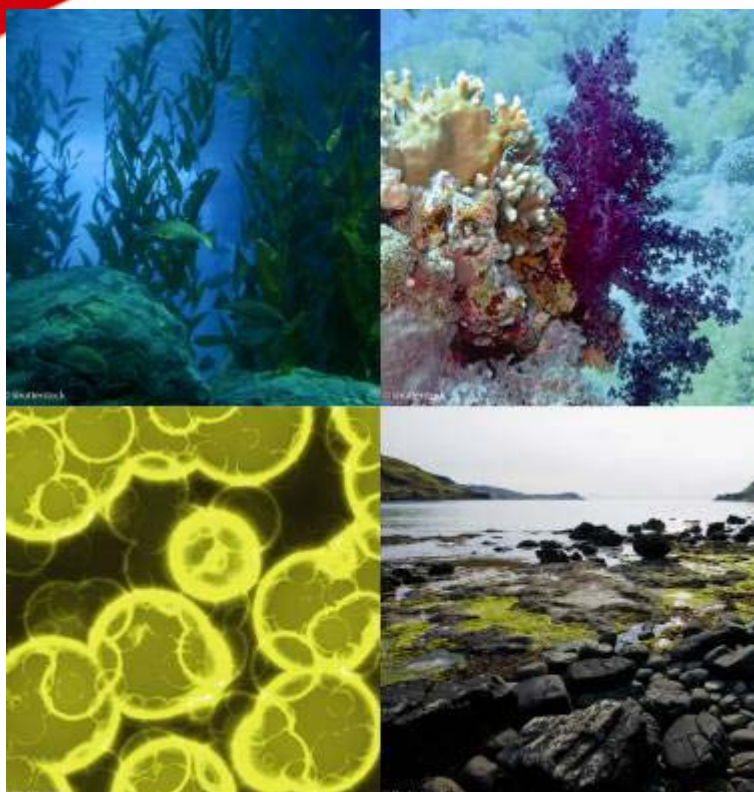




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Theme 2: KBBE OBJECTIVES



→ **4 Fs: Food, Fibre, Fuel and Feed**

Food,
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and **B**iotechnology

Knowledge-Based Bio-Economy (KBBE)

- Respond to social and economic challenges, including **global** ones:
 - Sustainable agriculture/fishery and climate change
 - High quality food and sustainable food production
 - Infectious animal diseases and zoo-noses
 - Food-related disorders (cardiovascular, obesity...)
 - Clean biomaterials from renewable bio-resources

- Support other EU policies such as CAP, CFP, Forest Strategy, Animal Health, Environment, Energy, Development and Trade Policies

- Support the coordination of National Research Programmes - ERA-NETS





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Theme 2: 3 KBBE Activities



KBBE - Activity 2.1

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



KBBE - Activity 2.2

“Fork to farm”: Food (including sea-food), health and well being



KBBE - Activity 2.3

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

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FP7 KBBE - Activity 2.1

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



Food, Agriculture and Fisheries, and Biotechnology



- Enabling research ('omics' converging technologies, bio-informatics, biodiversity) for micro-organism, plants and animals
- Competitive, sustainable and multifunctional agriculture, forestry, fishery and aquaculture
- Animal health production and welfare; animal diseases (including zoo-noses)
- Marine resources, fishery, aquaculture
- Development of policy strategies for knowledge based bio-economy, agriculture, fishery as well as rural and coastal areas

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Knowledge-Based Bio-Economy (KBBE)

www.ec.europa.eu/research/agriculture/index_en.html





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FP7 KBBE - Activity 2.2

Fork to farm”: Food (including sea-food), health and well being



Food, Agriculture and Fisheries, and Biotechnology

EU food facts and figures

- Leading manufacturing sector
- Employs 4.1 million
- EUR 800 billion annual turnover
- 283 000 food companies (99% SMEs)

The food and drink industry is one of Europe's most important and dynamic economic sectors. The European Commission aims to maintain its competitiveness while taking account of the requirements of the Community's policies and the European Union's international obligations.

- Consumer, societal, industrial and health aspects of food and feed
- Nutrition, diet related diseases and disorders
- Innovative food and feed processing
- Improved quality and safety of food, beverage and feed
- Total food chain concept

Food,
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www.cordis.europa.eu/fp7/kbbe/home_en.htm





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FP7 KBBE - Activity 2.3

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



Food, Agriculture and Fisheries, and Biotechnology



EU biotechnology facts and figures

- More than 2 200 companies
- 44% of employees involved in R&D activities
- Over EUR 21.5 billion in revenue
- EUR 7.6 billion in R&D

By 2030, the products of industrial biotechnology and bio-energy will have an estimated worth of EUR 300 billion of industrial production.

- Novel sources of biomass and bioproducts
- Marine and fresh-water biotechnology (blue biotechnology)
- Industrial biotechnology: novel high added-value bio-products and bioprocesses
- Biorefinery
- Environmental biotechnology
- Emerging trends in biotechnology

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www.cordis.europa.eu/fp7/kbbe/home_en.htm





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Participation of Bosnia-Herzegovina in EU Framework Programmes Agro-Food Sector

FP7

AGRIPOLICY	Enlargement Network for Agripolicy Analysis	CSA	FP7-KBBE-2007-1	FACULTY OF AGRICULTURE AND FOOD SCIENCE SARAJEVO
FOCUS-BALKANS	Food Consumer Science in the Balkans: Frameworks, Protocols and Networks for a better knowledge of food behaviours	CP	FP7-KBBE-2007-1	UNIVERZITET U BANJALUCI POLJOPRIVRE DNI FAKULTET

FP6

EU-BALKAN-FABNET	EU-Western Balkans network for training and the promotion of cooperation in research activities within the Food, Agriculture and Biotechnology area of FP7	SSA	FP6-2005-FOOD-4-C	UNIVERSITY OF SARAJEVO
FLU-LAB-NET	DEVELOPMENT AND ENHANCEMENT OF LABORATORY - NETWORKS FOR AVIAN INFLUENZA	CA	FP6-2005-SSP-5-B INFLUENZA	UNIVERSITY OF SARAJEVO
OPTIMILK	Quality, Safety and Value Optimisation of the Milk Supply Chain in Rapidly Evolving Central and Eastern European Markets	SSA	FP6-2002-FOOD-1	EDINBURGH DIRECT AID - BIHAC
CEEC AGRI POLICY	Agro-economic policy analysis of the New Member States, the Candidate States and the Countries of Western Balkan	SSA	FP6-2003-SSP-3	UNIVERSITY OF SARAJEVO

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Work Programmes

- Strategy/approach, timing and content of calls (topics, funding schemes, budgets etc.)
- Evaluation criteria (S&T quality, impact, implementation)
- Particular requirements for participation, evaluation, implementation
- Annual work programmes – 2010 work programme currently being prepared



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Preparation of WP2010 Call FP7-KBBE-2010-4

Publication date: July 2009

Indicative budget: 203 million €

Foreseen deadline: January 2010

Evaluation: March/April 2010

Indicative number of the topics: 53

All proposals will be evaluated under the single-stage procedure

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Preparation of WP2010 Call FP7-KBBE-2010-4

53 topics proposed:

Funding scheme	Number of topics	Funding limits
Collaborative Projects - small or medium-scale focused research actions- CP- FP	20	EUR 3.000.000 Unless stated otherwise for a given topic
Collaborative Projects - large scale integrating projects CP-IP	15	EUR 9.000.000 Unless stated otherwise for a given topic
Coordination & Support Actions – CSA	18 (includes 3 ERA-nets)	EUR 1.000.000 Unless stated otherwise for a given topic

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Preparation of WP 2010

Non exhaustive list of possible topics

Activity 2.1: Sustainable production and management of biological resources from land, forest and aquatic environment

Area 2.1.1 Enabling research

- Genetic and genomic tools to increase the breeding efficiency in fruit trees - CP
- Deepened and enlarged European cooperation in the area of Molecular Plant Sciences - ERA-NET CSA
- Creation of an inventory of biodiversity resources for wild crop relatives to improve crops by breeding - CP

Area 2.1.2 Increased sustainability of all production systems (agriculture, forestry, fisheries and aquaculture); plant health and crop protection

- Sustainable organic and low-input dairy production - CP
- Integrated pest management in farming systems of major importance for Europe - CP
- Deepened and enlarged cooperation between phytosanitary (statutory plant health) research programmes - ERA-NET CSA
- Understanding of the basic mechanisms involved in coping strategies of fish towards improvement of welfare - CSA
- Improving European mollusc aquaculture: disease detection and management - CP

Area 2.1.3 Optimised animal health, production and welfare across agriculture, fisheries and aquaculture

- Development and integration of animal based welfare indicators in livestock species - CP
- Improving integration in farm animal welfare research in an enlarged Europe - CSA

Area 2.1.4 Socio-economic research and support to policies

- Sharing best practice and enhancing European collaboration on research, knowledge transfer and innovation in farm animal sciences - CSA
- Integrating the Sustainable Management of Rural Public Goods into the Common Agricultural Policy - CP
- Assessment of transition pathways to sustainable agriculture and social and technological innovation needs - CP
- Knowledge systems for farming in the context of sustainable rural development - CP
- Using results-based management to achieve CFP objectives - CP

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INDICATIVE ONLY !





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Preparation of WP 2010

Non exhaustive list of possible topics

Activity 2.2 Fork to farm: Food (including seafood), health and well being

Area 2.2.1 Consumers

- Determinants of food choice and eating habits - CP
- Media training for food and nutrition scientists - CSA

Area 2.2.2 Nutrition

- Neurological pathways regulating hunger/satiety and gut behaviour - CP
- Diet and prevention of functional decline of the elderly - CP

Area 2.2.3 Food processing

- Development of biodegradable food packaging - CP
- Strategies for personalised nutrition - CP

Area 2.2.4 Food quality and safety

- Improving integration in food safety research - CP
- Quality and safety aspects of feed - CP

Area 2.2.5 Environmental impacts and total food chain

- Transparency of food pricing - CP

Area 2.2.6 European Research Area

- Strengthening cooperation in food safety research in the enlarged European Union - CSA

Activity 2.3 Life sciences, biotechnology and biochemistry for sustainable non-food products and processes

Area 2.3.1 Novel sources of biomass and bioproducts

- Promoting global cooperation to facilitate and accelerate knowledge transfer on abiotic stress tolerance of plants – Mandatory ICPC (Latin America and/or Asia and/or Eastern Europe and Central Asia and/or ACP and/or the Mediterranean Partner Countries) - CSA

Area 2.3.2 Marine and fresh-water biotechnology (blue biotechnology)

- Modification of marine or freshwater algae to better suit industrial applications - CP
- Innovative aquatic biosensors - CP

Area 2.3.3 Industrial biotechnology: novel high added-value bio-products and bio-processes

- Robust and novel biocatalysts for industrial applications - CP
- Biotechnology for 'greening' the chemical industry - Industrial bioprocesses for fine and speciality chemicals and intermediates - CP

Area 2.3.5 Environmental biotechnology

- Biotechnology for the environment - Soil and water treatment and bioremediation - CP

Food, Microbial diversity and metagenomic mining for biotechnological innovation - CP

Agriculture and **F**isheries,
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Food, Agriculture and Fisheries, and Biotechnology
Knowledge-Based Bio-Economy (KBBE)

Main role for SCAR

Support the
Commission and
MS towards better
coordination of
agricultural
research across the
ERA

Standing Committee on Agriculture Research

- **1974:** Council Regulation N° 1728/74 establishing SCAR
- **July 2004:** SCAR management transferred from DG AGRI to DG RTD
- **22 November 2004:** Dutch Presidency report calling for a high-level decision platform: a new role for SCAR
- **End November 2004:** MS to nominate two high-level representatives
- **2-3 February 2005:** first “new” SCAR meeting
 - *New mandate*
 - *Establishment of a standing oversight working group*
 - *Nomination of Observers*

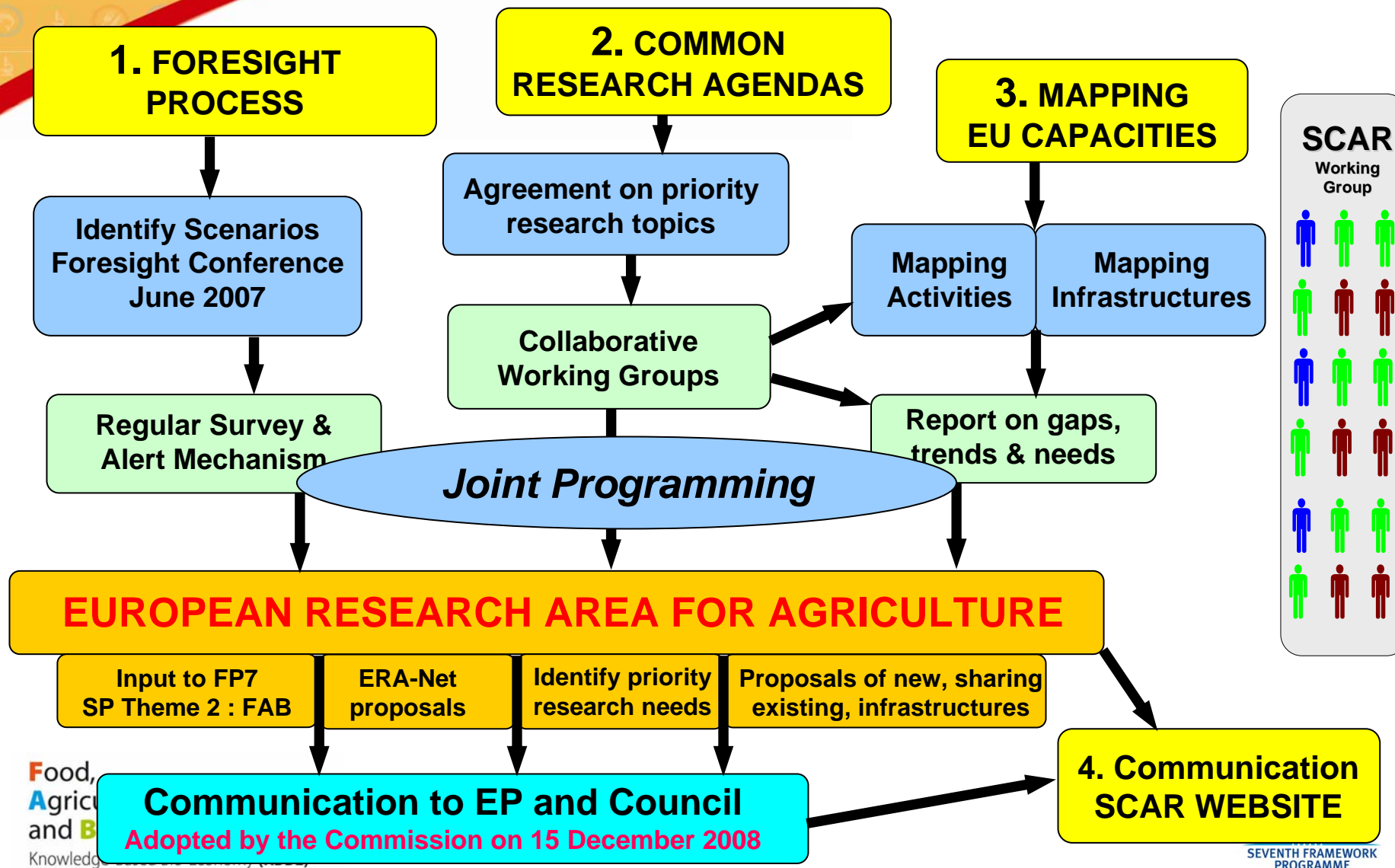
● **15-16 June 2009: 10th plenary meeting**

Food,
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**SCAR countries: EU 27 + 11 Observers
(HR, MK, TR, AL, CH, IL, IS, ME, NO, SB, BA)**



SCAR initiatives towards a European Research Area for Agriculture





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SCAR - Towards common research agendas

Collaborative Working Groups on 14 themes

<i>Towards ERA-Nets</i>	Coordinat or	SCAR countries	Kick-off meeting
Animal Health <i>BECAME AN ERA-NET "EMIDA" (1st call)</i> Animal Welfare (on-going CWG)	UK	21	8/12/2005
Relevant Issues for Mediterranean Agriculture <i>BECAME AN ERA-NET "ARIMNet" (1st call)</i>	FR	12	2/12/2005
ICT and Robotics in Agro-Food Industries <i>ERA-NET ERA-NET PROPOSAL "ICT-AGRI" IN NEGOTIATION (2nd call)</i>	DK	11	1/09/2005
Agriculture and Sustainable Development <i>ERA-NET PROPOSAL "RURAGRI" IN NEGOTIATION (2nd call)</i>	FR	11	6/12/2005
Common/ coordinated research agenda for EU rural policy <i>ERA-NET PROPOSAL "RURAGRI" IN NEGOTIATION (2nd call)</i>	SE - NL	7	23/11/2006
ON-GOING CWGs			
Renewable Raw Materials and their Applications in Non-Food Industry	DE	18	27/09/2005
Development of Sustainable Agriculture in the Baltic Sea Region	PL	8	17/11/2006
Climate Change and Agriculture <i>NEW jointly with KBBE-NET</i>	ES	21	24/06/2008
Agriculture and Energy <i>NEW jointly with KBBE-NET</i>	DE	20	24/06/2008
Shared Infrastructures in the field of Agricultural Research <i>NEW</i>	FR	15	25/09/2008
"STAND BY" CWGs			
Adaptation of Human Nutrition to Environment Evolution	FR	10	29/05/2006
Ecology for Ecosystems & Natural Resources Sustainable Management	FR	8	16/06/2006
FINISHED CWGs			
Sustainable Livestock Production from Grasslands	IE	21	1/12/2005
Advanced Technologies for Climatic Control of Greenhouses and Livestock Housing	IL	14	14/03/2006



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Communication from the Commission

“Towards a coherent strategy for a European Agricultural Research Agenda”

- 1. Towards a more sustainable agriculture in the global context**
- 2. New priority areas for the future Agricultural Research Agenda**
 - Agriculture & climate change
 - Agriculture and energy
- 3. Strengthening the agricultural knowledge production and sharing in Europe**
- 4. Consolidating joint research programming for better governance of the European agro-food system**
- 5. Developing a mechanism for foresight monitoring**
- 6. The responsibility of Europe in a globalised world**

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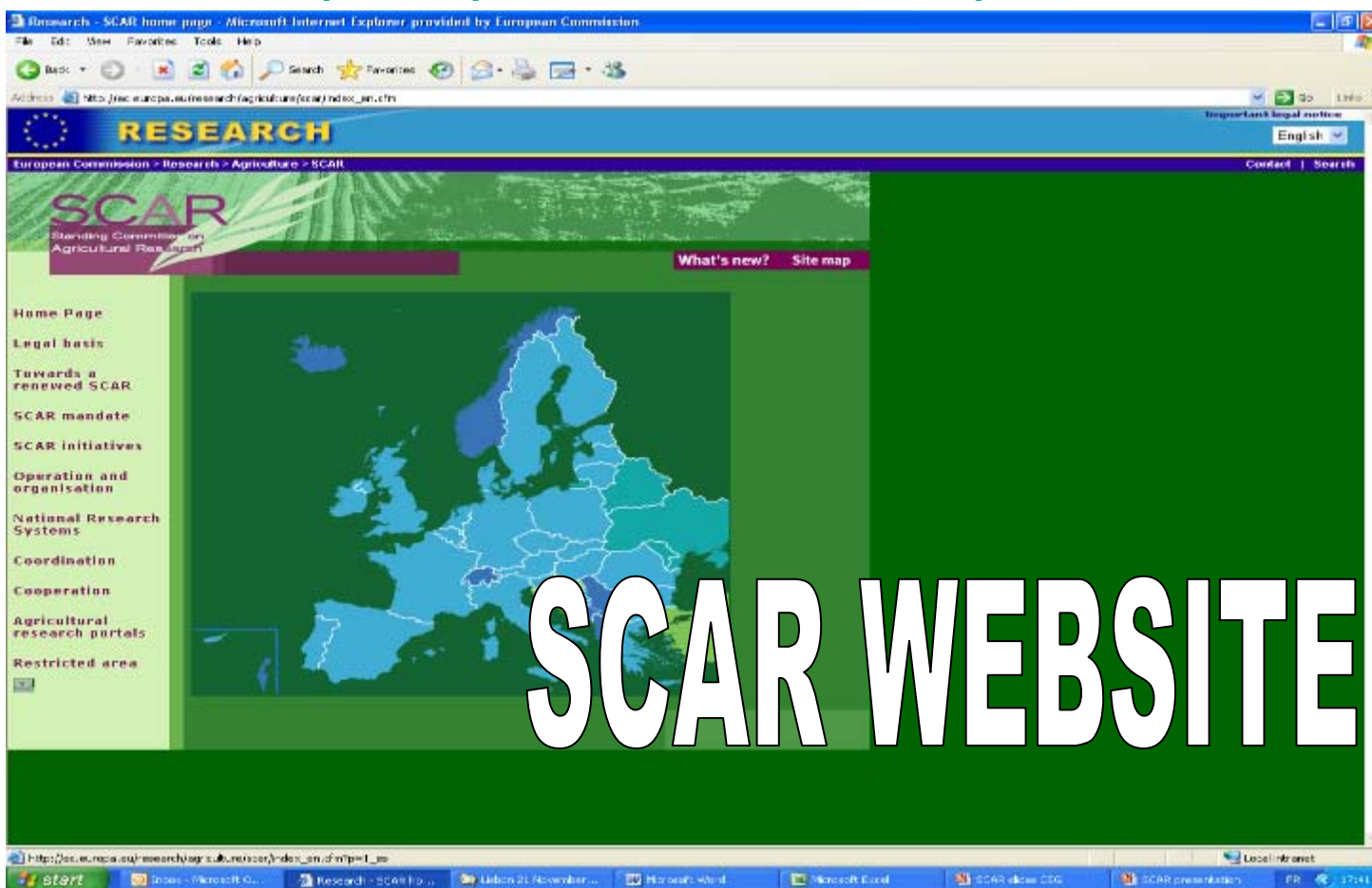
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linking with relevant MS/institution

http://europa.eu.int/comm/research/fp6/scar/index_en.cfm



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Main role for KBBE-NET

Support the Commission and MS towards the building of a Knowledge Based Bio-Economy in Europe

- **2005:** Third annual progress report of the Life Science and Biotechnology Strategy published in 2005:

The Commission will ...

*“establish a network with EU Member States to help coordinate the development and implementation of a European research policy for a **knowledge-based bio-economy** in co-ordination with the Standing Committee on Agricultural Research”.*

- **Spring 2006:** MS and candidate countries to nominate two high-level representatives

- **Spring 2006:** first KBBE-NET meeting

- **2007:**

- Mapping of national activities incl. on biorefineries
- Contribution to the leadmarket on biobased products

- **2008:**

- Collaborative working group on marine biotech and synthetic biology
- Establishment of Steering Group

- **21 January 2009: 6th plenary meeting**

Food,
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and Biotechnology
Knowledge-Based Bio-Economy (KBBE)

**KBBE-NET Countries: EU 27
and associated countries (NO, MK, CH, IS, RS, TR)**



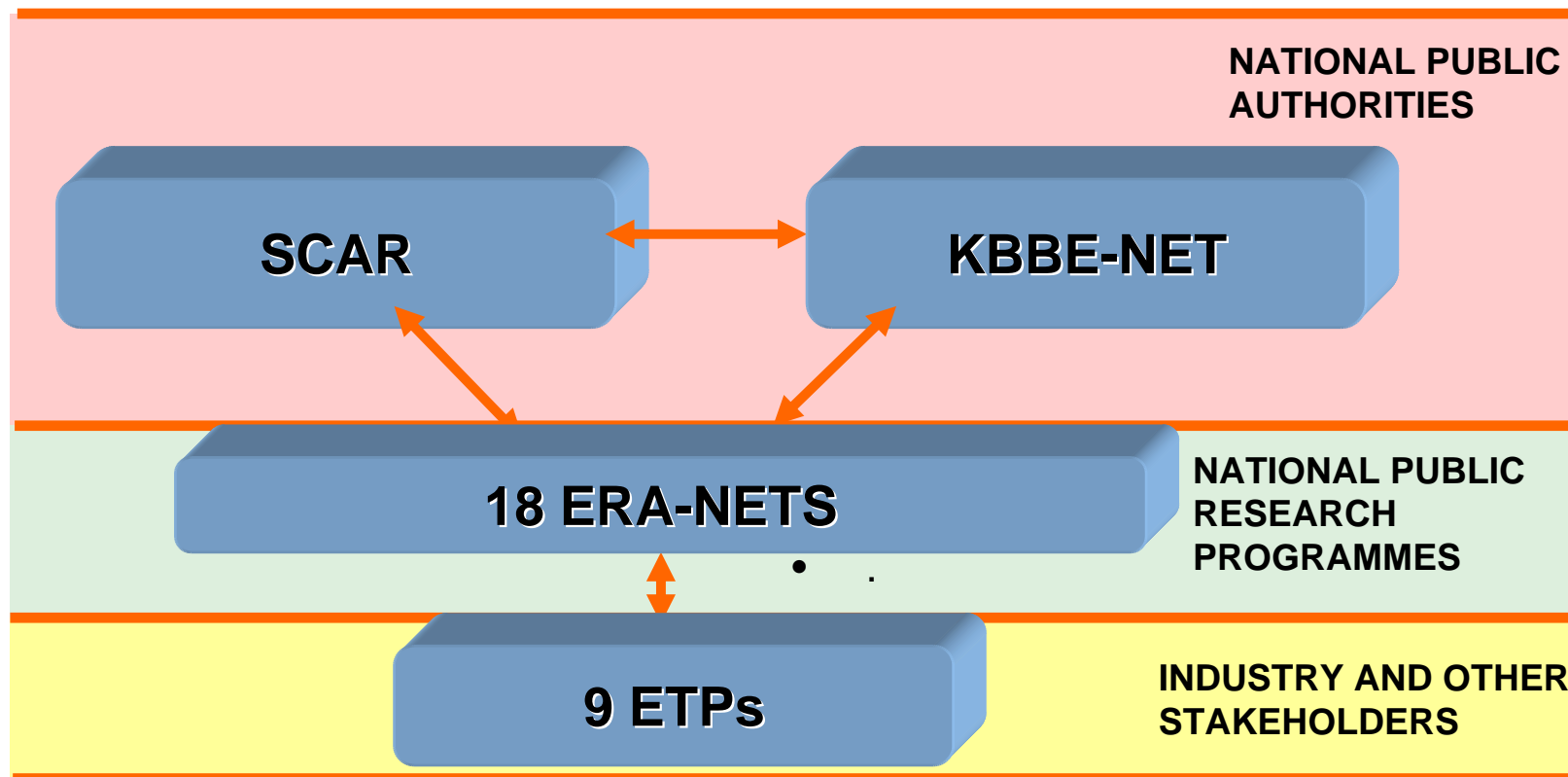


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Food, Agriculture and Fisheries, and Biotechnology
Knowledge-Based Bio-Economy (KBBE)

LINKING WITH NATIONAL POLICIES AND STAKEHOLDERS



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KBBE RELATED ERA-NETS

ARIMNET (MED)
RURAGRI
ICT-AGRI

EMIDA (Animal Health)
www.emida-era.net

ACENET (APPLIED CATALYSIS)
www.acenet.net

SAFEFOODERA
www.safefoodera.net/

ERA Trans-Bio (biotech SMEs)
www.eurotransbio.net/

MARIFISH
www.marifish.net/

BIOENERGY
www.eranetbioenergy.net/

EUPHRESKO (Plant Health)
www.euphresco.org/

ERASysBio
www.erasysbio.net/

CORE-Organic
www.coreorganic.org/

INDUSTRIAL BIOTECHNOLOGY
www.era-ib.net/

ARD: Agricultural Research
for Development
www.era-ard.org/

BiodivERsA
www.eurobiodiversa.org/

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WoodWisdomNet
www.woodwisdom.net/

NANOSCIENCES
www.nanoscience-europe.org

PLANTS GENOMICS
www.erapg.org

FP6

FP7





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Farm Animal Breeding

www.fabretp.org



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www.suschem.org



European Aquaculture



www.eatpnet.eu

<http://etp.ciaa.be>

Industrial biotechnology

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



www.biofuelstp.eu



Agriculture Engineering Technologies

www.manufuture.org

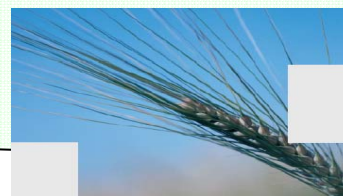


www.forestplatform.org



Global Animal Health

www.ifah.be/Europe/EUPlatform/Platform.htm



Plants for the Future

www.epsoweb.org

Food, Agriculture and Biotech
Knowledge-Based





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