



EUROPEAN
COMMISSION

Community research

The 7th Research Framework Programme in the area "Food, Agriculture, Fisheries and Biotechnology"



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Specific Programmes

***Cooperation* – Collaborative research**

***Ideas* – Frontier Research**

***People* – Human Potential**

***Capacities* – Research Capacity**

+

JRC (non-nuclear)

JRC (nuclear)

Euratom

Cooperation – Collaborative research

10 Thematic Priorities

	€M *
1. Health	6.050
2. Food, Agriculture, Fisheries and Biotechnology	1.935
3. Information and Communication Technologies	9.110
4. Nanosciences, Nanotechnologies, Materials and new Production Technologies	3.500
5. Energy	2.300
6. Environment (including Climate Change)	1.900
7. Transport (including Aeronautics)	4.180
8. Socio-Economic Sciences and the Humanities	610
9. Space	1.430
10. Security	1.350

* Council's agreement of July 2006

The term 'bio-economy' covers all industries and economical sectors that produce, utilize or manage biological resources.

The European bio-economy has an annual turnover of more than 1500 billion € and employs 22 million people.

Sector	Annual turnover (billions of €)	Employment (millions)	Source
Food & Beverages	850	4.1	CIAA
Agriculture	210	15	COPA-COGECA
Fisheries	8	0.5	FAO
Paper, Leather, Pulp, etc.	400	0.3 direct (4.0 indirect)	CEPI
Forestry, Wood	150	2.7	CEI-BOIS
Industrial Biotech	50		McKinsey
total	1618	22.1	

THE EUROPEAN KNOWLEDGE-BASED BIOECONOMY

**QUALITY ASSURANCE
STRATEGIES TRACEABILITY,
CONSUMER SCIENCE**

**STABILITY -
BIODEGRADABILITY
FUNCTIONALITY (Chirality)**

SOCIETAL NEEDS



**“Fork to Farm”
Food, health and well-
being**

**Life sciences &
biotechnology for
sustainable
non-food products +
processes**



**ADVANCED FOOD
TECHNOLOGIES, FOOD QUALITY
DETERMINANTS, NUTRITION**

**LOW INPUT FARMING - BIODIVERSITY
ANIMAL HEALTH - RURAL DEVT.**

PROCESSING

**WHITE BIOTECH
CLEAN BIOPROCESSES
RAW MATERIALS/WASTE**

PRODUCTION

**GREEN/BLUE BIOTECH
OPTIMISED RAW MATERIALS**

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




Food, Agriculture, Fisheries and Biotechnology: Rationale

- Build a European **Knowledge-Based Bio-Economy (KBBE)**
- Respond to **social and economic challenges**:
 - High quality food and sustainable food production
 - Food-related disorders (cardiovascular, obesity ...)
 - Infectious animal diseases and zoonoses
 - Sustainable agriculture/fishery and climate change
 - Clean biomaterials from renewable bio-resources
- Involve all stakeholders (incl. industry) in research
- Support CAP and CFP
- Respond quickly to emerging research needs

→ 4 Fs: Food, Fibre, Fuel and Feed





2. Food, Agriculture, Fisheries and Biotechnology

2.1.

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

2.2.

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

2.3.

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

Food, agriculture, fisheries and biotechnology research:

What's new ?

- Pillar 1 “Sustainable production and management of biological resources” and Pillar 3 “Life sciences and biotech for sustainable non-food products and processes”
- Some topics under pillar 1 & 3 partly financed in FP4 and FP5 (BIOTECH, FAIR, QoL, etc.), but FP6 efforts scattered and not of sufficient critical mass (some activities under materials, energy and environment) providing no synergies
- Technology platforms and their input in the area of plant biotechnology, forestry, industrial biotechnology, animal breeding, global animal health, and food
- Pillar 2 “Food, health and well-being” ensures continuity of FP6 “Food quality and safety” research

Food, agriculture, fisheries and biotechnology research:

New in FP 7: Some FP 6 activities outside the Thematic Priorities will be integrated in the FP 7 Themes !

such as

- Integration of new and emerging science and technologies (NEST)
- Support to policy development (**CAP**, CFP, public health, food safety, animal health, ...)
- International co-operation (SICA)
- ERA-Nets, ERA-Nets +

... to be defined on the level of the specific programme or workprogramme

Food, agriculture, fisheries and biotechnology research: Clear need to prioritise !

“More with less”

- Theme 2 FP7 “Food, Agriculture, Biotechnology” has much broader scope than priority 5 “Food Quality&Safety” of FP6 (added activity 3 on biotech products and processes for non-food applications)
- Research to support policies, international cooperation and coordination of national research is integrated into the themes
- Budget for first calls of theme 2 - FP7 comparable (or lower) than for priority 5 - FP6

Need to prioritise along the following criteria:

- New areas/topics not (little) covered in previous FPs.
- Continue/follow-up on successful EU research activities in order to achieve maximum impact.
- Preparatory actions for identifying priority topics/activity areas for future calls, i.e. analysis of certain research/technology options for addressing specific goals; in cooperation with TPs and ERA-NETs

Food, agriculture, fisheries and biotechnology research: Borderline with other FP7 themes

- Enabling/systems biology research on plants, animals and microbes complementary to systems biology for human health applications in theme 1.
- Complementary research relating to the management/conservation of natural resources and biodiversity is addressed under the “Environment including Climate Change” theme 6.
- Demonstration of bioprocesses for biomass conversion to energy/materials under this priority – up-scaling and complete process design under materials and energy themes (themes 4 and 5).

Activity 2.1:

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

- Enabling research ('omics', converging technologies, bioinformatics, biodiversity) for micro-organism, plants and animals
- Competitive, sustainable and multifunctional agriculture, forestry, fishery and aquaculture **with special emphasis on low-input and organic production systems; sustainable pest and weed management tools and techniques**



Activity 2.1:

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

- Animal health production and **welfare**; animal diseases incl. zoonoses; **improved understanding of animal physiology and behaviour**
- Marine resources, fishery, aquaculture
- Development of policy strategies for knowledge based bio-economy, agriculture, fishery as well as rural and coastal areas; **comparative investigations of different farming systems**





Our contribution in research

1st call

Cost of different standard setting and certification systems for organic food and farming (1)

2nd call

Improving animal health, product quality and performance of organic and low-input livestock systems through integration of breeding and innovative management techniques (2A)

Our contribution in research

- **2008 indicative topics**

Improved indicators of the relationship between organic/low-input farming and biodiversity (2B)

Societal benefits of organic farming (2B)

Our contribution in research

Related topics

CROPS

Reducing the need for external inputs in high-value protected horticultural and ornamental crops (1)

Reducing the utilisation of mineral fertilisers by improving the efficiency of nutrient use in EU crops (2A)

GMO cost-effective and crop-specific co-existence measures (1)

CAP

The farm of tomorrow (1)

Assessing the socio-economic consequences and costs benefits of measures promoting good animal welfare

Breeding tools for improved livestock products (1)

Establishment of an information platform on the protection and welfare of animals

Animals

Activity 2:

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

- Consumer, societal, industrial and health aspects of food and feed; consumer perception and attitudes towards food, including **traditional food**, understanding societal and cultural trends
- Nutrition, diet related diseases and disorders
- Innovative food and feed processing
- Improved **quality** and safety of food, beverage and feed
- Total food chain concept





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Activity 3:

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

- **Improved crops, feed-stocks, marine products and biomass for energy, environment, and high added value industrial products; novel farming systems**
- **Bio-catalysis; new bio-refinery concepts and other bioprocesses**
- **Forestry and forest based products and processes**
- **Environmental remediation and cleaner processing**



Work programme 2007

- **CALL KBBE-2007-1**

- Publication: 22 Dec 2006
- CSA, SCP, LCP & NoE covering all activities and areas
- covering full 2007 budget (190.09 M €)
- 1 step evaluation procedure (exceptionally also for LCP & NoE !!)
- Deadline for proposal submission: 2 May 2007

- **CALL KBBE-2007-2A**

- Publication: May 2007
but already part of Work Programme 2007 !!!
- LCP & NoE covering all activities and areas
- 2 step evaluation procedure
- Deadline for proposal submission: 11 Sep 2007, 31 Jan 2008
- Final evaluation (Feb 2008)

- **CALL ERANET-2007-RTD**

- 2.0 M € for Theme 2

Theme 2-specific requirements and some general aspects of high importance

- Specific participation rules for Coordination and Support Actions (coordinating type) applied for Specific International Co-operation Actions (SICA):
3 entities established in a Member States or Associated Countries plus 3 partners in International Co-operation Partner Countries (ICPC)
(instead of 2 + 2)
- Funding thresholds (to be regarded as an eligibility criterion !):

small Collaborative Projects:	up to 3 M€
large Collaborative Projects, Networks of Excellence:	between 3 and 6 M€
Coordination and Support Actions:	up to 1 M€
- 2 ERA-NETs (mediterranean agriculture, animal health) and 4 NoE (zoonoses, consumer sciences, high-tech food processing, 'pharming') in KBBE-1 and -2A
- One project per topic will be funded
- List of SICAs in the Work Programme (WP) with indications on type/region and minimum number of third countries being requested
- Footnotes on complementary topics open in other 'Themes'
- Indicative topics of the 2008 work programme outlined in 2007 work programme

Minimum conditions for participation

Specific:

- Frontier research actions (ERC): – at least 1 legal entity established in a MS or AC
- Coordination and support actions (CSA) and actions in favour of training and career development of researchers – minimum of 1 legal entity (except actions to coordinate)
- Collaborative projects* addressing the participation of international cooperation partner countries (INCO) – minimum is 4 participants of which 2 in MS or AC and 2 in INCO countries

* for CSA-SICA (coordinating type): 3 entities established in a MS or AC plus 3 partners in INCO countries (see WP, Theme 2)

- Participation of international organisations and participants from third countries possible if in addition to minima



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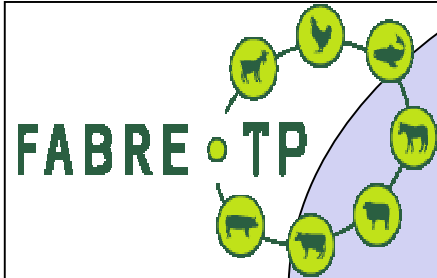


<http://etp.ciaa.be>

www.suschem.org



Industrial biotechnology



Farm Animal Breeding
www.fabretp.org

European Biofuels TP

Knowledge Based Bio-Economy



ETP
Global Animal Health

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



ETP
Plants for the Future
www.epsoweb.org



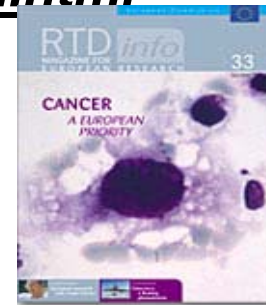
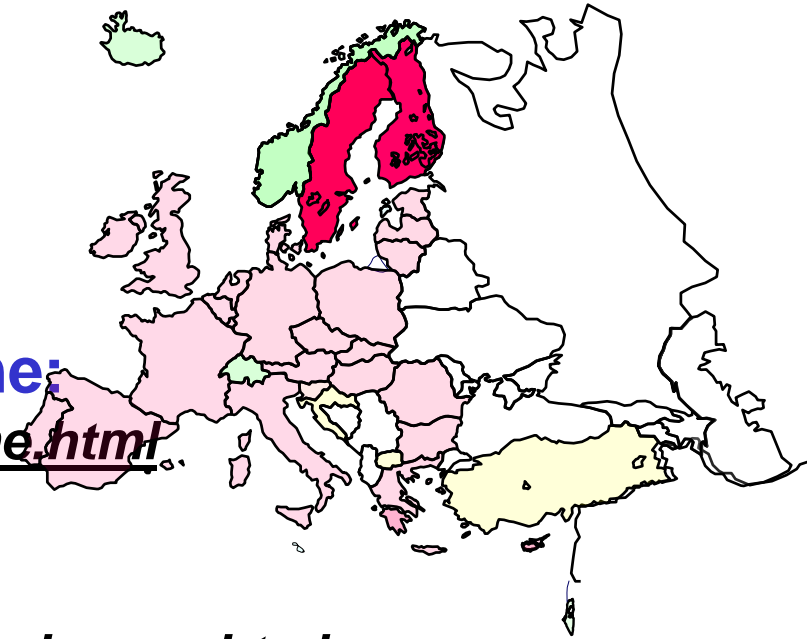
www.forestplatform.org



ERA Nets in the KBBE sector

ACRONYM	TITLE
ERA-PG	European Research Area - Plant Genomics
SAFEFOODERA	Food Safety - Forming a European platform for protecting consumers against health risks
ERA-IB	Towards an ERA in Industrial Biotechnology
EUPHRESKO	Coordination of European Phytosanitary (Statutory Plant Health) Research
EUROTRANSBIO	EUROpean network of TRANS-national collaborative RTD for SME's projects in the field of BIOtechnology
WOODWISDOM-NET	Networking and integration of National programmes in the area of wood material science and engineering
ERA-SAGE	European Research on Societal Aspects of Genomics
CORE-ORGANIC	Coordination of European Transnational Research in Organic Food and Farming
ARD	The Agricultural Research for Development (ARD) dimension of the European Research Area (ERA)
ERASysBio	Towards a European Research Area for Systems Biology - A Transnational Funding Initiative to Support the Convergence of Life Sciences with Information Technology & Systems Sciences

- **EU research:** <http://europa.eu.int/comm/research>
- **Sixth Framework Programme:**
<http://www.cordis.lu/fp6/home.html>
<http://www.cordis.lu/fp6/food.htm>
- **Seventh Framework Programme:**
<http://www.cordis.europa.eu/fp7/home.html>
- **Research DG Site:**
http://europa.eu.int/comm/research/index_en.html
- **RTD info magazine:**
<http://europa.eu.int/comm/research/rtdinfo/>
- **Information requests:** [*research@ec.europa.eu*](mailto:research@ec.europa.eu)



AC: Associated Country

CAP: Common Agricultural Policy

CFP: Common Fishery Policy

CSA: Coordination and Support Actions

ERC: European Research Council

INCO: International Cooperation

KBBE: Knowledge-Based Bio-Economy

LCP: large collaborative projects

MS: Member State

NEST: New and Emerging Science and Technologies

NoE: Network of Excellence

SCP: Small collaborative projects

SICA: Specific International Co-operation Actions