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Food, Agriculture and Fisheries, and Biotechnology

Knowledge-Based Bio-Economy (KBBE)

Information Day

Slovakia, 30 September 2010

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Directorate General for Research
European Commission

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

Not legally binding





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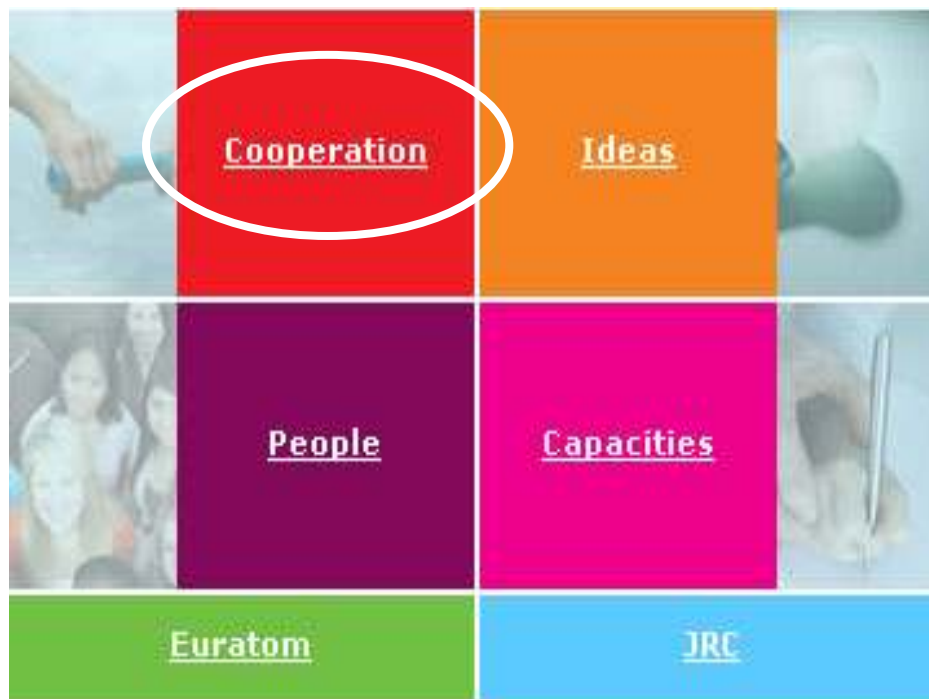
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The 7th EU Framework Programme for Research and Development

≈ €53 billion 2007-2013

Collaborative research

Human potential



Frontier research – the European Research Council

Infrastructures; SMEs etc



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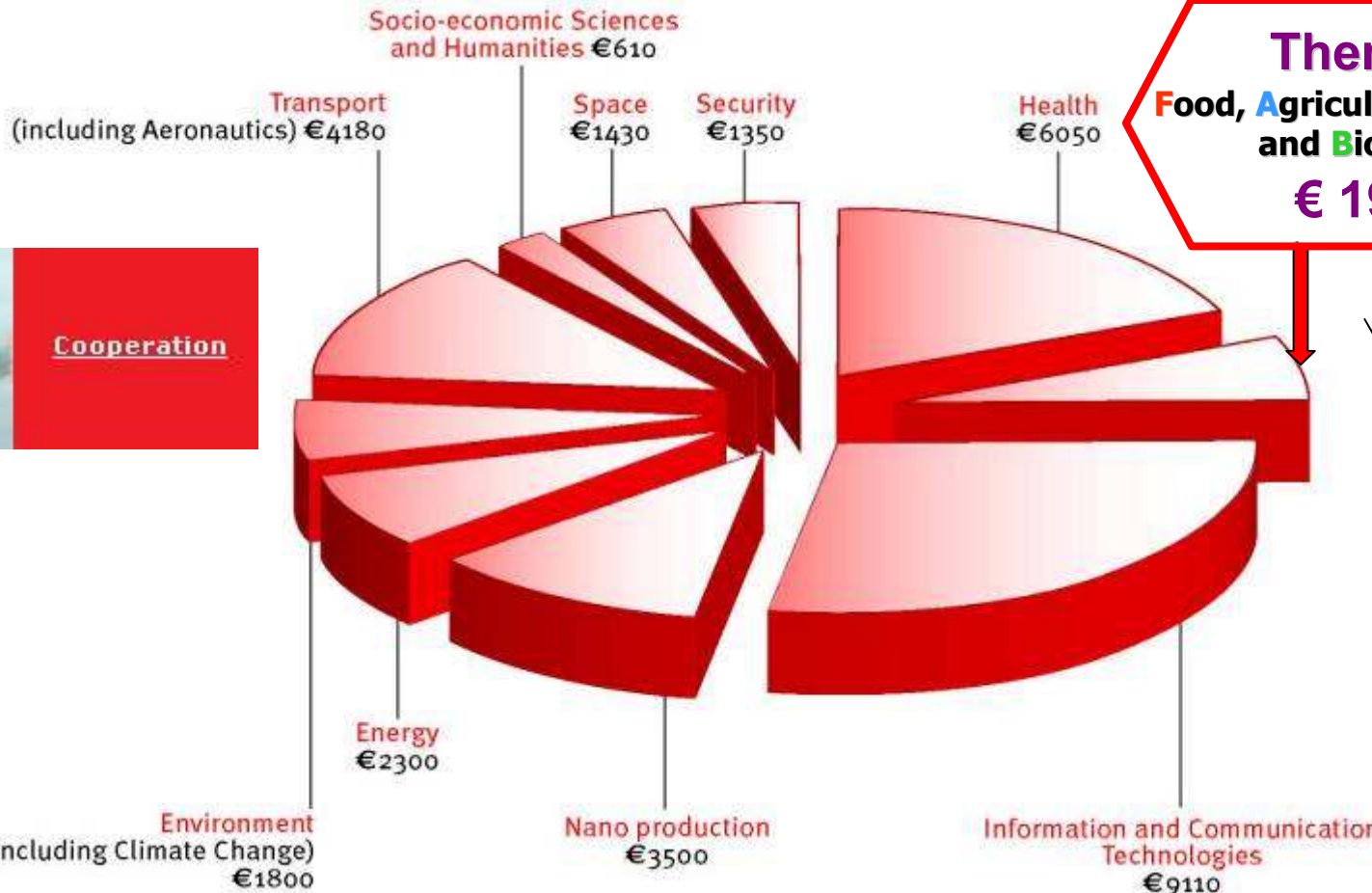
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Cooperation programme - 10 thematic areas

Theme 2

Food, Agriculture and Fisheries and Biotechnology

€ 1935



Cooperation

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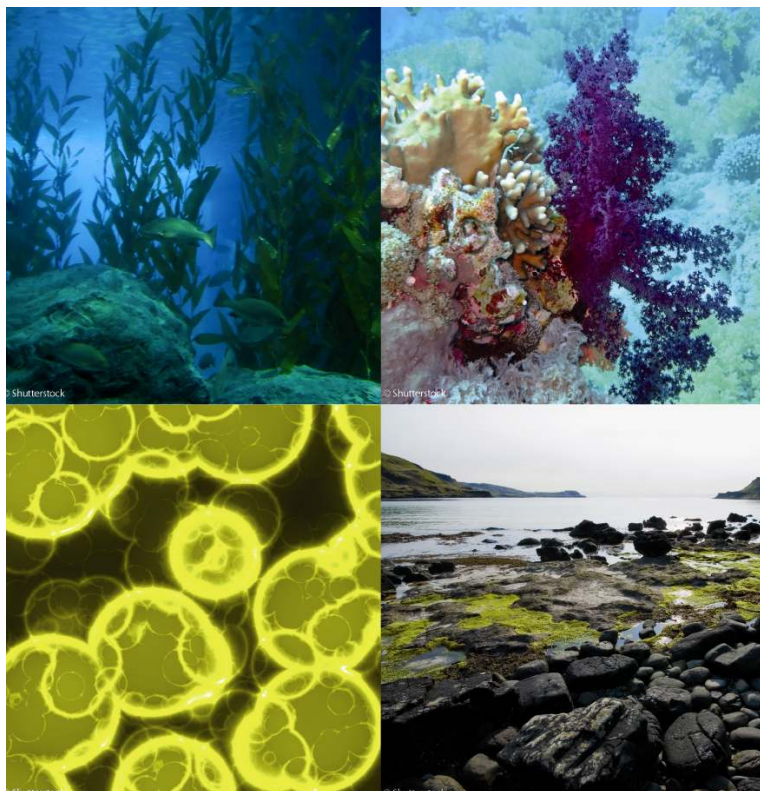
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Food, Agriculture and Fisheries, and Biotechnology

Knowledge-Based Bio-Economy (KBBE)

KBBE - OBJECTIVES



➤ Build a European Knowledge-Based Bio-Economy (KBBE)

➤ Respond to social, economic and GLOBAL challenges:

- Sustainable agriculture/fishery and climate change
- Increasing production of high quality food
- Food-related disorders
- Infectious animal diseases and zoo-noses
- Renewable energy sources and biomaterials

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

➤ Respond quickly to emerging research needs

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



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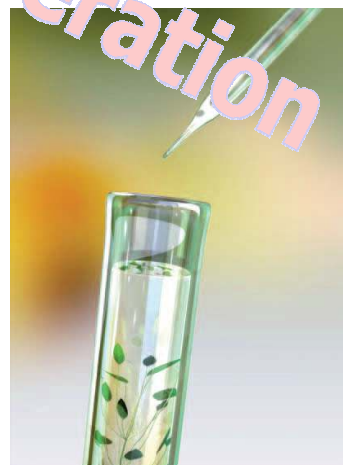
KBBE - Activity 2.1

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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Work Programme 2011

– 67 topics proposed:

- **KBBE-2011-5:**
 - 57 indicative topics in 3 main Activities (+ 6 in horizontal part)
- **The Ocean of Tomorrow – 2nd joint call**
 - Joint call with Energy, Environment (including Climate Change), Transport (including Aeronautics)
 - 4 indicative topics in Act 2.1 and 2.3
- **ERA-nets**
 - 6 indicative topics
- **Joint Programming Initiatives**
 - 2 support actions

=> Total budget: approx EUR 260 million



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Indicative timetable CALL FP7-KBBE-2011

Foreseen publication date:

20 July 2010

Indicative budget:

approx 260 million €

Tentative Deadline:

25 January 2011

Evaluation:

=> *evaluation under the single-stage
procedure*

March/April 2011

Negotiations:

May/June 2011

Submission of Grant preparation documents:

June/July 2011

**Commission funding decision/first
contract signatures:**

by Nov/Dec 2011

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



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Priorities for WP 2011 Addressing 'Grand challenges'

1. Primary production mitigating and adapting to climate change
2. Building sustainable, eco-efficient and competitive bio-economy=> greening the industry
3. Food security and safety for Europe and beyond
4. Social inclusive and healthy Europe
5. Oceans for the future

Bio-economy for a 'zero waste' society addressed across three activities



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Priorities for WP 2011

Recent EU policies and strategies

- **EU2020 strategy**
- **New Commissioner's 3 main priorities** (Finalisation of ERA; Simplification of the FP; Focus on innovation and knowledge transfer)
- **CAP**, health check of CAP, Organic Farming Action Plan; Forestry Action Plan
- **The Maritime policy** e.g. Communication on A European Strategy for Marine and Maritime Research; Aquaculture Strategy
- **Public health** e.g. "A strategy for Europe on nutrition, overweight and obesity related health issues"; Food safety legislation, health claims and food labelling
- **Energy policy** e.g. Strategic Energy Technology Plan
- **Environment policy** e.g. Green paper on adaptation to climate change; ETAP; Water Initiative; Industrial Emissions Directive; EU Biodiversity Strategy
- **Industrial competitiveness** e.g. Mid-term review of the EU Biotechnology Strategy; Lead Market in Bio-based products
- **Community Animal Health Policy and Animal Welfare Plan**
- **Development policy** e.g. Renewed Sustainable Development Strategy; EU-Africa Strategic Partnership
- **Recovery plan**



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Work programme 2011

Main features

- **SME participation in selected topics**
- **More than one project per topic in selected topics**
- **EUR 12 (“Enlarged Europe”)**
- **International Cooperation**
- **Coordination: Other themes and Member States**
 - ✓ **Ocean 2011 call: KBBE, Energy, Environment, Transport**
 - ✓ **ERA-NETs: e.g. Molecular plant sciences, Forest research Mediterranean region, Animal health and welfare, Sustainable food production and consumption, Synthetic Biology, Industrial Biotechnology, Marine Biotechnology**
 - ✓ **Actions to support Joint Programming Initiatives:**
 - **Agriculture, Food security and Climate change**
 - **A healthy diet for a healthy life**



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Call FP7-KBBE-2011-5 SMEs

1. Promoting SME participation

Aim to spend 15% of annual call budget on SMEs

Topics with mandatory SME participation:

- **Minimum funding thresholds applied:
eg. 15%, 25%, 35%**
- **31 draft topics with mandatory % EC contribution
going to SMEs**

+ Topics encouraging SMEs' participation



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Call FP7-KBBE-2011-5 Enlarged Europe

2. Strengthening science excellence and research capacities

- Topics encouraging participation of Enlarged Europe and Candidate countries
- Training/summer schools in selected CP topics



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International cooperation

3. International cooperation



**Opening of all activities / topics
to participation by Third Countries**

Targeted topics 5

where the participation of specific Third Countries is particularly welcome and clearly stated in the topic description for consideration by the evaluators.

Specific International Co-operation Actions (SICA) and other activities with mandatory ICPC participation 10

Partnering initiative with India

**Support action for International KBBE Forum
(with AU, CA, NZ)**

DRAFT WP2011: Topics for Specific International Co-operation Actions or with mandatory ICPC

| Topic | Third Countries/Region (Mandatory) |
|--|---|
| ERA-NET of Forest Research in the Mediterranean Region – Mandatory ICPC (Mediterranean partner countries) | different ICPC from the Mediterranean partner countries |
| New/next generation of researchers for Neglected Zoonoses at the animal-human interface – Mandatory ICPC | different ICPC (of which at least 2 from Africa) |
| EU-India Partnership initiative on biomass production and bio waste conversion through biotechnological approaches OR on animal vaccines and diagnostics (tbc) | India |
| Role of aquaculture in improving food security and eradicating poverty worldwide - Mandatory ICPC | different ICPC |
| Assessing and predicting the combined effects of natural and human-made pressures in the Mediterranean and the Black Sea in view of their better governance - SICA | Mediterranean Partner Countries and Black Sea countries |
| Knowledge-base and tools for regional networks of MPAs, integrated management of activities together with assessment of wind energy potential in the Mediterranean and the Black Sea | Mediterranean Partner Countries and Black Sea countries |
| Translation mechanisms for targeting interventions on micro-nutrients — Mandatory South Asia and South East Asia | South Asia and South East Asia |
| Reducing post-harvest losses for increased food security — SICA | different ICPC |
| Perennial grasses: optimising biomass production – SICA | different ICP |
| BioWASTE - Novel biotechnological approaches for transforming industrial and/or municipal biowaste into bioproducts – SICA | different ICPC |

DRAFT WP2011:

Other topics particularly well suited for international cooperation

| Topic | Third Countries/Region (Encouraged) |
|---|---|
| Promoting conifer genomic resources | USA, Canada |
| New technologies and tools and their potential application to nutrition research | Australia, Canada, USA, New Zealand |
| European interprofessional network addressing zoonotic diseases transmitted via companion animals | US (USDA and CDC), Australia, New Zealand, Canada |
| Long-term influence of early nutrition on health | USA |
| Pan-European Total Diet Study | Industrialised countries |
| Plant photosynthetic efficiency: from a C3 to a C4 system | All Third countries |
| Perennial grasses: optimising biomass production – SICA | India and/or China and/or Russia |



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4. Socio-economic aspects



- Civil Society Organizations, experts in ethics, law, economy and social sciences are encouraged to participate actively in research projects.
- Specific socio-economic research activities



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5. Dissemination



- Within Theme 2, a number of topics specifically address knowledge transfer, consortia should propose appropriate measures to increase the use of results by industry, policy makers and society.
- Innovation-related aspects need to be clearly addressed and action plans should be presented. These should show the optimal use of project results and would be considered an integral task of each project.



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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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WP 2011 – Overview Plants/soils

Enabling Research

- Conifer genomic resources (IP)
- Effects of combined biotic and abiotic stress in crop plants (FP)
- Sustaining and managing forest tree genetic resources (FP)
- Molecular Plant Sciences (ERA-NET)

Increased sustainability of all production systems; Plant health and crop protection

- Management of agricultural soils in the context of climate change (FP)
- Reducing mineral fertiliser use in agriculture: Recycling treated organic waste as compost and bio-char products (FP)
- Development of cover crop and mulch systems for crop production (FP)
- Translating knowledge on flowering time for breeding (FP)
- Root signalling, growth, development under abiotic stress conditions (FP)
- Strategies to replace copper-based products as plant protection products in low input and organic farming systems (FP)
- Carbon storage, hazard protection and timber production in European Mountain forests (FP)
- Forest Research in the Mediterranean Region (ERA-NET)



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WP 2011 – Overview Livestock

Enabling Research

- Efficiency of ruminant digestive systems and reduction of the ecological footprint through a combination of systems biology, 'omics' and nutrition (IP)

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

- New/next generation of researchers for Neglected Zoonoses at the animal-human interface (CSA)
- Development of multiple field tests for rapid screening of pathologies as well as simple laboratories tests (FP)
- European interprofessional network addressing zoonotic diseases transmitted via companion animals (CSA)
- Management and control of increased livestock parasite infection risks due to global change (FP)
- Animal health & welfare (ERA-NET)
- Development of next generation European system for cattle evaluation (FP)



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WP 2011 – Overview Fisheries and Aquaculture

Increased sustainability of all production systems; fisheries and aquaculture

- Beyond MSY (Maximum Sustainable Yield): defining management targets and their consequences (IP)
- Socio-economic effects of the main management principles of the new Common Fishery Policy (CFP) (FP)
- Role of aquaculture in improving food security and eradicating poverty worldwide (CSA)
- Aquaculture feeds and fish nutrition: paving the way to the development of efficient and tailored sustainable feeds for European farmed fish (IP)

Socio-economic research and support to policies

- Strengthening the impact of fisheries related research through dissemination, communication and technology transfer (CSA)

OCEAN 2011 JOINT CALL

- Multiuse of offshore platforms (IP)
- Marine microbial diversity: marine ecosystems, biotech applications (IP)
- Pressures and governance in the Mediterranean and Black sea (IP)
- Integrated management of activities in the Mediterranean and Black sea (IP)



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WP 2011 – Overview Socio-economic/policy

Socio-economic research and support to policies

- Joint programming facilitation (CSA)
- Crop-specific coexistence measures (FP)
- The CAP and sustainable land use (FP)
- Data network for organic market information (FP)
- Innovative forms of mixed farming for optimized use of energy and nutrients (FP)



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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



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WP 2011 – Overview Consumers, Nutrition, Processing

Consumers

- Communication consumer scientists, food technologists and consumers (CSA)

Nutrition

- Functional foods and ingredients (IP)
- New technologies and tools for nutrition research (IP)
- Influence early nutrition in health (IP)
- Targeting interventions on micronutrients (CSA)
- Joint Programming Initiative 'A Healthy Diet for a Healthy Life' (CSA)

Processing

- Cleaning and disinfection technologies (FP)
- Food Factory of the Future – Design study (CSA)
- Food packaging (FP)
- Safety control through food structures (IP)
- Processed foods with lower content of salt, fat and sugar (FP)



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WP 2011 – Overview

Food Quality and Safety

Food Chain and Environment

Food Quality and Safety

- Safety and quality of ready-to-eat foods (FP)
- Pan-European Total Diet Study (IP)

Food Chain and Environment

- Environmental sustainability in the European food and drink chain (FP)
- Reducing post-harvest losses (FP)
- Food science and the retail sector (CSA)
- Sustainable food production and consumption (ERA-NET)

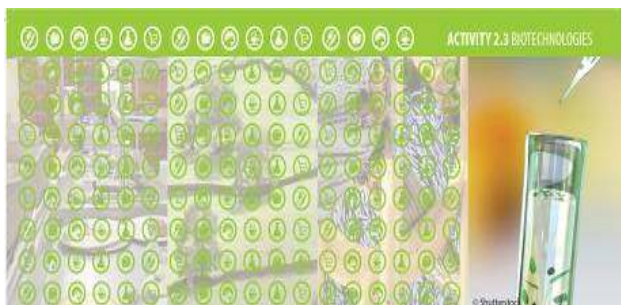


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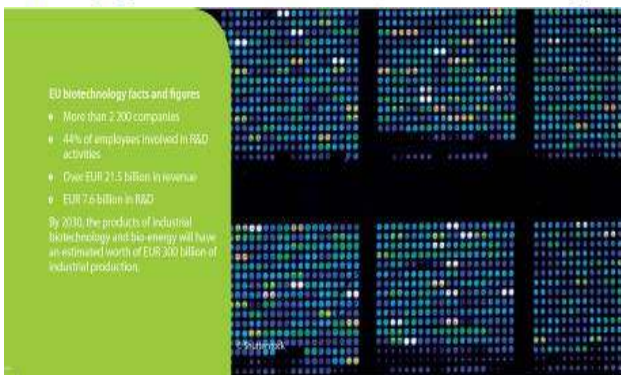
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FP7 KBBE - Activity 2.3

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



Food, Agriculture and Fisheries, and Biotechnology



- Novel sources of biomass and bioproducts
- Marine and fresh-water biotechnology
- Industrial biotechnology
- Biorefinery
- Environmental biotechnology
- Emerging trends in biotechnology

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WP 2011 – Overview Biotechnologies

Novel sources of biomass and bioproducts

- Plant photosynthetic efficiency: C3 to C4 (IP)
- Biomass from perennial grasses (FP)
- India Partnership Initiative biomass/biowaste (CSA)

Marine and fresh-water biotechnology (blue technology)

- Marine Biotechnology (ERA-NET)

Industrial biotechnology

- Industrial Biotechnology (ERA-NET)
- Biocatalysis from chiral compounds (IP)
- Biotechnology for novel compounds (FP)

Biorefinery

- Bio-waste into bioproducts (FP)
- Bio-industry – biochemicals and downstream (IP)

Environmental biotechnology

- GM crops in the EU – environ. economic impacts (IP)

Emerging trends in biotechnology

- Bioinformatics tools for Biotechnology (FP)
- Bioinformatics infrastructure for Biotechnology (CSA)
- Standardisation in Synthetic Biology (IP)
- Synthetic Biology and the Cell Factory (FP)
- Safety of Synthetic Biology (CSA)
- Synthetic Biology (ERA-NET)



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Reaching out to SMEs in Work Programme 2011

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SMEs in Work Programme 2011

More funding earmarked for SMEs! → Aims: more SMEs participating and more funding for them

Funding earmarked for SMEs is considerable this year → IMPORTANT to find those SMEs that are interested in and can contribute with participating and to communicate necessary information to them

In line with increased emphasis on linking research and innovation – SMEs are Essential participants in research projects

New instruments (previously used by other Directorates):

- 1. SME targeted topics:** certain percentage of EU contribution in 30 topics is earmarked for the SME participants in the consortia
- 2. Research for the benefit of SMEs (1 topic):** The aim of this funding scheme is to support projects where the bulk of the research is carried out by RTD performers for the benefit of SMEs.



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SMEs in Work Programme 2011/ SME targeted topics

How to recognise SME targeted topics in WP 2011?

Title of funding scheme: Collaborative Project (.... targeted to SMEs) and one Coordination and Support Action (KBBE.2011.1.3-01)

Depending on topic, 10-50% of funding earmarked for SMEs in the consortia, which is a strict eligibility criterion

What does it mean in practice?

In the proposal and in the final contract the EU contribution for the SMEs must reach the required percentage.

This will be checked upon submission of the proposal (as far as the data contained in the proposal allows an accurate assessment), and will be more thoroughly examined during contract negotiation, before signature of the grant agreement. Proposals not fulfilling this criterion will not be funded.



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SMEs in Work Programme 2011/ Research for the benefit of SMEs

1 topic follows the procedures of the funding scheme in the „Capacities” Programme!

Different scheme that supports outsourcing of research activities for SMEs

Title of scheme: „Research for the benefit of SMEs”

- KBBE.2011.1.3-06: Development of next generation of European system for cattle evaluation

Consortia preparing proposal for this topic will need to pay attention to the following:

Eligibility criteria for this topic:

- At least 3 SME participants (from 3 different Member States or Associated countries) and 2 RTD performers (independent from any other participant)
- Maximum requested EU contribution: EUR 3 000 000
- Evaluation criteria: Explained in Annex 2 to the Work Programme and the Guide for Applicants for submitting proposal for this specific topic



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SMEs in Work Programme 2011

ATTENTION!

1. As the EU contribution earmarked for SMEs is an eligibility criterion, it is a reason for exclusion if it is not met!
2. Pay attention to SME definition – DON'T ASSUME SME STATUS, VERIFY!

http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm

3. Check what percentage of EU contribution is required to go to SMEs in the topic description! (varying between 10-50%)



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SMEs in Work Programme 2011

For successful communication with SMEs

- think of which SMEs to reach and which information to communicate to them (simple and targeted messages)
- show them the benefits (innovative projects can gear up profit and improve a company's image)

WHERE TO FIND HELP FOR SMEs?

- guide them to the available information sources:
 - Europa: http://ec.europa.eu/research/sme-techweb/index_en.cfm
 - National Contact Points: http://cordis.europa.eu/fp7/ncp_en.html
 - Enterprise Europe Network: http://www.enterprise-europe-network.ec.europa.eu/index_en.htm
 - IPR Helpdesk: <http://www.ipr-helpdesk.org/index.html>
 - Europe Direct – Research Enquiry Service:
00800 6 7 8 9 10 11 (no cost, in Europe, in your language)
- **SMEs can also sign up for the Directorate's SME mailing list** (by sending a mail to rdt-kbbe-stakeholders@ec.europa.eu)!



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Documentation

- **Relevant general documents readily available include:**
 - EC Rules for participation
 - Rules for submission, evaluation, selection, award
 - Standard model grant agreement
 - Guide for beneficiaries
 - Guide to Financial Issues

All documents listed above and additional ones can be found at:
http://cordis.europa.eu/fp7/find-doc_en.html

- **Finding a call :**

These are available on the following site:

<http://cordis.europa.eu/fp7/dc/index.cfm>



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Advice

- **Use facilities which exist at national /regional/local level to get advice**
eg. **Slovakian National Contact Point**
Mrs Miroslava KACÁNIOVÁ
- **Appoint a coordinator with management skills.**
- **Select the partners according to their skills and complementarities**
- **Read carefully call topic description**
- **Address in your proposal all evaluation (sub) criteria**
- **Ask a non member of the consortium to read your application before submission**
- **Get advice on dissemination and exploitation**
- **Check that the proposal meets the eligibility criteria**



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Knowledge-Based Bio-Economy (KBBE)

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