



**Information Day: Food, Agriculture,
Forestry and Biotechnology FP7**



FP7-KBBE-2013-7 Call: context, content and practicalities

Despina Yancopoulou
PRAXI / HELP-FORWARD Network



Information Day: Food, Agriculture, Forestry and Biotechnology FP7



- 1. European Bio-economy
 - Commission Communication
- 2. Call FP7-KBBE-2013-7
 - Context (last call of FP7, transition to Horizon 2020 and innovation)
 - Content (topic highlights, Activity 1, 2, 3)
 - Practicalities (points to remember, contacts)



The Bioeconomy: An EU priority

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EU 2020 Strategy:

Smart growth

Sustainable Growth

Inclusive Growth

Building
a sustainable
BIOECONOMY
For Europe

The Innovation Union:

Turning innovative
ideas into products
and processes, for
growth and job
creation.



Sector	Annual turnover (billion €)	Employment (thousands)
Food	965	4,400
Agriculture	381	12,000
Paper/Pulp	375	1,800
Forestry/Wood ind.	269	3,000
Fisheries and Aquaculture	32	500
Bio-based industries		
• <i>Bio-chemicals and plastics</i>	50 (est.)	150 (est.)
▪ <i>Enzymes</i>	0.8 (est.)	5 (est.)
• <i>Biofuels</i>	6	150
Total	2,078	22,005

The bioeconomy in Europe:

- 2Billion € annual turnover,
- 1Billion € value added,
- ±9 % GDP, 22 Million jobs



BIOECONOMY STRATEGY ACTION PLAN

Horizon 2020 has defined value chains to be covered by Research and Innovation, within the bioeconomy strategy action plan

VALUE CHAINS ADDRESSED BY HORIZON 2020 WITHIN BE STRATEGY

AGRICULTURE and FORESTRY

*Land use
Resources efficiency
Eco-intensive
production
Climate change*

FISHERIES and AQUACULTURE

*Fish stocks
Sustainable fisheries
Competitive
Aquaculture*

BIO-BASED INDUSTRIES

*Biorefineries
New products
Waste*

FOOD CHAIN

*Food Security
and Safety
Nutrition
Efficient food/feed
industry*



Investing in bioeconomy

Based on various climate scenarios the agricultural productivity in most parts of Europe will increase by 2025. Due to the warmer and more unstable climate however, the risks of crops loss, pest and animal diseases grow.

Meat consumption expected to double by 2050



Investing in bioeconomy

In industrialized countries, the percentage of the population suffering from food borne diseases each year has been reported to be up to 30%

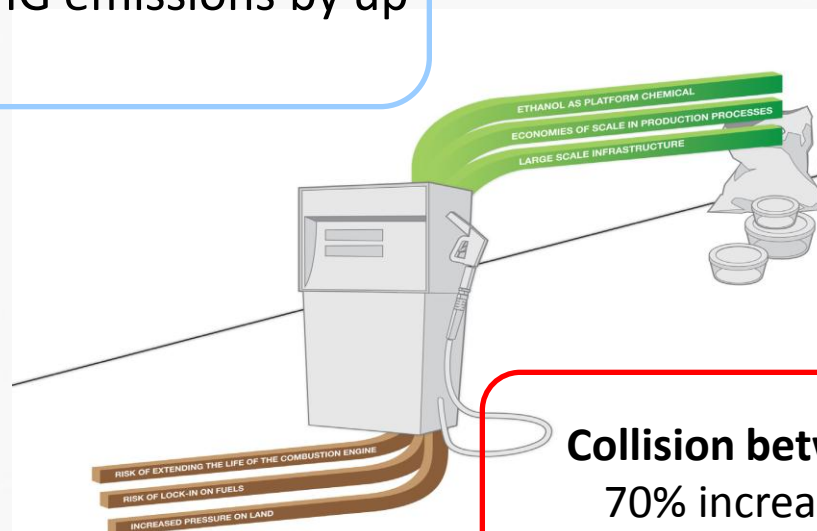
EU Food and Drink R&D expenditure at 0.40% of output
- one of the lowest of developed countries

Estimated 30-50% or up to 90 M tons of food in Europe goes to waste.



Investing in bioeconomy

Better use of industrial biotechnologies as processes, energy resources or materials to reduce GHG emissions by up to 2.5 BtCO₂ per year.



Collision between food and biofuels?

70% increase in food demand and
100% increase in energy demand by 2050

1st gen. bio-fuels to save 530 MtCO₂e /y
2nd gen. bio-fuels to save up to 1 BtCO₂e /y



Transition to Horizon 2020



Transition to Horizon 2020

	FP7	Horizon 2020 proposal
	2007-2013	2014-2020
All FP	€ 53 Billion	€ 80 Billion
Bioeconomy	€ 1,9 Billion for <u>Theme FAFB</u>	€ 4,6 for Bioeconomy Challenge

+ industrial leadership; Marie Curie actions; RSFF; ...



FP7 KBBE: Approach for 2013

EU 2020 Strategy:
Smart Growth
Sustainable Growth
Inclusive Growth

Bioeconomy Strategy:
Making the most out of our
biological renewable
resources
(food, feed, bio-products
and bio-energy)

**The Innovation
Union:**
Turning innovative
ideas into products
and processes, for
growth and job
creation.

**Horizon 2020
Proposal - Tackling
Challenges**

**FP7 FAFB
2013**

Drivers for 2013:
• Bio-resource efficiency
• Innovation

Other priorities:
The Oceans of the future / Water / Secure
clean and efficient energy / Anti-
microbial resistance



Bridging with Horizon 2020, Supporting Innovation

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2013 - KBBE Innovation

Bridging with Horizon 2020, supporting innovation

2013 KBBE reinforces innovation with emphasis on “from discovery to demonstration”.

Several topics require or encourage:

- ▶ Proof-of-concept and demonstration activities
- ▶ Knowledge transfer and dissemination actions
- ▶ Demand-side measures, such as pre-commercial procurement or standardisation activities

Bottom-up approaches with cross-cutting and cross-thematic topics, allowing for participants to freely develop their solutions to achieve the expected impact



Bridging with Horizon 2020, strengthening SME participation



- **In FP7 KBBE until now: SMEs =**
12% of budget
16% of participants
 - **In 2013, continued focus on strengthening industrial and SME participation:**
 - ▶ SMEs as key players to foster innovation
 - ▶ Almost 20% of budget earmarked for SME participants
 - ▶ A majority of topics have ring-fenced budget for SMEs
 - EU contribution for SMEs varies from 10% up to 75 % of topics' budget (27 topics)
- e.g.
- boosting the translation of FP projects' results into application in agriculture, forestry, fisheries and aquaculture (min 50% SMEs)
 - exploitation of FP projects' results in food, health and well-being by SMEs (min 75% SMEs)



Call for proposals KBBE-2013-7



➔ **Seventh (last) general Call: FP7-KBBE-2013-7 /open/**

- **Publication: 10 July 2012**
- **Budget: 341.35 million €**
- **Evaluation in one stage**
- **Deadline: 05 February 2013**

– **Information and submission on Participant Portal:**

<https://ec.europa.eu/research/participants/portal/page/cooperation#kbbe>

**Full Guides for Applicants with Annexes available / Work
Programme with topics / Get Support**

(also OCEAN for Tomorrow call / ERA-Net)



WP 2013 last FP7 call: To guide towards Horizon 2020



- Overall WP scope: “Bio-resource efficiency”: Fewer inputs and losses/waste; increased diversity and resilience of production systems and processes
- “Scale and scope” approach: Reduced number of topics with increased budget (not taking into account ERA-NETs)
- Increased emphasis on integration of basic and applied research, transfer of knowledge, impact and innovation
- Broader, interdisciplinary topics, several allowing for funding of more than one project
- Stronger SME and industrial involvement: 20% of budget (27 topics) earmarked for SME participants - eligibility criterion at time of negotiation



Activity 2.1

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

Activity 2.2

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

Activity 2.3

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

Knowledge Based Bio-economy (KBBE)



Indicative Budget

Activity		Indicative amount (EUR million)	Topics
Activity 2.1: Sustainable production and management of biological resources from land, forest and aquatic environments		125	23
Activity 2.2: Fork to farm: Food (including seafood), health and well being		89	10
Activity 2.3: Life sciences, biotechnology and biochemistry for sustainable non-food products and processes	Topics (Group A): KBBE.2013.3.1-02; KBBE.2013.3.3-02; KBBE.2013.3.3-03; KBBE.2013.3.5-01; KBBE.2013.3.5-02; KBBE.2013.3.6-01	20	6
	Topics: (Group B) KBBE.2013.3.1-01; KBBE.2013.3.2-02; KBBE.2013.3.3-01; KBBE.2013.3.3-04; KBBE.2013.3.4-01; KBBE.2013.3.6-02	108	6



Societal Challenges - FP7/H2020:

- An increasing world population
- Climate change
- Food security and safety
- Global markets
- Increasing food-related health problems
- Increasing environmental pressures



Activity 2.1
**Sustainable production and management of
biological resources from land, forest and aquatic
environments**



- **Crop breeding and management:** Legumes (5M x2) and small grain cereals (5Mx2)
- **Agroforestry** (6Mx1), **Wood mobilisation**(6Mx1) in forests
- **Plant Health:** IPM in fruit crops (6Mx1) and biocontrol in agriculture and forestry (9Mx1), quarantine pests
- **Animal production:** General sustainability (9Mx1) and genomics and phenotyping approaches (9Mx1); **Animal Health:** Viral vector borne diseases (3Mx1) / sustainable apiculture (6Mx1) / antimicrobial resistance (9Mx1) / zoonoses (EU-China)
- **Aquaculture:** Diversification (9Mx1) and breeding (6Mx1), organic production (1,5Mx1); **Ecosystem based approach for fisheries**(6Mx1)



Activity 2.1

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



- **Agro-meteorological crop modelling** (2Mx1)
- **Socio-economy:** trade with Eastern Europe, farm-level indicators, research impact
- **Outreach, translation, impact of results** in agriculture, forestry, fisheries, aquaculture (6x1M), (3Mx1)
- **Joint topic with Energy Theme:** Logistics for non-food biomass feed stocks (see ENERGY call)
- 4 **ERA-NETS:** IPM, forest, MED agriculture, ICT
- 2 **ERA-NET+:** Climate smart, organic agriculture



Activity 2.2

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

- **Nutrition:** diet-related diseases (impact of food on depression (9Mx1); brain function (9Mx1); gut health (9Mx1)); Vitamin D deficiency (6Mx1)
- **Food processing:** innovative sensors for food processing(3Mx3); quality and authenticity in the food chain (9Mx1); traditional foods network (4Mx2)
- Impact of global changes on **Europe's food security** (4Mx1)
- **Saving water and energy** in food processing (6Mx3)
- **Exploitation of results** by SMEs (2Mx5)



Activity 2.3

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



- Largest share of activities: bottom-up, variable geometry approach
- Actions and demonstration in **support of market development of biobased products** and processes.



Activity 2.3

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



- **Plant High Value Products:** developing plant-based 'eco-friendly' products with bioactive properties(20M/several projects)
- The CO2 **algae biorefinery:** for high addedvalue products, integrated approach(20M/several projects)
- **Industrial biotechnology,** demonstration (20M/several projects), markets for bio-based products(6M/x 1), industrial biocatalysts(20M/several projects)
- **Preventing and valorising biowaste:** in biorefineries (12M/several projects)
- **Emerging trends in biotechnology:** (e.g. nano-biotechnologies, synthetic biology) with the view to maintain biotechnology at the front line of innovation also in the long term.



«The Ocean of Tomorrow» 2013



4 Topics:

1. Biosensors for marine water quality monitoring (15 €M)
2. Sensors for in-situ monitoring (15 €M)
3. Antifouling materials for maritime applications (15 €M)
4. Service technologies for the offshore wind energy sector (10 €M)

5 Themes involved in the call:

Theme 2: Food, Agriculture and Fisheries, and Biotechnology (FAFB)

Theme 4: Nanosciences, Nanotechnologies, Materials and new Production

Technologies (NMP)

Theme 5: Energy

Theme 6: Environment (including Climate Change)

Theme 7: Transport (including Aeronautics)

55 million €EU contribution



Advice for submission Form & practicalities

- Before getting prepared: Check thoroughly if your project idea fully meets the call topic requests –don't try to "fit in" your particular field of research
- Follow strictly the structure and requirements from guidance notes (e.g. on page length) (see Guide for Applicants)
- Check eligibility criteria: e.g. limit for requested EC contribution, SME budget, number of participants, deadline/means of submission
- Check if your SME partner conforms to definition
- Include suitable partners –complementarity of competences etc
- Submit continuously drafts of the proposal through SESAM to test function
- Ask somebody outside the consortium to read your application before submission (ideally somebody who has already served as an expert)



Make sure that your proposal addresses all the issues requested under the evaluation (sub)criteria

***Evaluation criteria applicable to
Collaborative project proposals***

S/T QUALITY

“Scientific and/or technological excellence (relevant to the topics addressed by the call)”

- Soundness of concept, and quality of objectives
- Progress beyond the state-of-the-art
- Quality and effectiveness of the S/T methodology and associated work plan

IMPLEMENTATION

“Quality and efficiency of the Implementation and the management”

- Appropriateness of the management structure and procedures
- Quality and relevant experience of the individual participants
- Quality of the consortium as a whole (including complementarity, balance)
- Appropriateness of the allocation and justification of the resources to be committed (budget, staff, equipment)

IMPACT

“Potential Impact through the development, dissemination and use of project results”

- Contribution, at the European [and/or international] level, to the expected impacts listed in the work programme under the relevant topic/activity
- Appropriateness of measures for the dissemination and/or exploitation of project results, and management of intellectual property.



Criterion: S/T QUALITY

- Ensure coherence between Objectives – Work plan – Tasks-Deliverables
- « Clarity versus length »: Use where possible graphs, tables, overviews, in particular to visualise complex issues (such as the project concept)
- Show collaborative value of proposal: Work plan should be more than the sum of individual activities while avoiding too complex interconnections between WPs, tasks and partners
- Show that you are aware of risks and how you will deal with them (e.g. include under each Work Package a section on risk and contingency planning)
- Clearly present state of the art indicating progress beyond the current status while avoiding being "overambitious" –useful to check and link with relevant ongoing or finished EU/ international projects



Criterion: IMPLEMENTATION

- Coordinator: Should have good track record in project management (not necessarily at European level)
- Budget should be clear and justified and consistent with proposed work BUT avoid unbalanced distribution of budget across partners
- Clear, simple and well described management structures
- Where useful: Complement expertise of the consortium with that from external participants (e.g. through an Advisory Board)



Criterion: **IMPACT**

- Describe clearly of how you are addressing the expected impact as described under the **call text** (not necessarily how you are addressing various EU policies)
- Clear indication of expected research outputs and realistic assessment of potential short and longer term impact
- Well defined route towards outreach, dissemination: Targeted to needs of different stakeholders
- Dissemination and communication aspects should be well covered; open access is encouraged throughout FP funding
- Show that you are aware of potential IPR issues



Praxi contact info



Despina Yancopoulou

Email despina@help-forward.gr

Tel 210 3607690