



Food, Agriculture and Fisheries and Biotechnology

Achievements and Prospects for EU-RUSSIA co-operation from 2007 to 2010



*German-Russian Forum on Biotechnology
Novosibirsk 15 – 19.06.2009*

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

Not legally binding

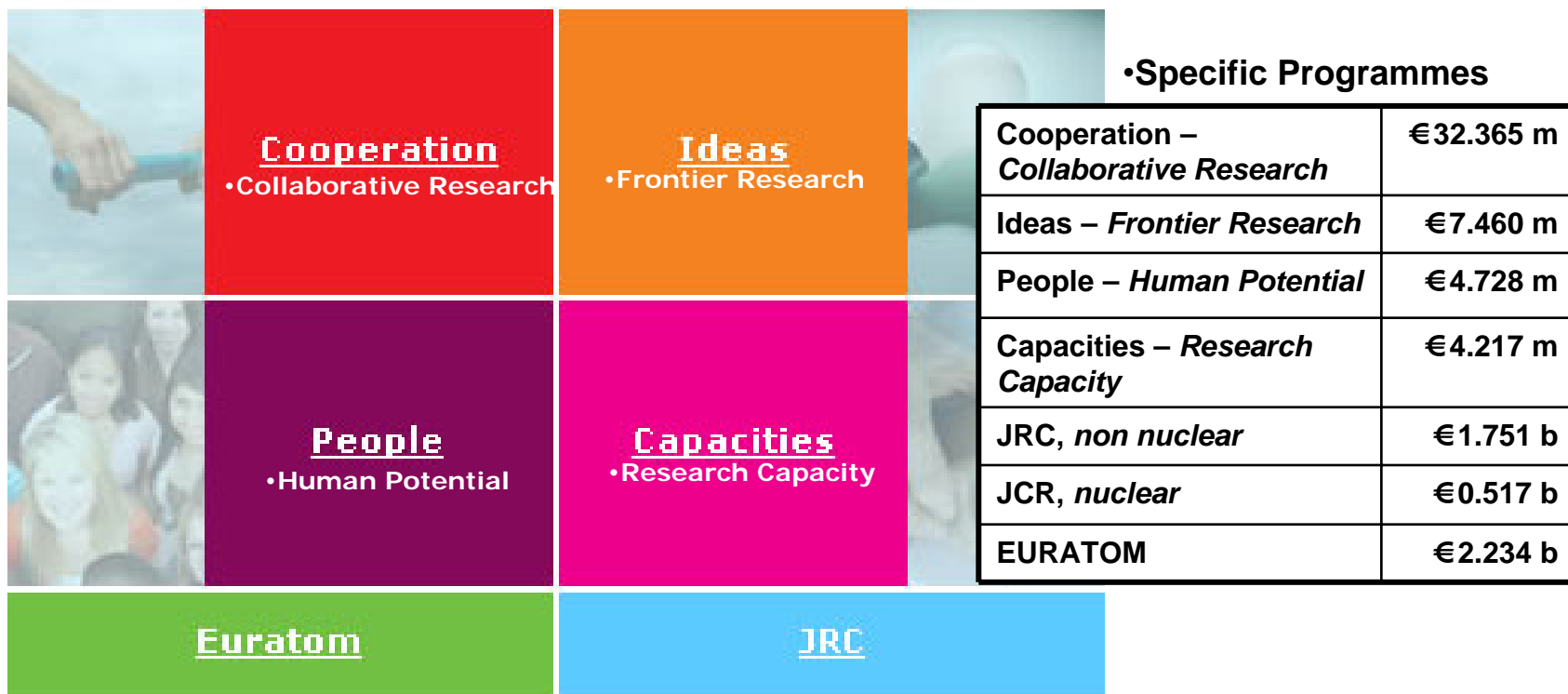
Elisabetta Balzi
European Commission
DG Research
Biotechnologies, Agriculture, Food



- Objectives, Activities and Modalities
- Results of EU - Russia co-operation in 2007-2009
- Prospects for 2010

The 7th EU Framework Programme for Research and Development 2007-2013

total funding 53 billion €

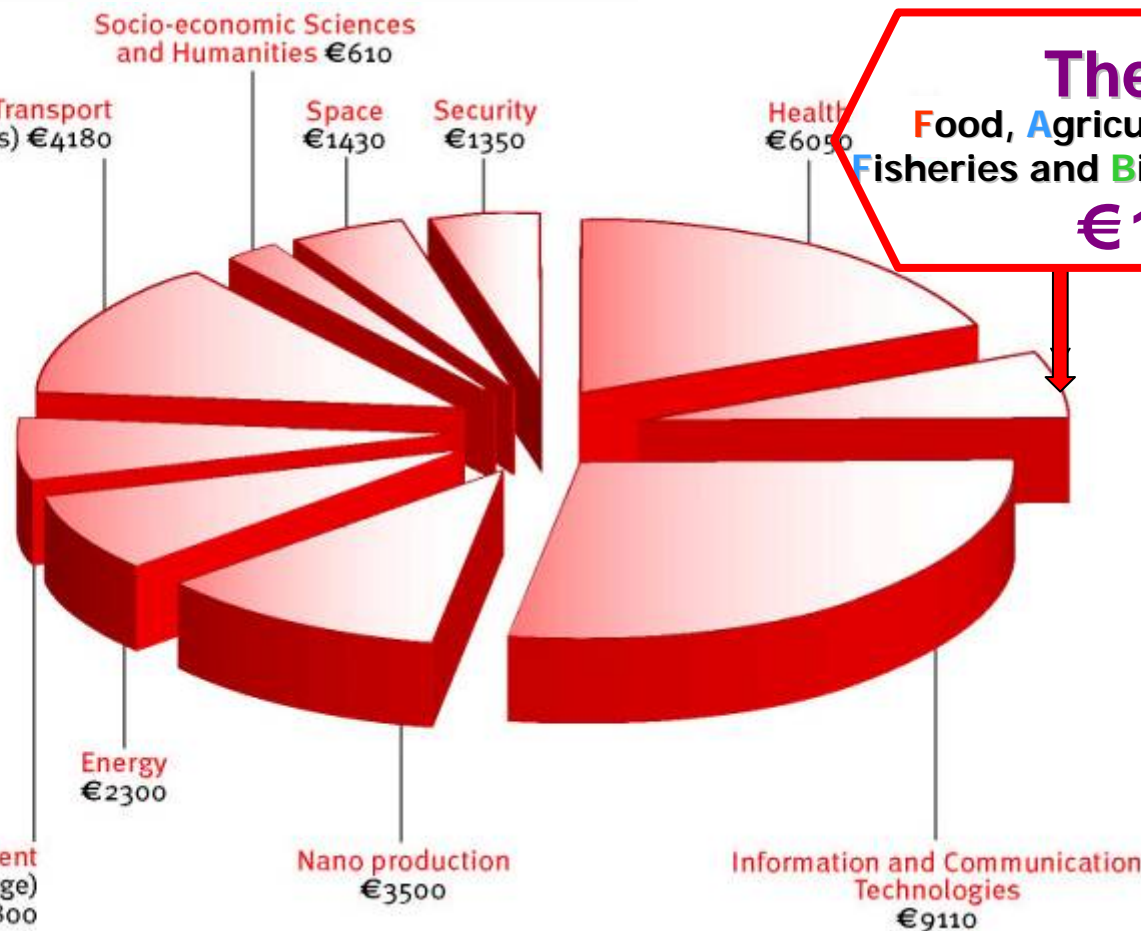




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Cooperation programme – 10 thematic areas



Theme 2
Food, Agriculture and Fisheries and Biotechnology
€1935

Food,
Agriculture and **F**isheries,
and **B**io**T**echnology

Knowledge-Based Bio-Economy (KBBE)

Not legally binding



FP7 – Co-operation *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)

OBJECTIVES

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

Knowledge-Based Bio-Economy (KBBE)

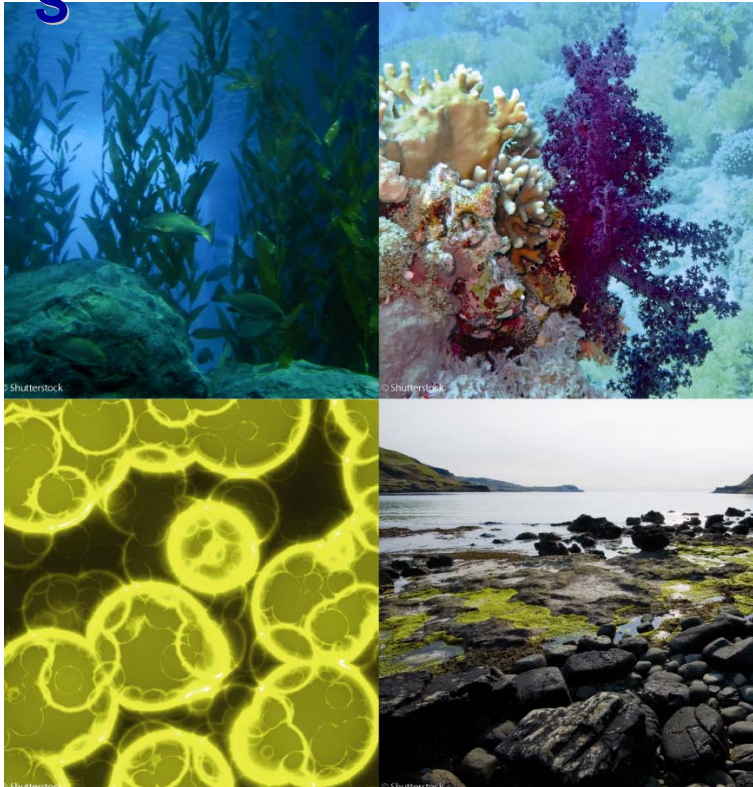
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KBBE - OBJECTIVES



Food, Agriculture and Fisheries, and Biotechnology

Knowledge-Based Bio-Economy (KBBE)

- **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

Not legally binding



FP7 – Co-operation *Theme 2*

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

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)

3 ACTIVITIES of RESEARCH

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

Knowledge-Based Bio-Economy (KBBE)

Not legally binding

3 KBBE - ACTIVITIES



FP7 KBBE - Activity 2.1

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



FP7 KBBE - Activity 2.2

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



FP7 KBBE - Activity 2.3

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

- **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
- **Marine resources**, fishery, aquaculture
- Development of **policy** strategies for knowledge based bio-economy, agriculture, fishery as well as rural and coastal areas

- **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

- **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**

International Cooperation

International Cooperation in FP7 - PRINCIPLES

Efforts should be made to strengthen international co-operation towards:

- Reaping the full benefits of **internationalization of R&D**
- Contributing to the production of **global public goods**
- Further integrating the EU into the **world-wide research community**

FP7 should contribute towards promoting world-wide

**GROWTH,
SUSTAINABLE DEVELOPMENT and
ENVIRONMENTAL PROTECTION, also by addressing climate change**

Where possible, the FP will contribute to meeting the

Millennium Development Goals by 2010

International Cooperation in FP7

Food, **A**griculture and **F**isheries and **B**iotchnology Research

The context

Agriculture, food and biotechnology research is a priority for most countries:
highly industrialised, emerging and developing economies

The socio-economic challenges addressed by research in this theme

Sustainable agriculture/fishery under climate change
Increasing need for high quality and sustainable food production
Food-related disorders (cardiovascular, obesity ...)
Infectious animal diseases and zoo-noses
Renewable energy sources

are GLOBAL and require international S&T cooperation

1. Participation of Third countries (= non EU) in FP7

- **GENERAL OPENING**

All activities / topics are open to participation by Third Countries

Third countries (other than AC): as additional partners

- **TARGETED OPENING:**

Some topics encourage international cooperation with some TC

Third countries (other than AC): as additional partners (encouraged)

- **SICAs - Specific International Co-operation Actions**

Topics with mandatory participation of some TC - ICPC

International Co-operation Partner Countries : as COMPULSORY partners

2. Co-ordination of FP7 & EU with Third countries Programmes

- **COORDINATED CALLS**

Synchronised Calls, by FP7-Theme2 and a Third country, on topics of shared interest and with co-funding (ex **Russia 2008**, India 2009)

- **TWINNING of projects**

between FP7-Theme 2 and related programmes from Third countries, on on-going projects throughout this Theme, since 2008 (ex Canada, Argentina)

- **ERA-Nets**

Coordination of European National Research Programmes, including some third countries programmes (e.g. agriculture for development, agriculture for Mediterranean countries)

- **GLOBAL INITIATIVES and PARTNERSHIP INITIATIVES**

CSA for co-ordination of programmes activities between EU and Third countries

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

IMPLEMENTATION

Yearly Call for proposals

See Calls publications on :
www.cordis.europa.eu/fp7/kbbe/home_en.htm



Seventh Research Framework Programme (FP7) Important Legal Notice

CORDIS

Europa > CORDIS > FP7 > Find a Call

Cooperation : Calls

Food, Agriculture and Fisheries, and Biotechnology

Calls for Proposals	
FP7-KBBE-2007-1 CLOSED	General Call 1
FP7-KBBE-2007-2A CLOSED	General call 2

Coordination of Research Activities related to this theme (Calls for Proposals)

FP7-ERANET-2007-RTD CLOSED	ERA-NET / ERA-NET Plus Call 2007
-----------------------------------------------	----------------------------------

[Other FP7 calls](#)

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Publications Office

KBBE Work Programmes 2007-2010:

52 SICAs / topics with mandatory TC and 45 topics targeted to TC

⇒ 35% of KBBE topics call for international co-operation

	WP 2007		WP 2008	WP 2009	WP 2010
	Call 1 +ERANET	Call 2A	Call 2B + ERANET	Call 3 + Biorefineries + ERANET	Call 4 + Africa + Ocean + Influenza + ERANET
Total topics called	78	23	50	72	56
SICAs & topics with mandatory TC participation	6	2	10	19	15
Targeted topics	17	4	10	11	4
General topics	55	17	30	40	29
Coordinated call			Russia 2 topics (Act 3)	India 2 topics (Act 2)	
Twinning			Canada (Act 3, 2)	Argentina (Act 1, 2)	open

- Principles, Activities and Modalities
- **Results of EU - Russia co-operation in 2007-2009**
- Prospects for 2010

EC-Russia bilateral S&T co-operation agreement

EU-Russia Working Group on Agro-Bio-Food :

EC Research DG & Russia Federal Agency for Science and Innovation – since 2005

bioNCP (<http://fp7-bio.ru/en/>), since FP6

- **1st EU-Russia co-ordinated call** for proposals in biotechnology (2007)
 - **6 mirroring Technology Platforms** : RFTPs and ETPs
Industrial Biotechnology, Food, Plants, Animal Health, Forestry, Aquaculture & Fisheries
(national research agendas and EU-Russia joint research agendas)
 - **ERA-NETs links** (industrial biotechnology, forestry...)
 - **yearly EU-Russia Symposia on Biotechnology** (5, since 2004)
- ⇒ **24 RU partners in FP7- KBBE projects 2007-2009** (RU ranks n°2)



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Strong Response and Participation by Third Countries in FP7-KBBE calls (2007-2008)

	Call 1	Call 2A	Call 2B	Total
Response by Third Countries in submitted proposals	9,44 %	9,6%	17,2 %	12 %
Participation of Third Countries in proposals selected for funding	8,70%	10,10%	18,50%	11,90%
Success rate of Third Countries	18,5 %	22,70%	19,20%	19,4 %

Number of participants in projects selected for funding in the first three calls under FP7-KBBE

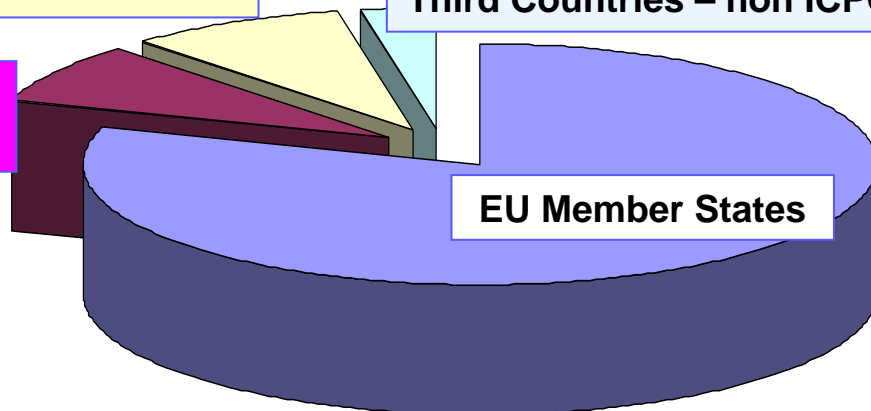
By category of countries

Third Countries - ICPC

Third Countries – non ICPC

FP Associated Countries

EU Member States



Distribution of Countries in selected proposals - 2007-2008



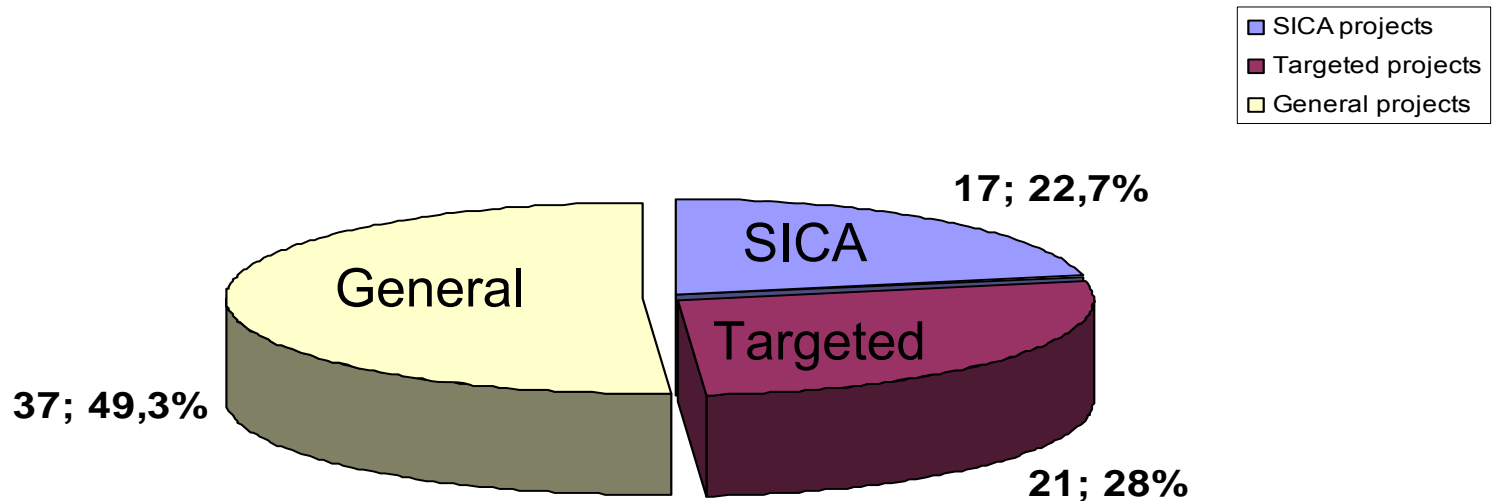
In 2007-2008:

60 PROJECTS with **TC** partners (others than AC) (out of 123 tot)

(194 partners from 49 different Third Countries – excluding AC)

50% of all projects selected include **Third Countries** partners

TC succeeded in all types of topics

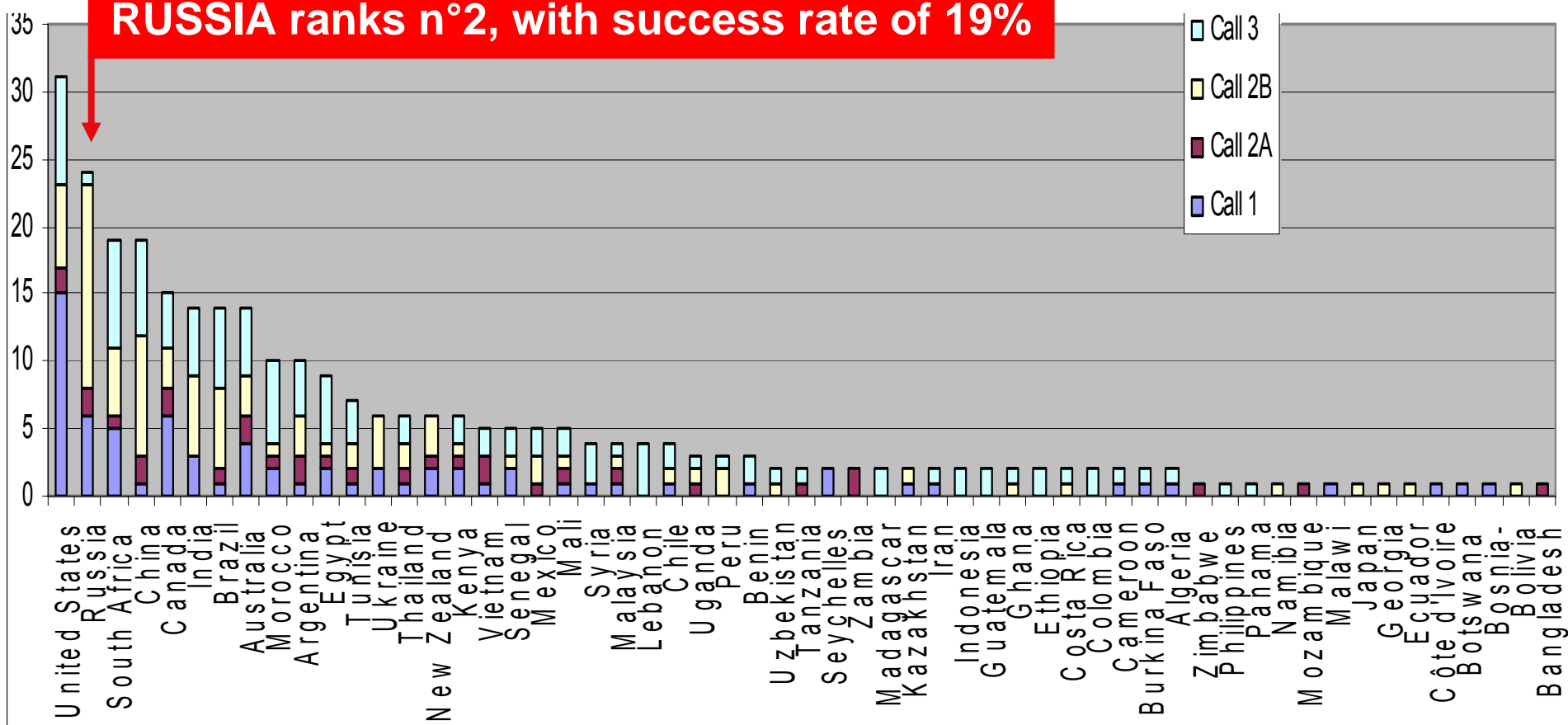


PARTICIPATION of Third Countries in selected KBBE projects - 2007-2009

301 partners from 57 different Third Countries (others than AC) in successful proposals

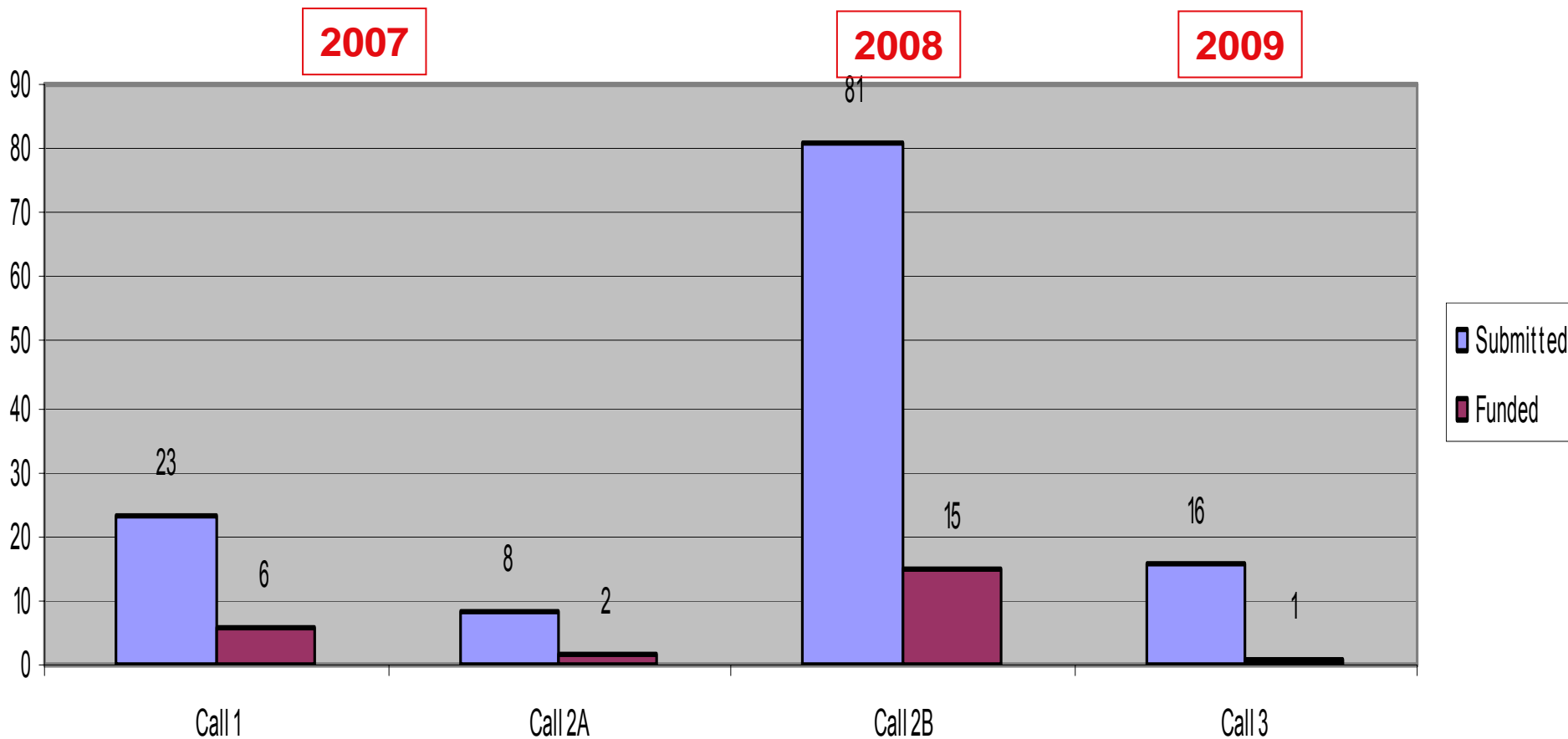
Top 10: US; RU; SA, CN; CA, IN, BR; AU, MA; AR

RUSSIA ranks n°2, with success rate of 19%

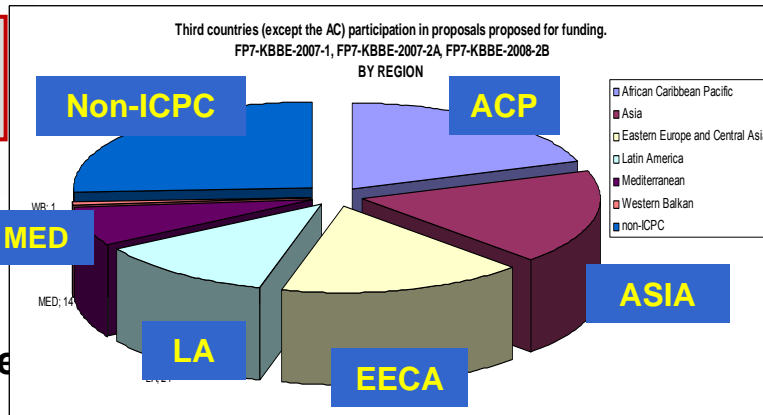




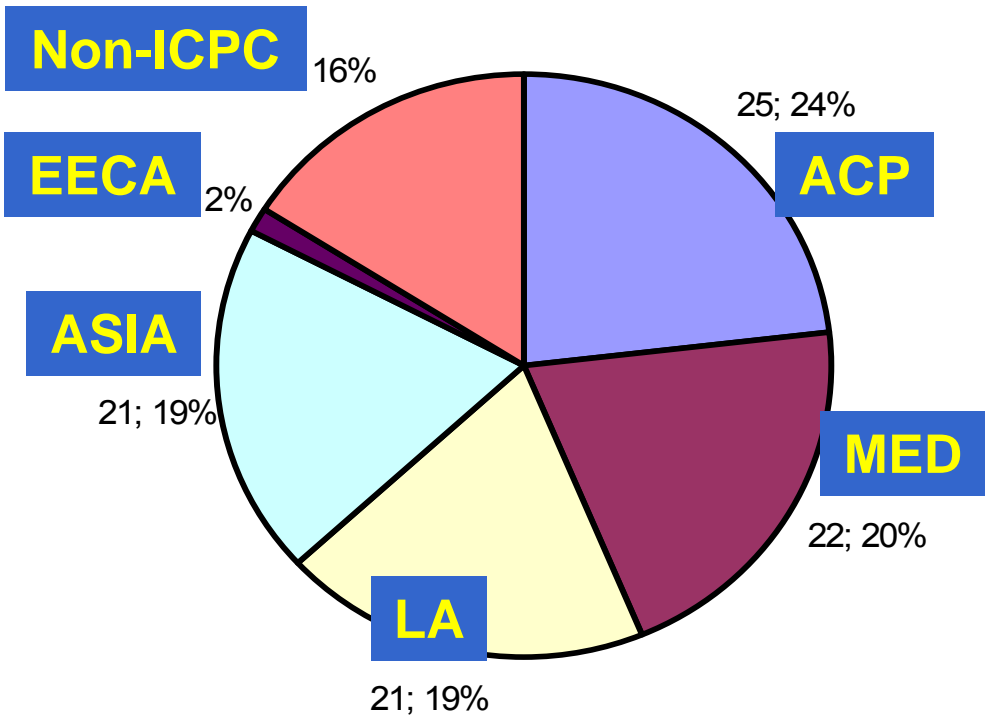
RUSSIA Participation in submitted and funded projects 2007- 2009



2007-2008



2009



- ACP
- MED
- Latin America
- ASIA
- Eastern Europe and Central Asia
- Industrialised Third countries

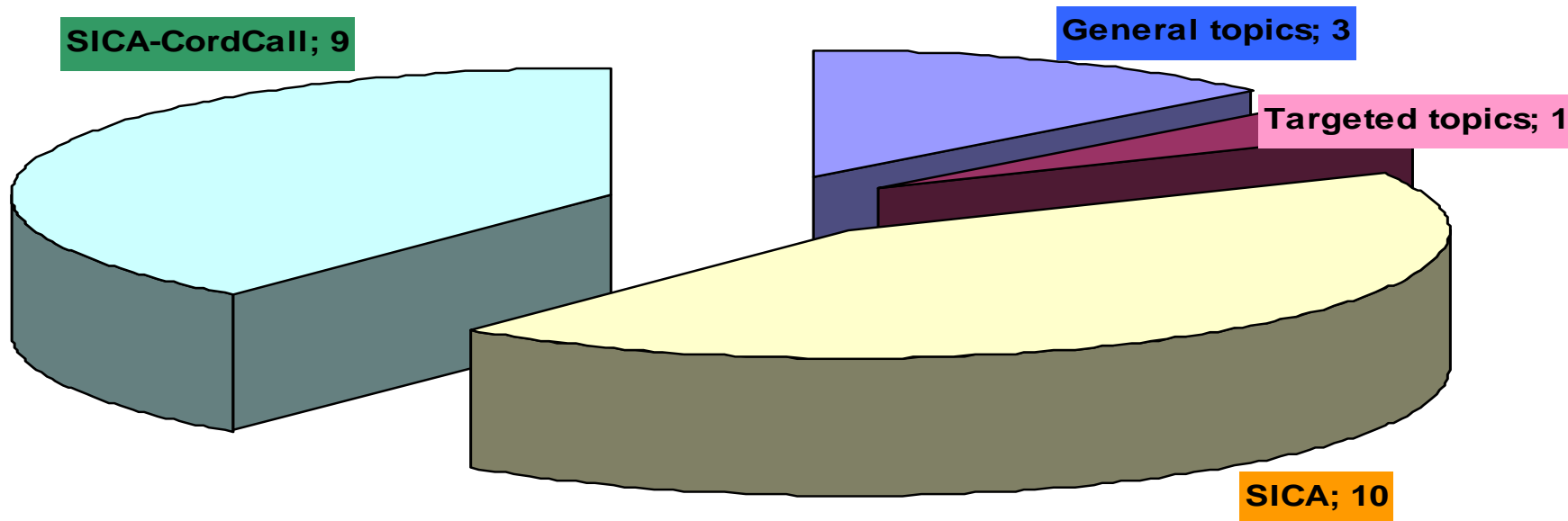


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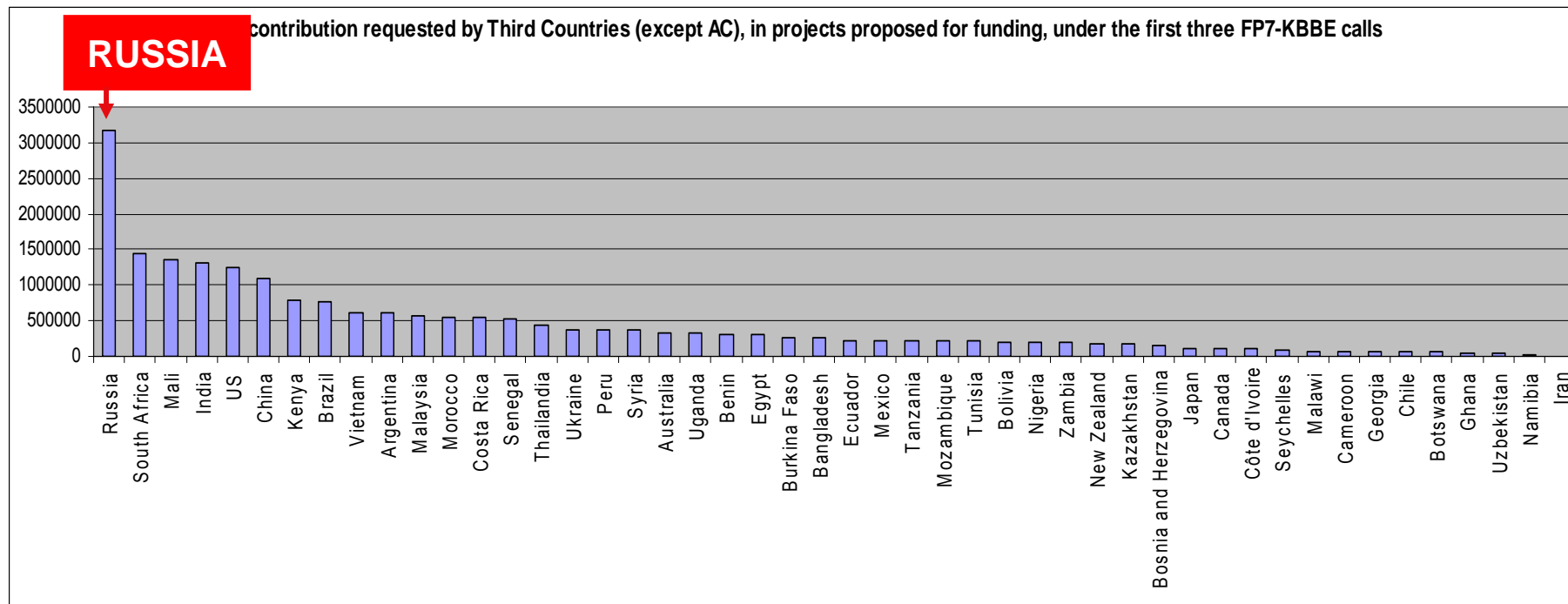
Successful Participation of Russia in different types of topics (2007-2008)

Participation of Russian partners in projects selected for funding, by category of topic



FUNDING of Third Countries in selected projects - 2007-2008

More than **20 million€** requested EC contribution for selected partners from 46 TC
= **5.2 % of the total budget 2007-2008**



24 Russian partners in 12 KBBE projects in 2007-2009

FP7- KBBE PROJECTS with partners from RUSSIA – 2007 (1/3)

Call	Category of topic	Project Acronym	Selected Project Title	Partner Name
FP7- KBBE- 2007-1	Targeted opening	FishPop Trace	Fish Population Structure and Traceability	Russian Federal Research Institute for Fisheries and Oceanography
FP7- KBBE- 2007-1	general opening	DISCO	Targeted DISCOvery of novel cellulases and hemicellulases and their reaction mechanisms for hydrolysis of lignocellulosic biomass	A.N. Bakh Institute of Biochemistry, RAS
FP7- KBBE- 2007-1	SICA	PROSP ARE	PROgress in Saving Proteins And Recovering Energy	- A.N. Bakh Institute of Biochemistry, RAS - Symbol Ltd - All-Russian Scientific Research Institute of Poultry Processing - R&D Joint stock company
FP7- KBBE- 2007-2A	general opening	ETHERP ATHS	Characterization and modelling of dietary effects mediated by gut microbiota on lipid metabolism	Institute for Systems Biology SPb Company Limited
FP7- KBBE- 2007-2A	SICA	MycoRed	Novel integrated strategies for worldwide mycotoxin reduction in the food and feed chains	A.N. Bakh Institute of Biochemistry of the Russian Academy of Science

FP7- KBBE PROJECTS with partners from **RUSSIA** -2008 (2/3)

Call	Category of topic	Project Acronym	Project Title	Partner Name
FP7- KBBE- 2008-2B	General Opening	NTB- IMPACT	Assessment of the impacts of non-tariff barriers - NTB on the competitiveness of the EU and selected trade partners	Institute for Agricultural Market Studies
FP7- KBBE- 2008-2B	SICA – Black Sea	BaSeFood	Sustainable exploitation of bioactive components from the Black Sea Area traditional foods	State educational institution of the high professional education “Moscow State University of Food Productions”
FP7- KBBE- 2008-2B	SICA – co-ordinated call	PLAPROV A	Plant Production of Vaccines	<ul style="list-style-type: none"> - Centre Bioengineering of the Russian academy of sciences - Moscow State University, Faculty of Biology - Research Institute of Influenza of Russian Academy of Medical Science - FGI Federal Centre for Animal Health
FP7- KBBE- 2008-2B	SICA – co-ordinated call	IRENE	In silico Rational Engineering of Novel Enzymes	<ul style="list-style-type: none"> - Belozersky Institute of Physicochemical Biology - Petersburg Nuclear Physics Institute, Russian Academy of Sciences - Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Russian Academy of Sciences - Molecular Technologies, Ltd. -Bio/ Technologies, Innovations, Researches, Ltd



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FP7- KBBE PROJECTS with partners from **RUSSIA** _ 2008 -2009 (3/3)

Call	Category of topic	Project Acronym	Project Title	Partner Name
FP7- KBBE- 2008-2B	SICA – (Russia)	FORESTSPECS	Wood Bark and Peat Based Bioactive Compounds, Speciality Chemicals, and Remediation Materials: from Innovations to Applications	-St. Petersburg State Medical Academy named after I. I. Mechnikov -Northern Research Institute of Forestry branch of SPb - Far East Forestry Research Institute
FP7- KBBE- 2008-2B	CSA - Mandatory TC	BIO CIRCLE	Creating a CIRCLE by extending the BIO NCP network to Third Country NIPs	A.N. Bakh Institute of Biochemistry, Russian Academy of Sciences
FP7- KBBE- 2009-3	SICA (Russia)	ISEFOR	Increasing Sustainability of European Forests: Modelling for Security Against Invasive Pests and Pathogens under Climate Change	Saint Petersburg State Forest Technical Academy

Food,
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and **B**iotchnology
Knowledge-Based Bio-Economy (KBBE)

Not legally binding



➤ Principles, Strategies and Modalities

➤ Implementation and Results

➤ Prospects



Draft Workprogramme 2010

- **KBBE 2010**, general call for proposals : **FP7-KBBE-2010-4**

Tentative publ: end July 2009, deadline: **mid Jan 2010** (47 topics 190 m€)

- **Africa** coordinated call: **FP7-AFRICA -2010**

with the Themes Environment and Health

Tentative publ: end July 2009, deadline: **mid Jan 2010** (tot 63M€ : 4 KBBE topics, 6.5m€)

- **The Ocean of tomorrow** joint call: **FP7-OCEAN-2010**

with the Themes Environment, Transport, Energy, Socio-economic Sciences & Humanities

Tentative publ: end July 2009, deadline: **mid Jan 2010** (tot 34 M€ ; 3 topics)

- **Influenza** coordinated call : **FP7-INFLUENZA-2010**

with the Theme Health

Tentative publ: end July 2009, deadline: **end Oct 2009** (tot 18 M€ ; 2 KBBE topics, 6 m€)

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

International Cooperation in KBBE Work Programme 2010



- **Opening of all activities / topics**
to participation by Third Countries
- **Specific International Co-operation Actions (SICA) (5)**
and other topics (10) with mandatory ICPC participation
- **Targeted topics (4)**
particularly suited for international co-operation
- **Dedicated call for AFRICA (4 topics)**
- **Twinning** with programmes in Third Countries

New !

Global Initiatives and Partnership initiatives

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

Call FP7-KBBE-2010-4

Expected publication date: end July 2009

Indicative budget: 190 million €

Indicative number of topics: 47

Expected deadline: 14th January 2010

Evaluation by independent scientific reviewers:
March/April 2010

All topics open to participation by ICPC, including RUSSIA

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

Not legally binding

- **The Ocean of tomorrow** joint call: **FP7-OCEAN-2010**
with the Themes Environment, Transport, Energy, Socio-economic Sciences & Humanities
Tentative publ: end July 2009, deadline: mid Jan 2010 (tot 34 M€)

INDICATIVE TOPICS

Quantification of climate change impacts on economic sectors in the Arctic

Vectors of changes in marine life, impact on economic sectors

Sub-seabed carbon storage and the marine environment

All topics open to participation by ICPC, including RUSSIA

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

- **Influenza** coordinated call : **FP7-INFLUENZA-2010**
with the Theme Health

Tentative publ: end July 2009, Tentative deadline: **end Oct 2009** (KBBE + HEALTH topics)

INDICATIVE KBBE TOPICS

(see also other topics by Health)

Swine influenza surveillance network (CSA-CA)

Pathogenesis and transmission of influenza in pigs (CP-IP)

All topics open to participation by ICPC, including RUSSIA

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



Topics with MANDATORY / encouraged participation of ICPC including Russia

Full title	Funding Scheme	Third Countries/Region (Mandatory)
EU-Russia <u>Partnership initiative</u> in Microbes – Plants Biodiversities	CSA-CA	Russia
Promoting coordination and cooperation at international level of research programmes in the area of animal health , in particular infectious diseases including zoonoses	CSA-CA Global init.	Latin America and Asia + encouraged: all TC with bilateral agreements
Improving research in support to scientific advice to fisheries management in the Mediterranean and Black Seas	CSA-CA	Mediterranean Partner Countries and Black Sea countries: Georgia, Ukraine and Russia
Promoting global cooperation to facilitate and accelerate knowledge transfer on abiotic stress tolerance of plants	CSA-CA Global init.	Latin America and/or Asia and/or Eastern Europe and Central Asia and/or ACP and/or the Mediterranean Partner Countries
Network of Third Countries Bio-NCPs	CSA-CA	Different ICPC having signed bilateral S&T cooperation agreements with the EU (Argentina, Brazil, Chile, China, Egypt, India, Mexico, Morocco, Russia, Ukraine, Tunisia, South Africa)

Targeted topics – ENCOURAGING TC participation

Full Title	Funding Scheme	Third Countries (encouraged)
Strategies for <u>personalised nutrition</u>	CP - IP	Industrialised countries
Sustainable culture of <u>marine microorganisms, algae and/or invertebrates</u> for high added value products	CP - FP	ICPC
<u>Microbial diversity and metagenomic mining</u> for biotechnological innovation	CP - IP	US
	CP- IP Ocean	Australia, Japan, US

Definition:

Bilateral action of **systematic co-ordination** between **R&D programmes** from the EU (FP7 and national programmes) + another region / Third country, both operating in a given area of shared interest.

Scope:

Reinforcing synergies between the two counterparts programmes (EU and third country), for mutual benefit and optimised efficacy and advancement of R&D in a given area

Actions: building systematic links between large sets of research projects /consortia from the two counterparts programmes (networking meetings, short term visits, exchange of information, data, materials & methods...) for increased synergy and collaboration.

Rationale and conditions:

- A strong critical mass exist from both sides in a given R&D area of shared interest, but links between the programmes from each side are weak, insufficient or not systematic.
- Reinforcing links would provide synergetic effects, beneficial for both sides.
- The need and will of systematic bilateral co-ordination is recognised from both sides - at programme management level - and actions are supported from both parties.



PARTNERSHIP INITIATIVES in Food, Agriculture and Fisheries and Biotechnology

To be launched in 2010

FP7-KBBE-2010-4 (Tentative publ: end July 2009, deadline: mid Jan 2010):

Full title	Funding Scheme	Third Countries (Mandatory)
EU-Russia Partnership initiative in Microbes – Plants Biodiversities	CSA-CA	Russia
EU-China Partnership initiative in Plant Breeding	CSA-CA	China

INDICATIVE BUDGET: 500.000 € each from FP7
(mirroring actions by Third countries partners could be foreseen)

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

Not legally binding





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GLOBAL INITIATIVES in

Food, Agriculture and Fisheries and Biotechnology

Large number of research issues under this Theme are of global interest

➡ Need to address these **global challenges** via:

- **multilateral international efforts**
- **coordination at programmes level (beyond project level)**

**The GLOBAL INITIATIVE are actions to
co-ordinate similar R&D programmes from the EU and world-wide
in order to tackle together global challenges via broad international efforts**

Activities:

Establishment of an **international forum of R&D programme managers** from EU (FP + national programmes from MS/AC), Third countries and International organisation **to co-ordinate current and future activities from all respective programmes:**

- exchange of information, share objectives and create links between programmes
- organise multilateral networking and partnership initiatives among on-going projects from each programme
- formulate joint research agendas, jointly plan and implement new co-ordinated activities



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GLOBAL INITIATIVES in

Food, Agriculture and Fisheries and Biotechnology

To be launched in 2010

FP7-KBBE-2010-4 (Tentative publ: end July 2009, deadline: mid Jan 2010):

Full title	Funding Scheme	Third Countries/Region (Mandatory / Encouraged)
<p>Promoting coordination and cooperation at international level of research programmes in the area of animal health, in particular infectious diseases including zoonoses</p>	<p>CSA-CA</p>	<p><u>Mandatory:</u> Latin America and Asia</p> <p><u>Encouraged:</u> all countries with bilateral agreements, international organisations</p>
<p>Promoting global cooperation to facilitate and accelerate knowledge transfer on abiotic stress tolerance of plants</p>	<p>CSA-CA</p>	<p><u>Mandatory:</u> Latin America and/or Asia and/or Eastern Europe and Central Asia and/or ACP and/or the Mediterranean Partner Countries</p> <p><u>Encouraged:</u> all countries with bilateral agreements, international organisations</p>

INDICATIVE BUDGET: 1.000.000 € each from FP7

(mirroring actions by third countries partners could be foreseen)



CALL	KBBE-TOPIC TITLE	PROJECT TITLE	ACRONYM	INSTR	THIRD COUNTRY
FP7-ERANET-2007-RTD	Coordination of Agricultural Research in the Mediterranean	Coordination of Agricultural Research in the Mediterranean	ARIMNET	CSA, Targeted topic for MED	Algeria, Egypt, Morocco, Tunisia
FP7-ERANET-2007-RTD	Coordination of European research in the area of animal health , including emerging threats, infectious diseases and surveillance	Coordination of European Research on Emerging and Major Infectious Diseases of Livestock	EMIDA	CSA	
FP7-ERANET-2008-RTD	Agriculture and sustainable development in a rural development context	Facing sustainability: new relationships between rural areas and agriculture in Europe	RURAGRI	CSA	
FP7-ERANET-2009-RTD	Organic agriculture	Coordination of European Transnational Research in Organic Food and Farming Systems	CORE_Organic II	CSA	
FP7-ERANET-2009-RTD	Agricultural Research for Development	The Agricultural Research for Development Dimension of the European Research Area	ERA-ARD II	CSA	
FP7-ERANET-2010-RTD	Deepened and enlarged European cooperation in the area of Molecular Plant Sciences			CSA	

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