

BEOBAL: "BEO Centre of Excellence Research Capacity Improvement  
for Sustainable Environment and Advanced Integration into ERA"  
22-26 October 2005

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# **Support to the Implementation of the EU Acquis & Opportunities under the EC & EURATOM Framework Programs**

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EU Delegation of the European Commission to Bulgaria**

University Campus, Blagoevgrad, 24 October 2005

# Outline of the presentation

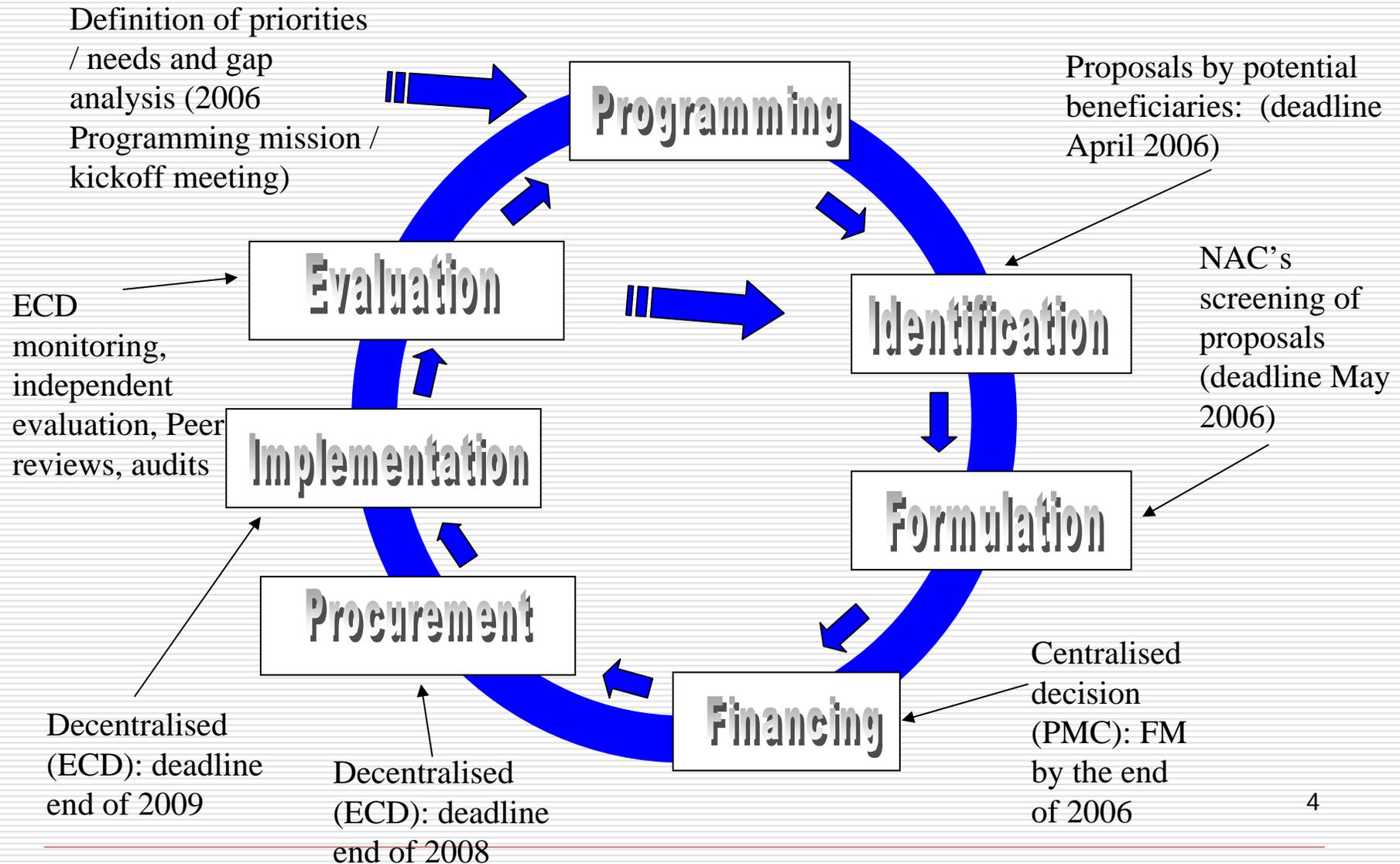
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- Implementation of the EU Acquis
  - the Phare pre-accession programme
    - Project cycle: strategy, goals, priorities, rules,
  
- Current and Future EC & EURATOM Framework Programs
  - Current FP-6 projects
  - Basis of the future FP-7

# Phare nuclear safety projects (for 2004) under implementation by the ECD

Budgetary Year	Title of the Project	Beneficiary	Co-financing/Phare budget
PHARE 2004	Development of conceptual design of the national disposal facility for low- and intermediate-level short-lived radioactive waste	SERAW	0/1.0 M Euro
PHARE 2004	Civil Construction Works For Establishment Of Radioactive Waste Processing Plant And Storage Facility For Novi Han Repository	SERAW	0.67/1.67 M Euro
PHARE 2004	Severe Accident Management Guidelines (SAMGs) review and assessment in compliance with international requirements	NRA	0/0.8 M Euro
PHARE 2004	Improvement of the Off-site Emergency Preparedness (OSEP) in Central and Eastern Europe: Installation of the RODOS System in Bulgaria	NRA	0.15/0.45 M Euro
PHARE 2004	Safety Analysis Report of Kozloduy NPP Unit 5 and 6 review and assessment in compliance with international requirements	NRA	0/1.3 M Euro
PHARE 2004	Assistance to the Bulgarian Nuclear Regulatory Agency (BNRA) in capacity building in the areas of regulatory guides, assessment capabilities, staff training and quality management	NRA	0/1.05 M Euro

# Phare project cycle phases: how to come full circle (e.g. the 2006 Phare programme)



# Phare opportunities: unallocated envelope

- FM 2005 contains a 5.0 million Euro envelope - Unallocated Envelope for Institution Building - for financing IB projects to be identified between programming exercises. The project selection is carried out by a Steering Committee (StC) composed of representatives of NAC, NF, CFCU and the Delegation (as observer); the basic elements of the process are as follows:
- By the 10th day of each month, NAC sends to all StC members the project proposals received
- The twinning team informs the respective sectoral Task Managers (TMs) about the proposals received in their field of responsibility and about the date of the next StC meeting (Usually on the 20th day of the month)
- The TMs, whose projects will be discussed at the StC meeting, are requested to participate together with the Twinning TM
- Once the StC takes a decision for a project to be financed out of the envelope, the respective TM processes the PF within the Delegation
- Once approved, sectoral TM takes over and follows contracting and implementation
- The first meeting of the StC is scheduled for the 18th November 2005, 2:00 pm, at MoF premises; the invitation and the pre-selected projects will be sent to<sup>5</sup>ECD in the w/c 7 November to the persons in charge

# PHARE objectives and limits; other instruments designed for research: JRC's Actions and Framework Programs

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- PHARE could target, for example, the strengthening of fundamental Bulgarian research capabilities or **training of researchers**, but it does not address research projects 
- JRC's Actions (Support "from Enlargement to Integration") are meant to support new MCs, acceding countries and potential CCs in their adoption of science-based Community legislation (Acquis Communautaire) 
- the EC & the EURATOM Framework Programs (FP) offer a wide range of research topics (through FP calls) for the implementation of the EU Research Area (ERA) 
- Under FP calls: Specific Support Actions (SSAs) complement the implementation of FPs (e.g. FP6-2004-ACC-SSA-2 "Reinforcement of the Associated CCs' Research Capacities") 

# The SARNET FP-6 Project: one example of good implementation

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The FoBAUs group (Forum of Bulgarian ASTEC Users), informally established by research institutions and universities, through the coordination (and active participation) of the EC Delegation, is improving the Bulgarian contribution to the SARNET project.



**SARNET (Severe Accident Research Network) is a project (NoE) under the 6th Framework Programme** and involves 49 partners (3 are from Bulgaria). The SARNET project has also the target to involve Ph.D students and researchers in the “education, training & mobility” elements related to the ASTEC code development.

# Validation of the European ASTEC code: ASTEC & MELCOR Comparison (SBLOCA + SBO)

FoBAUs activities:

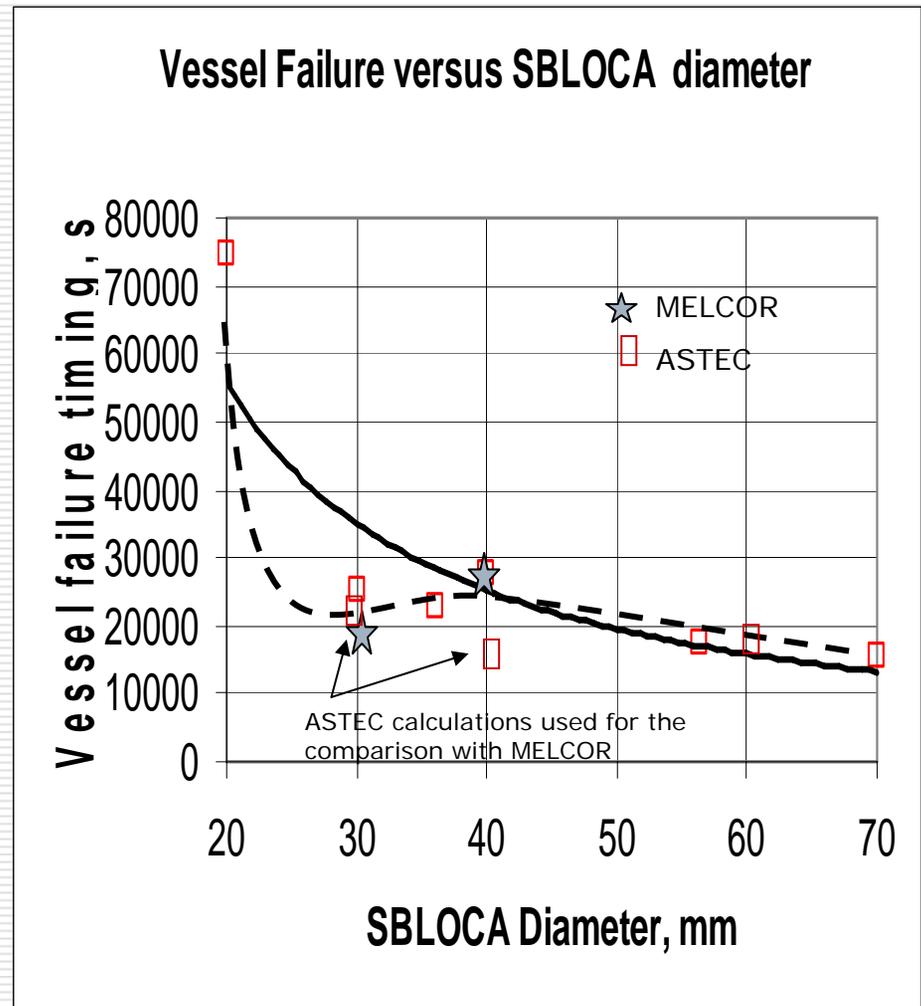
a national network  
within the EU

SARNET

(international)

network which

allows for a deeper verification or results and a final better contribution to the projects' targets



Note:

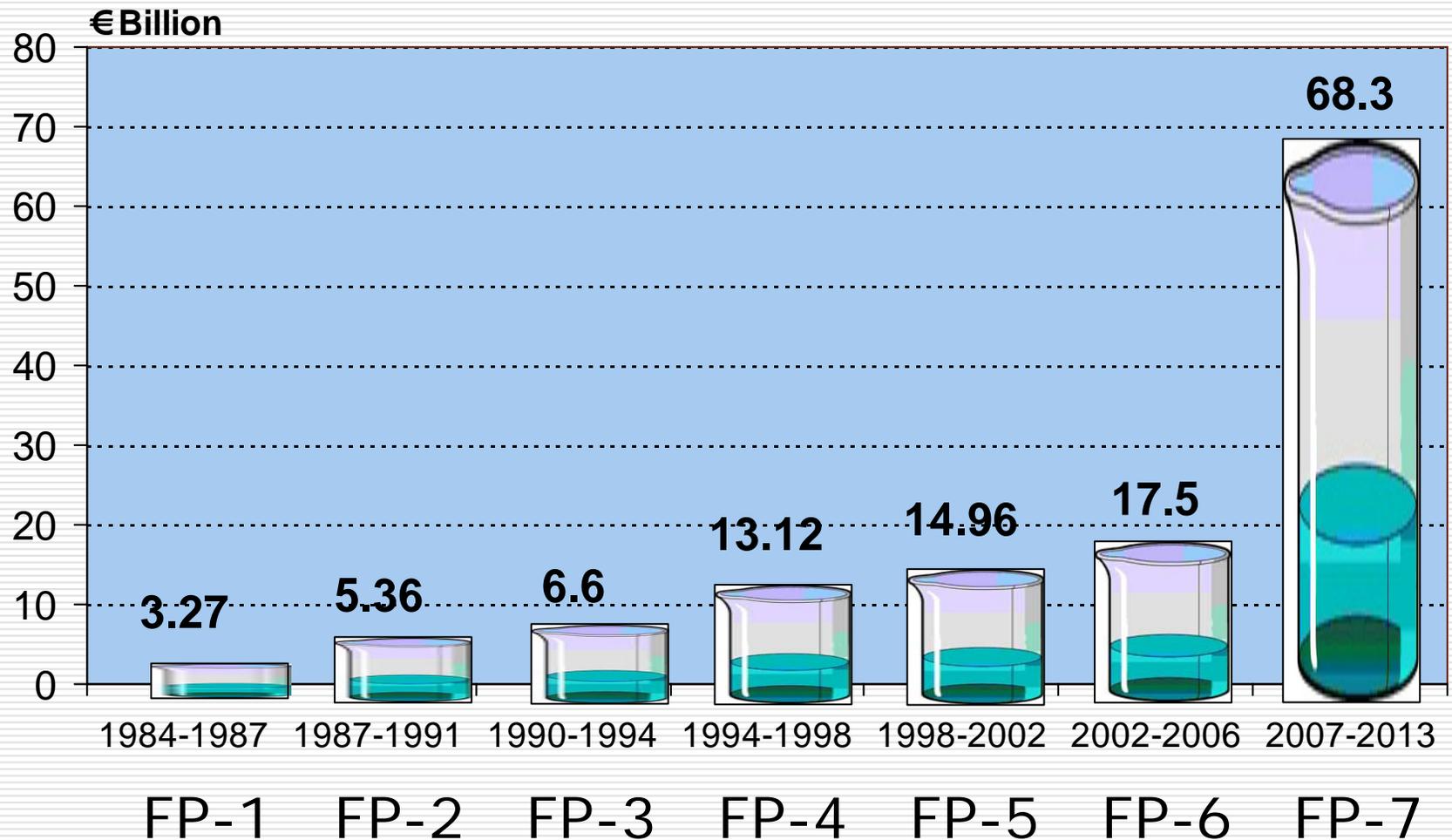
all active safety features are assumed not available  
(Station Black Out + unavailability of battery back-up)

# Science and Research: the Barcelona goal

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- The Barcelona goal sets an increase of investments in European research in order to reach 3 % of GDP (of which 2/3 from private sector) by 2010
  - Japan has already achieved the 3% level and the USA is coming closer
  - In Europe R&D intensity is still stagnating below 2% (R&D spending remains below 1% of GDP in Greece, Portugal, Spain and in all Candidate Countries except the Czech Republic and Slovenia, but is already above 3% of GDP in Sweden and Finland and above 2.5% in Germany)
  
- Financial Perspectives (2007 – 2013) have proposed to **double** the EU research budget for the 7<sup>th</sup> Framework Program (FP-7) up to € 68 billion

# Budgets of the EU Framework Programmes



# Status of EURATOM FP-6

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## □ Proposals funded until now

- Fixed call: 32 projects (EC funding 130 M€)
- Open Call: 27 projects (EC funding 3.3 M€)

## □ Current Call

- Fixed Call in Spring 2005 (deadline 11 October 2005): 52 M€; Proposals are under evaluation

## □ Future Calls

- Open calls: Two more cut-off dates remaining



# Nuclear Fission and Radiation Protection

You are here: [Home Page](#) > [Find a Call](#)

2002-2006

- [Home](#)
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## Find a Call

The Nuclear Energy Activity of the Sixth Euratom Framework Programme has launched calls for proposals. All the documentation necessary to respond to open calls are available from the individual call pages below.

Call for Proposals	<a href="#">Euratom Call 2003 - Fixed deadline</a> CLOSED	Thematic Call in the area of "Euratom Research and Training programme on Nuclear Energy"
Call for Proposals	<a href="#">Euratom Call Open</a>	Specific support actions, trans-national access to large infrastructures and actions to promote and develop human mobility in the "Euratom Research and Training Programme on Nuclear Energy"
Call for Proposals	<a href="#">Euratom Call 2004 - Fixed Deadline</a> CLOSED	Thematic call in the area of 'Euratom research and training programme on nuclear energy'
Expression of Interest	<a href="#">EOI.FP6.Euratom.2003</a> CLOSED	An opportunity for Europe's research community to help identify priorities for the mid-term revision of the Work Programme of the FP6 EURATOM Research and Training Programme on Nuclear Energy (2002-2006)
Call for Proposals	<a href="#">Euratom - 2005-6 - Fixed deadline</a>	Thematic Call in the area of 'Euratom Research and Training programme on nuclear energy'

### [Other FP6 calls](#)





CORDIS



## Sixth Framework Programme

You are here: [FP6 Home](#) > [EPSS](#) > [Welcome](#)[Home](#)[What is FP6?](#)[FP6 step by step](#)[Find a Call](#)[Get Support](#)[Find a Partner](#)[Find a Document](#)[Prepare & submit a proposal](#)[Project management](#)[Find a Project](#)[What's New?](#)**Welcome to EPSS, the Electronic Proposal Submission System**

Call Selected: Euratom - 2005-6 - Fixed deadline

Instrument Selected: NoE

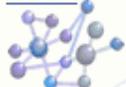
**Recommended method for FP6 proposals:****ONLINE preparation and submission**

(Web-based, no download of special software necessary)

I am the **coordinator** of a proposal and I need a user name and a password[REGISTER<sup>1</sup>](#)I already have an **online** user name and a password[LOGIN](#)I am a **participant (not the coordinator)** in a proposal and I need a user name and password[CONTACT YOUR COORDINATOR](#)[EPSS user guide](#)**Alternative: OFFLINE preparation and online or offline submission**

(ATTENTION: download and installation on your computer of special software and forms necessary.

If you already have a previous version of the EPT, you must update to EPT version 2.39 before preparing your proposal)

I will **prepare** my proposal **offline** (with the EPT) but I want to **submit** it **online** (by uploading the package created by EPT to the EPSS)[REGISTER<sup>1</sup>](#)I need the **software program** for offline proposal preparation (EPT) to be installed on my computer[DOWNLOAD EPT version 2.39](#)[Activity Areas](#)

# Topics of the Fixed Call (Publication 8 June; Deadline 11 October 2005; budget 52 M€)

- ❑ **Geological Disposal**
- ❑ **P&T and other concepts to produce less waste in nuclear energy generation**
- ❑ **Integrated Infrastructure Initiatives (I3) in Rad Waste Management**
- ❑ **Quantification of risks associated with low and protracted exposures**
- ❑ **Medical exposures and natural sources of radiation**
- ❑ **Protection of the environment and radioecology**
- ❑ **Risk and Emergency Management**
- ❑ **Innovative Concepts**
- ❑ **Safety of Existing Installations**
- ❑ **I3 in nuclear technologies and safety**
- ❑ **Education and Training**

# FP6 current projects: **Management of Radioactive Waste** (where is Bulgaria?)

Area	Project acronym & short description	Instrument	(M€)
<i>GD</i>	<ul style="list-style-type: none"> <li>• ACTINET-6 – Actinide science</li> <li>• NF-PRO – Near-field processes</li> <li>• FUNMIG – Radionuclide migration</li> <li>• ESDRED – Engineering and demonstration</li> <li>• COWAM 2 – Governance</li> <li>• SAPIERR –Regional Repository</li> </ul>	NoE	6,4
		IP	8,0
		IP	8,0
		IP	7,3
		STREP	1,2
		SSA	0,2
		<i>P&amp;T</i>	<ul style="list-style-type: none"> <li>• RED-IMPACT - impact of P, T and waste reduction technologies on final disposal</li> <li>• EUROPART – Partitioning of minor actinides and long-lived fission products</li> <li>• IP EUROTRANS – transmutation in ADS</li> </ul>
IP	6,0		
IP	23,0		

# FP6 current projects: **Radiation Protection** (where is Bulgaria?)

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Area	Project acronym & short description	Instrument	(M€)
<i>Quantification of risks associated with low and protracted exposures</i>	• SOUL – Southern Ural	IP	6,8
	• CHRONIC RED EPIC – cancer and non-cancer risks associated with multiple chronic radiation exposure	STREP	2,2
	• GENE-RAD RISK – Risk of breast cancer )	STREP	2,0
	• RACE – Risk of cardiovascular events following radiotherapy for breast cancer	STREP	1,0
	• RISC-RAD – DNA damage response, genomic instability and radiation-induced cancer	IP	10,0
	• MSCRB – Master of science course in radiobiology	SSA	0,4

# FP6 current projects: **Radiation Protection** (where is Bulgaria?)

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<b>Area</b>	<b>Project acronym &amp; short description</b>	<b>Instrument</b>	<b>(M€)</b>
<i>Medical exposures and natural sources of radiation</i>	<ul style="list-style-type: none"><li>• CT Safety &amp; Efficacy – Computed tomography</li><li>• SENTINEL – Safety and efficacy for new techniques and imaging</li></ul>	STREP	2,5
		CA	0,7
<i>Protection environment &amp; radioecology</i>	<ul style="list-style-type: none"><li>• ERICA – Environmental risk from ionising contaminants: assessment and management</li></ul>	STREP	1,5
<i>Risk and emergency management</i>	<ul style="list-style-type: none"><li>• EURANOS – Emergency management and rehabilitation strategies</li></ul>	IP	7,0
<i>Protection of the workplace</i>	<ul style="list-style-type: none"><li>• CONRAD – Network for Radiation dosimetry</li></ul>	CA	0,3

# FP6 current projects: Nuclear Technology and Safety

Area	Project acronym & short description	Instrument	(M€)
<i>Safety of Existing Nuclear Installations</i>	<ul style="list-style-type: none"> <li>● PERFECT – Irradiation damage on reactor components</li> </ul>	IP	7,5
	<ul style="list-style-type: none"> <li>● COVERS – VVER safety research</li> </ul>	CA	1,1
	<ul style="list-style-type: none"> <li>● GAIN – inspection needs</li> </ul>	SSA	0,2
	<ul style="list-style-type: none"> <li>● SARNET – Severe accident phenomenology network</li> </ul>	NoE	6,3
	<ul style="list-style-type: none"> <li>● CND – decommissioning network</li> </ul>	CA	0,7
	<ul style="list-style-type: none"> <li>● EUNDETRAF II – decommissioning training</li> </ul>	SSA	0,2
	<ul style="list-style-type: none"> <li>● NURESIM – nuclear reactor simulations</li> </ul>	IP	4,5

# FP6 current projects: **Education and Training**

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Area	Project acronym & short description	Instrument	(M€)
<i>Innovative Concepts</i>	• V/HTR-IP – Very/High Temperature Reactor	IP	9,0
	• GCFR – Gas Cooled Fast Reactor	STREP	2,0
<i>Education and Training</i>	• NEPTUNO – European platform on training and university organisations	CA	0,8
	• CETRAD – Radioactive waste management	CA	0,3
	• EURAC – radiological protection and radioecology	CA	0,1
	• ENETRAP – network on E&T in radiological protection	CA	0,4
	• JHR-CA – material test reactor	CA	1,5
	• HOTLAB – Hot laboratories network	CA	0,2

# Instruments for Implementation of FP6 Research

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□ Those aimed at generating, demonstrating and validating new knowledge through research and development:

■ **Integrated Projects (IPs):** 3-5 Years duration, 10-20 partners

■ **Specific Targeted Research Projects (STREPs):** 2-3 years, 6-15 partners

□ Those aimed at durable integrating, structuring and shaping of participants' research and infrastructure activities and capacities across EU:

■ **Networks of Excellence (NoEs):** 4-6 Years duration, 6-12 partners

■ **Integrated Infrastructure Initiatives:** 4-6 years, 6-15 partners

# Instruments for Implementation of FP6 Research

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□ Those aimed at supporting collaboration and coordination of research and its improvement and other activities (such as conferences, workshops, studies, dissemination of good practices, setting up of information systems):

■ **Coordination Actions (CAs):** 1.5-3 Years duration, 12-25 partners

■ **Specific Support Actions (SSAs):** 0.75-2 Years duration, 1-15 partners

□ Those aimed at promoting and developing human resources and mobility:

■ **Training Fellowships (TF) and European Re-integration Grants:** 1-2 Years, 0.1-0.15 M€

■ **Special Training Courses (STC):** 1-2 years, 0.05-0.1 M€

■ **Grants for Co-operating with Third Countries:** 0.5 Years, 0.05-0.1 M€,

■ **Trans-national Access to Large Infrastructures:** 1-2 years, 0.1-0.15 M€

# Typical EURATOM Project (budget) Size

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□ Integrated projects	~ 3 – 7 M€
□ Networks of excellence	~ 3 - 5 M€
□ Integrated infrastructure initiatives	~ 3 - 5 M€
□ Specific Targeted Research Projects	~ 0,5 – 3 M€
□ Coordination actions	~ 0,2 – 1 M€
□ Specific Support Actions	~ 0,1 – 0,2 M€
□ Special Training Courses	~ 0,05 – 0,1 M€
□ Fellowships	~ 0,1 – 0,15 M€
□ Grants	~ 0,05 – 0,1 M€
□ Transnational Access	~ 0,1 – 0,15 M€

# Time Table

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- ❑ Publication of Fixed deadline call: -3 to 4 month0 (m0)
- ❑ Fixed Deadline for submission of proposals or known Cut-off dates for open call (m0)
- ❑ Acknowledgement Receipt (m0 +0.5m)
- ❑ Evaluation of proposals (m0+ ~1m)
- ❑ Quick Evaluation Summary Reports sent to proposal coordinators (m0+ ~1.5m)
- ❑ Hearings for IP and NOEs (m0+ ~2m)
- ❑ Invitation letter to successful coordinators to launch contract negotiations with Commission services (m0+ ~3m)
- ❑ End Negotiations (m0+ ~6m)
- ❑ Signature of first contracts (m0+ ~8m)

# Rules of Participation: number of participants

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Instrument	Minimum number of participants
IP, NOE and I3	3 independent legal entities from 3 different MS or AS, with at least 2 MS or ACC.
STREP and CA	2 independent legal entities from 2 different MS or AS, with at least 1 MS or ACC.
TF and EU Re-integration grants	1 legal entity from 1 MS or AS
SSA, TALI, STC, GCTC	1 legal entity

# Opportunities for training: JRC SSAs' Actions

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Joint research centre  
EUROPEAN COMMISSION

## Research Training at IRMM in 2002



**Total 60 persons present in 2002 for research training**



duration 3 months to 3 years



one third female



**40 % from Candidate Countries**



MONTEBELLI



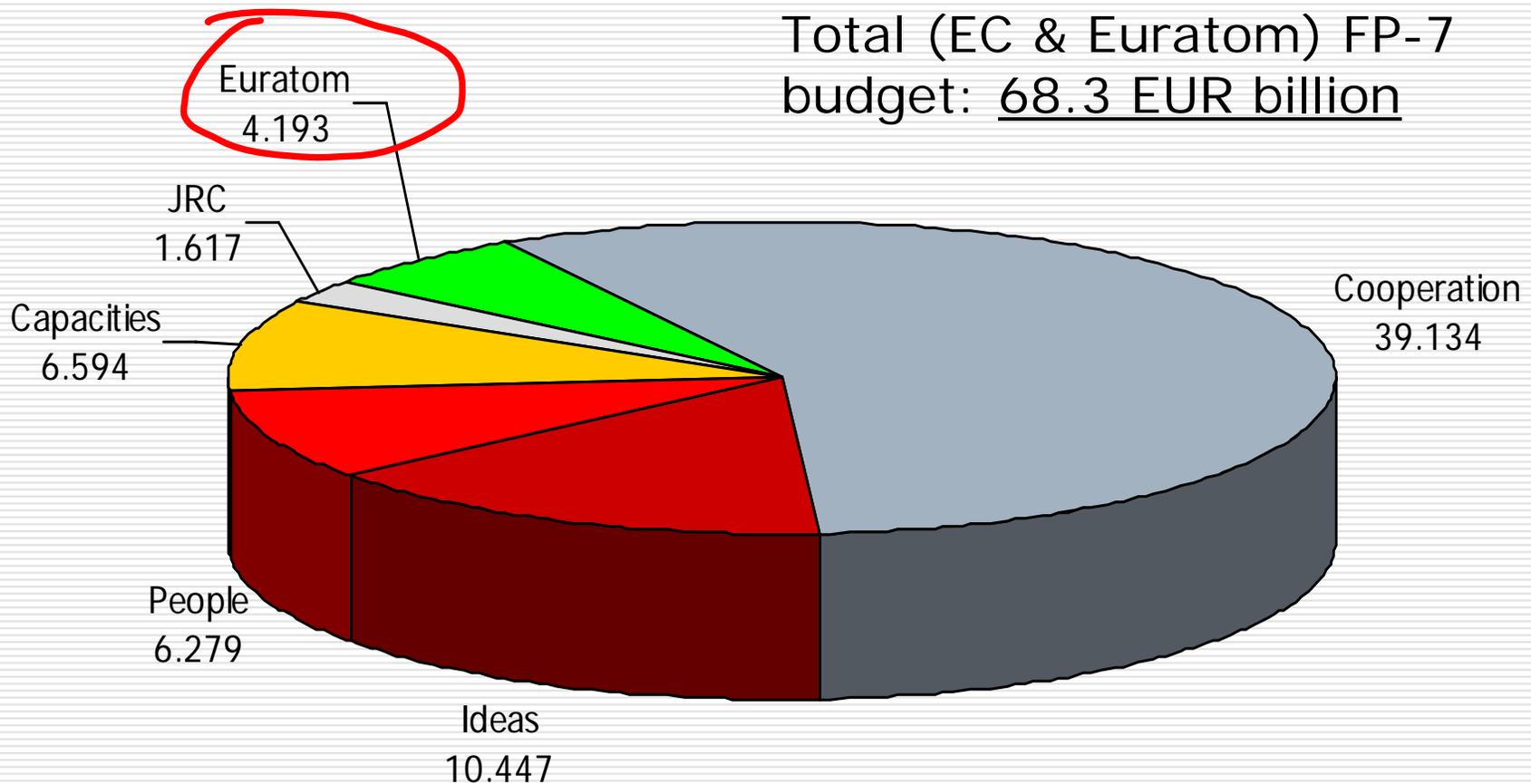
EUROPEAN COMMISSION  
JOINT RESEARCH CENTRE



# FP-7 budget (EC & Euratom FPs -EUR billion)

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Total (EC & Euratom) FP-7 budget: 68.3 EUR billion



# FP-7 2007-2013 Cooperation budget

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## I. Cooperation

Budget  
(€million, 2004  
constant prices)

1. Health	7 325
2. Biotechnology, food and agriculture	2 163
3. Information society	11 159
4. Nanotechnologies, materials and production	4 256
5. Energy	2 581
6. Environment	2 232
7. Transport	5 232
8. Socio-economic research	698
9. Security and space	3 488
<b>Total</b>	<b>39 134*</b>

\* Not including non-nuclear activities of the Joint Research Centre: €1 617 million

# Environment: 11 themes of research

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'Sustainable development tools' to allow decision-makers to identify the practical measures, with acceptable tradeoffs, that maximise the benefits in economic, social and environmental terms

'Risk assessment and health' theme investigates how environmental changes can pose risks to human health, particularly over the long term

'Earth observation' are integrating land- and sea-based *in situ* sensor networks with space-based platforms to provide information for a wide range of environmental parameters with social and economic consequences

'Water-related research' deals with water supply and sanitation issues and the negative impacts of climate change and human actions

# Environment: 11 themes of research

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'Marine ecosystems' support projects to analyse the impacts of man-made and natural changes on the delicate equilibrium of marine ecosystems and biodiversity

'Desertification and natural disasters', 'Biodiversity', and 'Atmospheric pollutants and climate change' projects study the causes, impacts, prevention and mitigation of undesirable, short- and long-term environmental changes

'Land management' and 'Urban sustainability and cultural heritage' fund research projects on how our cities and countryside can be managed in a sustainable manner

'Environmental technologies' promotes the development of new, sustainable ways of running our societies

## EC FP-6: European Space Policy -Proposed GMES themes for 3rd call (indicative budget M€ 35.5)

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- ❑ GMES: stimulate evolution of satellite-based information technologies (e.g. sensors, data and information models, services for global environment, land-use, desertification, disaster management)
- ❑ Proposed GMES themes
  - ❑ Water Resources (IP)
  - ❑ Security (IP)
  - ❑ Data harmonisation of ground-, air and space-borne data (INSPIRE - IP)
  - ❑ Long-term development of GMES (IP)
  - ❑ Education and training (SSA)
  - ❑ Networking the users (SSA)
  - ❑ International cooperation (STREP, SSA)

Evaluation of 3<sup>rd</sup> call is in progress

Programme website: <http://www.cordis.lu/fp6/aerospace.htm>

# EC FP-6: Information Society and economical growth

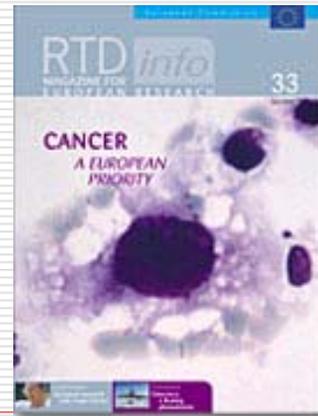
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- Information Society Technologies (ISTs) account for half of the productivity growth in modern economies. In Europe we don't invest in it as much as other major economies: only 20% of our research spending is in IST; our direct competitors put more than 30%
  
- ISTs are an important way of getting more efficient and higher quality products and services in both public and private sectors
  - 90% of all future innovation in the automobile sector will be driven by ISTs
  
- A comparison of research investment by the private sector shows that, worldwide, IST spending is nearly 60% of the total. In Europe it is 38% (worldwide global R&D spending is in IT hardware. In Europe is in automobiles)

# Useful (FP-6 & FP-7)web links

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- ❑ EU research: <http://europa.eu.int/comm/research>
- ❑ Seventh Framework Programme:  
[http://europa.eu.int/comm/research/future/index\\_en.cfm](http://europa.eu.int/comm/research/future/index_en.cfm)
- ❑ Information on research programmes and projects:  
<http://www.cordis.lu>
- ❑ RTD info magazine:  
<http://europa.eu.int/comm/research/rtdinfo/>
- ❑ Information requests:  
[research@cec.eu.int](mailto:research@cec.eu.int)





# Towards FP7

Your gateway to the preparation of the Seventh Framework Programme

- Home
- What is FP7?
- Roadmap to FP7
- Main Objectives
- Thematic Priorities**
- FP6 & FP7
- Security & Space
- The Debate
- News & Events

## Thematic Priorities

Following publication of its Communication in June 2004, the Commission held a [stakeholder consultation](#) [PDF] on the future of European research. Participants recognised the importance of focusing efforts on priorities and that these should support EU policy objectives. Many participants commented on the difficulties of identifying priorities, but there was a general view that this should be done in transparent way, involving stakeholders. Many responses stressed the importance of flexibility and there was strong support for some areas, such as basic research, allowing researchers to choose the topic.

# GET READY for next FP Calls !

### Research Themes in FP7

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already identified two new thematic priorities for FP7 - [security and space](#). In the future of European research there was support for European funding in these new / related research was marginally lower and many comments stressed that such mental liberties, human rights and social values.

[Research Themes in FP7](#), and this closed at the end of 2004. The aim was to identify new and emerging areas.

specific programmes handling research themes in different ways:

cts will be organised according to sub-programmes in nine defined [thematic](#)  
**Directorate-General for Research  
Information and Communication Unit**  
[research@cec.eu.int](mailto:research@cec.eu.int)

> European Joint Technology Initiatives will be selected from the strategic research agendas defined by individual technology platforms.

- Ideas** / The ERC will support 'researcher led' basic research in all scientific and technological areas.
- People** / Marie Curie actions to support individual researchers will operate horizontally across all research themes.
- Capacities** / Activities to support research infrastructures, SMEs, international cooperation and 'science in society' issues will also be identified across all research areas.