









European Environment and Health Action Plan and air pollution and health research

European Commission
Research Directorate-General
Environment Directorate
Climate Change and Environmental Risks Unit
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FUNDING OF EUROPEAN RESEARCH

 <p>RESEARCH</p>	<p>Research Directorate-General (DG Research):</p> <ul style="list-style-type: none"> ✓ Environment Directorate ✓ Health Directorate ✓ Biotechnologies, Agriculture and Food Directorate
 <p>Information Society and Media</p>	<p>Information Society and Media Directorate-General (DG Info)</p>

POLICY MAKING




 <p>Environment</p>	<p>Environment DG (DG ENV)</p>	<p>European Environment and Health Action Plan (EHAP), air pollution, noise-related issues, climate change, water pollution, REACH...</p>
  	<p>Health and Consumer Protection DG (DG SANCO)</p>	<p>EHAP, Public health policies (EMF, indoor air issues...), Community legislation on food contaminants, risk assessment committees (SCHER, SCENHIR), Programme of Community Action in the Field of Health 2008-2013 ...</p>
 <p>Enterprise and Industry</p>	<p>Enterprise and Industry DG</p>	<p>Community legislation on substances, REACH...</p>
 <p>Directorate General for Employment, Social Affairs & Equal Opportunities</p>	<p>Employment, Social Affairs and Equal Opportunities DG</p>	<p>Occupational health...</p>

OTHER ACTORS

 <p>JRC EUROPEAN COMMISSION</p>	<p>Joint Research Centre DG</p>	<p>Validation of chemical testing methods, EHAP...</p>
	<p>European Environment Agency</p>	<p>Reporting...</p>
	<p>European Chemicals Agency</p>	<p>REACH</p>





		Nb projects funded	EU contribution	Nb of projects funded on air pollution and health	Main issues covered
	Fifth Framework Programme (1998-2002)	92	€ 160M	12	<ul style="list-style-type: none"> • Health risks of exposure to chemicals, air pollution, and electromagnetic fields (EMF)
	Sixth Framework Programme (2002-2006)	68	€ 220M	11	<ul style="list-style-type: none"> • Integrated environment and health risk assessment • Chemicals and health risks • Health risks related to exposure to nanoparticles
	Seventh Framework Programme (2006-2013)	?	?	7	<p>Likely:</p> <ul style="list-style-type: none"> • Climate change and health risks • Chemicals and health risks • EMF and health risks • Air pollution and health risks • Health risks related to exposure to nanoparticles



Impetus for increased spending on E&H issues: European Environment and Health Action Plan [EHAP] adopted in 2004
→ **66 projects** funded by the **Sixth Framework of Research (2002-2006)** with a total EC contribution of **over €200M**
→ results starting to become available

Science

Children

Awareness raising

Legislation

Evaluation

ACTIONS 1 to 3:

To improve the information chain by developing integrated E&H information

- 1. *Develop environmental health indicators (DG SANCO)***
- 2. *Develop integrated monitoring of the environment, food (DG ENV)***
- 3. *Develop a coherent approach to human biomonitoring in Europe (DG ENV)***
- 4. *Enhance coordination and joint activities (DG ENV)***

ACTIONS 5 to 8:

To fill the knowledge gap by strengthening research on E&H and identifying emerging issues (DG Research, Joint Research Centre)

- 1. Integrate and strengthen EU E&H research**
- 2. Target research on diseases, disorders and exposures**
- 3. Develop methodological systems to analyse interactions between E&H**
- 4. Ensure that potential hazards on E&H are identified and addressed**

ACTIONS 9 to 13:

To review policies and improve communication by developing awareness raising, risk communication, training & education

- 1. Develop public health activities and networking on environmental health determinants through the public health programme (DG SANCO)**
- 2. Promote training of professionals and improve organisational capacity in E&H (DG SANCO)**
- 3. Coordinate ongoing risk reduction measures and focus on the priority diseases (DG ENV)**
- 4. Improve indoor air quality (DG SANCO)**
- 5. Follow developments regarding electromagnetic fields (DG SANCO)**



Review of European research on the most indoor air-relevant health effects and respective exposures to contaminants in indoor air

Final workshop Brussels 16-17 September 2008
http://cordis.europa.eu/fp7/environment/events_en.html

✓ Evaluation of interventions on environment and health exposure reduction measures on a regional level and promoting of implementation of successful initiatives in other regions of Europe
 ✓ Focus on the exchange of useful practices in two areas: (i) the reduction of traffic-related health hazards (ii) improvement of indoor air quality

✓ Main objective is to increase the information on the PM characteristics throughout Europe, describing the PM-system with respect to geographical and meteorological conditions, particle formation processes and their transport

✓ Identification of the remaining knowledge gaps in the field of air pollution and health in relation to the objectives of Environment & Health Action Plan

- ✓ **ENVIE**: www.envie-iaq.eu/home.html
- ✓ **PRONET**: <http://www.proneteurope.eu>
- ✓ **COST ACTION 633**: <http://cost633.dmu.dk>
- ✓ **CAIR4HEALTH**: www.cair4health.eu

➤ (Action 5 of EHAP) Integrate and strengthen European environment and health research → make full use of the results from EU and nationally funded projects in policy development





✓ Establishment of a network of European centres of excellence conducting integrated multidisciplinary research programmes on allergy/asthma and environmental factors (e.g., outdoor and indoor pollution), nutrition, lifestyle (including occupation), infections and genetic susceptibility

✓ Identification of how genes and the environment cause the development of asthma
 ✓ Identification of both risk and protective factors, with the long-term aim of preventing the illness

✓ Establishment of expert teams for each of the four priority diseases of the European Environment and Health Action Plan (allergy/asthma; cancer; neurodevelopmental disorders; endocrine disrupting effects), to summarise the current scientific basis regarding the links between health and environment

➤ (Action 6 of EHAP) Target research on diseases, disorders and exposures → improve knowledge of the links between environmental exposures and four priority diseases and to strengthen the integration of the research results into relevant policy measures.

- ✓ **asthma, allergy**
- ✓ neuro-immune disorders
- ✓ cancers
- ✓ endocrine-disrupting effects



- ✓ **GA2LEN:** www.ga2len.com
- ✓ **GABRIEL:** www.gabriel-fp6.org
- ✓ **HENVINET:** www.henvinet.eu



✓ aims at producing a new integrated risk assessment framework, based on the full chain approach (causal chain spanning sources of pollution, releases into various media, dispersion and transport, exposure medium inhalation/dermal contact/ingestion, intake, uptake, dose, health effects and impacts)

✓ Sub-projects (SP),

□ SP1 will review and develop the tools and methods needed for integrated assessments;

□ SP2 will review and develop monitoring and modelling methods necessary to support integrated assessment;

□ SP3 will apply the methods developed in SP1 to seven policy areas (**Transport**, **housing**, agricultural land use, water, household chemicals, waste and climate);

□ SP4 will design a web-based integrated assessment toolbox or system which will be the operational means to assess environment and health risks.

Housing - including the effects both separately and in combination of environmental tobacco smoke, indoor air pollution (e.g. from cooking and heating, moulds, furnishings etc), noise and indoor climate (including temperature and dampness) on acute and chronic health (respiratory illness, cardiovascular illness, winter mortality and infant mortality).

- (Action 7 of EHAP)
Develop methodological systems to analyse interactions between environment and health
→ research into the adequacy of current risk assessment and possible development of new methodologies to assess better the risks coming from environmental factors, and to improve economic valuation and impact analyses of prevention strategies



✓ **INTARESE**: www.intarese.org

✓ **NOMIRACLE**:

<http://viso.jrc.it/nomiracle>

✓ **HEIMTSA**: www.heimtsa.eu

✓ **2-FUN**: www.2-fun.org

✓ **DROPS**: www.nilu.no/DROPS

✓ **ENVIRISK**: <http://envirisk.nilu.no>



Collaborative research: research activities carried out in trans-national cooperation in 10 thematic areas - budget €32.4 bn

Frontier research: "investigator-driven" research carried out across all fields (bottom-up approach) by individual teams in competition at the European level - €7.51 bn

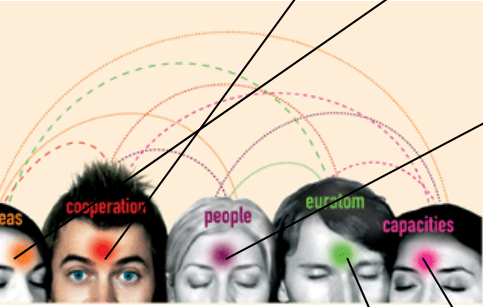
Human potential: Strengthening the human potential in research and technology in Europe - budget €4.75 bn

Research capacity: research infrastructures; regional research driven clusters; unleashing the full research potential in the EU's "Convergence" regions; research for and by SMEs; "Science in Society" issues; "horizontal" activities of international co-operation - budget €4.10 bn

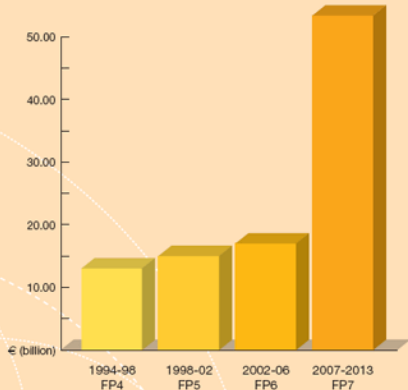
Euratom

Joint Research Centre (S/T support to EU policies): €1.75 bn

Joint Research Centre (nuclear)



Evolution of EU Research Framework Programme Budgets

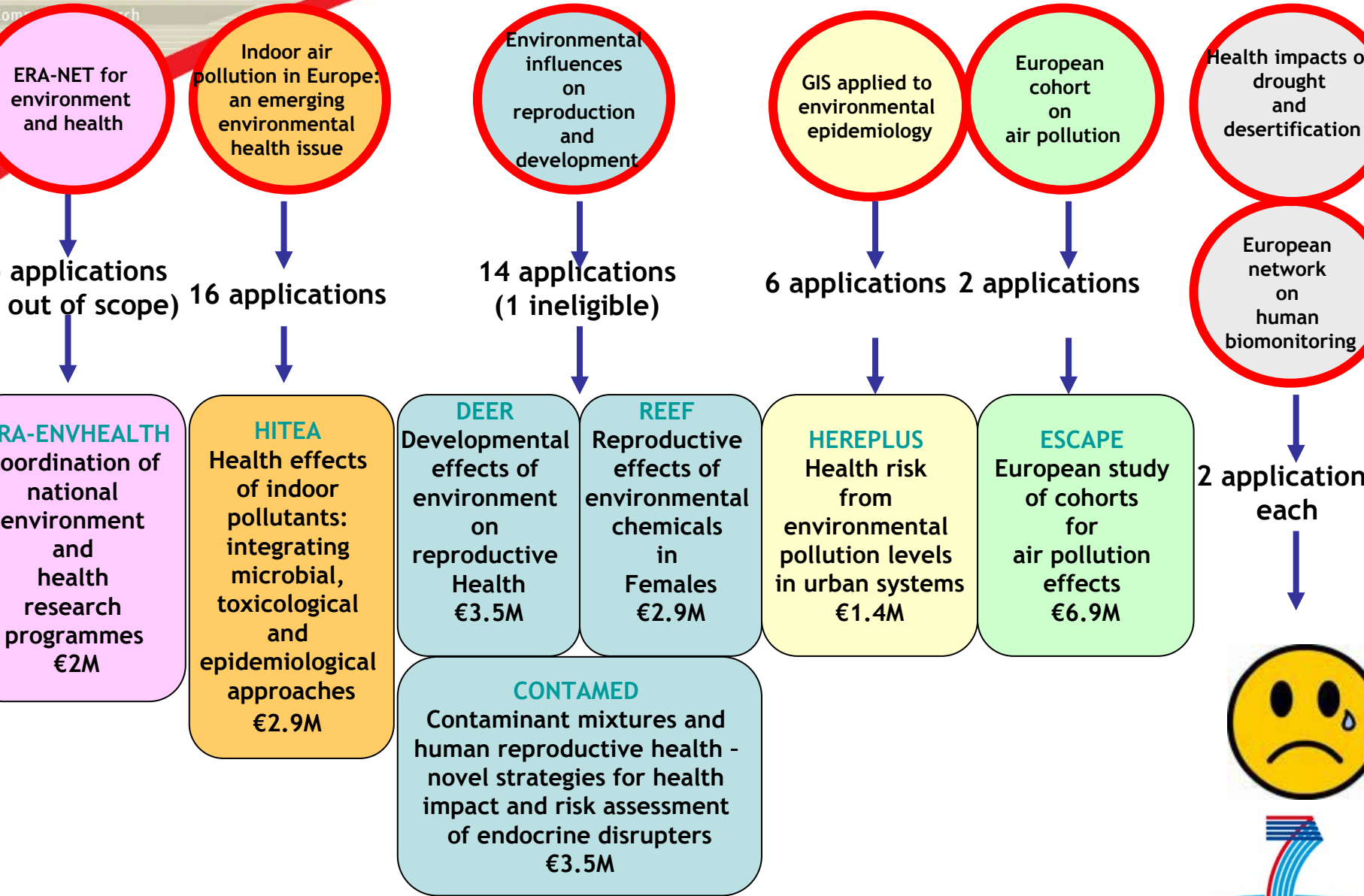


	THEME	E&H-RELATED ACTIVITIES COVERED	PROPOSED BUDGET (€ bn)	FUNDING OF E&H RESEARCH
1	HEALTH	Gene-environment interactions in major diseases of public health relevance	6.10	+
2	FOOD, AGRICULTURE AND FISHERIES, AND BIOTECHNOLOGY	Health impacts of food contaminants, animal diseases	1.94	+
3	INFORMATION AND COMMUNICATION TECHNOLOGIES	Possibly personalised exposure measurement devices	9.05	(+)
4	NANOSCIENCES, NANOTECHNOLOGIES, MATERIALS AND NEW PRODUCTION TECHNOLOGIES	Health risk of nanoparticles	3.48	+
5	ENERGY		2.35	
6	ENVIRONMENT (INCLUDING CLIMATE CHANGE)	All ('Environment and Health' sub-activity)	1.89	+++
7	TRANSPORT (INCLUDING AERONAUTICS)		4.16	
8	SOCIO-ECONOMIC SCIENCES AND THE HUMANITIES		0.62	
9	SECURITY		1.40	
10	SPACE		1.43	
	TOTAL		32.4	





Topics for 1st call (Environment and Health sub-activity) and projects funded





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community research



Under negotiation:
air quality and climate

TOPIC TITLE IN THE CALL	ACRONYM	TITLE	EC CONTRIBUTION
Megacities and regional hot-spots air quality and climate	MEGAPOLI	<i>Megacities: emissions, urban, regional and global atmospheric pollution and climate effects, and integrated tools for assessment and mitigation</i>	€3.4M
	CITYZEN	<i>Megacity - zoom for the environment</i>	€2.9M



Under negotiation:
allergy

TOPIC TITLE IN THE CALL	ACRONYM	TITLE	EC CONTRIBUTION
Impact of exogenous factors in the development of allergy	EFRAIM	<i>Mechanisms of early protective exposures on allergy development</i>	€3M



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Topics for 2nd call (Environment and Health sub-activity) and projects selected (final approval pending)

Health impacts of exposure to radiofrequency fields in childhood and adolescence

Comparison of health risks in populations in the Arctic and selected areas in Europe due to the spreading of contaminants resulting from climate change

Databases based on European cohort studies and their exploitation for advancement of knowledge of environment-health relationships

New, improved and validated biomarkers to investigate long-term health impacts of exposure to environmental pollutants

Quantification of changing surface UV radiation levels and its impact on human health

European research network on noise and health

4 applications

4 applications

3 applications

19 applications

5 applications

2 applications

1 project selected

1 project selected
1 project selected

1 project selected

1 project selected
1 project selected

1 project selected





- **Emerging/neglected scientific issues** with insufficient evidence for health impacts
 - Health impacts related to climate change; impact of nanoparticles on human health and environment; health risks of exposure to non-ionising radiation (EMF); noise; indoor and water air quality
- Need to **support evolving policies** in the field of population exposures to
 - non-ionising radiation (EMF)
 - nanoparticles
 - indoor and outdoor air pollution
- **Issues of public and media concern**
 - Risks linked to increased use of mobile phone especially in children/adolescents
 - Presence of many chemicals in European populations as evidenced by human biomonitoring
 - Concerns about health impacts of climate change
- **Issues of public health relevance**
 - Increasing cancer rates
 - Increasing rates of asthma/allergies
 - Increasing reproductive anomalies and neurodevelopmental disturbances
 - Obesity 'epidemic'

**Next call: Proposed topics
(To be published 3 September 2008)**

- **Climate change and water related health issues in Europe**
- **Methods to quantify the impacts of climate and weather on health in developing low income countries**
- **Transport related air pollution and health impacts**
- **Health effects from electromagnetic fields (EMF): improved exposure assessment to wireless communication devices**
- **European coordination action on human biomonitoring**
- **Contribution to observing systems for environment and health monitoring and modelling**

For more info, see call page:
http://cordis.europa.eu/fp7/environment/home_en.html

- **Prioritisation of issues**
- **How to coordinate with national activities/activities outside the EU**
- **Keen competition for funding – availability of budget**
- **Efficient transfer of results to policy makers**

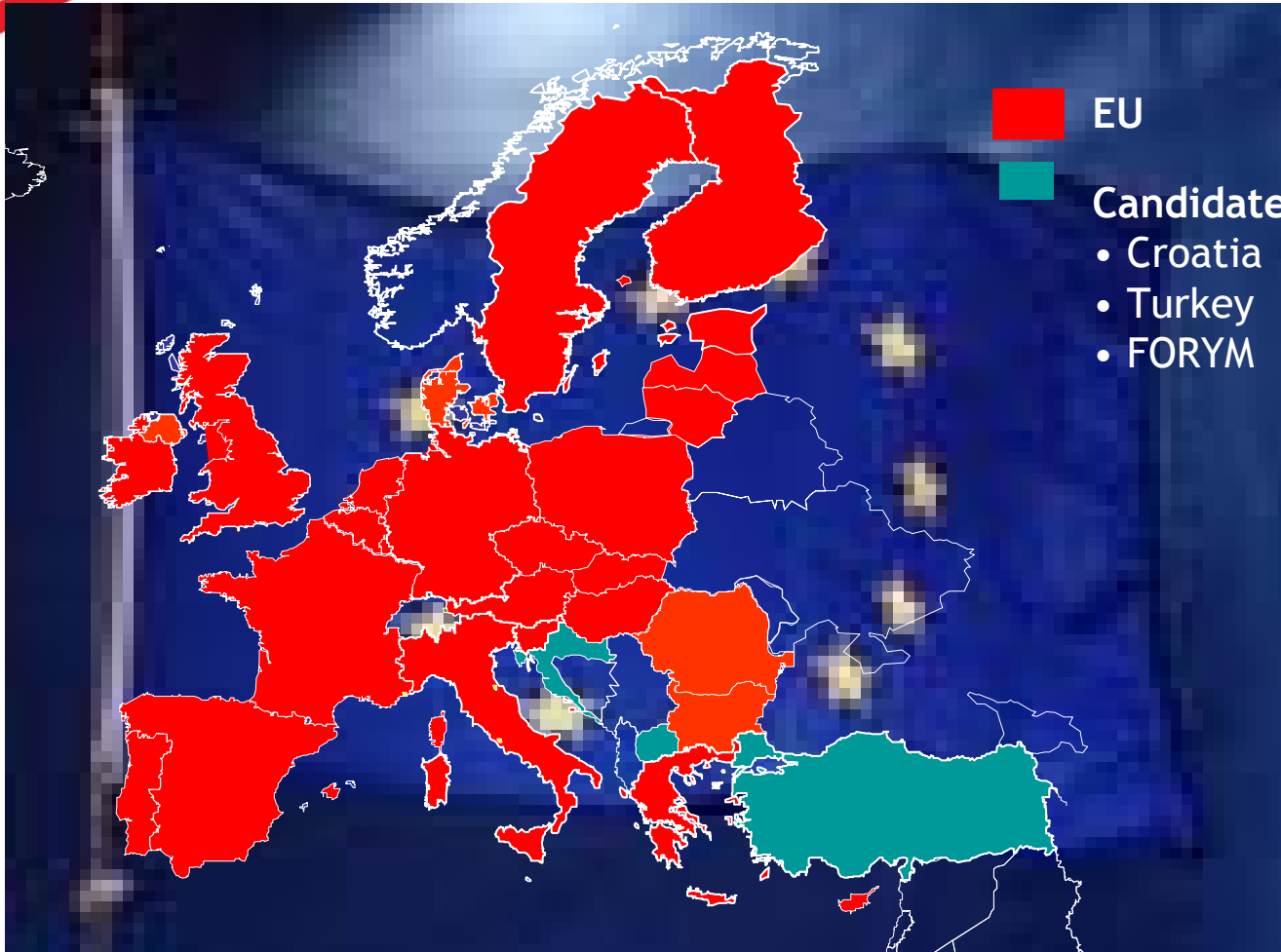
- **DG Research is committed to supporting excellent science to improve science-based policy making**
- **In prioritising topics for calls for proposals, DG Research relies partially on work carried out by policy DGs (e.g., Scientific Committee for Emerging and Newly Identified Health Risks) and WHO**
- **‘Environment and Health’ sub-activity of the Environment theme of the Cooperation Programme will be the main source of funding at the EU level for environment and health research in the Seventh Framework Programme**



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Thank you for your attention



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