WORK PROGRAMME 2007

CAPACITIES

PART 5

SCIENCE IN SOCIETY

(European Commission C(2007)563 of 26.02.2007)

Changes to the Capacities Work Programme: Science in Society Theme

This work programme is an update with respect to the provisional version adopted on 21 December 2006. The majority of changes are minor typographical corrections. The more substantive modifications are as follows:

- p15 the title of the first Cross-thematic topic (Area 5.1.2.3) has been slightly amended.
- p33 Area 5.3.0.5 (Promotion of excellent trans-national research and science communication by the means of popular prizes) has been revised, so there are now only two categories of prizes, SiS-2007-3.0.5.1 European Research Awards: Descartes prizes for transnational collaborative research; and SiS-2007-3.0.5.2 European Research Awards: Prizes for science communication. The descriptions of these topics have also been amended.
- p35 The timings of certain public procurements have been revised, and timings have been provided for the award of expert group contracts.
- p44 Call Fiche 2 is also amended to reflect the changes in Area 5.3.0.5 (science prizes). New dates of publication and closure of the related call for proposals are now indicated. Specific evaluation criteria are now also provided, as well as indicative amounts of the awards.

Contents

CC	N 17	$\overline{}$	$\nabla \mathbf{T}$
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Policy Context	4
The Seventh Framework Programme and the Approach for the 2007 Work Programme	5
Other Activities: Cross Thematic partnerships; International cooperation Transnational cooperation among NCPs; Grants to named recipients;, Expert contracts, Funding Schemes	6
II CONTENT OF CALLS IN 2007	
5.1 - First Action Line – A more dynamic governance of the science and society relationship	10
5.1.1 Better understanding of the place of science and technology in society	10
5.1.2 Broader engagement to anticipate and clarify political, societal and ethical issues	13
5.1.3 Strengthening and improving the European science system	17
5.1.4 The evolving role of universities	19
5.2 – Second Action Line – Strengthening potential, broadening horizons	22
5.2.1 Gender and Research	22
5.2.2 Young People and Science	26
5.3 – Third Action Line – Science and society communicate	30
5.4 – Fourth Action Line - Strategic Activities	34
III IMPLEMENTATION OF CALLS	39
IV INDICATIVE PRIORITIES FOR FUTURE CALLS	46

Objective

With a view to building an effective and democratic European knowledge-based society, the aim is to stimulate the harmonious integration of scientific and technological endeavour and associated research policies into European society.

I. CONTEXT

Policy context

For Europe to become the most advanced knowledge society in the world, it is imperative that legitimate societal concerns and needs concerning science and technology development are taken on board, entailing an enhanced democratic debate with a more engaged and informed public and better conditions for collective choices on scientific issues.

Following the Council resolution of 2001¹ and the adoption of the Science and Society Action Plan in December 2001, the "Science and Society" action of the specific programme "Structuring the ERA" in Sixth Framework Programme was the first ever initiative in this field at the European level scale, alongside mainstream Community research.

Science and Society in the Sixth Framework Programme has helped increase awareness among socio-economic actors and decision-makers of the need to bring a range of research-related societal issues to the top of the policy agenda. Several recent developments (Eurobarometer surveys, conferences, high-level expert group reports) are evidence of this trend. The new programme for 2007-2013 will therefore build on the actions under the Sixth Framework Programme, with greater coherence across its different elements and in the involvement of different actors. It will also address new and emerging themes, placing greater emphasis on issues such as: supporting multidisciplinary research addressing science-society interactions as a system; capacity building of civil society organisations and their involvement in research, and, cross-thematic and integrated actions, combining Science in Society expertise with the science policy design and implementation belonging to other specific S&T fields.

The change in perspective illustrated by the new title "Science *in* society" recognises that research activities are a specific type of social activity that is embedded in a wider societal context.

While "Science in Society" activities within the Seventh Framework Programme should continue to build upon the progress and the achievements of the past, the overarching objective for the period 2007-2013 is to make the "Science in Society" perspective a core element of EU research policy, helping to shape its future priorities and ways of operating.

Science in Society' will be implemented through the following mix of initiatives:

• Policy-related actions and research supported directly from this theme;

 $^{^{\}it I}$ Council Resolution on science and society and women in science, Brussels, 3 July 2001 01357/01

² Special Eurobarometer 224 "European, Science and Technology": http://ec.europa.eu/public_opinion/archives/ebs/ebs_224_report_en.pdf

- Cooperation between Member States and associated countries, identifying common goals, and reinforcing national practices, in the spirit of the open method of co-ordination;
- Promoting, supporting and monitoring the uptake and impact of 'Science in Society' issues in other parts of the Framework Programme³. The overall coordination of issues related to Science in Society both across the Framework Programme and within other relevant Community activities (e.g. relating to education and culture) will be ensured by this theme.

The Seventh Framework Programme and the Approach for the 2007 Work Programme

In pursuit of the overall programme objective, the Work Programme is organised along Action Lines: The first aims for a more dynamic governance of the science and society relationship; the second is concerned with strengthening potential and broadening horizons with respect to issues of gender and science education; the third seeks to promote effective two-way communication channels that enable the public to engage with science and vice versa. The fourth action line contains a number of strategic activities.

This first Science in Society Work Programme under the Seventh Framework Programme has two main goals. First, in the period 2007-2009, to ensure a certain measure of continuity with the activities established under the Sixth Framework Programme, by capitalising on the previous work and by reorienting certain initiatives towards the more ambitious objectives of the Seventh Framework Programme. Secondly, the Work Programme in 2007 will prepare the ground for the full deployment of new components from 2010 onwards. The Programme should contribute to looking at civil society not as a constraint but as a driver and locus for innovation and therefore an active player in building a democratic knowledge society. The first years should therefore pave the way for this ambitious new perspective. Innovative actions in this regard in the 2007 Work Programme include supporting capacity building for non-research actors such as civil society organisations and developing research in the fields of gender and of young people and science. The Work Programme, therefore, is designed in such a way that the ratio of new actions to continuing activities will increase over the years. This Work Programme is also based on advice received from the European Advisory Group for Science and Society; from the European Research Advisory Board⁴, from expert groups⁵, via SINAPSE⁶, and on the outcome of broad stakeholder consultations.⁷

http://europa.eu.int/comm/research/eurab/pdf/eurab 05 036 wg5 final report en.pdf

³Includes the running of the ethical review procedures for proposals addressing sensitive issues under the 'Cooperation' specific programme.

⁴ EURAB In September and October 2005, EURAB produced the following advice on S& S-related issues: "Science and Society" - An agenda for a responsive and responsible research in FP7-Final Report http://europa.eu.int/comm/research/eurab/pdf/eurab 05 035 wg6 final report-rev 160905.pdf; Boosting European private R&D: The Foundation Stone of the New Lisbon Strategy

Expert Group on Science and Governance http://europa.eu.int/comm/research/science-society/page_en.cfm?id=3195;; Expert Group on Reciprocal Influence of Science and Culture; Helsinki Group on Women and Science http://europa.eu.int/comm/research/science-society/page_en.cfm?id=2906;; Meeting of Minds - European Citizens Deliberations on Brain Science http://www.meetingmindseurope.org/redirect.aspx?CREF=45;; Forum of National Ethics Councils http://europa.eu.int/comm/research/science-society/page_en.cfm?id=3161

http://ec.europa.eu/sinapse

⁷ The SiS Forum, March 2005 gathered 900 stakeholders from the entire range of the Science and Society landscape: http://europa.eu.int/comm/research/science-society/page_en.cfm?id=3173

Other activities

Cross thematic partnerships

The principles inherent in this Work Programme will also be taken up, in different ways, in other parts of the Seventh Framework Programme and in particular in the themes of the Specific Programme 'Co-operation'. Measures will be taken to promote, support and monitor this process, and a degree of co-ordination will be assured. Where appropriate, cross-thematic activities will be established which will focus on actions and measures of mutual benefit, highlight synergies, and help bridge the gap between topical areas in science and technology and society's interests.

The challenge today is to encourage actors in their own disciplines and fields to participate in developing Science in Society perspectives from the very beginning of the conception of their activities. This is in line with concepts developed in the field of governance, notably that of "co-operative research" which resulted from the Gover'Science Seminar held in November 2005, i.e. a research process aiming as much at the harmonious societal integration of new scientific and technological knowledge as to achieving the specific objective of the research itself.⁸

Support for these *Cross-Thematic Partnerships* will take the form of expert groups, conferences, studies and analyses, which will mobilise, in a synergistic way, the resources and expertise associated with this programme, and the thematic priority in question.

Trans-national co-operation among NCPs

The network of National Contact Points (NCP) for the Seventh Framework Programme under Science in Society will be reinforced by promoting trans-national co-operation. See Area 5.4, below.

International Cooperation

Objectives: In pursuit of the widely acknowledged objective of a shared prosperity in the global knowledge society, it is critical to facilitate closer cooperation between Europe and third countries or regions of the world, not simply by enhancing S&T international cooperation, but also by addressing the societal aspects related to the research activities that are carried out in the partner third countries. This will help ensure a global perspective on science and societal issues that is not simply focused on European concepts of science. The main objectives of building up a basis for international cooperation with selected third countries or regions on science in society related issues are:

• To establish privileged and mutually beneficial partnerships for jointly addressing crucial research-related societal issues, e.g. the recognition of ethical issues entailed in clinical trials; and to allow third countries' research teams to participate in the ongoing European dialogue.

 $^{^8 \} See \ http://ec.europa.eu/research/science-society/pdf/goverscience_final_report_en.pdf$

⁹ Countries which are not EU Member States, associated countries or EU candidate countries

- To contribute to the stability and prosperity of regions neighbouring the EU through closer cooperation, not just in research and innovation, but also in addressing their societal conditions, e.g. the role of women in research activities.
- To share good practice on the ethical, legal and social environments that help reconcile fast-growing scientific knowledge with local and regional cultures, in order to promote citizens' understanding, equal opportunities from scientific progress and technology trade based on a fair and equitable basis.
- To prepare for wider and more concrete partnerships with the targeted third countries or regions in the future.

The Science in Society Work Programme will support the participation of researchers and research institutions from third countries in proposals that are submitted under the calls. In particular, there will be specific focus in 2007 on the following areas:

a) International dialogue in the field of ethics

The selected area (5.1.2.2, below) demonstrates a sufficient level of maturity with respect to previous actions related to capacity building in international cooperation partner countries that were supported by the Science and Society budget in the Sixth Framework Programme.

b) Survey of positive action schemes in the area of Research Decision-making The selected area (5.2.1.1, below) will target active cooperation with the USA, Canada and Australia.

The minimum participation requirements for the topics described in (a) and (b) above are specified in Call Fiche 1.

Grants to named recipients under the Work Programme

- a) Lisbon Conference on Ethics, September 2007 (European Science Foundation).
- b) Portuguese Ministry for Science, Technology and Higher Education
- c) European Union Contest for Young Scientists (University of Valencia)
- d) 14th International Conference of Women Engineers and Scientists, Lille, 2008
- e) European Broadcasting Union
- f) Lindau Foundation

Expert Contracts under the Work Programme

- a) Expert reviews on examples of the adaptation of information on emerging issues for science teaching.
- b) Expert review of projects funded under the Sixth Framework Programme looking into the societal dimension of energy technologies
- c) 'Learning Institutions' expert review: Training scheme for policy officers (based on the model developed by projects funded under the Sixth Framework Programme such as CIPAST, DOTIK and DECIDE)¹⁰.
- d) Establishment of university-based research working group
- e) Women in Science and Technology (WiST) working group
- f) Expert Group on Gender and Excellence

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 $^{^{10}\} http://www.cipast.org;\ http://ics.sissa.it/research/dotik.html;\ http://www.playdecide.org/decide_content.html$

Funding Schemes

The following gives an outline of the main features of the funding schemes:

I) COLLABORATIVE RESEARCH PROJECTS (SMALL OR MEDIUM-SCALE FOCUSED PROJECTS)

- Targeted to specific objectives:
- research and development to generate new knowledge, improve European competitiveness or address major societal needs;
- Clear focus and approach at project level
- Overall work plan clearly fixed for the whole project life
- Major deliverables planned in detail
- No changes expected in work plan and deliverables
- Adequate project management
- Management of the knowledge produced (protection, exploitation, dissemination)

Where Collaborative projects are indicated as the Funding Scheme, it is expected to fund one or more projects per topic.

Under this 2007 Science in Society Work Programme, "Collaborative research projects (small or medium-scale focused research projects)" are those which request a maximum EC Contribution of €800.000. This maximum amount of the requested Community grant is a criterion for eligibility of proposals.

II) COORDINATION AND SUPPORT ACTIONS

In addition, Coordination and Support Actions will be used, according to the profile of each topic. Coordination and Support Actions include actions aiming at coordinating research activities and policies (CSA coordinating) and actions aiming at supporting research activities and policies (CSA supporting). Besides grants subject to calls for proposals, other indirect actions under the Rules for Participation may be carried out in accordance with the topic profile pursued. These shall include grants to named recipients, public procurement, and expert groups.

The forms of the grant to be used or the funding schemes under this Work Programme part are given in Annex 3.

Civil Society Organisations

In the context of this Work Programme, civil society organisations are considered to be any legal entity that is non governmental, not-for-profit, not representing commercial interests, and pursuing a common purpose in the public interest.

Engaging society

The Seventh Framework Programme aims to increase the societal relevance of research. With this in mind, the work programme will encourage greater public engagement and promote the participation of citizens and civil society organisations in research and science policymaking.

The pursuit of scientific knowledge and its technical application towards society requires the talent, perspectives and insight that an increasing diversity in the research workforce will ensure. Therefore, a balanced representation of women and men at all levels in research projects is encouraged. When human beings are involved as users, gender differences may exist. These will be addressed as an integral part of the research to ensure the highest level of scientific quality.

Activities in the work programme will be ca

II. CONTENT OF CALLS IN 2007

'Science in Society' will be implemented through:

SUB-PART 5.1. First action line: A more dynamic governance of the science and society relationship

Several activities relevant to the aims of the first Action Line have already been undertaken in the Sixth Framework Programme in the areas of governance, ethics and scientific culture. It is intended to capitalise on the results and outcome of the funded projects completed by 2007 and to go a step further towards a more democratic knowledge society. It involves a more direct focus on social needs and interests and implies a move from current modes of citizens' (public) involvement as consumers of research findings to richer forms of engagement of citizens and of organised civil society in research and research based policies. In the first year of the Seventh Framework Programme, this entails the need for capacity building, as newcomers on the research scene, of civil society organisations, the initiation of new forms of partnerships between researchers and others actors through 'co-operative research' and preparatory actions to develop science and technology studies at European level.

In the overall context of ethical issues in Europe and internationally, there is a continuing need to consider ethics in the fields of research, new technologies, science and academia in a global context, in relation to governance issues, taking full account of the opinions and concerns of European citizens. This work is closely associated with the implementation of the Charter of Fundamental Rights of the European Union.

Activity 5.1.1. Better understanding of the place of science and technology in society

Objectives 2007-2013: In order to address the relationship between science and society through sound policies, the knowledge accumulated in the history, sociology and philosophy of sciences needs to be expanded, consolidated and spread at European level. To this end, scholars from these disciplines should form networks to structure research and debates capable of revealing the real participation of science in building a European society and identity, stressing in particular:

Area 5.1.1.1. Research on relationships between science, democracy and law

Topics

SiS-2007-1.1.1.1 - Revisiting the challenges of the interaction between science and politics in the European knowledge-based society

Description of topic: Preparatory actions to harness the knowledge produced by history, sociology, philosophy of sciences and science and technology studies (STS) into policy practice. These should contribute to providing a contextualised perspective to analyse the

relationships between science and society, within the EU and at international level, to offer methods for trans-disciplinary and multidisciplinary analysis, including a historical perspective, and to develop critical understandings of the dynamics of knowledge, science and scientific uncertainty, perceptions, behaviour, conflicts of interest, power and decision making. Possible activities may include the definition of a research agenda in this field, seminars, pilot projects etc.

Funding scheme: Co-ordination and support actions (co-ordinating) and Co-ordination and support actions (supporting)

Expected impact: This activity should allow the research community to formulate clear policy messages on how to optimise the contribution of research to policies, in particular in relation to sustainable development / growth and an increased congruence between political, economic and social objectives. It should also allow the STS community to prepare for future steps towards engaging in a significant joint research effort, foreseen in 2008 or 2009.

Area 5.1.1.2. Research on ethics in science and technology

Topics

Interdisciplinary research, to better explore the relationship between ethics, law and science, to promote a common understanding between Member States

Description of Topics

SiS-2007-1.1.2.1 Ethical frameworks of new technologies

Research on appropriate ethical frameworks of new technologies; research on foresight of ethical issues likely to emerge in the context of the societal embedding of new technologies.

Funding scheme: Collaborative research projects (small or medium-scale focused research projects)

Expected impact: to contribute positively to the quality of research in the field of ethics of new technologies and to the early identification of ethical issues and the effectiveness of EU policy over the years 2007 - 2013.

SiS-2007-1.1.2.2 Research underpinning policy related to ethics, precaution and sustainable development

Research underpinning policy at European and International levels, related to ethics, precaution and sustainable development. More specifically: benefit sharing aspects of natural and genetic resources; IPR and bioethics.

Funding scheme: Collaborative research projects (small or medium-scale focused research projects)

Expected Impact: A contribution to underpinning policy by recommendations resulting from research at European and international levels over the years 2007-2013.

Area 5.1.1.3 Research on the reciprocal influence of science and culture

Topics

SiS-2007-1.1.3.1 - Action to establish a trans-disciplinary research community on science and culture

Description of topic: The aim is to invite researchers and scholars from all disciplines, from the natural sciences to social sciences and humanities, interested in the scientific dimension of European cultural heritage, to establish an interdisciplinary community to analyse the role of science in the building of a shared European culture. The objective in 2007 is to help establish such a community by inviting these participants to form a coordinated and transdisciplinary grouping with the task of creating, an agenda of issues to address, a forum for debate and policy recommendations. The themes to be studied will include the following:

- The concepts of scientific culture, scientific literacy, public awareness of science, public engagement with science
- The creation of virtual science spaces on the Internet (e.g. using open-source / 'wiki' approach) allowing the involvement of the non-professionals and promoting dialog with society.
- The role of citizens, professionals and non-professionals in the sharing of scientific evidence and the design of good dissemination practices.
- The collaboration of other professional groups (e.g. school teachers, curators, social mediators and social workers) with scientists in the conduct of research, for mainstreaming science into social life.

Next, the group will be invited to establish an agenda of issues to address and to convene a Forum involving all actors concerned to exchange best practices, provide European added value, and promote networking and synergies. Finally, the group should develop policy recommendations.

It is expected that one co-ordination and support action will be funded.

Funding scheme: Co-ordination and support action (coordinating)

Expected Impact: (a) develop interactions and cooperation between actors from different disciplines working on key topics regarding science and culture, giving added value to existing research approaches. (b) Devise strategies to involve relevant communities, stakeholders, practitioners in mainstreaming science into social life (c) produce policy recommendations.

Area 5.1.1.4. The role and image of scientists

No actions foreseen in 2007

Activity 5.1.2. Broader engagement to anticipate and clarify political, societal and ethical issues

Area 5.1.2.1. Developing governance on science-related questions

Topics

Capacity building activities for civil society organisations and development of cooperative research activities

Description of Topics:

This addresses two types of actions:

SiS-2007-1.2.1.1 – CSO capacity building in research

Stimulating participation of civil society organisations (CSOs) in research activities: CSOs which articulate the aspirations and concerns of sections of society show an increasing interest in research activities and can provide complementary visions and knowledge in domains such as sustainable development, food safety, public health and well-being, renewable energy, discriminations, and conflict resolutions. However, to become effective research actors in view of more comprehensive actions in the seventh Framework Programme, they need capacity-building. The call proposes therefore to support CSOs participation as coordinator or partners in activities which will prepare them for further involvement in research. Activities may cover:

- Identifying and discussing topics and opportunities for future research initiatives.
- Mapping and assessing previous research activities in relation to CSOs needs and interests.
- Exploration of possible forms of cooperation with research centres and other research stakeholders.

In the context of this Work Programme, civil society organisations are considered to be any legal entity that is non governmental, not-for-profit, not representing commercial interests, and pursuing a common purpose in the public interest

Funding scheme: Co-ordination and support actions (co-ordinating) and Co-ordination and support actions (supporting)

Expected Impact: Increase the ability of civil society organisations to participate in research activities in the different fields covered by the Seventh Framework Programme

SiS-2007-1.2.1.2 – Co-operative research processes

Initiation of co-operative research processes at European level. These processes result from the partnership of researchers and non-researchers, including notably policy makers, citizens and CSOs. These actors choose to combine their skills, knowledge and understanding of an issue, in order to produce concrete solutions and/or substantiate options for further development. The issue at stake can be either of local or global societal relevance (e.g. health,

environment, fisheries, agriculture etc.), but it needs to be sufficiently precisely defined in order to allow for an engagement of the different stakeholders in the process.

Funding Scheme: Collaborative research projects (small or medium-scale focused research projects); and Co-ordination and support actions (co-ordinating) and Co-ordination and support actions (supporting)

Expected Impact: Stimulate and test the use of co-operative research at European level in fields of societal interest

SiS-2007-1.2.1.3 - Pairing scheme for scientists and Members of the European Parliament

Description of topic: If policy makers can be brought into closer contact with scientists and researchers, they will be able to better understand the environment in which scientists operate, and therefore the relationship between scientific advice and policy making. This action aims to create ten pairings between Members of the European Parliament and scientists/researchers from Member States and associated countries. The action will pay for the costs of the scientists' participation. Each pairing will consist of a one-week placement. These will be evaluated at a workshop in Brussels bringing together all of the participants.

Action in this topic will be launched through public procurement

Indicative budget: EUR 0,05 million

Expected impact: Greater awareness on the part of both European Parliamentarians and scientists of each other's methodologies, priorities and constraints, particularly as regards the relationship between research and policy-making

Area 5.1.2.2 Conditions for an informed debate on ethics and science

Topics

Creation of and support to pan-European platforms

Description of Topics:

SiS-2007-1.2.2.1 – European Ethics Documentation Centre

Create an inter-connected European information and documentation system to promote critical debate on issues of major significance in ethics and science. The system should include appropriate links to international organisations, notably UNESCO, the Council of Europe and the OECD Group on Preventing Scientific Misconduct.

Funding Scheme: Co-ordination and support actions (co-ordinating)

Expected impact: contribute to the progressive creation of a European information system on ethics and science during the period 2007-2013.

SiS-2007-1,2,2,2 - Forum of National Ethics Councils

Support for the networking of national Ethics Councils. This support will encourage further cooperation and consultation between the national Ethics Councils and the European Commission on the most topical issues in research ethics. This action will be supported by the use of SINAPSE.

Funding Scheme: Co-ordination and support actions (co-ordinating)

Expected impact: A better coordination and collaboration between national actors on important ethical issues of European significance, which can be expected during the period 2007-2013

SiS-2007-1.2.2.3 - Ethics and security research

Promote a pan-European discussion on ethical aspects of dual use (e.g. potential use for military purposes and/or potential use by terrorists) and security-related research, focusing in particular on biometric technologies. Activities will include studies; the creation of networks and of a panel of experts; international dialogue, and the organisation of a major conference.

Funding Scheme: Co-ordination and support actions (co-ordinating)

Expected impact: to contribute to the promotion of international discussion on ethical aspects of dual use and security-related research.

SiS-2007-1.2.2.4 - International dialogue: capacity building in developing countries

Description of topic: Existing networks of experts and initiatives in the field of ethics and science within developing countries (international cooperation partner countries) and emerging economies often lack coordination, sustainability or possibilities to implement best practices. This call intends to develop capacity building, including development and support to regional networks of experts, covering Africa (ACP), Latin America, Eastern Europe and Central Asia (EECA), and Asia (in particular India or China). The activities will primarily aim at helping developing countries to build up their own best practices in the field of ethics and science, and ensuring that European research conducted in developing countries (international cooperation partner countries) will comply with fundamental ethical principles. Please refer to Call Fiche 1 for specific participation criteria for this topic.

Funding schemes: Co-ordination and support actions (co-ordinating)

Expected Impact: The overall impact should be facilitating targeted partner countries to bring science closer to society and, equally, to benefit from their own experience. Over the

years 2007-2013, one can expect the strengthening of international and regional networks in the field of ethics and science, the further development of international standards concerning ethical research practices worldwide, the implementation of best practices in developing countries and emerging economies, the compliance with fundamental ethical principles and the requirements for ethical review of research project under the Seventh Framework Programme.

The following Cross-Thematic Activities will be implemented in 2007

Area 5.1.2.3 CROSS THEMATIC ACTIVITIES "ENVIRONMENT and ENERGY" and "NANOTECHNOLOGIES".

SiS-2007-1.2.3.1-CT - Framing deliberative processes fostering sustainable consumption and production at the intersection between environment and energy.

As underlined in the June 2006 revision of the European Union Sustainable Development Strategy, the main challenge facing the European Union is to "gradually change our current unsustainable consumption and production patterns and the non-integrated approach to policy-making". Therefore, during 2007, the Research Directorate General will stimulate a European reflection aiming to improve sustainable consumption and production through more inclusive science governance in the relevant policy fields.

The following activities may notably be funded under the present "Science in Society" theme:

Topic: Workshops prepared jointly by a set of relevant actors among researchers, policy makers, citizens, ethicists and civil society organisations (CSOs) which will combine their skills, knowledge and understanding. The workshops will aim to discuss the nature and importance of factors limiting the sustainability of current consumption and production patterns in the long run, to identify specific areas which could benefit from research undertaken with CSOs and to frame deliberative processes where relevant to support sustainable consumption and production. The proposals should include detailed content/agenda of the planned workshops. Depending on the results of the workshops and on the main assets of ongoing research, further action could take place in 2008.

Funding scheme: Co-ordination and support actions (co-ordinating) and Co-ordination and support actions (supporting)

Expected impact: The results of these workshops would contribute to a better implementation of the renewed European Union Sustainable Development Strategy. The subsequent launch of targeted co-operative research processes over the years 2009-2013 would ease the design and implementation of society-friendly agendas, as well as the dissemination of the resulting scientific and technological knowledge. This work would also contribute to strengthening the societal dimension of the preparation and implementation of the strategies elaborated in the Energy and Environment-related Technology Platforms.

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¹¹ Understood, as indicated earlier in the text, as a research process aiming as much at the harmonious societal integration of new scientific and technological knowledge as to achieving the specific objective of the research itself.

SiS-2007-1.2.3.2-CT - Framing the deliberative process on the responsible development of Nanosciences and Nanotechnologies (NS&T)

In order to develop a special focus on European nanosciences and nanotechnologies, actions will be carried out during 2007 as a complement to the Cooperation Programme "Nanosciences, nanotechnologies, materials and new production technologies". The following activities may be funded under this "Science in Society" theme:

Topic: A deliberative process inviting researchers, policy makers, citizens, ethicists and CSOs to combine their skills, knowledge and understanding in an attempt to provide a societal framework for a responsible development of NS&T in the European Union, and allowing for an international dialogue notably through future ad-hoc co-operative research processes. This deliberative process will be informed and submitted to analysis by STS researchers and ethicists.

The activity will consist of all of the following elements:

- Analysis of deliberative processes and procedures at European level on the responsible development of NS&T;
- Identification of needs and interests of NGOs and other civil society institutions to engage actively in deliberative processes and procedures on the development of NS&T;
- Design of possible deliberative processes and procedures for a responsible development of NS&T in the European Union and beyond.

Funding Scheme: Co-ordination and support actions (co-ordinating) and Co-ordination and support actions (supporting)

Expected Impact: Articulate consensus and absence of consensus between the various stakeholders involved in the process, sustain a European debate between them, and produce new knowledge and recommendations for future research, policy actions, deliberative processes and procedures and co-operative research processes over the years 2009-2013.

Activity 5.1.3. Strengthening and improving the European science system

Objectives for 2007-2013: Society's aspirations and concerns, and fundamental ethical principles, need to be better integrated throughout the research process, creating a more secure and constructive environment for researchers and for society as a whole. Three aspects of broad significance, focusing on the actors and dynamics of the European Research Area, will be tackled.

Area 5.1.3.1. Encouraging the debate on information dissemination, including access to scientific results and the future of scientific publications.

No actions foreseen in 2007

Area 5.1.3.2 Increasing trust and supporting self-regulation in the scientific community

a) Lisbon Conference on Ethics (*Grant to a named recipient*): A major conference on the topic of Research Integrity will be held in September 2007 in Lisbon, in cooperation with the Portuguese Presidency of the EU (Ministry of Science, Technology and Higher Education), the European Science Foundation and the US Office of Research Integrity. It will look not only at current cases of misconduct but also, more importantly, at pressures on the research system as well as questionable research methods. The involvement of the Global Science Forum of the OECD, editors from science journals, research institutes, policymakers, ethics committees, and other interested groups is foreseen. Around 200 people from all over the world will attend. Through the exchange of ideas at international level, it will contribute to the establishment of best practices on research integrity.

Grant to a named recipient (European Science Foundation) Indicative budget: EUR 0,15 million

Area 5.1.3.3 Improving the use of scientific advice and expertise for policy-making in Europe, and developing practical tools and schemes (e.g. electronic networks)

Topics

SiS-2007-1.3.3.1 - E-network SINAPSE (Scientific INformAtion for Policy Support in Europe)

Description of Topic: Maintenance of SINAPSE and enhancement of its functionalities, ergonomics and infrastructure. As regards the network development, efforts during the first registration phase focused on the building of a substantial membership including a sufficient number of important scientific organisations. The second phase will be dedicated to the registration of the main experts within these organisations, the increase of awareness about SINAPSE tools' potential within and outside its current membership and the stimulation of activities (e.g. creation of e-communities) and content upload.

Action in this topic will be launched through public procurement Indicative budget EUR 0,8 million

Expected Impact: SINAPSE is designed to promote a better use of scientific information and expertise in policy making and facilitate the emergence of new forms of governance by offering the possibility to easily involve a wide range of relevant actors. It is an instrument that supports the implementation of the Commission's *Better Regulation* package as regards the use of expertise. SINAPSE aims to build the "European yellow pages" of expertise, offering easier access to scientific experts/organisations and giving these actors the possibility to easily create thematic e-communities for mutual information and cooperation purposes. The different communication tools should progressively help strengthen the existing

EU/national advisory processes by enabling a mobilisation of a wider knowledge stock. It should also, by increasing the dissemination of already issued scientific advice, increase its use and impact.

Expert Contracts

i) Expert review of projects funded under the Sixth Framework Programme looking into the societal dimension of energy technologies: based on a results analysis of the projects, organisation of a workshop on "GoverScience Energy" bringing together researchers, policy makers and representatives of civil society organisations.

Funding Scheme: Coordination and support action (expert contract)

Expected impact: This expert review will help Commission services to better position their activities for the period 2008-2013 through a proper policy framing.

ii) 'Learning Institutions' expert review: Training scheme for policy officers (based on the model developed by the Sixth Framework Programme funded projects such as CIPAST, DOTIK and DECIDE): in support of the specific cross-thematic partnerships in "Nanosciences and nanotechnologies" and "Energy and Environment" there is a need to draw the attention of policy officers to the conceptual and practical developments in the field of governance of research and research based policies. Experts in pedagogy and communication will be solicited to introduce the rationale and aims of co-operative research processes.

Funding Scheme: Coordination and support action (expert contract)

Expected impact: Uptake of new governance concepts and skills by policy makers will improve policy making and delivery by European institutions.

Activity 5.1.4 The evolving role of universities

Objectives 2007-2013: University-based research plays a crucial role in the development of a European Knowledge-based Society. The actions under this heading support, at the European level, the ongoing process of reform of European universities, in line with the May 2006 Communication "Delivering on the Modernisation agenda for Universities: Education, Research and Innovation" COM (2006) 208 of 10 May 2006. They will be carried out in cooperation with the ongoing activities launched by DG EAC on the follow-up to this Communication, complementing them from the university-based research angle.

Defining better framework conditions for more efficient university research

Promoting the establishment of structured partnerships with the business sector, having regard to universities' research management capacities

Reinforcing knowledge sharing between universities and society at large

The following activities are proposed to meet the objectives of the three above-mentioned Areas:

a) Presidency Conference on University-based Research

The forthcoming Portuguese Presidency has placed universities as one of their top priorities. Therefore, a major conference will be held in autumn 2007 in Portugal, organised by the Portuguese Ministry for Science, Technology and Higher Education, in close cooperation with the European Commission, the European University Association and other partners such as the League of European Research Universities (LERU) and the European Industrial Research Management Association (EIRMA). It will look into the areas for action addressing the challenges identified in the Communication: *Delivering on the Modernisation Agenda for Universities: Education, Research and Innovation*¹², tackling them from the perspective of university-based research.

The involvement of a wide range of rectors, policy makers in the respective Ministries dealing with the Higher Education Sector, representatives from industry and research organisations as well as researchers is foreseen. Around 250 people from these areas will attend.

Financed by a grant to named recipient (Portuguese Ministry for Science, Technology and Higher Education) - indicative budget: EUR 0,15 million

Expected impact: This conference will take stock of the progress made since the adoption of the Communication, and serve as an opportunity to exchange best practice and first results of the work proposed for the two experts groups described below. It will also take stock on progress made by the Member States when implementing the necessary reforms in the context of the National Reform Programmes of the renewed Lisbon strategy. During the Presidency, the outcomes of the conference will also be reported back at the appropriate level in the Council and serve as a basis for identifying additional actions needed to take the modernising agenda for universities further.

b) The establishment of University-based Research (UBR) expert groups.

As announced in the Communication: *Delivering on the Modernisation Agenda for Universities: Education, Research and Innovation*, the Commission is not a direct actor in the modernisation of universities, but it can play a catalytic role, providing political impetus and targeted funding in support of reform and modernisation.

To this end, starting from 2007, a limited number of University-based Research (UBR) expert groups involving a variety of stakeholders coming from universities, the business community, research organisation, etc, will be set up.

The aim of the expert groups is to analyse the issues, identify options and good practices and provide recommendations to the Commission for action. In 2007 the following expert groups will be set up:

¹² (COM 208 final of 10/05/2006)

Group 1: Diversified funding streams for university-based research including the issue of the different accounting systems for research activities in place in European universities and their impact on funding university-based research.

Group 2: Different approaches and methodologies for institutional evaluation, profiling and ranking of university-based research, with a view to identifying a framework and tools to appraise the evolution, quality, efficiency and effectiveness of university based research in Europe.

Funding Scheme: Coordination and support actions (expert contracts)

Expected impact: The meetings of the university-based research working groups organised during 2007 will serve to pave the way for the creation of a *European Platform on University-based Research* to exchange best practices, collect data in order to measure, monitor and assess the research performance of universities, and provide policy input in support of better and stronger UBR in Europe. By offering a forum for exchange of best practice and for the identification of innovation solutions the EU level can offer genuine added value, and formulate recommendations to be discussed at the different appropriate levels (Member States and associated countries, stakeholders) The Commission will through this exercise also facilitate dialogue between universities, the business community, social partners and research organisations.

SUB-PART 5.2. Second action line: Strengthening potential, broadening horizons

Projects relevant to the aims of the second Action Line have already been undertaken in Sixth Framework Programme in the areas of Women and Science and Science Education. It is intended to capitalise on the results and outcome of those projects completed by 2007 in order to create synergies with the relevant actions under this Work Programme.

Activity 5.2.1. Gender and research

Objectives 2007-2013: The Seventh Framework Programme demands active promotion of the role of women in scientific research. The objective is to boost gender equality in research, through stimulating the participation of women in science and technological development; and fostering the integration of the gender dimension throughout European Research. This will be done both through gender mainstreaming the Framework Programme and through specific activities. In particular, the Science in Society part of the Capacities programme will contribute to the promotion of women researchers and the promotion of gender equality in European Research. Actions will be based on the knowledge gained through the collection and analysis of sex-disaggregated data since 1999. In the light of progress already achieved, a number of new and continuing priorities can now be identified for future action both at Commission and member state levels. In terms of the participation of women in science, the objectives need to be more narrowly focused, to concentrate essentially on certain disciplines or fields (engineering, entrepreneurship, innovation and technology) or levels (senior and decision-making positions). Areas of action will include gender issues in the definition and measurement of scientific excellence. Furthermore, the role of men in realising progress towards gender equality in science will be examined more closely with a view to better understanding the mechanisms involved, and measures to encourage men to participate actively in promoting gender equality in science will be envisaged. Attention will be given to raising awareness within the scientific community, in the general public and among policy makers. Benchmarking and monitoring will continue to underpin the whole range of actions undertaken.

Area 5.2.1.1. Strengthening the role of women in scientific research

Two distinct activities are developed: firstly the monitoring of participation, which relies heavily on the production and availability of statistics and, secondly, development of mechanisms to support women researchers.

Topics

SiS-2007-2.1.1.1 - Survey of positive action schemes in the area of Research Decision-making

Description of Topic: An expert group looking at positive actions to increase the numbers of women in research decision making was established in 2006. The findings of this group will

be complemented by a comparative study, including literature review and data analysis, on positive action schemes at institutional and national levels to increase the number of women in public research decision-making in Europe and selected non-European countries, with active participation of experts from these countries. Please refer to Call Fiche 1 for specific participation criteria for this topic.

Target countries: USA, Canada and Australia

Funding Scheme: Co-ordination and support actions (co-ordinating)

Expected Impact: Targeted dissemination of new knowledge base of positive action schemes in the area of research decision-making. The Commission and Member States and associated countries can develop the most appropriate actions for Europe in the years to come.

Area 5.2.1.2 Gender Dimension of Research

Topics

SiS-2007-2.1.2.1 - Meta analysis of gender and science research

Description of Topic: A meta-analysis will be undertaken of gender and science research made at national and European level on the following topics: (i) horizontal segregation ("choice" issues, causes, perception of SET by girls, etc), (ii) vertical segregation (why few women scientists reach top level positions, glass ceiling, sticky floor, etc.) and (iii) underlying segregation causes and effects (work life balance, pay gap, mobility-related obstacles, etc.).

This exercise has several purposes: to get an overview of existing knowledge on these issues in order to compare and summarise the information and to highlight best practices existing in Europe.

The study should include a secondary data collection, a literature review, a compendium of specific initiatives implemented at national, regional and institutional level (mentoring or tutoring programmes, supportive initiatives, etc.) and an analysis of their effectiveness. The analysis should be tailored to the needs of policy makers, providing them with readily useable instruments and methodologies. It should provide on an annual basis a report describing in a concise and synthetic way currently ongoing research and at the end of the project all research since 1980 should have been covered. The research projects and studies analysed should be accessible through a database, which at the end of the project shall be made publicly available. This study may be followed by a similar one covering the private sector in 2008.

Action in this topic will be launched through public procurement Indicative budget EUR 2,0 million

Expected impact: To identify blank spots where more research or coordination is needed, and to prepare the ground for sound policy-making based on scientific grounds.

Area 5.2.1.3 Mainstreaming gender in Community research policy and programmes

Topics

SiS-2007-2.1.3.1 - Help desk for Gender Mainstreaming

Description of topic: Establish a help desk with training and information packs for project officers, coordinators and evaluators regarding gender mainstreaming in the Seventh Framework Programme.

Action in this topic will be launched through public procurement Indicative budget EUR 0,7 million

Expected Impact: To increase gender awareness among project applicants, coordinators scientific officers, evaluators and National Contact Points on all aspects of gender mainstreaming through information, training and support to researchers.

Grant to named recipients

a) 14th International Conference of Women Engineers and Scientists - By co-funding this international event, the Commission intends to give the greatest possible visibility to European-based activities on women in engineering and technologies. Results obtained by initiatives and projects funded at European and/or national level will be presented to a worldwide forum for discussion. The ICWES-14 will take place in Lille, France in 2008.

Grant to a named recipient - indicative budget: EUR 0,1 million

Expert Contracts

a) Women in Science and Technology (WiST) working group

Following the positive experience with a previous working group constituted of academics and multinational companies, the European Commission will create a new working group composed by companies, experts and higher education institutions focusing on the promotion of a working environment, which allows both women and men scientists to combine family and work, children/private life and career. Special focus will be made on the industrial research sector. Efforts would be made to involve men in the discussion on dual careers and work life balance.

The working group will identify best practices existing in Europe and will assess the measures optimising work-life balance. In cooperation with higher education institutions, initiatives will be identified to better tackle the low interest and high drop-out rate of women in the engineering and technology sectors.

Funding Scheme: Coordination and support actions (expert contracts)

Expected impact: To create guidelines for companies and public sector institutions who intend to optimise their human resources development strategies. To encourage the implementation of better work-life balance measures for researchers.

b) Expert Group on Gender and Excellence

To maintain autonomy and ensure scientific excellence, research decision-making should be based on meritocracy and individual scientific achievements. Scientific excellence, however, is not an absolute term but a composite of several determinants: originality, publications innovative force etc. Gender studies of research policy presented in the report "Gender and Excellence in the Making" have revealed that the term "excellence" as applied today may hinder women in establishing scientific careers. The discourse on "excellence" needs to be reframed in such a way as to include all scientists, regardless of gender.

Some research has been done on "Gender and Excellence", but the results have not yet been widely disseminated and have not been conclusive. This new expert group will focus on gender issues in the definition and measurement of scientific excellence. Evaluation systems and parameters of excellence employed in a researcher's career chain will be explored from a gender perspective and recommendations will be made.

The outcome of two conferences held in the last quarter of 2006 could be used as a starting point for the expert group, along with the conclusions from the report "Gender and Excellence in the Making".

Funding Scheme: Coordination and support actions (expert contracts)

Expected Impact: The expert group is expected to develop and disseminate recommendations on how to improve the situation, which in turn will raise awareness of this issue in the scientific community and among research policy makers in Europe.

Activity 5.2.2. Young people and science

Objectives 2007-2013: To contribute to the Lisbon agenda by increasing the number of young people from all backgrounds entering careers in science, research and technology; and, by raising the general level of scientific literacy to increase awareness of the societal impact of science.

Area 5.2.2.1. Supporting formal and informal science education in schools as well as through science centres and museums and other relevant means

Topics

SiS-2007-2.2.1.1 - Links between science education and research

Description of topic: Given the rapid pace of scientific and technological development, teachers need more support in terms of advice, training and resources needed to deconstruct complex systems into teaching subjects that can be related to basic scientific laws or theories. Moreover, researchers need to develop skills in communicating to non-specialists including the younger population. Actions will be aimed at reinforcing links between schools, universities research organisations and industry; at reinforcing the connection between science and its development through research; and at highlighting the relevance of science to cultural and societal development.

Funding Scheme: Co-ordination and support actions (co-ordinating)

Expected impact: To bring about a change in perception among young people as to what science is and how scientific progress arises; to strengthen the links between science education and research, to improve communication and the development of resources material; to improve the exchange of knowledge and know-how at the European level between science teachers and the research community, and to provide mechanisms (such as seminars, workshops and conferences) that bring together a broad range of key players.

SiS-2007-2.2.1.2 - Teaching Methods

Description of topic: Actions for promoting the use of context and inquiry-based science teaching techniques; actions for bridging the gap between the science education research community and science teachers to facilitate the uptake of new science teaching methods. Falling interest in key science topics and mathematics has been linked to the way they are taught from the earliest age. Greater emphasis needs to be placed on the development of analytical skills, and on techniques for stimulating intrinsic motivation for learning science. Context-based learning in which the relevance of science is highlighted and inquiry-based techniques to stimulate the formulation of ideas and their testing through direct experimentation have been shown to be effective in stimulating interest in science but need to be developed and implemented more widely. In a more general context, better links need to be established between the science education research community, curricula developers and practitioners (teachers and educators). Account needs to be taken of the development of key resources, training requirements and the involvement of parents and other relevant actors.

Funding Scheme: Co-ordination and support actions (co-ordinating)

Expected Impact: To bring about a change in the way that science is taught in schools through European collaborative activities that take techniques that have been successfully piloted and adapting and applying them on a significantly greater scale. The actions must include an element of independent evaluation as well as providing a convincing plan for the regular dissemination of progress and know-how to special interest groups (e.g. parents' associations, teachers' networks, curricula developers, and policy-makers). To improve the exchange of knowledge and know-how at the European level between practitioners, the science education research community and policy makers, and to provide mechanisms (such as seminars, workshops and conferences) that bring together a broad range of key players.

Area 5.2.2.2 Reinforcing links between science education and science careers

Topics

SiS-2007-2.2.2.1 - Images of Science

Description of topic: Actions to combat stereotypical images of science and scientists; to promote interest in science among young people and to promote realistic role models. Special attention should be paid to gender specific differences and to the needs of young people from disadvantaged, under-represented or underperforming groups. Narrow images of scientists (as portrayed through the popular media for example) need to be broadened to become more representative in order to appeal to young people from a diversity of background. Actions will involve collaboration at European level.

Funding Scheme: Co-ordination and support actions (co-ordinating)

Expected Impact: To contribute to developing models and methodologies to increase the number of young people studying science at school; to bring about a change in how young people as individuals relate to science and their perception of careers in science; to improve the quality of information aimed at teachers and parents as regards science careers; to improve the exchange of knowledge and know-how at the European level between initiatives and programmes that aim at combating stereotypes and prompting broader participation in science among young people science. The actions must include an element of independent evaluation

SiS-2007-2.2.2.2 - Europa Diary

Description of Topic: *Europa Diary: Wise Choices?* is an initiative of DG SANCO to provide information about consumer and health issues to secondary school students. In the 2007/2008 edition, DG RTD is going to include four pages on research topics.

A total of 1.610.690 copies of the Diary will be distributed among secondary school students in Member States and associated countries with the accompanying Teacher's Guide.

DG RTD will contribute the amount of €120,960 to the cost of graphics, editorial, translation and localisation of texts, printing and distribution, which will be done under an existing Framework contract (SANCO / 2005 /B1 /021) awarded to *Fondation Génération Europe*.

This amount will cover the cost of 72.000 additional copies of the Diary and 2.880 teachers' manuals.

Action in this topic will be launched through public procurement Indicative budget EUR 0,121 million

Expected Impact: To contribute to raising the profile of European research among secondary school pupils in all of the Member States and associated countries by showing some results of European research (solar energy, reducing automobile emissions, the oceans) in a language attractive to students and providing a springboard for classroom discussion of scientific research by means of the Teacher's Guide.

5.2.2.3. Research and coordination actions on new methods in science education

No actions foreseen in 2007

Grants to named recipients

a) European Union Contest for Young Scientists: The European Union Contest for Young Scientists brings together winners of pre-university school science projects from across Europe to compete for prizes and awards. The Contest is based on national competitions and takes place each year in a different location. It will be implemented in 2007 through a direct grant to the University of Valencia. The Contest provides additional stimulus to young people who have already demonstrated that they are applying science to solve problems. Many go on to become successful scientists. It attracts a considerable level of co-funding in the host country, and high levels of international media attention. International research organisation and similar bodies donate many of the non-cash prizes.

Grant to a named recipient - indicative budget: EUR 0,439 million

b) Foundation Lindau meeting of Nobel laureates and young scientists

The Foundation Lindau supports the annual meeting with around 20 Nobel Prize winners in Lindau. Students come from all over the world to listen to the Laureates' lectures and participate in discussions. With the aim of promoting contact and dialogue between distinguished scientists (as 'role-models') and aspiring young scientists, the direct grant to the Foundation Lindau will be used to help finance the expenses of young European students and scientists to attend the Lindau meeting.

Grant to a named recipient - indicative budget: EUR 0,05 million

Expert Contracts

a) Expert reviews on examples of the adaptation of information on emerging issues for science teaching.

To highlight examples where researchers and teachers have collaborated on developing material on topical research issues, such as in the areas of space, nanotechnology, energy, biotechnology, and energy, for use in the classroom.

Funding Scheme: Coordination and support action (expert contract)

Expected impact: Through highlighting the benefits to students, teachers and scientists of joint projects that bring topical science issues into the classroom, the examples identified will provide inspiration for new collaboration.

SUB-PART 5.3. Third action line: Science and society communicate

Projects relevant to the aims of the third Action Line have already been undertaken under the Sixth Framework Programme, mainly in the areas of the exchange of user-friendly information products and audio-visual co-productions on science and research. It is intended to capitalise on the results and outcome of those projects completed by 2007 in order to create synergies with the relevant actions under this Work Programme.

Objectives 2007-2013: Activities will contribute to addressing the ambiguous feelings expressed by citizens regarding knowledge of and the potential benefits from science and technology. They will also help fight the perceived isolation of the world of science from the everyday realities of Europeans by promoting effective two-way communication channels: providing a wider public with more scientific information and enabling the public to engage with scientists. A specific focus will be given to the role of the media in this regard, approached in their role as one voice of society's expectations, concerns and interests. A closer dialogue with them will be promoted, including the exchange of best practice between scientists and media professionals. In addition, some of the funded activities will be requested to provide the public with tools to express its views on science. The effort will focus on six aspects

Area 5.3.0.1 Provision of reliable and timely EU research information to the scientific press

No actions foreseen in 2007

Area 5.3.0.2 Training actions to bridge the gap between the media and the scientific community

No actions foreseen in 2007

Area 5.3.0.3 Encouraging a European dimension at science events targeting the public

Topic

SiS-2007-3.0.3.1 - Actions to encourage co-operation and networking between science museums, science centres and/or the organisers of national and regional events, e.g. by creating synergies to conceive and exchange ambitious and interactive exhibitions on European research topics

Description of topic: Science museums and science centres in Europe have been developing valuable know-how in communicating science to the public through interactive exhibitions which address the interests and concerns of citizens. Moreover, they have developed valuable experience in associating science concepts with citizens' debates and participative democracy tools. More synergies are needed, however, between these key actors to develop ambitious

projects at the European level. The Commission invites the science museums and science centres to choose topics of particular interest to European citizens (e.g. health, energy after oil, climate change) and to engage in particular with citizens and civil society organisations in the framework of the project.

Funding Scheme: Co-ordination and support actions (co-ordinating)

Expected impact: to enlarge the public at the European level when communicating science with exhibitions; to permit the public to express its views and questions on these science and research topics; to contribute to greater visibility of European research and researchers by bringing together the experience and tools of science centres and museums.

Area 5.3.04 Promotion of science by audio-visual means via European co-productions and the circulation of science programmes

a) Grant to a named recipient: grant to the European Broadcasting Union, contributing to the objectives of area 5.3.0.4

The EBU groups all European public broadcasters, as well as a number of independent producers. The EBU has launched over the past few years an ambitious programme of coproductions reinforcing the presence of science on EU screens. Sharing common objectives with the EBU in this field, the Commission launched in 2006 a pilot phase to develop science co-productions with the EBU. Building on this pilot phase, the EBU has proposed to launch an initiative called "Science in Europe 2020, (with an estimated overall budget of €4 million). This project, to be coordinated by the EBU, should include, inter alia:

- the co-production of a package of a minimum of 24 high quality 26 minute programmes focused on European science, targeting larger audiences, with guaranteed diffusion across Europe,
- the development of innovative EU science "formats" and other modular programmes for adaptation to different linguistic markets,
- the development of a professional exchange platform for science programmes,
- the integration of new distribution platforms in the conception programmes, to reach younger audiences

It is proposed that the Commission contribute to this project, as a minority co-producer to a maximum level of 25%. This contribution will be conditional on the EBU raising the remaining 75% with its other partners, and on the programmes being actually broadcast by a pre-defined minimum number of broadcasters. As a counterpart for the Commission contribution, a number of rights will be negotiated and full visibility of the Commission and EU scientists involved contractually guaranteed.

Grant to a named recipient - indicative budget: EUR 1,0 million

Area 5.3.0.5 Promotion of excellent trans-national research and science communication by the means of popular prizes

SiS-2007-3.0.5.1 European Research Awards: Descartes prizes for transnational collaborative research SiS-2007-3.0.5.2 European Research Awards: Prizes for science communication

Description of Topic: The European Research Awards have been created with a view to contributing to the Community policy which aims to stimulate European collaborative research, ensuring the general public's interest and understanding of its results. The European Research Awards complement each other and serve as a major awareness-raising tool. Making good science and communicating it efficiently are indeed essential ingredients in developing the European knowledge society.

The annual European Research Awards are a public recognition of outstanding achievements in (i) transnational collaborative research (Descartes prizes) and in (ii) science communication, The prizes are awarded respectively as follows:

- (i) SiS-2007-3.0.5.1 European Research Awards Descartes prizes for transnational collaborative research: Prizes will be awarded to transnational teams that have achieved outstanding scientific or technological results from European collaborative research in any field of science, including the economic, social and human sciences. Each proposal received in response to this call will be allocated by the Grand Jury to one of four categories which will cover the various fields of science. In principle, in each of these categories one prize will be awarded, and one finalist selected. Proposals may be submitted by the research teams themselves, or by research organisations and institutions.
- (ii) SiS-2007-3.0.5.2 European Research Awards Prizes for science communication: Prizes awarded to organisations or individuals that have achieved outstanding results in science communication and which have been selected as winners of awards by European and/or national organisations. In principle, prizes will be awarded in the following categories:
- The communicator of the year: scientists or professionals engaged in communicating science to the public.
- The writer of the year: popularising science through the written word (e.g. newspaper articles, popular science books, editorial policies, innovative actions).
- The audiovisual documentary of the year: popularising science through audiovisual and electronic media (e.g. scientific television or radio documentaries, websites, editorial policies, innovative actions).

Proposals must be submitted by the organisation which has awarded the prize to the candidate.

 $\overline{\text{NB}}$: For all of the above mentioned prizes, there can be not more than one laureate per category and not more than one finalist per category.

Funding Scheme: Co-ordination and support actions (supporting)

<u>Expected Impact</u>: Increased standards and prestige of European collaborative research and of Science communication. Greater awareness among scientists of the importance of science communication. Better understanding of European research and of European research policies by the scientific and science communication communities. Increased knowledge about scientific research and science communication by the public at large. Feed the public debate on scientific research issues. Encourage scientific careers. Entice young people to an increased interest in science.

Area 5.3.06 Research aimed at enhancing science communication in its methods and its products.

Topic

SiS-2007-3.0.6.1 - Cultural differences in Europe related to the relationship of the public with TV and radio science programmes.

Description of Topic: Research to gather data from Member States and associated countries and to provide an analysis of how Europeans, according to their nationality, gender, socio-cultural background (including young people), perceive existing audiovisual science programmes. The objective is to identify the reasons why different sections of the European public are satisfied or not with what is currently offered in this field. Where the public are unsatisfied, the study should identify what is missing and what their precise expectations are towards science programmes on TV and radio (topics, formats ...).

Funding Scheme: Collaborative research projects (small or medium-scale focused research projects) – please note the indicative budget for this topic is estimated at EUR 500.000.

Expected Impact: The outcome of this research should help the Commission in developing its policy of partnerships with audiovisual professionals to communicate science at the European level.

SUB-PART 5.4. Fourth Action Line: Strategic activities

Area 5.4.0.1 Trans-national co-operation among National Contact Points (NCPs) for Science in Society

SiS-2007-4.0.1.1 – Transnational cooperation among the National Contact Points (NCPs) for Science in Society

Description of Topic: Reinforcing the network of National Contact Points (NCP) for the Seventh Framework Programme under Science in Society, by promoting trans-national cooperation. The action will focus on identifying and sharing good practice. This may entail various mechanisms such as benchmarking, joint workshops, training, and twinning schemes. Practical initiatives to benefit cross-border audiences may also be included, such as transnational brokerage events.

Special attention will be given to helping less experienced NCPs rapidly acquire the know-how accumulated in other countries.

Proposals are expected to include all NCPs who have been officially appointed by the relevant national authorities. Other participants from the EU and associated countries are ineligible. If certain NCPs wish to abstain from participating, this fact should be explicitly documented in the proposal.

The action may also involve official FP7 contacts from the international cooperation partner countries.

The Commission expects to receive a single proposal under this heading.

Funding scheme: Co-ordination and support actions (co-ordinating) - indicative budget €1.2 million for the 2007 budget (for a proposal for a project with a duration of two years).

Expected impact:

- An improved NCP service across Europe, therefore helping simplify access to FP7 calls, lowering the entry barriers for newcomers, and raising the average quality of submitted proposals.
- A more consistent level of NCP support services across Europe.
- More effective participation of organisations from third countries, alongside European organisations, in line with the principle of mutual benefit.

Area 5.4.0.2 Ad hoc advisory groups and other structures

The Commission will continue to examine and validate its objectives and identify new policy directions with the help of ad hoc advisory groups and other structures, including the Helsinki Group on Women in Science.

The Helsinki Group on Women and Science was set up in 1999 by the European Commission to bring together national representatives. It aims to promote the participation and equality of women in the sciences on a Europe-wide basis. Meeting twice a year, it provides an important forum for dialogue on national policies and, recognising the value of networking and mutual support among women scientists, the group also helps explore the ways in which the potential, skills and expertise of women could best be secured and shares and compares experiences. The Helsinki Group also helps the Commission build a clear picture of the situation on the ground at national level, and members have produced national reports on the situation of women scientists in their respective countries. The work of the Helsinki Group will continue with two meetings in 2007 (bringing together 34 representatives), at a cost of approximately EUR 0,1 million.

Action in this topic will be launched through public procurement Indicative budget EUR 0,1 million

Area 5.4.0.3

Operation of the European Research Advisory Board (EURAB): The programme will support the work of EURAB in the performance of its tasks to advise the Commission on the design and implementation of Community policy in research and technological development, and in particular on the realisation of the European Research Area. The Commission decision establishing EURAB ¹³ states that the Commission shall provide financial support to the secretariat of the committee, ensuring that its independence is fully guaranteed. This includes the scientific secretariat as well as secretarial support to the chair.

EURAB studies -According to Article 5 of the above-mentioned Decision, EURAB may ask the Commission to undertake studies or consult outside organisations. The programme, therefore, will also support the cost of a very limited number of studies on topics under the consideration by EURAB or its working parties.

Actions in this topic will be launched through public procurement Indicative budget (both parts): EUR 0,1 million

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¹³ Commission Decision of 27 June 2001 on establishing the European Research Advisory Board, OJ L 192/91 14.7.2001

GRANTS TO NAMED RECIPIENTS	
Topic	Indicative
_	Budget (m €)
a) Lisbon Conference on Ethics (European Science Foundation).	0,15
b) UBR Conference - Portuguese Ministry for Science, Technology and Higher	0,15
Education).	
c) European Union Contest for Young Scientists	0.439
d) 14 th International Conference of Women Engineers and Scientists	0,1
e) Lindau Foundation	0,05
f) European Broadcasting Union	1,0
SUBTOTAL	1,889

EXPERT CONTRACTS			
Topic	Indicative	Timing	
	Budget (m €)		
a) Expert Review on examples of adaptation of information on	0,025	2 nd semester	
emerging issues for science teaching.			
b) Expert review of projects funded under FP6 looking into the	0,1	1 st semester	
societal dimension of energy technologies			
c) Establishment of university-based research expert groups	0.08	1 st semester	
d) 'Learning Institutions' expert review	0,02	1 st semester	
e) Women in Science and Technology (WiST) working group	0,5	1 st semester	
f) Expert Group on Gender and Excellence	0,2	2 nd semester	
SUBTOTAL	0.925		

A number of actions foreseen will be funded through public procurement. A Summary table is presented here for information purposes:

PUBLIC PROCUREMENT					
Area and Topic	Indicative	Timing	No of	Procedure	
	Budget(m €)		contracts		
5.1.2.1 Pairing scheme for scientists and	0,05	2 nd	1	Specific contract based on a	
Members of the European Parliament		semester		framework contract under	
				Articles 88 FI and 117 IR	
5.1.3.3 - E-network SINAPSE (Scientific	0,8	1 st	1	Specific contract based on a	
INformAtion for Policy Support in Europe)		semester		framework contract under	
		. at		Articles 88 FI and 117 IR	
2.1.2.1 Meta analysis of gender and science	2,0	1 st	1	Open	
research		semester			
2.1.3.1 Help desk for Gender	0.7	2 nd	1	Open	
Mainstreaming		semester			
	0.101	and		g :g	
2.2.2.2 Europa Diary for Schools	0,121	2 nd	1	Specific contract based on a	
		semester		framework contract under	
				Articles 88 FI and 117 IR	
5.4.0.2.Helsinki Group on Women in	0.1	1st	1	Specific contract based on a	
Science		semester		framework contract under	
5.4.0.0 5770.4.0	0.1	a nd		Articles 88 FI and 117 IR	
5.4.0.3 EURAB	0.1	2 nd	1	Specific contract based on a	
		semester		framework contract under	
				Articles 88 FI and 117 IR	
SUBTOTAL	3.871				

Indicative budget for the Science in Society 2007 Work Programme

	2007
	M€
Calls (FP7 Science in Society-2007-1 & FP7 Science in	
Society-2007-2)	23,473
Expert evaluators	0,410
Other activities (incl. public procurement, expert groups, grants to named recipients)	6,685
Estimated total budget allocation	30,568

INDICATIVE BUDGET

Total

Indicative budget breakdown per activity or area (this excludes expert contracts, grants to named recipients and public procurement).

Area 5.1.1.1	1,5 Million €
Area 5.1.1.2	2,0 Million €
Area 5.1.1.3	0,8 Million €
Area 5.1.2.1	4,0 Million €
Area 5.1.2.2	2,5 Million €
Area 5.1.2.3	1,5 Million €
Area 5.2.1.1	1.0 Million €
Area 5.2.2.1	2.0 Million €
Area 5.2.2.2	2,0 Million €
Area 5.3.0.3	2,798 Million €
Area 5.3.0.6	0,5 Million €
Area 5.3.0.5	1,675 Million €
Area 5.4.0.1	1,2 Million €

23,473 Million €

III. IMPLEMENTATION OF CALLS

CALL FICHE 1

• Call identifier: FP7-SCIENCE-IN-SOCIETY-2007-1

• Date of publication: Friday 22 December 2006

• Closure date: Wednesday 23 May, at 17.00, Brussels local time.

• Indicative budget: €21,798 million EUR from 2007 budget

• Topics called:

ACTIVITY/AREA	TOPICSCALLED	Funding Schemes	Indicative Budget(€m)
ACTIVITY 5.1.1 Bet	ter understanding of the place of science a	nd technology in society	/
Area 5.1.1.1. Researc	h on relationships between science, democ	racy and law	
5.1.1.1.	SiS-2007-1.1.1.1 Interaction between science and politics	CSA (Coordinating) and CSA (Supporting)	1,5
Area 5.1.1.2 Research	n on ethics in science and technology		
5.1.1.2.	SiS-2007-1.1.2.1 Ethical frameworks of new technologies	Collaborative research Projects (small or medium- scale focused projects)	2,0
	SiS-2007-1.1.2.2 Research underpinning policy support related to ethics precaution, and sustainable development	Collaborative research Projects (small or medium- scale focused projects)	
Area 5.1.1.3 Research	n on the reciprocal influence of science and	culture	
5.1.1.3.	SiS-2007-1.1.3.1 Science and Culture Research Community	CSA (Coordinating)	0,8
ACTIVITY 5.1.2 Bro	pader engagement to anticipate and clarify	political, societal and e	thical issues
Area 5.1.2.1. Develop	ing governance on science-related question	าร	
5.1.2.1.	SiS-2007-1.2.1.1 CSO Capacity-building in Research	CSA (Coordinating) and CSA (Supporting)	4,0

	SiS-2007-1.2.1.2 Cooperative research processes	Collaborative research Projects (small or medium- scale focused projects), CSA Coordinating and CSA Supporting	
Area 5.1.2.2. Conditio	ns for an informed debate on ethics and s	cience	
5.1.2.2.	SiS-2007-1.2.2.1 European Ethics Documentation Centre	CSA (Coordinating)	
	SiS-2007-1.2.2.2 Forum of National Ethics Councils	CSA (Coordinating)	
	SiS-2007-1.2.2.3 Ethics and Security Research	CSA (Coordinating)	2,5
	SiS-2007-1.2.2.4 Capacity Building on ethics in developing countries	CSA (Coordinating)	
Area 5.1.2.3. Cross Th	ematic Activities		
5.1.2.3	SiS-2007-1.2.3.1-CT Sustainable consumption and production	CSA (Coordinating) and CSA (Supporting)	0,4
	SiS-2007-1.2.3.2-CT Nanoscience and Nanotechnology	CSA (Coordinating) and CSA (Supporting)	1,1
ACTIVITY 5.2.1 Gen			
	ening the role of women in scientific resea		
5.2.1.1	SiS-2007-2.1.1.1 Survey of positive action schemes in the area of Research Decision-making	CSA (Coordinating)	1,0
ACTIVITY 5.2.2 You	ng People and Science		
	ng formal and informal science education and other relevant means	in schools as well as thr	ough science
5.2.2.1.	SiS-2007-2.2.1.1 Links between science education and research	CSA (Coordinating)	1,0
-	SiS-2007-2.2.1.2 Teaching Methods	CSA (Coordinating)	1,0
Area 5.2.2.2 Reinforci	ng links between science education and sc	ience careers	
5.2.2.2.	SiS-2007-2.2.2.1 Images of science	CSA (Coordinating)	2,0
Area 5.3.0.3 Encouraç	jing a European dimension at science ever	nts targeting the public	
5.3.0.3.	SiS-2007-3.0.3.1 Science museums, science centres and organisers of science events	CSA (Coordinating)	2,798
Area 5.3.0.6. Research	aimed at enhancing science communicat	ion in its methods and it	tsproducts

5.3.0.6.	SiS-2007-3.0.6.1 Research in cultural differences in public understanding	Collaborative research Projects (small or medium- scale focused projects)	0,5
ACTIVITY 5.4.1 Tr Society	ans-national cooperation among National	Contact Points (NCPs) f	or Science in
5.4.0.1	SiS-2007-4.0.1.1 National Contact Points transnational cooperation	CSA (Coordinating)	1,2
		SUBTOTAL	21.798

Evaluation procedure:

- A one-stage submission procedure will be followed
- Proposals may be evaluated remotely
- The evaluation criteria and sub-criteria (including weights and thresholds), together with the eligibility, selection and award criteria, for the different funding schemes are set out in Annex 2 to this work programme
- Proposals will not be evaluated anonymously.

Indicative evaluation and contractual timetable

Evaluations are expected to be carried out during the month of July 2007. It is expected that the contract negotiations for the shortlisted proposals will be open in September 2007.

Particular requirements for participation, evaluation and implementation

The minimum number of participating legal entities required, for all funding schemes, is set out in the Rules for Participation¹⁴. A summary of the minimum participation requirements for the instruments used in this call is given in the following table. These participation criteria are also criteria for eligibility of the proposal.

Funding scheme	Minimum conditions
Collaborative project	At least 3 independent legal entities, each of which is established in
	a MS or AC, and no two of which are established in the same MS or AC.
Co-ordination and support action (co-ordinating)	At least 3 independent legal entities, each of which is established in a MS or AC, and no two of which are established in the same MS or AC.
Co-ordination and support action (supporting)	At least 1 independent legal entity*

*For the purposes of this Call for Proposals, the minimum participation condition for a Coordination and support action (supporting) is 'at least one independent legal entity which is

 $^{^{14}}$ MS = Member States of the EU; AC = Associated country. Where the minimum conditions for an indirect action are satisfied by a number of legal entities, which together form one legal entity, the latter may be the sole participant, provided that it is established in a Member State or Associated country

established in a Member State or in an Associated Country". This is also an eligibility criterion.

The following participation criteria are also criteria for eligibility of proposals under the specific topics indicated:

For SiS 2007 1.2.2.4 *Capacity building on ethics in developing countries*, the following rules apply for Co-ordination and support actions (co-ordinating):

- (a) at least four legal entities must participate;
- (b) at least one of the legal entities referred to in point (a) must be established in an international cooperation partner country, in particular the target regions of Africa (ACP) Latin America, Eastern Europe and Central Asia (EECA), or Asia (in particular India or China)
- (c) at least three of the legal entities referred to in point (a) must be established in Member States or Associated countries
- (d) all four legal entities referred to in point (a) must be independent of each other

For SiS 2007 2.1.1.1 *Survey of positive action schemes*, the following rules apply for Coordination and support actions (co-ordinating):

- (a) at least four legal entities must participate;
- (b) at least one of the legal entities referred to in point (a) must be established in the United States, Canada or Australia
- (c) at least thr ee of the legal entities referred to in point (a) must be established in Member States or Associated country
- (d) all four legal entities referred to in point (a) must be independent of each other

Under this 2007 Science in Society Work Programme, "Collaborative research projects (small or medium-scale focused research projects)" are those which request a maximum EC contribution of €800.000. This financial limit constitutes an eligibility criterion and proposals for "Collaborative research projects (small or medium-scale focused research projects)" outside the limit will be excluded from the evaluation process. Please note, also, those topics where the indicative budget amount may be close to or less than €800.000.

The forms of grant which will be offered and the maximum reimbursement rates are specified in Annex 3 to the Capacities work programme.

CALL FICHE 2

• Call identifier: FP7-SCIENCE-IN-SOCIETY-2007- 2

• Date of publication: Thursday 15 March 2007¹⁵

• Closure date: Tuesday 10 July 2007¹⁶, at 17.00, Brussels local time.

• Indicative budget: €1,675 million EUR from 2007 budget

• Topics called:

ACTIVITY/AREA	TOPICSCALLED	Funding Schemes	Indicative Budget(€m)	
 Area 5.3.0.5 Promotion of excellent trans-national research and science communication by the means of popular prizes 				
5.3.0.5	SiS-2007-3.0.5.1 Descartes prizes for transnational collaborative research	CSA (Supporting)	1,480	
	SiS-2007-3.0.5.2 Prizes for science communication	CSA (Supporting)	0,195	
	·	SUBTOTAL	1.675	

Indicative amounts of Awards:

SiS-2007-3.0.5.1 Descartes prizes for transnational collaborative research:

Total indicative amount available: 1.480.000 EUR

Up to 1.360.000 EUR for the laureates

120.000 EUR for up to four finalists (30.000 EUR each).

SiS-2007-3.0.5.2 Prizes for science Communication:

Total indicative amount available: 195.000 EUR

180.000 EUR for up to three laureates - 60.000 EUR each

15.000 EUR for up to three finalists (5.000 EUR each)

Evaluation procedure:

- A one-stage submission procedure will be followed

- The evaluation criteria and sub-criteria (including weights and thresholds), together with the eligibility, selection and award criteria, for the different funding schemes are set out below.
- Proposals will not be evaluated anonymously.

Indicative evaluation and contractual timetable

The Director-General responsible for the call may publish it up to one month prior to or after the envisaged date of publication.

At the time of the publication of the call, the Director-General responsible may delay this deadline by up to two months.

To be determined on the basis of the publication date and closure date for this call for proposals.

Particular requirements for participation, evaluation and implementation

The minimum number of participating legal entities required, for all funding schemes, is set out in the Rules for Participation¹⁷. A summary of the minimum participation requirements for the instruments used in this call is given in the following table. These participation criteria are also criteria for eligibility of the proposal, and may be elaborated in more detail at the time of the call

Funding scheme	Minimum conditions
Co-ordination and support action	At least 1 independent legal entity
(supporting)	

The following participation criteria are also criteria for eligibility of proposals under this call:

- <u>SiS-2007-3.0.5.1 Descartes prizes for transnational collaborative research:</u> Proposals are to be submitted by a consortium of teams comprising a minimum of two mutually independent legal entities* (organisations or individuals) of which one must be a MS, and the other one from any other country (MS, AC, rest of the world).
- <u>SiS-2007-3.0.5.2 Prizes for Science Communication</u>: Proposals are to be submitted by a legal entity (organisations or individuals) from a MS or AC that is awarding science communication prizes on a national and/or international level ("prize organisers"). The candidates proposed (for whom there are no restrictions as to their nationality) must be winners of a science communication award of such a "prize organiser".

Specific Evaluation Criteria

SiS-2007-3.0.5.1 Descartes prize for transnational collaborative research

- 1. Excellence and quality of the proposal (threshold score 4 out of 5; weighting = 3)
- quality and novelty of the results achieved;
- contribution to addressing key scientific and technological issues.
- 2. European added value (threshold score 4 out of 5; weighting = 1)
- The extent to which the results of the research can only be achieved if carried out at European level and beyond;

¹⁷ MS = Member States of the EU; AC = Associated country. Where the minimum conditions for an indirect action are satisfied by a number of legal entities, which together form one legal entity, the latter may be the sole participant, provided that it is established in a Member State or Associated country

Overall threshold score after application of the weightings: 17 out of 20.

SiS-2007-3.0.5.2 Prizes for Science Communication

- 1. Excellence and quality of the proposal (threshold score 4 out of 5):
- Adequacy, competence and innovativeness of the technical means invested in the communication,
- Accuracy, appropriateness and soundness of the scientific content
- 2. Relevance and impact (threshold score <u>3</u> out of 5):
- Effectiveness of the communication activity in raising the profile of science, engineering or technology, seen through the eyes of the intended public
- Capability of the science communication action to address the main concerns and/or expectations of the European society
- 3. European added value (threshold score 3 out of 5); weighting 2:
- Capability of the communication activity, or of the professional engaged in communication, to offer a model for its transposition into different cultural backgrounds
- Capability of the communication activity or of the professional engaged in communication, to open new lines of thoughts and trigger subsequent initiatives in a wider context

Overall threshold score: 16 out of 20 (after the application of the weighting)

IV INDICATIVE PRIORITIES FOR FUTURE CALLS (2008)

Area 5.1.1.3. Research on the reciprocal influence of science and culture

Science and the City – combining regional and scientific actors, including museums, in promoting a scientific culture.

Area 5.1.1.4. The role and image of scientists

Area 5.1.2.2. Conditions for an informed debate on ethics and science

Creation of a platform of European Ethics Committees – (EUREC)

Area 5.1.2.1. Broader engagement on science-related questions

Area 5.1.3.3. Encouraging the debate on information dissemination, including access to scientific results and the future of scientific publications.

The role of scientific publication in the research system, IPRs, open science

Area 5.2.1.1. Strengthening the role of women in scientific research

- a) Europe wide statistical survey of science graduates and senior researchers to gain a better understanding of issues affecting women's careers in science.
- b) International comparative analysis of Gender Mainstreaming: Identification at European level of national or local schemes aiming at encouraging academic institutions in their mainstreaming of gender issues and promotion of women scientists.

Area 5.2.1.2. Gender dimension of research

Gender and Emerging Technologies: projects will investigate whether the social structures in New and Emerging Technologies repeat the usual scheme like for well established – traditionally male dominated – disciplines, or if women scientists involved in these fields have better opportunities.

Area 5.2.1.3. Mainstreaming gender in EU research policy and programme:

Gender, environment and health (Cross-thematic activity)

Area 5.2.2.2. Reinforcing links between science education and science careers

Call for proposals for actions to establish and reinforce links between science education and science careers, targeting lower secondary up to and including science undergraduates.

5.2.2.3. Research and coordination actions on new methods in science education

Include analysis of young peoples' attitudes towards science (studies)

- 5.3.2 Training actions to bridge the gap between the media and the scientific community (training actions for journalists/scientists and intensive training for scientists).
- 5.3.4 Promoting science by audiovisual means via European co-productions and the circulation of science programmes

Area 5.3.6. Research aimed at enhancing science communication in its methods and its products.

Cultural differences in public understanding of science, and access to information (including ethnic minorities).