EUROPEAN COMISSION

Integrating and strengthening the European Research Area

Scientific Support to Policies (SSP)

2005 WORK PROGRAMME (SP1 – SSP5)

COVERING CALLS:

SSP 5A and

SSP-5B INFLUENZA

Directorate-General for Research
Scientific Support to Policies

1. GENERAL INTRODUCTION

1. General

Following the adoption of the specific programme for research, technological development and demonstration: "Integrating and strengthening the European Research Area"[1] and the rules of participation and dissemination[2] under the EC Treaty, the Commission adopted and updated as appropriate, with the assistance of the programme committee, this work programme which sets out in greater detail the objectives and technological priorities and the timetable for implementation of the specific programme.

As regards the **Priority Thematic Areas of Research**, integrated projects and networks of excellence are recognised as being an overall priority means to attain the objectives of critical mass, integration of the research capacities, management simplification and European added value.

These instruments are being used in each theme and, where deemed appropriate, as a priority means, while maintaining the use of specific targeted projects and co-ordination actions.

In terms of participation of the Community in programmes undertaken by several Member States (Article 169 of the Treaty), this is only foreseen, at this stage, in the priority thematic area of research addressing 'Life sciences, genomics and biotechnology for health'.

More information on the provisions for implementing the new instruments (integrated projects and networks of excellence) is available on Cordis (*http://www.cordis.lu/fp6/instruments.htm).*

Regarding research activities in areas involving **Specific Activities Covering a Wider Field of Research**, these are being implemented, at this stage, using specific targeted research projects, co-ordination actions, and specific research projects for small and medium sized enterprises (SMEs).

Concerning **Strengthening the Foundations of the European Research Area**, the implementation is mostly done through specific targeted research projects, specific support actions, and co-ordination actions.

Specific support actions, including calls for tender, and co-ordination actions may be applied throughout the programme.

In updating this work programme, the Commission has relied on advice mainly from advisory groups. More information on the list of members of the advisory groups is available on Cordis. These groups of independent high-

[1] OJ L 294, 29.10.2002, p. 1.
[2] OJ L 355, 30.12.2002, p. 23.

level experts have been set up to advise on the implementation of Community research policy. The experts are renowned for their knowledge, skills and top-level experience in the field or regarding the issues to be dealt with by the groups.

2. Scope of Work Programme

The scope of this work programme corresponds to that defined in the specific programme. The calls for proposals planned within this work programme are those foreseen to close in 2006. Annex A gives an overview of these calls.

3. Cross Cutting Issues

There are several issues that are important to all parts of the work programme. These are addressed here and, as appropriate, elaborated in the various parts. Please note that the work related to statistics in this work programme will be implemented in close co-operation with EUROSTAT, in particular the parts relating to the priority thematic areas "Information society technologies" and "Citizens and governance in a knowledge-based society", as well as the part addressing policy-oriented research under the heading "Specific activities covering a wider field of research".

a) This work programme places special emphasis on the needs of small and medium-sized enterprises (SMEs). In particular, at least 15% of the funding allocated to the Priority Thematic Areas of Research is foreseen for SMEs. In order to reach this objective, special actions are foreseen such as SME specific calls for proposals in the context of the new instruments, reinforcement of National Contact Points, and specific training and take-up measures. In addition, the involvement of SMEs is taken into account in the evaluation criteria particularly for the new instruments. Also the fact that enterprise groupings which represent large communities of SMEs may play an active role in the new instruments will contribute to reaching the above-mentioned objective.

b) Proposers based in Associated States may take part in this programme on the same footing and with the same rights and obligations as those based in Member States. In addition, this work programme underlines the importance of involving associated candidate countries in the Community's research policy and in the European Research Area. Further specific support actions will also be implemented to stimulate, encourage and facilitate the participation of organisations from the remaining candidate countries in the activities of the priority thematic areas. Annex D provides details of these specific measures (in particular that relate to the reinforcement of the Associated Candidate Countries research capacities).

c) International co-operation represents an important dimension of the Sixth Framework Programme. As a contribution to a European Research Area open to the world, it will be implemented in the Sixth Framework Programme through three major routes:

- The opening of "Focusing and Integrating Community Research" to third country organisations with substantial funding,
- Specific measures in support of international co-operation, and
- International activities under the heading of Human Resources in the specific programme for research, technological development and demonstration "structuring the European Research Area".

The first two, as part of the specific programme "Integrating and strengthening the European Research Area", are covered by the present work programme. They also correspond to the second activity referred to in Article 164 of the Treaty, which covers co-operation with third countries and international organisations.

- *Opening of "Focusing and Integrating Community Research" to third country organisations*

Funding is available for the participation of researchers, teams and institutions from third countries in projects within the seven Priority Thematic Areas of Research, as well as under "Specific activities covering a wider field of research". Under this heading, the activities in question have the following overall objectives:

- To help European researchers, businesses and research organisations in the European Union and in the countries associated with the Framework programme to have access to knowledge and expertise existing elsewhere in the world, and
- To help ensure Europe's strong and coherent participation in the research initiatives conducted at international level in order to push back the boundaries of knowledge or help to resolve the major global issues.

Any particular issue concerning the international dimension of the seven Priority Thematic Areas of Research and of the Specific activities concerning a wider field of research is set out in the relevant chapter of this work programme. Annex E on the other hand provides details on the specific measures that are envisaged for the promotion of co-operation with targeted third countries.

Participants from all third countries[3] and from international organisations may take part in all activities under this heading in addition to the minimum number of participants required.

Participants from developing countries, Mediterranean partner countries, Western Balkan countries, as well as Russia and the new independent states (see the list of countries in Annex C) can be funded in all activities under this heading[4].Other third country participants can also be funded in those areas where the relevant part of this work programme makes

[3] Please check on Cordis for further details, including regularly updated information.

[4] 285 million euro has in fact been allocated for participation from the targeted third countries (see Annex C) within the Priority Thematic Areas of Research and specific activities covering a wider field of research.

reference to this possibility or if it is essential for carrying out the research activity.

- *Specific measures in support of international co-operation*

315 million Euro will fund “Specific measures in support of international co-operation”. In support of the external relations, including the development policy, of the Community, these measures target the following groups of third countries: Developing countries, Mediterranean partner countries, Western Balkan countries, and Russia and the new independent states. The activities and calls for proposals under this heading, which are complementary to the opening of the Priority Thematic Areas of Research, are presented in Chapter 10 of this work programme. Requirements for consortium composition are set out in this part.

- *Participation and funding for third country entities under the heading “Strengthening the European Research Area”*

International co-operation with third country partners and international organisations will be actively fostered on all topics which will benefit from such co-operation. Furthermore, third country entities and international organisations can benefit from Community financial contribution. To this end, topics for international co-operation will be specified, where appropriate, in calls. This applies particularly to those third countries with whom co-operation agreements have been concluded. As mentioned above, Annex E provides details on the specific measures that are envisaged for the promotion of co-operation with targeted third countries.

d) Research activities carried out under this work programme must respect fundamental ethical principles and the requirements as stipulated in the decision on the specific programme for research, technological development and demonstration: "Integrating and strengthening the European Research Area". More information on the review procedure is foreseen in the “Guidelines on Proposal Evaluation and Project Selection Procedures” (*http://www.cordis.lu/fp6/eval-guidelines*). Annex B to this work programme also details the issues to be covered in any ethical review.

e) As much as possible and in association with the specific programme for research, technological development and demonstration "Structuring the European Research Area", the mobility of researchers will be promoted, particularly with a view to the successful creation of the European Research Area.

f) This work programme attempts, where possible, to reinforce and increase the place and role of women in science and research both from the perspective of equal opportunities and gender relevance of the topics covered.

g) A particular effort will be carried out to take into consideration the ethical, social, legal, regulatory and wider cultural aspects of the research including socio-economic research, and innovation, resulting from the possible deployment, use and effects of the newly developed technologies or processes and scenarios covered by each of the thematic priorities. This effort will be complemented by socio-economic research carried out within the priority addressing 'Citizens and governance in a knowledge-based society'.

h) In the context of the regular report to be submitted to the European Parliament and the Council, the Commission will continue to report in detail on progress in implementing the specific programme, and, in particular, progress towards achieving its objectives and meeting its priorities.

i) The promotion of innovation is a cross-cutting issue, relevant to the whole European Community RTD Framework Programme. This issue aims to meet the Treaty objective of strengthening the scientific and technological bases of Community industry *and encouraging it to become more competitive at international level*[5].

In this context, an important goal is to promote exploitation of the results of those projects which include R&D components[6]. To this end, consortia should pay sufficient attention to the management of knowledge and pursuit of innovation in their projects. These issues should be well integrated in the proposals through the work content and consortium composition, and will be taken into account during their evaluation7. Projects should involve, where appropriate, end-users and other stakeholders to ensure relevance of the research and effective take-up of results.

In particular, the participants should include in their projects "innovation-related activities", that may be supported by EC funding. Examples of such activities include the protection and management of knowledge and intellectual property, the analysis of socio-economic factors affecting the exploitation of the project's results, feasibility studies for the creation of spin-offs, and other activities to promote knowledge transfer between public research and industry.

During a project, the participants will be requested to report periodically on these issues, in particular by developing and updating throughout the project a *plan for using and disseminating the knowledge*. This plan should describe the innovation-related activities already implemented and those being planned, as well as their actual or expected impact.

[5] EC Treaty, Art. 163.1
[6] As confirmed in the Council decision of 30.9.2002 relating to the specific RTD programme for "Integrating and strengthening the European Research Area" (Annex, section 1.1 – OJ L 294/7)
[7] As stated in Art. 10.1.e of the rules of participation (OJ L 355/28)

Besides these central project-level activities, specific mechanisms will ensure that there is exchange of information and experience between the activities of the different work programmes as regards their innovation dimension, and that the innovation-related achievements be properly analysed, monitored, and evaluated[8].

4. Submitting a Proposal

Proposals should be submitted under the terms of a call for proposals[9]. In order to submit a proposal, a proposer should consult the following:

- This work programme,
- The relevant call for proposals as it is published in the *Official Journal of the European Union*, and
- The relevant Guide for Proposers.

These and a number of other useful texts, including the rules for participation and details on the contracts, are available on Cordis (as referred to above).

5. Cross Cutting Proposals

Proposals are invited to be submitted on the basis of calls for proposals, which are, in the case of the Priority Thematic Areas of Research organised thematically. Proposals that address more than one thematic area will be accommodated by the Commission provided the proposal addresses areas covered by this work programme.

The specific programme is focused on a number of thematic priorities. They encompass a wide range of disciplines and proposals that cut across the boundaries of themes are to be expected. The criterion of relevance to the objectives of the specific programme is a *sine qua non* for the further consideration of such proposals. Furthermore, proposals will not be accepted if they do not fall within the scope of the work programme.

Cross-cutting proposals may be categorised as follows:

- **Proposals with a clear "centre of gravity".** Given the nature of research carried out today, a large proportion of proposals contain some degree of multi-disciplinarity. These are handled by normal submission and evaluation procedures. For proposals which contain a significant technological or thematic element from a different part of the programme, the procedure involves the proposal being treated by the thematic area represented by the greatest proportion of the proposal (ie, its "centre of gravity"). For proposals where the centre of gravity is not immediately

[8] cf. OJ L 294/50, section 2.f of the Annex

[9] Proposals for specific support actions, which do not fall within the scope of a call for proposals, may be submitted to the Commission only when it is provided for in this work programme.

obvious, the Commission will examine the proposal content and decide in which thematic area the proposal is best handled. If a proposal is transferred to a thematic area other than the one to which it was submitted, it will be handled in the framework of the new thematic area. However, if the new centre of gravity does not have an open call at the time of transfer, the proposal will be held over, with the agreement of the proposers, until a suitable call is open, but only if such a call is explicitly foreseen by the work programme. If successful, the proposal will be handled and funded by the thematic centre of gravity.

- **Joint calls for proposals**. In certain fields, it is clear that proposals will always contain a high proportion of interest for different thematic areas. In this instance, the Commission uses calls for proposals issued jointly by two or more programme/thematic areas, with a pooling of budget. This procedure only occurs for well-defined areas where the cross cutting nature of the proposals to be received can be clearly identified in advance.

- **Proposals with horizontal interest**. These relate to proposals which are of general interest to all parts of the specific programme but of no specific interest to an individual part. If such proposals are truly innovative and ground breaking, there is the possibility of referring them to the work programme part that addresses "anticipating scientific and technological needs", once this part is open for the receipt of such proposals. Proposals with a horizontal interest which do not meet this criterion may, if applicable, be handled like proposals with a centre of gravity (see first bullet point).

6. Evaluation Criteria and Related Issues

The "Guidelines on Proposal Evaluation and Project Selection Procedures" describes the basic procedures to be followed by all programmes under the Sixth Framework Programme of the European Community.

The set of criteria applicable to this work programme is given in Annex B. Any complementary criteria are clearly stated in the relevant part of this work programme. Evaluation thresholds for each set of criteria are given in Annex B and apply unless otherwise clearly stated. In addition, Annex B outlines how the following will be addressed: gender issues, ethical and/or safety aspects, and the education dimension.

All proposals before they are selected for funding and which deal with ethical issues and any proposal for which ethical concerns have been identified during the scientific evaluation may be reviewed by a separate ethical review panel. The "Guidelines on Proposal Evaluation and Project Selection Procedures" gives more details on the evaluation procedure as a whole as well as details of the ethical review procedure.

Furthermore, the work programmes, and consequently their calls for proposals, may specify and restrict the participation of legal entities in an indirect action according to their activity and type, according to the instrument

deployed and to take into account specific objectives of the Framework Programme.

Calls for proposals may involve a two-stage evaluation procedure. When such a procedure is employed, this is stated clearly in the call for proposals. More information on this process is given in the "Guidelines on Proposal Evaluation and Project Selection Procedures".

Finally, when evaluating proposals received in response to a call, the Commission may opt to send the proposals to external experts or make proposals available by electronic means, so that the experts can carry out their examination at their home or place of work.

7. Specific Support Actions

Support activities are more limited in scope than the accompanying measures of the previous Framework Programmes. These projects aim to **contribute actively** to the implementation of activities of the work programme, the analysis and dissemination of results or the preparation of future activities, with a view to enabling the Community to achieve or define its RTD strategic objectives. Therefore, a significant emphasis has been placed on Support Actions:

- to promote and facilitate the dissemination, transfer, exploitation, assessment and/or broad take-up of past and present programme results (over and above the standard diffusion and exploitation activities of individual projects);
- to contribute to strategic objectives, notably regarding the European research area (e.g. pilot initiatives on benchmarking, mapping, networking, etc.);
- to prepare future community RTD activities, (e.g. via prospective studies, exploratory measures. pilot actions etc.);

as opposed to awareness and information exchange activities, e.g. annual Workshops and Conferences, that would take place anyway without Commission support. The latter activities will not be welcome if they do not **serve** the programme's strategic objectives, (in the sense of the European Research Area, improved co-ordination, public awareness, preparation of future Community initiatives, etc.).

A limited number of specific support actions may be funded, where such a request does not fall within the scope of a call for proposals, when they have particular characteristics and value to the objectives and the scientific and technological content of the specific programme. Such requests for grants must be for actions of European significance and could, for example, provide support for major policy-related workshops in the context of activities of the rotating Presidency of the Union. They should be submitted at least five months in advance of the event for which support is requested. The evaluation

criteria will be those applicable to specific support actions as laid down in this work programme.

8.1. Policy-oriented research
Scientific Support to Policies (SSP)

Work Programme for calls:

SSP-5A; and
SSP-5B INFLUENZA

Table of contents

A. Common framework

1. Introduction

(1) Overall principles and objectives

The overall objective is to support the formulation and implementation of Community policies, by providing scientific contributions to policies that are targeted precisely on needs ('demand-driven'), coherent across the various Community policy areas, and sensitive to changes in policies as they take place.

Under this part of the programme, research to support Community policies is organised as an integrated activity, according to specific principles which are designed to ensure:

– timely and effective scientific inputs, covering a wider field of policies than in the past, and with the prospect of improved information, exploitation and uptake of results, at national and EU level;

– a coherent research base that reflects the increasing integration of Community policies and of the science that underpins them;

– systematic improvements in the relationship between research and policy at all levels in the EU;

– development of the European Research Area, by encouraging a single 'playing field' in relation to policy-related research.

The activities under this section of the programme are naturally diverse in their subject matter, and will be implemented in such a way as to ensure co-ordination across the various topics and complementarity with the thematic priority areas.

A set of initial research priorities has been defined in the specific programme, on the basis of foreseeable needs, corresponding to an intervention budget of EUR 247.5 million over four years. These initial priorities will be adapted and supplemented during the course of the programme, by means of a programming method that responds to requirements identified by policy makers, taking into account the opinions of the relevant Scientific Committees associated with the policies concerned. An additional allocation, amounting to an intervention budget of EUR 71 million will be available to cover the additional topics so defined.

(2) Generic aspects of implementation

Research projects financed under this activity are expected to respond to the specific requirements of the tasks set out under each of the subject headings.

The tasks often involve a requirement to address different disciplinary aspects, in view of the increasingly integrated nature of Community policies (for example a policy concern such as reform of the common agriculture policy will involve not just

agricultural issues as such, but also environmental, regional development, social, economic and trade dimensions).

Additional information for each task is provided in part B of 8.1. Detailed task descriptions can be found in the relevant guide for proposers.

2. Links to other research topics

Links exist between some initial priorities under SSP and the following priority thematic areas of research. Complementarities among projects to be funded will be identified and possible synergies taken into consideration:

- Life sciences, genomics and biotechnology for health
  - Advanced genomics and its applications for health.
  - Combating major diseases.
- Information society technologies
- Aeronautics and space
- Nano-technologies and nano-sciences, knowledge-based multifunctional materials and new production processes and devices
  - New production processes and devices
- Food quality and safety
- Sustainable development, global change and ecosystems
  - Sustainable energy Systems.
  - Sustainable surface transport.
  - Global change and ecosystems.
- Citizens and governance in a knowledge-based society

3. Implementation plan and related issues

This work programme covers two calls for proposals: SSP-5A and SSP-5B INFLUENZA. For the, SSP-5A, it is envisaged that up to one project will be funded for each task. While projects addressing the different tasks of a given area (as defined under section 8 of the call fiche), or clusters of projects across areas where they exist, will be evaluated together, the ranking of projects will be conducted on a task by task basis. For a given task, the best proposal meeting all the evaluation thresholds will be ranked before any second best proposal for another task. When tasks are subdivided (task x, task x bis, task x ter, etc.), up to one project per subdivision may be funded and co-ordination among the projects selected will be ensured. For SSP-5B INFLUENZA, the tasks have also been elaborated with the notion that more than one project might be selected for funding under each task.

4. Roadmap

Call	Publication	Closure	Areas
5A	2005	2006	1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-7, 3-2, 3-3, 3-4, 3-6

Call	Publication	Closure	Areas
5B INFLUENZA	2005	2006	1-4, 2-2

5A. Call information: SSP-5A

1. **Specific Programme:** 'Integrating and strengthening the ERA'

2. **Activity:** Specific activity covering policy-orientated research under 'Policy support and anticipating scientific and technological needs'

3. **Call title:** Scientific Support to Policies

4. **Call identifier :** FP6-2005-SSP-5A

5. **Date of publication:** 22 December 2005[10]

6. **Closure date(s):** 22 March 2006 at 17.00 (Brussels local time)[11]

7. **Total indicative budget:**

Instrument[12]	€ (millions)
STREP, CA and SSA	77.0

8. **Areas called and instruments:**

Areas under priority 'Sustainable management of Europe's natural resources'	**Tasks**	**Instruments**	**Indicative EC contribution (EUR millions)**
8.1. B.1.1. Modernisation and sustainability of agriculture and forestry, including their multifunctional role in order to ensure the sustainable development and promotion of rural areas and 8.1. B.1.2. Tools and assessment methods for sustainable agriculture and forestry management	1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 14, 15, 16, 20, 21, 24, 26	STREP	13.2

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

[11] Where the envisaged date of publication is either advanced or delayed, the deadline may be adjusted accordingly

[12] STREP = Specific targeted research project; CA = Coordination action; SSA = Specific support action

	10, 11, 17, 18, 19, 22, 23, 25, 27, 28, 29	SSA or CA	
	6, 30	CA	
8.1. B.1.3. Modernisation and sustainability of fisheries, including aquaculture-based production systems.	1, 2, 3, 4, 5, 6, 8, 9, 10, 11	STREP	13.6
	7, 12	CA	
	13	SSA	
8.1. B.1.4. New and more environment friendly production methods to improve animal health and welfare including research on animal diseases such as foot and mouth disease, swine fever and development of marker vaccines	1	CA	1.3
	2	STREP	
	3, 4, 5	SSA	
8.1. B.1.5. Environmental assessment (soil, water, air, noise, including the effects of chemical substances)	1, 2, 4, 5, 6, 8, 9	STREP	6.9
	3	SSA	
	7	CA	
8.1. B.1.6. Assessment of environmental technologies for support of policy decisions, in particular concerning effective but low-cost technologies in the context of fulfilling environmental legislation	1, 3	STREP	1.3
	2	CA	
Areas under priority 'Providing health, security and opportunity to the people of Europe'	**Tasks**	**Instruments**	**Indicative EC contribution (EUR millions)**
8.1. B.2.1. Health determinants and the	1, 4, 6	STREP	7.4 – 7.9
	2 ,3, 7	CA	

provision of high quality and sustainable health care services and pension systems (in particular in the context of ageing and demographic change)	5	SSA	
8.1. B.2.2. Public health issues, including epidemiology contributing to disease prevention and responses to emerging rare and communicable diseases, allergies, procedures for secure blood and organ donations, non-animal test	1, 2, 3,	STREP	5.3 – 5.8
	4	CA	
	5	SSA	
8.1. B.2.3. The impact of environmental issues on health (including safety at work and methods for risk assessment and the mitigation of risks of natural disasters to people)	1, 3	STREP	2.5
	2	CA	
8.1. B.2.4. Quality of life issues relating to handicapped/disabled people (including equal access facilities)	1, 2	SSA	0.7 – 0.8
8.1. B.2.5. Comparative research of factors underlying migration and refugee flows, including illegal immigration and trafficking in human beings	1, 2	STREP or CA	1.0 – 1.5
8.1. B.2.6. Improved means to anticipate crime trends and causes, and to assess the effectiveness of crime prevention policies; assessment of new challenges related to illicit drug use	1, 2, 3	STREP or CA	1.5 – 2.25
8.1. B.2.7. Issues related to civil protection (including biosecurity and protection against risks arising from terrorist attacks), and crisis management	1	SSA	0.5

Areas under priority 'Underpinning the economic potential and cohesion of a larger and more integrated European Union'	**Tasks**	**Instruments**	**Indicative EC contribution (EUR millions)**
8.1. B.3.1. Underpinning European integration, sustainable development, competitiveness and trade policies (including improved means to assess economic development and cohesion)	CLOSED	CLOSED	CLOSED
8.1. B.3.2. The development of tools, indicators and operational parameters for assessing sustainable transport and energy systems performance (economic, environmental and social)	1, 5, 6	STREP	9.6
	2, 3, 4, 7, 8, 10	SSA	
	9	CA	
8.1. B.3.3. Global security analysis and validation systems for transport and research relating to accident risks and safety in mobility systems	1	SSA	1.1
8.1. B.3.4. Forecasting and developing innovative policies for sustainability in the medium and long term	1, 3, 4, 5, 6	STREP	3.9
	2	SSA	
8.1. B.3.5. Information Society issues (such as management and protection of digital assets, and inclusive access to the information society)	CLOSED	CLOSED	CLOSED
8.1. B.3.6. The protection of cultural heritage and associated conservation strategies	1, 2, 4, 5	STREP	4.0
	3	CA	

	6, 7	SSA	
8.1. B.3.7. Improved quality, accessibility and dissemination of European statistics	CLOSED	CLOSED	CLOSED

9. Minimum number of participants[13]:

Instrument	Minimum number of participants
STREP and CA	3 independent legal entities from 3 different MS or AS, with at least 2 MS or ACC.
SSA	1 legal entity from a MS or AS

10. Restriction on participation: None.

11. Consortium agreement: participants in RTD actions resulting from this call are not required to conclude a consortium agreement.

12. Evaluation procedure:

The evaluation shall follow a single stage procedure.

Proposals will not be evaluated anonymously.

13. Evaluation criteria: See Annex B of the work programme for the applicable criteria (including their individual weights and thresholds and the overall threshold) per instrument.

14. Indicative evaluation and contractual timetable:

Evaluation Results: Considering the wide scope of SSP and the need to ensure coherence with thematic priorities of the work programme, evaluations will be carried out at various dates and the results are not expected to become available earlier than July 2006.

Contract signature: it is estimated that the first contracts related to this call will come into force in the final quarter of 2006.

[13] MS = Member States of the EU; AS (incl. ACC) = Associated States; ACC = Associated candidate countries.
Any legal entity established in a Member State or Associated State and which is made up of the requested number of participant may be the sole participant in an indirect action.

5B. Call information: SSP-5B INFLUENZA

1. **Specific Programme:** 'Integrating and strengthening the ERA'

2. **Activity:** Specific activity covering policy-orientated research under 'Policy support and anticipating scientific and technological needs'

3. **Call title:** Scientific Support to Policies: Special call on avian / pandemic influenza

4. **Call identifier :** FP6-2005-SSP-5B-INFLUENZA

5. **Date of publication:** 22 December 2005[14]

6. **Closure date(s):** 22 March 2006 at 17.00 (Brussels local time)[15]

7. **Total indicative budget:**

Instrument[16]	€ (millions)
STREP, CA and SSA	20

8. **Areas called and instruments:**

Areas under priority 'Sustainable management of Europe's natural resources'	**Tasks**	**Instruments**	**Indicative EC contribution (EUR millions)**
8.1. B.1.4. New and more environment friendly production methods to improve animal health and welfare including research on animal diseases such as foot and mouth disease, swine fever and development of marker vaccines.	1, 2, 3, 5	STREP	10
	6	CA	
	4	STREP or CA	

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

[15] Where the envisaged date of publication is either advanced or delayed, the deadline may be adjusted accordingly.

[16] STREP = Specific targeted research project; CA = Coordination action; SSA = Specific support action

	7	CA or SSA	
Areas under priority 'Providing health, security and opportunity to the people of Europe'	**Tasks**	**Instruments**	**Indicative EC contribution (EUR millions)**
8.1. B.2.2. Public health issues, including epidemiology contributing to disease prevention and responses to emerging rare and communicable diseases, allergies, procedures for secure blood and organ donations, non-animal test	1, 2, 3	STREP	10
	4	SSA	

9. Minimum number of participants[17]:

Instrument	Minimum number of participants
STREP and CA	3 independent legal entities from 3 different MS or AS, with at least 2 MS or ACC.
SSA	1 legal entity from a MS or AS

10. Restriction on participation: None.

11. Consortium agreement: participants in RTD actions resulting from this call are not required to conclude a consortium agreement.

12. Evaluation procedure:

The evaluation shall follow a single stage procedure.

Proposals will not be evaluated anonymously.

13. Evaluation criteria: See Annex B of the work programme for the applicable criteria (including their individual weights and thresholds and the overall threshold) per instrument.

14. Indicative evaluation and contractual timetable:

[17] MS = Member States of the EU; AS (incl. ACC) = Associated States; ACC = Associated candidate countries.
Any legal entity established in a Member State or Associated State and which is made up of the requested number of participant may be the sole participant in an indirect action.

Evaluation Results: Considering the wide scope of SSP and the need to ensure coherence with thematic priorities of the work programme, evaluations will be carried out at various dates and the results are not expected to become available earlier than July 2006.

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B 1. Research priorities under Call SSP5-A

1. Sustainable management of Europe's natural resources

1.1. Modernisation and sustainability of agriculture and forestry, including their multifunctional role, in order to ensure the sustainable development and promotion of rural areas

Policy context: Orientation, objectives and challenges of the Community policy area

On 26 June 2003, EU farm ministers agreed on a fundamental reform of the Common Agricultural Policy (CAP) and new measures have been put in place since January 2005.

This reform package makes significant changes to the way the EU supports its farm sector. The new CAP is geared towards consumers and taxpayers, whilst giving EU farmers the opportunity of being more responsive to market signals.

In future, the vast majority of subsidies will be paid independently from the volume of production. Member States may choose to maintain a limited link between subsidy and production under well defined conditions and within clear limits. These new 'single farm payments' will be linked to the respect of environmental, food safety and animal welfare standards. Removing the link between subsidies and production will make EU farmers more competitive and market orientated, while providing the necessary income stability. In addition, the new system is supposed to be favourable to the external dimension of sustainable development, to which the EU is committed, by reducing the likelihood of negative impacts on developing countries.

The successful implementation of these new orientations can be facilitated by support through strategic policy oriented research.

Additionally, in the WTO negotiations, the basic rationale for the Doha Development Agenda (DDA) remains valid and, following the agreement on a framework for modalities as to how to liberalise farm trade, the EU's objectives are maintained. In order to support the WTO process, a wide range of policy options has to be taken into account, solidly supported by scientific analyses. Therefore, research is needed to support the preparation of these options.

The Community has also embarked on further regional agreements. A new European Neighbourhood Policy has been launched, with the major objective of creating conditions for a free trade area by 2010, moving towards a common economic area. Agriculture and rural development, due to their importance in the partner countries in terms of GDP share, percentage of labour force and rural population, are key elements for achieving this objective. Similar considerations apply, to a different extent, to other EC initiatives, notably in relation to ACP countries.

The research orientations 2006 reflecting these changes are:

Research in support of international negotiations

In supporting the goals of the Doha Development Agenda (DDA) the EU, among other constructive efforts to this end, is preparing to adjust or refine its approach in a number of specific areas of trade and 'Non Trade Concerns' (NTCs). Alternatives have to be explored and policy options developed concerning the approach to trade, as well as NTCs such as rural development, environment and geographical indications, aimed at improving understanding of the international dimension of these issues and reducing reticence to negotiations in these areas. In particular, given the acceleration of international trade and globalisation, together with the reform of EU agricultural policy, research is needed into issues surrounding major emerging trade partners (e.g. India, China) which are able to compete with the EU and other important traditional traders from the developed world (US, Australia, etc.). The potential for smaller and more fragile countries in the developing world needs exploring, as well as the risks to which they could be exposed.

Fifth call tasks

Task 1 - Trade and agricultural policies - India. India is a leading world agricultural producer and consumer. Depending on factors affecting demand and supply, its net trade position can quickly change and have a significant impact on world commodity markets.
The research should provide a qualitative and quantitative analysis of future developments in Indian supply, demand and trade of main agricultural commodities. The aim is to evaluate the impact that domestic structural changes and trade agreements (WTO, Generalised System of Preferences (GSP)) may have on the EU and Indian agricultural sectors as well as on world markets.
Special emphasis should be put on agricultural trade with the EU, taking into account the likely outcome of the Doha Round and the Community's future GSP scheme for 2006 to 2015[18]. The work shall provide a comparison of agricultural trade prospects with other developed countries, including under their GSP schemes. Similarly, the project should examine prospects for regional trade, including with the countries benefiting from the Everything but Arms agreement with the EU, and the likely consequences for the accumulation of origin under EU preferential agreements. Ongoing work carried out on India by international organisations, especially the OECD and FAO should be taken into account.

Task 2 - Trade and agricultural policies – China. China is a leading world agricultural producer and consumer. Since its accession to the WTO in 2001, its net agricultural trade position has changed and its impact on world agricultural commodity markets has increased. The evolution of its agricultural sector will be influenced by both domestic and international developments, particularly the outcome of the Doha Development Round.

Within this framework, research should concentrate on quantitative and qualitative analysis of the impact of Chinese agricultural trade and market policies on world agricultural markets. It should evaluate the potential impact of changing rural

[18] Commission Communication COM(2004) 461 of 7.7.2004 « Developing countries, international trade and sustainable development : the function of the Community's generalised system of preferences for the ten year period from 2006 to 2015".

structures and future developments in Chinese supply, demand and trade patterns for main agricultural commodities. Particular attention should be paid to China's agricultural trade relations with the EU, taking into account the Community's future GSP scheme[19] for 2006 to 2015 and to agricultural commodities significant to world, EU and Chinese agricultural markets (i.e. cotton, fruit & vegetables and grains). The possible effects of agricultural trade agreements involving China (i.e. WTO) should also be covered, as should their impact on world markets, domestic development patterns and other developing countries. The analysis should take into account the ongoing studies on China carried out by other international organisations.

Task 3 - Foresight analysis for world agricultural markets (2020) and Europe. Foresight analysis is needed to understand the consequences for the European production base and for the future of European rural areas in the coming decade. Factors of particular interest should include the CAP reform, the Doha Development Round, the further liberalisation of agricultural markets and the emergence of new agricultural exporting regions, environment-related international agreements. Technological developments, climate change and the evolution of consumer expectations should also be considered. The project should develop scenarios supported by either quantitative or qualitative analysis for relevant initiatives at EC level.

Supporting CAP market reform

Reduction of market support and protection / Decoupling of direct payments

The reduction of market support and protection, along with the introduction of the single farm payment, will enable the farming community to react to market signals instead of incentives from subsidies. These changes require solid models for internal (EU 25) and world market analysis, including research on marketing and the food chain.

Fifth call tasks

Task 4 - Effects of regionalisation/decoupling on potatoes and vegetables. As from 2005, in the Member States opting for regionalisation, farmers may be entitled to receive payments on the portion of their land cultivated with potatoes and/or vegetables. The decoupled nature of these entitlements leaves farmers free to choose between different activities. Variables such as cost structures, returns and risks will affect their decision. It is therefore necessary to analyse in the framework of a research project the effects of regionalisation/decoupling on potato and vegetable markets, possible changes in production decisions, and observed and potential consequences for trade in the EU.

Task 5 - Analysis of the food industry – development of analytical tools and methods. The economics and future development of the EU agricultural sector, food industry and rural areas are intricately interwoven. There is a need to develop

[19] Commission Communication COM(2004) 461 of 7.7.2004 « Developing countries, international trade and sustainable development : the function of the Community's generalised system of preferences for the ten year period from 2006 to 2015".

quantitative and qualitative tools and methods for analysing the food chain and food industry in the EU, with regard to its structure, competition, concentration, dynamics, economic performance (including strategy and competitiveness), its regulatory and institutional environment and the main drivers of change (regulatory, economic, social and technical) with a view to assessing its interaction and integration with the agricultural sector. Specific attention should be paid to: the economics of the food supply chain by main sub-sector and the influence of the pattern and level of integration on its economic performance; the contribution to and influence of the food chain on the socio-economic development of rural areas (notably remote rural areas and mountainous rural areas); the influence of agricultural policy on the performance and development of the food chain (notably instruments linked to market and trade policies, to food quality issues – food standards, labelling, quality assurance etc. - and rural development).

Task 6 - Crop specific concerted action – permanent crops, non food or alternative crops. The removal of the link between subsidy and production will allow the Union's farmers to be more competitive and more market-orientated in their activities. This opens the way to diversification and the introduction of more competitive crops. Research is needed to reinforce the competitiveness of crops now cultivated, as well as for the development and promotion of alternative crops including cost benefit analysis tools. The concerted action should address viticulture, non-food crops or other alternative crops and include scientists and users of research (from the consumer to the farmer).

Task 7 - Mountain quality-food products – consumer preferences and policy needs. The new orientation of the Common Agriculture Policy enhances a 'market driven' type of production where European Union farmers will be expected to respond to market signals. However, they are still expected to contribute to a living countryside (including environmental, social and cultural aspects). These two contrasting views have particularly deep implications for European mountain areas, insofar as adding value to food products is a prerequisite for the survival and the management of rural and cultural mountain diversity. The task objective is to assess the perception and interest of European consumers in mountain quality-food products. In parallel, and as a way of reaching the consumer, the strategic opportunities offered by certain types of distribution channels need to be evaluated. The results of the studies could lead to a proposal for a harmonised European communication on these products and their positive externalities. Finally, the process would necessarily also make notes on the European regulatory and subsidy environment regarding the promotion and labelling of local products.

Task 8 - On-farm research – seeds breeding. The international treaty on plant genetic resources, the growing consumers demand for locally produced food, as well as the increasing awareness of the need to preserve endangered agro-biodiversity, has increased the demand for seeds of land races, speciality and conservation varieties. However, strict rules for marketing of seeds set in Directive 98/95/EC and the small market niches for such varieties with limited interest for commercial companies to invest have threatened the survival of local varieties. Therefore the Commission is preparing a directive to facilitate the marketing of seeds of landraces, conservation varieties and special 'amateur' varieties. In preparation of this directive research

should focus on the development of methodologies for breeding strategies involving all relevant actors, in particular with regard to on-farm breeding and seed production.

Task 9 - Assessing sustainability of farms. Achieving sustainability means meeting three challenges: an economic challenge (by strengthening the viability and competitiveness of the agricultural sector); a social challenge (by providing a security/safety net and by improving living conditions in rural areas); and an ecological challenge (by promoting good environmental practices as well as the provision of services linked to the maintenance of habitats, biodiversity and landscape). The aim of the research project would be to develop an approach to assessing the sustainability of different farms, basically by using existing data bases, e.g., the Farm Accountancy Data Network (FADN) in combination with specific supplementary recordings to cover biodiversity and social sustainability. The tool should build on existing European tools for farm level environmental and sustainability assessments.

Task 10 - Scientific support to the EU cotton regime. In the framework of the last CAP reform the Council adopted, in June 2004, a substantial reform of the Common Market Organisation in the cotton sector. Given the background of a world market crisis and initiative of African countries the EU and African countries adopted an EU-Africa cotton partnership in Paris in July 2004. The cotton situation has been radically modified by the globalisation of the market, the end of textile quotas, the continuing intensification of production, the emergence of new producers and shifts in consumption. The task is to organise workshops / conferences bringing together scientists, policy makers, producers, consumers and other relevant stakeholders to support the establishment of a network of ongoing research and expertise to monitor the mechanisms and effects of the new EU cotton regime covering particularly the situation in the EU and other high income countries acting in the cotton sector. The objective is to assess the impacts of EU reforms and future of the sector.

Task 11 - Workshops and conferences on scientific support to policies. The aim of the task is to organise workshops / conferences bringing together scientists, policy makers, producers, consumers and other relevant stakeholders to discuss the achievements of scientific support to agricultural policies in Europe, as well as future needs.

Cross-Compliance

The single farm payment is linked to the '**conditionality**' of respecting environmental, food safety, plant health and animal welfare standards, as well as a requirement to keep all farm land in a satisfactory agricultural and environmental condition ('**eco-conditionality**'). Research is essential to further develop organic farming systems and to provide appropriate low transaction cost options for implementation in the Member States, taking regional differences into account.

Fifth call tasks

Task 12 – Analytical tool for the evaluation of the impact of cross-compliance. Cross-compliance means that agricultural producers have to comply with environmental, veterinary and other requirements to qualify for support schemes. This comes at a cost of various documentation and reporting requirements and may

influence the strategic behaviour of farmers and administrative bodies, as well as the competitiveness of the agricultural sector. There is a need to evaluate the full impact of using the cross compliance concept in terms of the objectives of the CAP, by analysing the effect on e.g. land use, landscape and biodiversity maintenance, agricultural markets and the producer's income. Research would develop an analytical tool allowing the impact of cross compliance to be assessed. It would further carry out an evaluation of the impact of cross-compliance since 2005, at regional/national level.

Widening the scope of rural development

A living countryside is essential for farming, as agricultural activity is essential for a living countryside. Rural development policy is therefore no longer based on agriculture alone. Increased diversification, innovation and value added of products and services, both within and beyond the agricultural sector, are indispensable in order to promote integrated and sustainable rural development. Rural development policy has therefore been reinforced by CAP reform, with access to additional funds. The reform is characterised by new measures designed to promote a living countryside, to preserve its diversity and to ensure restructuring and the improved competitiveness of the farming sector. For the next programming period (2007-2013) a new rural development regulation will provide support through the European Agricultural Fund for Rural Development. It will address innovation and restructuring needs in farming and forestry activities, improve environmental protection and aim to create more jobs and opportunities in rural areas. It will reduce the existing multiplicity of programmes and financial instruments into a single framework and will be able to respond to citizens' concerns for food safety and quality and their demand for rural amenities. Furthermore, it considers farmers within the food chain, land management issues, and the needs of farmers and the wider rural population.

Scientific support for rural policies, with regard to the increased scope, diversification, innovation and value added of products and services, calls for analyses that are sufficiently interdisciplinary, holistic and quantitative to provide useful input into the new programming period.

Fifth call tasks

Task 13 - Analysis of conceptual aspects of sustainable and integrated rural development. The EU has increasingly opted for a wider approach in its rural development policies, expanding from an initial focus on farm structures to include food chain aspects, forestry, environmental issues and the countryside, diversification of the rural economy and the quality of life in rural areas. It has also mainstreamed a local development approach, based on integrated actions, public-private partnerships, an area-based and bottom up approach. A key theme for research, strengthened by this widening of the rural policy area, is the mutual interactions that take place between agriculture, the environment and other aspects, social and economic, of the wider rural development processes.

Task 14 - New methods for calculating premiums in the rural development measures. The current set of rural development measure composes a wide range of annual payments to compensate beneficiaries for higher production cost and income

losses resulting from natural and other handicaps, from compulsory management restrictions or from voluntary commitments to apply certain production methods going beyond good farming or animal husbandry practices. The calculation levels of payments are based on generalised assumptions. This may lead, in individual situations, to over- or under- compensation. In addition calculation methods vary between the different Member States. Research will include an analysis of current methods and proposals for new, more harmonised and efficient methods, such as the elaboration of methodological grids that are based on objective and quantifiable criteria.

Task 15 - Foresight analysis of EU rural areas. Research should be carried out to analyse long term trends and patterns in the evolution of rural areas in Europe from a territorial perspective. Major factors for sustainable rural development should be identified, taking into account the relationships between regional, urban and rural policies, and between social (including social exclusion issues), economic and environmental policies, and the effect of restructuring of the global economy, trade liberalisation, global environmental change, market reorganisation / diversification in agriculture (tourism, on-farm processing etc). Research will be carried out to identify the role of different forms of governance and institutional cooperation on the diffusion of new information and communications technologies in rural economies.

Task 16 - Social factors and structural change in agriculture, taking special account of the new Member States. Whilst unemployment in rural areas is high and increasing, labour migration and the abandonment of agriculture could aggravate social imbalance and unrest. Research should lead to policy recommendations to valorise agricultural activities, in view of their social function.

Task 17 - Agricultural Practices, climate change and rural development. The specific support action or concerted action should assess the effectiveness for climate change mitigation of a range of possible changes to agricultural practices (for example to be funded under the agro-environment part of Rural Development, or introduced as part of Member States' measures to implement cross-compliance obligations relating to soil and keeping land in good agricultural and environmental condition). The analysis would not include major changes in land use such as a switch to growing biomass crops, afforestation, or significant changes in livestock production approaches, but would focus more on less substantial changes to existing agricultural practices which might be funded under the agro-environment part of rural development (such as zero- or reduced-tillage techniques, use of deep-rooting crops, different types of set-aside, conversion of arable to grassland including field strips, improved rotations, winter cover, maintenance of terraces, etc.).

Task 18 - Adaptation of agriculture to climate change. Climate change affects food production in the EU, and throughout the world extreme weather phenomena will increase. Global warming will change the disease and pest patterns. Of all our human systems, none is more exposed to climate variability and change than agriculture. However, within limits, our agricultural systems have shown a considerable adaptive capacity to climate. The project should be directed towards the following questions:

What adaptation options in the area of farm production practices are technically feasible and economically viable? What are the proposed adaptation strategies for climate-related pest and disease risks and what impacts could these strategies have environmentally and economically? What is the production feasibility and timetable

for producing alternative crops in different areas of Europe as the climate changes? What factors constrain adaptation? What opportunities exist for co-benefits? How can Climate Change adaptation issues be integrated into management strategies and into agricultural policy?

Task 19 – Innovation and know-how transfer in rural development. In the process of further integrating the Lisbon agenda into rural development policy, innovation will be the key for creating employment in- and out-side agriculture. Research should focus on facilitating innovation and access to research and development to increase the competitiveness of Europe's farming, agri-food and forestry sectors. The project should include a review of methods to codify and disseminate know-how and innovation in this environmental technologies field and a review of processes which have led or could lead to the development of innovations for the provision of services in rural areas.

Task 20 - Analysing the territorial impact of agriculture on the European rural areas on the basis of sustainability indicators. About 90% of European land is non-urban rural space. These rural areas are of crucial importance to the quality of everyday life of the European citizen. But the rural space is vulnerable and its economic, social and environmental sustainability is at danger without adequate policies. These policies have to be as effective and efficient as possible because the available budget for the sustainability of European rural space is small compared with the challenges that it faces. The research will deal with the relative sustainability impact of agriculture on the European rural territory, through a comparative study of areas faced with a similar challenge to sustainability. A 'challenge' corresponds to a good (sustainability asset) to which value is attached by actors and whose characteristics may be threatened or improved. These sustainability assets can be environmental in the broad sense (e.g. biodiversity, water quality, landscape) or socio-economic (e.g. product quality, employment, possibility to make a living, working conditions, contribution to tourism and leisure industry). The possibilities of the rural space to contribute to the renewed Lisbon agenda should also be taken into account.

Sustainable agriculture production systems: development of a basis for policies to promote sustainable, quality-based agriculture production systems, including non-food agriculture, and their interactions

Research activities will focus on improving sustainable, quality-based crop and animal production systems (including non-food products and uses) and developing techno-economic references to support EU legislation. Research support is needed for the following fields:

Research into the further development of EU legislation on organic farming, specifically research issues arising from the annexes to the EU regulation on organic farming:

Fifth call tasks

Task 21 - Societal Benefits of Organic Farming. Consumer fears, triggered by food scares and technological developments such as genetic modification and food irradiation, have translated into a serious concern about food safety, ever increasing demands for quality assurance and more information about production methods. Whilst there is already scientific evidence of organic farming's positive impact on the environment, so far no scientific knowledge is available on the corresponding societal cost and benefits. Furthermore, no research has so far analysed the cross-sector effects of organic farming on the entire economic system of the EU. Research under this task would therefore aim to identify organic farming's multiple functions and seek to provide a detailed insight into the corresponding economic, environmental and social impacts of both the present level of organic farming and under scenarios for larger scale conversion into organic farming in Member States. Development of a common methodology to estimate the corresponding costs and benefits of organic farming, at farm level, and for the entire economic system. Research is aimed at recommendations and strategies for policy makers to explore and optimise the regulatory framework of the CAP with respect to organic farming's multifunctional benefits.

Task 22 - Livestock breeding. The sustained pressure for high quality foods produced in sustainable farming systems while protecting the environment and rural economies, puts continued demands on developing the breeding of suitable livestock (including poultry and fish). Uptake by industry of highly productive breeds, can lead to reduced biodiversity at the same time that changing demands require that an ever wider range of traits need to be exploited. New biotechnologies, in particular those related to genomics, offer new potential for exploiting biodiversity in a sustainable way, and provide potential new breeding tools while offering new options to increase animal welfare. Europe has been a leader in the field of animal breeding and developing the competitiveness of industry which is important for the diversity of European model of agriculture. The aim of this task is to bring together relevant stakeholders (industry, public authorities, research community, regulators, livestock, producers, civil society, consumers, funding bodies etc) to explore the possibility of launching a technology platform to develop tools to exploit biotechnologies to support and develop sustainable livestock breeding that is sustainable and takes animal welfare into account. It will also aim to establish a vision paper and define a strategic research agenda. The SSA would mainly consist on organisation of conferences, working groups and expert groups.

Task 23 - Sustainable use of soil related to different agricultural practices – Thematic Strategy on Soil. Numerous methodologies are used in the Member States to assess the risk for different soil threats (erosion, salinisation, organic matter decline, compaction and landslides) related to various agricultural practices. These methodologies are based on different approaches, are fed with different parameters and sometimes different values are used for the same parameter. The task of this SSA would be to review the current risk assessment methodologies, assess the differences and provide scientific support in exploring which parameters could and should be harmonised among the Member States. For the parameters which should not or could not be harmonised, scientific guidelines should be provided to support the choice of a certain approach. The SSA shall address the methodologies used to identify geographical areas at risk from these threats.

Task 24 - External costs of pesticides. Some Member States follow concepts to internalise external costs of pesticides. Research is needed to assess the value of such approaches. The project should (i) sum up true external costs and benefits of pesticide, use for the operators, the environment and the consumer, and develop options / criteria for a system of taxes/levies on pesticides to internalise these external costs; (ii) study the potential of incentives to implement the substitution principle to pesticides (preferred use of products with lower risks to human health and the environment) and (iii) study the feasibility of such a system.

Task 25 - IPPC Directive: The European Directive on Integrated Pollution Prevention and Control (Council Directive 96/61/EC) presents new requirements for the installation and operation of livestock management installations. In the future, the technology standard of these installations must comply with the 'Best Available Techniques (BAT)', the purpose of which is to assure compliance with the transmedia approach of the IPPC Directive. An international information exchange process is established in order to define BAT Europe-wide and to update it every three years. Research is needed to support the IPPC implementation and produce guidelines.

Task 26 – Pepino Mosaic Virus. The research will deliver increased knowledge of the epidemiology and likely economic impact of Pepino Mosaic Virus in the EU context. The objective is to provide a rigorous pest risk analysis of Pepino mosaic virus. This is required to underpin the existing legislation and to help the consideration of any necessary amendments. It is particularly important that the partnership should cover all Member States considered to be at risk.

Task 27 - Quarantine organisms, not yet spread in the EU or in adjacent countries but with a potential to spread within the Community. The project should aim at coordinating on-going research activities at national level with the view to providing improvements in knowledge of epidemiology and economic impact of the chosen organism in support of the existing legislation and its possible amendment.

Task 28 – The development of bio-refineries and the implications for agriculture and forestry policy. Currently over 90% of EU arable land is used for food production and primary extraction and processing refineries are usually located close to the production areas. Through agricultural and market reforms more of this land could ostensibly become available for the growing of alternative non-food crops. The idea behind the 'bio-refinery concept' is to further develop existing 'food based' bio-refineries such as sugar oil and grain processing facilities, or to develop completely new installations, which could dry and fractionate the whole biomass crop into its appropriate primary feedstock state and further process it into sustainable products such as polymers, chemicals, fuels, and heat and power. By producing multiple outputs outside of the standard 'food chain' a bio-refinery would maximise the value derived from biomass feed stocks and optimises the cost-effectiveness of its product.

A specific support action is thus sought which reviews the potential of the bio-refinery concept in the EU.

Sustainable forestry

Forests and their diversity are an important part of the European natural environment and their protection and conservation fall within the scope of a number of Community policies and international agreements. They are also the basis for an economically important industrial sector in the Union and for the development of rural areas. Research activities will not only analyse the various social, ecological and economic aspects of forest policies in the Member States and Candidate countries, but will also take into consideration their relation to the CAP, land use policies and rural development.

Fifth call tasks

Task 29 - Structuring future research in the EU forestry sector. The recently launched Forest-Based Sector Technology Platform has published a vision paper 2030. A key element to reach the ambitious goal of that vision is to set up and implement a strategic research agenda. The objective of this task is to give support to the further development of a well coordinated network within the EU forest based sector (including forest resources, woodworking industries and pulp, paper and board sub-sectors). In addition to the existing cross-sectional networks in some countries this network should focus on a European interface between research, industry, policy and practice. The SSA would mainly help to organise conferences, stakeholder and expert meetings, and training seminars as well as to set up related information and communication technologies.

Task 30 Emerging diseases and threats through invasive alien species in forest ecosystems. There is concern in Europe with aspects related to diseases that are emerging as considerable threats to European forest ecosystems and beyond. In addition, the number of recently imported invasive species (alien species) that cause damage to trees and forest ecosystems are growing. Novel ideas to prevent/cure diseases should be evaluated. The objective of the CA would be to review the current situation and predicted damage in EU Member States and to support EU policies related to these issues.

1.2 Tools and assessment methods for sustainable agriculture and forestry management

Tasks related to this chapter are covered under area 1.1.

1.3 Modernisation and sustainability of fisheries, including aquaculture-based production systems

Policy context

In its proposal for a new framework regulation on the Common Fisheries Policy (CFP), the Commission has defined the scope of the CFP as being to ensure exploitation of living aquatic resources, which provides sustainable environmental, economic and social conditions. The main objectives can be summarised as:

- Responsible and sustainable fisheries and aquaculture activities that contribute to healthy marine ecosystems;

- An economically viable and competitive fisheries and aquaculture industry;
- A fair standard of living for those who depend on fishing and aquaculture activities.

Research activities will focus on improving the scientific basis for fisheries management; support aquaculture by promoting disease prevention and sound environmental protection, integrating environmental requirements into the CFP, and investigating the economic dimension of sustainable fishing and aquaculture.
Further linking of the European fishery and aquaculture research institutes in joint research activities will be promoted in order to strengthen their current networks and facilitate research activities that will integrate and underpin the European Research Area in this field.

1.3.1 Scientific basis of fisheries management

Some exploited stocks in European waters are at historically low levels and others are overexploited. To compare options for recovering the stocks and promoting sustainable fisheries it is necessary to obtain improved scientific advice on medium- and long-term effects of different management tools. Management measures and systems should be explored and evaluated to identify and resolve deficiencies through better understanding of key biological parameters, exploitation patterns and socio-economic implications.

Enhancement of technical measures, e.g. introducing more selective fishing, reduction of discards at sea, protection of non-target species and essential habitats, will rely on new scientific discoveries and developments. Furthermore, critical elements in the stock assessment need to be addressed to ensure the best possible basis for the advice.
The present call comprises fleet-based management, genetic consequences of fishing, automated age determination, and management of small pelagic fish species in the Mediterranean.

Fifth call tasks:

Task 1 – Framework for area- and fleet-based management: Multifleet and mixed-species fisheries management is currently based on single-species assessments and short-term forecasts, with some adjustments based on other information to take into account the mixed nature of the fisheries. Thus, there is only limited integrated advice given for an area, and clearly defined targets for the management of such fisheries are also largely missing. Management needs to address directly the fleets and fisheries in an area, rather than the single stocks. Management shall ensure that these human activities are within sustainable bounds. With the move towards an ecosystem-based management, the need for an integrated approach that addresses the total fishery in an area is even more apparent.

The objective of this task is to develop a framework for multifleet advice. This should include development of harvest rules and, as appropriate, biological reference points and targets. The need for robustness to lack of discard data is emphasised. Case studies should cover both the Northeast Atlantic (e.g. the North Sea) and the Mediterranean and should focus on areas where the need for a fleet-based management is urgent.

Task 2 – Fisheries-induced changes in the adaptive genetic potential of exploited fish stocks: Fisheries impact the genetic composition of the exploited stocks. Fishing mortality is high on several commercially exploited stocks and some of these have collapsed. Recent evidence indicates that the genetic diversity may be significantly reduced even during a short period of high fishing mortality and that this may reduce the productivity of the population and thus adversely affect e.g. stock recovery. In most stocks these possible effects have not been investigated, but recent developments indicate that they could be significant.

The objective of the task is to identify genetic changes in stocks that are, or recently were, heavily exploited, and among the genetic changes, identify those that have affected the population dynamics. Management implications should be investigated with particular emphasis on long-term yield and stock recovery.

Task 3 – Objective model-based and computer-assisted age determination technology for fish: Most European fish stocks are assessed using age-based models, and errors in age reading therefore have a direct, but usually obscure, impact on the stock assessment. The acquisition of age data from the interpretation of fish otoliths at the European level has an annual cost of several million euros. Despite this expense, only 25% of the fish stocks on which ICES provide scientific advice are considered to have a low uncertainty in age estimation. Furthermore, disagreement on age reading between different laboratories frequently occurs. Therefore, approaches which improve the objectivity of the interpretation would be extremely useful. A fully automated process of age determination would improve consistency of the age determination and represents a potential for significant reductions in cost.

The objective of this task is to demonstrate and evaluate the available technology. The demonstration should show the reproducibility and precision in the interpretation of age offered by the technology as well as the degree of automation. The accuracy when comparing with an experienced age reader should also be considered. The focus should be on demonstrating the applicability of the technology for a range of species, rather than on solving problems for species that are particularly difficult to age.

Task 4 – Basis for improved management of small pelagic species in the Mediterranean: Some stocks of small pelagic species in the Mediterranean are over-exploited. However, it is not well understood which management measures may remedy the situation. The small pelagics in the Mediterranean must be managed internationally as the stocks are shared among various members of General Fisheries Commission for the Mediterranean (GFCM). There is a need to better understand the distribution of post-larval stages and how this distribution depends on oceanographic features. Post-larval sardines and anchovies are caught in a locally important mixed small-scale artisanal fishery. Little is known about the effect this mortality has on the yield of larger sardines and anchovies.

The objective of the task is to contribute to the scientific basis for improving exploitation of sardine and anchovy in the Mediterranean by studying the spatial distribution of nursery areas and how this links to environmental factors, and the selectivity of purse seines and pelagic trawls. A special problem to be addressed is the effects on the juvenile and adult anchovy and sardine populations of exploiting post-larval sardines and anchovies.

1.3.2 Scientific basis of fisheries monitoring, control and surveillance

Monitoring, control and surveillance constitute a main part of the day-to-day execution of the CFP. The implementation of the Vessel Monitoring System (VMS) has provided the ground for more cost efficient methodologies to be developed. Relevant research should aim at improving the accuracy and consistency of fisheries catch data, especially in the context of growing doubts about the performance of catch reporting systems and of traditional assessment and management systems.

Fifth call tasks:

Task 5 – Cost-efficiency of Control strategies: The CFP uses different management measures (TACs, technical measures, effort control, etc.) and sets of rules. These measures, which may vary between management areas and fisheries, are designed to ensure biological sustainable exploitation and economically viable fisheries. Enforcement (monitoring and control) costs have become an important component of public expenditures related to fisheries management and it is therefore important to carefully investigate which combinations of measures would offer the best cost-efficiency relationships. Cost/benefit relationships usually vary when different management measures are considered. This implies that comparisons between strategies must be performed for each type of management measure, although possible synergies between the enforcement of different management measures should also be considered.

The objective of this task is to present a cost-benefit analysis of control schemes for management strategies relevant for the CFP and based on this analysis, infer the potential economic benefits to the fisheries which might accrue from proper enforcement of the management.

1.3.3 Sustainable aquaculture production

Research on aquaculture in support of the CFP should provide the scientific basis for sustainable aquaculture production by promoting disease prevention and a sound protection of the environment.

Aquaculture activity and its environmental interactions, as well as fish and shellfish health aspects, are important policy issues, which will need to be addressed. Increasing scientific knowledge on the effect of aquaculture on the structure and functioning of marine ecosystems (including non-commercial species) as well as the environmental hazards of aquaculture activities, has to be based on innovative research in this field.

Fifth call tasks:

Task 6 – Cost-efficiency of improving fish welfare: Ensuring fish welfare and good husbandry practices with reduced stress conditions is not only of ethical relevance, but could also reduce the risk for disease outbreak and improve product quality. Thus there could be economic benefits linked to good welfare practices. However, for producers the cost of welfare monitoring and maintaining husbandry practices that

assure low stress levels in stocks could be significant, particularly on a short term basis. There may also be economic impacts in the food retail sector arising from, among other factors, the costs related to meeting higher standards of welfare demanded by consumers. It is therefore important to develop cost-efficient approaches to fish welfare practices.

The objective of this task is to evaluate the costs and gains of improving welfare and develop bio-economic models exploring the economical implications of ensuring various degrees of fish welfare, and thereby provide an instrument for addressing cost-efficiency.

Task 7 – Application of genomics in aquaculture: In recent years there have been major research investments on genomics in aquaculture, but there is a clear need to coordinate research projects in this domain better at the national and European level. In parallel, there is a growing gap between the fundamental knowledge being generated in this area and the capacity of the industry for using the research results in new breeding techniques.

The objective of this task is to promote better coordination among research projects in the field of genomics

Task 8 – Extensive and semi-intensive coastal aquaculture: Extensive and semi-intensive aquaculture can be effective and sustainable ways of exploiting the natural resources of the water bodies, and through developing extensive farming an economic activity can be associated with conservation/development of wetlands. Unfortunately, their dependence on natural processes also limits their productivity, implying a low compatibility with intense economic activity.

The objective is to bring 'added-value' to this sector by optimising the production systems and promote final product differentiation, whilst maintaining sound environmental conditions. Research should identify the potential of coastal ecosystems (e.g. wetlands, lagoons, estuaries, salt marshes) to support extensive aquaculture, establish ways to enhance natural production and promote high quality products, and develop production protocols and certification systems for voluntary use by the industry.

Task 9 – Capture-based aquaculture of bluefin tuna (BFT): The fattening of bluefin tuna (BFT) in cages based on the capture of wild fish, is an increasing practice in Mediterranean countries. However, there is a growing concern among different stakeholders about interactions between fisheries and BFT aquaculture, which could have profound impacts. Despite some research efforts, there are still many gaps in the knowledge base required for a controlled development of this activity, e.g. impact of catching different age classes, impact of fishing of feed species, economical and social impacts.

The objective of this task is to establish the scientific knowledge base on the interactions between BFT aquaculture and fisheries from biological, economical and social short- to long-term perspectives.

1.3.4 Integration of environmental requirements into the CFP

The requirement to integrate environmental issues into Community policies as stipulated under Article 6 of the Treaty is reflected in the CFP reform[20], where the Commission is promoting the progressive adoption of an ecosystem-based approach to fisheries management.

Two aspects are of special relevance for research: the better understanding of structure and dynamics of marine ecosystems, including their response to the impact of human activities, and the development of operational protocols and procedures in order to improve scientific advice to fisheries management.

From this perspective, two main topics will be addressed: the development of methods to assess the impact of fishing (indicators) and aquaculture (alien species) on the marine ecosystems, and the investigation on the effect of climatic change on the dynamics of fish stocks.

This research will aim at reinforcing the integration of environmental protection requirements into the CFP through a more complete implementation of the ecosystem-based approach to fisheries management.

Fifth call tasks:

Task 10 – Indicators to support ecosystem-based fisheries management: The application of an ecosystem-based approach to fisheries management in the CFP is dependent on the availability of operational quantitative ecosystem indicators. Preliminary investigations are being conducted within a two-year Coordination Action, set up under SSP3, to identify from literature generic indicators of the impact of fishing on ecosystems, and to define the reference points and preliminarily test their sensitivity to fishing pressure. Further actions are required to monitor these generic indicators at appropriate spatial and temporal scales, and reference levels describing acceptable ecosystem states in relation to fishing activities need to be developed.

The objective of this task is to develop further and test the candidate indicators identified in the Coordination Action, to support the application of an ecosystem-based approach to fisheries management. The indicators should be suitable for assessing the environmental performance of fisheries management measures at a reasonable cost. Procedures for the implementation and monitoring of these quantitative indicators, as operational management tools, should be developed, taking into account also indicators applied or developed through other initiatives.

Task 11 – Effect of climatic changes upon production and distribution of fish and shellfish populations: There is general consensus that the physical environment plays a significant role in determining the condition of a fish population. However, research on relating the impact of climate change to the dynamics of fish and shellfish populations is in a developmental stage and we still lack knowledge on the processes,

[20] COM(2002)186 final – setting out an Action Plan to integrate environmental protection requirements into the Common Fishery Policy; COM(2001)143.

in particular trophic level interactions, that impact upon key stock characteristics like production and distribution.

The objective of this task is to conduct a preliminary investigation on the effects of climatic change on the food chain processes and particularly the production and geographical distribution of marine fish and shellfish populations, and to formulate hypotheses to be tested in future research. The research should aim at reviewing knowledge and exploring relationships between productivity, distribution and climate. The project should also address research needs with special emphasis on long-term effects of climatic change in relation to fish and shellfish stocks.

Task 12 – Environmental impacts of alien species in aquaculture: In the strategy for a sustainable development of European aquaculture (COM-2002-511), the Commission has been committed to propose management rules on the introduction and translocation of alien species in aquaculture. Moreover, in its biodiversity action plan for fisheries (COM-2001-162), the Commission has emphasised the need for a thorough evaluation of the potential impact of non indigenous species in aquaculture and it has also promoted the application of the 'ICES Code of Practice on introduction and transfers of marine organisms' as well as the 'EIFAC Code of Practice and Manual of procedures for considerations and transfers of marine and freshwater organisms'. Presently, the Commission is producing a new regulation setting the rules governing the use of alien species in aquaculture.

The objective of this task is to develop harmonised guidelines in support of this regulation for evaluating risks associated with the introduction or translocation of alien species for aquaculture. Special emphasis should also be given on improving knowledge and requirements on quarantine facilities.

1.3.5 General Support to all areas within B.1.3

Fifth call tasks:

Task 13 – Specific Support Actions: to support research projects aiming to contribute actively to the implementation of the work programme, the analysis and dissemination of results or the preparation of future activities, with a view to enabling the Community to achieve or define its RTD strategic objectives in relation to the Common Fisheries Policy (CFP).

The following topics should be considered for Specific Support Actions in 2005:

Sub-Task 13.1 – Exploitation of results of the 5th and 6th Framework Programme: to combine the results of different individual complementary research projects in the fifth and sixth Framework Research Programme in the field of fisheries and aquaculture with the aim to produce syntheses, e.g. joints publications, books, special reviews in scientific journals, and enhance the impact of the research activities. Proposals should cover the analysis of results on main sub-topics gained in the following domains:

Sub-Task 13.1.1 – scientific basis of fisheries management

Sub-Task 13.1.2 – sustainable aquaculture (excluding genomics)

Sub-Task 13.1.3 – interaction between environment and fisheries

<u>Sub-Task 13.2</u> – Support to a technological platform on breeding of aquaculture species: There is concern in the research community that Europe has been falling behind in the area of animal breeding, especially in the development and exploitation of genomics. There is also concern that unlimited exploitation may have an impact on animal welfare and other societal issues. An initiative has recently been launched by the research communities concerned with farm animal breeding, genetics and genomics to prepare a technological platform with a broad stakeholder base in the area of animal breeding.

The objective of this task is to investigate the opportunity and the usefulness for the aquaculture industry to be included in this technological platform for animal breeding.

<u>Sub-Task 13.3</u> – Support to a technological platform on offshore aquaculture: The development of offshore fish cage culture technology is recognised as an interesting option for European aquaculture by the Commission in its communication to the Council and the European Parliament on sustainable development of European aquaculture.

The objective of this task is to investigate the opportunity and the usefulness for the aquaculture industry of promoting offshore aquaculture through a technological platform.

<u>Sub-Task 13.4</u> – Foresight exercise on research needs in the marine sector: The task is to launch a Foresight exercise in the field of marine sciences related to the exploitation and farming of aquatic resources with the objective to define the key challenges and risks facing research in the marine sector in the next few years, to develop possible scenarios for meeting sustainability requirements, e.g. from international conventions, in fisheries and aquaculture, and identify the research required to deliver the desired outcomes.

The main output of this exercise is a contribution to the implementation of a future Maritime Policy and a further strengthening of the European Marine Research Area through a better anticipation of research needs in the field of fisheries and aquaculture in the medium term (10 years).

1.4. New and more environment friendly production methods to improve animal health and welfare including research on animal diseases such as foot and mouth disease, swine fever and development of marker vaccines

Policy context and objectives

Improvement of animal health and welfare is targeted by several of the EU policies and is also addressed by international organisations such as the World Organisation for Animal Health or Office International des Epizooties (OIE), the Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO).

The Community Animal Health Policy (CAHP) has been progressively developed and supported by harmonised legislation since the early 1960s, with the main aim of reaching and maintaining a high status of animal health throughout the EU, which is fundamental to ensure the welfare of animals, food safety, profitability of farmers, the functioning of the single market and the possibility to export to third countries. The CAHP deals basically with the compulsory notifiable epizootic diseases, major zoonoses and other diseases which are subject to national control/eradication programmes.

The EU policy for development and economic cooperation has as a priority area of action in food security and sustainable rural development. Livestock production, as an integrated part of rural development, represents an opportunity to improve the well being of rural people, increase their incomes and alleviate poverty. Different projects are supported to fight against epizootic diseases in different regions in coordination with Member States and international programmes of FAO.

At international level, the OIE, an intergovernmental organisation created in 1924 with currently 167 countries has the following missions: to guarantee the transparency of animal disease status world-wide; to collect, analyse and disseminate veterinary scientific information to help member countries to improve the methods used to control and eradicate diseases; to provide expertise and promote international solidarity for the control of animal diseases and to guarantee the sanitary safety of world trade by developing sanitary rules for international trade in animals and animal products.

The OIE develops normative documents relating to rules that Member Countries can use to protect themselves from diseases, without setting up unjustified sanitary barriers. The main normative works produced by the OIE are: the *International Animal Health Code*, the *Manual of Standards for Diagnostic Tests and Vaccines*.

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS agreement), which came into force in January 1995 with the WTO, is aimed at minimising the negative effects of unjustified health barriers on international trade. For animal health and zoonoses, the SPS Agreement refers to the "standards, guidelines and recommendations developed under the auspices of the OIE".

EU legislation on these diseases is largely based on the OIE recommendations and several EU Reference Laboratories are also OIE Reference Laboratories.

The FAO established in 1994 an Emergency Prevention System (EMPRES) for Transboundary Animal and Plant Pests and Diseases in order to minimise the risk of such emergencies developing. With regard to epizootic diseases special programmes have been put in place such as the Pan-African Rinderpest Campaign (PARC) and Pan-African Programme for control of Epizootics (PACE) and more recently the within the Livestock-Environment and Development initiative (LEAD).

Infections that are enzootic in European farm animals (including aquaculture) still have an impact on the productivity and welfare of those animals. Data are needed in order to formulate reliable policies for the control of these infections, whether these are aimed at reducing, eliminating or tolerating the disease. Many of these diseases

are multifactorial in nature and environment can play a major impact on the development of clinical signs.

There is growing support for the development of more welfare-orientated production systems and, as a corollary, the Commission finds itself in the position of assessing welfare when formulating policies. There is a need, therefore, to ensure that there are solid scientific data available to underpin policy development. With new farming systems being developed, there is a need for the adaptation of animal husbandry techniques.

Research will have direct impact on food safety and quality and, thus, also complement research under thematic priority 5 (Food Quality and Safety) of the Framework programme.

Fifth call tasks:

Task 1 - Culicoides transmitted diseases: bluetongue and African horse sickness. Bluetongue virus (BTV) and African horse sicknes virus (AHSV) are transmitted by vectors species of *Culicoides* biting midge. BTV infects all species of ruminants but causes severe disease in sheep. Since 1998 five serotypes of BTV have infected ruminants in countries around the Mediterranean Basin. The virus has extended further north than ever. It is being transmitted by the traditional vector *C. imicola* which has extended its range northwards possibly by the influence of climate change and by novel vector species of *Culicoides* that already occur throughout central and northern Europe. The virus has therefore the potential to become established in Europe and presents a major risk to the livestock industry. AHSV outbreaks have occurred in Southern Europe in the past. It causes one of the most severe diseases in horses. It is closely related to BTV and is transmitted by the same Culicoides vectors, hence regions at risk of BTV can be regarded at risk of AHSV. The coordination action should focus on sharing and exchanging data, expertise, experiences and information via regular meetings, maintain and expand surveillance systems, setting a European database including surveillance, disease occurrence, virus isolation and vaccine use. It will also focus on disease detection and control tools and ensure wide dissemination of information to all concerned parties. Participation of relevant third countries, in particular those representing major threat for the EU and international organisations should be sought.

Task 2 - New vaccines against bluetongue. There is a need for safe and efficacious alternative vaccines to the currently available live attenuated vaccine. A recently developed inactivated vaccine has shown very good results in efficacy and safety in sheep. In addition, promising results have been obtained with protein-based subunit vaccines. In the framework of a STREP, research should be supported to assess the safety of the inactivated vaccine in pregnant animals of the bovine, ovine and caprine species and research efforts for the development of alternative subunit vaccines should be pursued. In both cases it is of major importance to advance towards available products for the market. To this end, the involvement of industry will be of

paramount importance. The research should also address the selection of appropriate delivery systems. The STREP should be linked to the Coordination Action of task 1.

Task 3 - Perkinsosis in molluscs. Infections by protistan parasites of the genus Perkinsus cause severe losses to the mollusc production. Certain species such as *P. olseni* are endemic in Europe and others such as *P. marinus* are exotic to the Community. The SSA could envisage the organisation of workshops bringing together relevant stakeholders such as industry, public authorities, research community and regulators to address among others diagnosis, epidemiology, host-pathogen interactions, the environmental and production factors contributing to the disease and the risk of introduction of exotic species of the pathogen.

Task 4 - Welfare implications of surgical castration in pigs. Castration of male pigs is carried out principally to reduce the occurrence of boar taint in pork. Available information suggests that female pigs are very occasionally castrated in certain extensive rearing systems. Surgical castration is often carried out without anaesthesia and by a variety of personnel, and this raises concerns about the welfare of the animals. The SSA could envisage the organisation of workshops and other consultations that will address possible means of reducing the poor welfare implications of castration by, among others, improving castration methods, using techniques other than surgical castration and/ or alternative management practices to reduce the risk of boar taint in meat.

Task 5 - Collaboration EU-South-East Asia and China. The need to address infectious diseases at a global level has been stressed in multiple fora including research fora. The EU is seeking to strengthen research collaborations with relevant regions and third countries. The aim of this task is to identify areas of mutual interest for future collaborations between the EU and South-East Asia and China in animal health and food chain safety. The SSA could envisage the organisation of workshops addressing areas of mutual interest to both parties such as swine diseases (PRRS, CSF, ASF, FMD etc.) and poultry diseases (avian influenza etc.), food safety control and traceability.

1.5. Environmental assessment (soil, water, air, noise, including the effects of chemical substances)

Policy context

The proposed research will contribute to the implementation and development of the 6th Environment Action Plan, the Environment and Health Action Plan and the Water Framework Directive Common Implementation Strategy (2000/60/EC). The proposed research will also contribute to implementation of the European Community Biodiversity Strategy, the EU Water Initiative and the Mining Waste Directive.

Research objectives

The research objectives are: To forecast impacts of key pressures on biodiversity, to develop tools for the implementation of the Water Framework Directive and other water and soil policies, to develop methodologies for characterisation of mining waste, to identify the interaction between environmental stressors and effects on human health and to identify climate change mitigation options and alternatives to HCFCs in developing countries.

Fifth call tasks **Task 1 – Minimising habitat destruction, fragmentation and degradation:** Assessment of potential impacts of projected habitat fragmentation on biodiversity in the EU up to 2020 and available options to prevent, minimise and mitigate biodiversity loss. Investigation of the state of the art of methods to assess, and knowledge of, the extent of loss, fragmentation and degradation and impacts on biodiversity in recent decades for EU25. Development of better methods to identify habitats at greatest risk of future loss, fragmentation and degradation. Identification of the policy options at EU, Member States, regional and local levels to address key causes of fragmentation, loss and degradation of ecosystems, species and genetic diversity.

Task 2 – Minimising impact of climate change and of climate change adaptation and mitigation measures on biodiversity: Assessment of potential impacts of climate change and of proposed climate change adaptation and mitigation measures on biodiversity, and available options to prevent and minimise negative impacts. Investigation of the state of the art of methods to assess, and knowledge of, the probable impacts of climate change and of proposed climate change adaptation and mitigation measures on biodiversity for the EU25 up to 2050. Development of better methods to identify habitats at greatest risk and to identify all habitats that may potentially buffer against impacts of climatic change. Identification of policy options at EU and Member State levels to prevent and minimise negative impacts.

Task 3 – Alternatives to HCFCs in developing countries: Running workshops to explore the availability of technically and economically sound alternatives to HCFCs in developing countries, effective methods of transfer, and potential sources of funding.

Task 4 - Ecological status assessment - filling the gaps: Development of tools in the implementation of the Water Framework Directive, such as hydromorphological pressures (e.g., issues such as river continuity), testing of the European Fish Index in Mediterranean and central and Eastern ecoregions, and the application of classification schemes in very large rivers.

Task 5 – Operational interface linking scientific knowledge to the implementation and development of water policies: This task includes (1) Analysis of earlier RTD Framework and LIFE Programme projects in the field of water policies to detect gaps between research and successful demonstration, and suggestions on improvements linked to the WFD implementation; (2) Development of EUWI/WFD joint process activities for facilitating the transfer of Integrated Water Resources Management (IWRM) principles to non-EU countries; and (3) Development of training activities on the use of a common web portal aiming to provide access to RTD and demonstration project information to EU policy-makers and stakeholders on

the basis of on-going activities in the framework of Water Information System for Europe (WISE).

Task 6 – Assessing the health risks of environmental stressors: Development of an integrated methodological framework for identification of health risks caused by exposure to environmental factors with a view to providing useful information for prevention and targeted policy measures. The framework will include the development, piloting and cost-benefit analysis of protocols and methodologies for exposure assessment and health impact assessment in specified areas relevant to the implementation of the EU Action Plan on Environment and Health.

Task 7 – Characterisation of mining waste: Identification and assessment of methodologies for the characterisation of mining waste on the basis of their physical-chemical characteristics and stability, and development of risk assessment methodologies for the classification of waste facilities, including old/abandoned waste facilities.

Task 8 - Identification and analysis of climate change mitigation options in Developing Countries, in particular in China and India: Identify policy options and opportunities for environmental technological development, goals for innovation, and EU-rest of the world technology cooperation to contribute to reinforcing the EU dialogue on climate change with developing countries, in particular China and India,. Based on both bottom-up, technology oriented approaches and sector specific macro-econometric and general equilibrium models, the project will consider both medium and long term horizons to deliver timely results. Partners from China and India are essential.

Task 9 - Sectoral Emission Reduction Potentials and Economic Costs for Climate Change. Negotiations on the post-2012 UN climate policy framework and the further development of EU climate policy beyond 2012 need to be based on solid analysis about reduction potentials. The objective of this activity should be to identify the least-cost contribution of different sectors and gases for meeting post-2012 EU-25/EU-27 quantitative reduction objectives for greenhouse gases and to determine a package of cost-effective policies and measures for all sectors and gases towards meeting the goals. The analysis should focus on measures within the EU-25 not looking into reductions via flexible mechanisms outside the EU. The project should aim for a comprehensive update (new technological development and sectoral trends, introduction of a carbon price via the EU emission trading scheme) and extension to new Member States of a 2002 exercise undertaken by DG Environment on 'Economic Evaluation of Sectoral Emission Reduction Objectives for Climate Change'. Interim results should be subject to extensive stakeholder review in the form of sectoral workshops to disseminate results and collect stakeholder comments

1.6. Assessment of environmental technologies for support of policy decisions, in particular concerning effective but low-cost technologies in the context of fulfilling environmental legislation

Policy context

Environmental technology and eco-innovation is already playing a role in decoupling growth from environmental damage, but it is crucial that its full potential is harnessed. The proposed research will contribute to the implementation of the Environmental Technologies Action Plan (ETAP) following the Commission's report on environmental technologies for Sustainable Development. In addition it will contribute to the implementation and development of the 6th Environment Action Programme as well as other EU initiatives on eco-innovation. Research will support the EU strategy for Sustainable Development through cost-benefit analyses of environmental actions, improved assessment methodologies and data.

Research objectives

The overall objectives are: To assess and analyse the market dynamics of eco-innovation and environmental technologies, in order to develop indicators and statistics on eco-innovation; to identify training needs constraining the wider use of environmental technologies; and to understand the functioning and gaps of commercial-type funding in this area.

Fifth Call Tasks

Task 1 - Measuring eco-innovation: Development of a conceptual framework for eco-innovation (developing a typology) based on the innovation dynamics. Identification and analysis of the main methodological challenges in developing indicators and statistics on eco-innovation. Proposals to address these methodological challenges and the most feasible route for implementation. Discussion of possible indicators as regards their relevance for eco-innovation and their ability for implementation and robustness/reliability.

Task 2 – Identification and assessment of training needs, methods and activities for the wider use of environmental technologies in key sectors: Building on ETAP actions on targeted training, the project will identify and assess specific targeted training that is needed for the practical take-up and application of environmental technologies in industrial and business settings. The research could span a range of economic sectors networking relevant actors and players to identify key issues, obstacles to progress and propose processes, methods and techniques on how to advance, and estimate the training needs of selected sectors by extrapolating clean technology uptake. The project should provide the basis for the development of permanent sectoral and trans-sectoral networks that would allow targeted training activities to be promptly implemented.

Task 3 - Comparison and assessment of funding schemes for the development of new activities and investments in environmental technologies: Building on ETAP, the project will analyse the current functioning of commercial-type funding

schemes available for the development of new technologies, such as bank loans, guarantees and venture capital. It will assess how these schemes perform in promoting environmental technologies, which particular obstacles are met by the funding of these technologies and how these schemes could evolve to overcome these obstacles.

2. Providing health, security and opportunity to the people of Europe

2.1. Health determinants and the provision of high quality and sustainable health care services and pension systems (in particular in the context of ageing and demographic change)

Policy context

Health and social policy in the EU is moving from a series of separate, relatively small-scale initiatives towards the formation of a more coherent overall policy vision with a clear evidence base. An important driver for this is the need to respond to the new challenges of enlargement and to find effective responses to issues relating to the ageing population, the introduction of new technologies, including IT, health professionals and services.
The health care systems of all Member States are under increasing pressure to cope with demands of their populations. The ageing population and technological innovation are likely to continue to exert pressures on social welfare systems, and health systems in particular, over the coming years. Furthermore the consequences of mental disorders for the individuals affected and their environments as well as the enormous costs which they impose on health, social, economic, education and justice systems are becoming more apparent. At the European level the Commission's Green Paper on mental health[21] will launch a debate about the relevance of mental health for the EU and the need for a strategy at EU-level and its possible priorities.

In Barcelona, the European Council invited the Commission and the Council to examine more thoroughly the three long-term objectives of accessibility, quality and financial sustainability, which form the common framework to develop co-operative approaches in the EU[22] and one major development has been follow-up to the high level reflection process on patient mobility ad healthcare developments in the European Union, with the establishment of a High Level Group on Health Services and Medical Care[23].

Research objectives

Research is needed to deepen understanding and enhance the scientific base for policy on the main determinants of health in the EU and of developments in European health and care services. It will contribute to health protection, prevention and promotion, taking into consideration a comparative policy assessment of the determinants for health, such as key lifestyle factors in particular nutrition and physical activity, while

21 COM(2005) 484, Commission Green Paper 'Promoting the mental health of the population Towards a strategy on mental health for the European Union'.
22 COM(2001)723: "The future of health care and care for the elderly: guaranteeing accessibility, quality and financial viability"
23 COM(200)301: "Follow-up to the high level reflection process on patient mobility ad healthcare developments in the European Union "

a high level of mental health will support the EU in becoming more knowledge-based, competitive and socially cohesive.
Research under this area will complement and take into account the actions launched under the new EC Public Health Programme (2003-2008)[24] and the work to be carried out under Priority 1 'Life Sciences, genomics and biotechnology for health'. It will have the following specific objectives: to improve the understanding of health determinants; to assess the quality and performance of health care; to address patient safety research agenda, develop health promotion and protection in mental health policy, enhancing health promotion and prevention through public health intervention research in Europe.

Fifth call tasks

Task 1 - Developing methodologies to address cost effectiveness in healthcare systems: to develop and validate innovative and transparent methodologies to address the cost effectiveness of adequate and long-term care provision in healthcare systems in order to achieve best value for money.

Task 2 - To improve the understanding of health determinants: to increase understanding/knowledge across Member States in research terms, of health promotion and health protection policy where the key lifestyle factors of nutrition and physical activity are concerned and how they might impact on inequalities in health.

Task 3 - To improve the understanding of health determinants: to increase understanding/knowledge across Member States in research terms, of health promotion and health protection policy for mental health, comparison of best practice, the prevention of mental disorders in environments such as educational institutions, workplaces, residential homes for the elderly, together with an identification of the impact of such measures on cognitive and emotional development.

Task 4 - To improve the understanding of health determinants: to increase understanding/knowledge across Member States in research terms by developing a methodology to analyse and review the living situations and care and treatment practices in psychiatric and social care institutions for mentally ill and disabled persons in the European Union, with a particular focus on human rights, the protection of the dignity of residents, the use of restraint measures and the scope for health promoting measures.

Task 5 - Research and patient safety: to increase understanding/knowledge across Member States in research terms by establishing a major scientific conference to address the patient safety research agenda, bringing together key players, academia, patient groups and relevant NGOs, with a view to identify research priorities in the field of patient safety. The conference would also complement work being taken forward under the premises of the High level Group on Health Services and Medical Care.

24 Decision N° 1786/2002/EC of the European parliament and of the Council, 23/9/2002 adopting a programme of Community action in the field of public health (2003-2008).

Task 6 - Impact of new technologies and techniques on healthcare systems: to investigate and compare across Member States the advantages and costs of technological progress and innovation in the context of rising incomes and expectations on future provisions of healthcare in the EU, with special consideration given to the ageing and disabled population, with a view to developing and validating an innovative and transparent methodology to predict the possible transfer and impact of such new technologies.

Task 7 - Enhancing health promotion and prevention through public health intervention research in Europe: a mapping exercise of public health intervention research across Member States to identify gaps and best practice, with a view to establishing an open database of completed, ongoing and planned public health intervention research in Europe.

2.2. Public health issues, including epidemiology contributing to disease prevention and responses to emerging rare and communicable diseases, allergies, procedures for secure blood and organ donations, non-animal test methods

Policy context

Health policy in the EU is entering a new phase of development. It is moving from a series of separate, relatively small-scale initiatives towards the formation of a more coherent overall policy vision with a clear evidence base. An important driver for this is the need to respond to the new challenges of enlargement and to find effective responses to issues relating to new health threats such as emerging communicable diseases and bio-terrorism.

One main objective of the new Programme of Community action in the field of public health (2003-2008) is to identify the required action to underpin the development of policy where the Community has competence in other key areas of the public health framework, such as strengthening the surveillance and control of communicable diseases and securing the safety and quality of blood, organs and substances of human origin[25]. It is also necessary to support by scientific evidence, the development of the European legislative framework on human tissues and cells in particular concerning safe processing, taking into account existing legal frameworks and debate on this matter. In the context of the Commission's White Paper on a strategy for a future chemicals' policy, the Commission is committed to the promotion of non-animal test methods, through maximising use of non-animal test methods, encouraging development of new non-animal test methods and minimising test programmes.

Research objectives

[25] Article 152 of the Treaty of Amsterdam and Council Recommendation 98/463/EC.

Research is needed to deepen understanding and enhance the scientific base for policy on the main determinants of health in the EU and of developments in European health systems. Research under this area will focus on the surveillance of anti-microbial resistance, blood, organ and substances of human origin; development of procedures for the replacement of blood, blood components, organs, tissues and cells by safer alternatives; research on issues concerning human tissue and cell processing; and in the area of alternative *in vitro* tests , research resources currently engaged need to be co-ordinated in order to maximise the development and validation of globally accepted test guidelines

Research under this area will complement and take into account the actions launched under the new EC Public Health Programme (2003-2008) and the work to be carried out under Priority 1 (Life Sciences genomics and biotechnology for health) and Priority 5 (Food Quality and Safety), as well as work foreseen under 2.7 below (Issues related to civil protection).

Fifth call tasks

Task 1 - Strengthening of the surveillance and control of communicable diseases through the development of tools for behavioural changes of the general public and professionals in the Community towards prudent use of anti-microbial agents in view of different cultural backgrounds: to carry out research on existing behavioural tools/schemes in different Member States, developing tools to focus specifically on the development of media campaigns targeted at health care professionals and the parents of young children and healthy adults on the reasonable use of anti-microbials.

Task 2 - Development of procedures for the replacement of blood, organ and substances of human origin: to address the replacement of blood, blood components, organs, tissues and cells by safer alternatives.

Task 3 - Development of new and better tests for the screening of substances of human origin such as blood, plasma, tissue, cells and organs, including diagnostic tests for CJD, WNV, rabies or other pathogens in donors.

Task 4 - Identification of existing best practice in the processing of human tissues and cells, including examining procedures, research on possible improvements, with a view to increasing safety without unduly increasing the production costs, and taking into account legal, ethical, socio-political, and technical and medical factors.

Task 5 - To enhance the development and validation of alternative *in vitro* tests for chemical substances: To organise an international workshop with leading experts on QSARs (Quantitative Structure Activity Relationship) for genotoxicity and carcinogenicity.

2.3. *The impact of environmental issues on health (including safety at work and methods for risk assessment and the mitigation of risks of natural disasters to people)*

Policy context

The European Commission has in recent years launched several initiatives with the general aim to improve the health and well-being of EU citizens. Among these, the *Community strategy on health and safety at work 2002-2006*[26] provides a global approach to well being at work, based on consolidating a culture of risk prevention, on combining a variety of political instruments and on building partnerships. Related to this is the *Programme of Community action in the field of public health 2003-2008*[27], which is based on three general objectives: health information, rapid reaction to health threats and health promotion through addressing health determinants.

The development of robust and transparent environmental protection legislation is dependent on a number of factors including the establishment of clear and policy relevant science. Within this context the *Sixth Environmental Action Programme 2001-2010*[28] set the strategic direction of environmental policy over the 10 years. One of the four priorities identified within the Action Programme is 'Environment and Health', which sets the objective to 'achieve a quality of the environment where the levels of man-made contaminants do not give rise to significant impacts on or risks to human health'. Under this umbrella the *European Environment and Health Strategy 2004-2010*[29] was subsequently adopted, with an ensuing Action Plan, with a long-term vision to reduce diseases caused by environmental factors. In order to achieve this goal, the need for a better understanding of environmental health impacts through the development of scientific knowledge is considered vital.

Research objectives

The research objectives are diverse and broad in scope. They address health implications of environmental stressors such as EMF exposure (EMF-NET[30] project funded from first call), air pollution (ENVIE[31] project funded from first call; ESBIO project from the fourth call) and noise; economic valuation of health impacts (VERHI children project funded from third call); risk assessment and prevention of natural disasters. The principal objective of research activities under this heading is to bring together existing and future research results in the most important domains, interpret them and assemble coherent inputs to the relevant community policies.

Task 1 - New knowledge of burden of work-related stress including physical and psychological violence such as harassment, bullying, and mobbing. The research objective is to review available methodologies to evaluate the phenomenon, to identify appropriate means of collecting sensitive data, to develop international

[26] http://europa.eu.int/comm/employment_social/news/2002/mar/new_strategy_en.html
[27] http://europa.eu.int/comm/health/ph_programme/programme_en.htm
[28] http://europa.eu.int/comm/environment/newprg
[29] http://europa.eu.int/comm/environment/health/index_en.htm
[30] http://www.jrc.cec.eu.int/emf-net
[31] http://indoorairenvie.cstb.fr/

standards and indicators on stress and violence at work. Ways should be defined to enable practical monitoring and management of the problem at the workplace, to develop detailed recommendations and guidelines, and to disseminate results to stakeholders and social partners including SMEs. The work organisation and management practices (working time arrangement, degree of autonomy, match between workers skill and job requirements, workload, exposure to abusive behaviour etc.) is a factor which should be explored in order to identify good practices that may prevent or reduce the occurrence of stress or violence.

The output will be new knowledge on the burden of work-related stress, in particular, development of indicators on stress (at workplace) and evidence-based best-practice guidelines for preventing and reducing work-related stress (including practical implementation). In addition, worker groups and occupational sectors should be identified that are at a high risk of exposure to violence at work. Community strategy on health and safety at work will be supported.

Task 2 - Regional networks in Europe on risk reduction of environmental health risks: to carry out pilot projects at the EU, national, and regional level on measures to reduce risk due to environmental stressors, based on available exposure data in databases or biobanks; to disseminate best practice to relevant stakeholders at national/EU level; to support the Community Environment and Health Action Plan, and, possibly, the Commission's Urban Strategy.

Task 3 - Risk assessment of furan in food. The aim is to focus on hazard identification based on in vitro and in vivo toxicological approaches and hazard characterisation (emphasis on dose-response data combined with mechanistic studies, mechanism of action and means of mitigation). The output will contribute to improved risk assessment of furan, taking into account work being carried out inside and outside the EU. Community legislation on food contaminants will be supported.

2.4. Quality of life issues relating to handicapped/disabled people (including equal access facilities)

Policy context

Allowing for differences in definitions and measurement procedures, it is reasonable to estimate that people with disabilities form 7 % to 18 % of the European Union population and are affected by a physical, cognitive, or psychic severe to moderate condition that requires societal accommodation[32]. These figures are much likely to increase in the future. In its recent decisions, the Commission developed a human-rights-based approach to disability, underpinned by Article 13 in the Amsterdam

[32] 'Disability and Social Participation in Europe', European Commission Eurostat - Theme 3 Population and Social Conditions, 2001.

Treaty[33]. Achieving equal opportunities for people with disabilities calls for a multi-pronged strategy involving *inter alia*, combating discrimination, promoting greater social integration and active participation, enhancing the opportunities for education, training, lifelong learning and employment, facilitating independent living and increasing the availability and quality of care and assistive technologies.
The Lisbon Strategy calls for more jobs and greater social cohesion. The integration of people with disabilities is one aspect of this strategy which, according to survey data, concerns 15 to 25 per cent of the working age European population. This percentage may become even higher with an ageing society and also through the process of enlargements of the Union.
Anti-discrimination measures, design for all approaches and active labour market policies are now occupying a central place in the 'social model' of disability, which currently dominates the European disability policy agenda. The Community is aiming to strengthen co-operation with and among the Member States in the disability field and promote the collection, exchange and development of comparable information and statistics and good practice.

Research objectives

Multi-disciplinary research is needed to address the gaps in knowledge, deepen understanding and enhance the scientific base of policy. It will focus on improving measurement issues, changing the organisation of care delivery to services and understanding the social and environmental contexts.
The Commission Communication on 'Equal opportunities for people with disabilities: a European Action Plan'[34] highlights the need for research efforts within the four pillars of the action plan: access to, and remaining in employment; lifelong learning; using the potential of new technologies: and accessibility to the public built environment.
Research in this area will draw on recent results and on-going projects and initiatives.
It will have the following specific objectives: to improve the accessibility of public transport systems for people with disabilities and the analysis of the free movement of people with disabilities.

Fifth call tasks

Task 1 - Accessibility of public transport systems for people with disabilities: Investigation into the accessibility of public transport systems for people with disabilities in all 25 Member States and at urban and rural level. Analysis of best practice and innovation and their associated cost, and of the correlations between social exclusion, including unemployment and the lack of transport facilities available to disabled people.

Task 2 - Free movement of people with disabilities: Research into the extent to which people with disabilities currently take advantage of their rights to free movement as compared with the whole population. Analysis of existing rights and

[33] Directive establishing a general framework for equal treatment in employment and occupation and a Community action programme to combat discrimination (2001-2006) - COM(2000)284 "Towards a barrier free Europe for people with disabilities".
[34] COM(2003)650.

provisions, and consideration of existing difficulties and barriers, with a view to identify possible action in this area.

2.5. Comparative research of factors underlying migration and refugee flows, including illegal immigration and trafficking in human beings

Policy context

The Amsterdam Treaty introduced a new Community policy on immigration and asylum as an integral part of the space of freedom, security and justice to be set up according to the objectives defined by the conclusions of the European Council held in Tampere in October 1999. This policy completes the framework encompassing the fight against racism and xenophobia, the integration of third-country nationals residing in the EU, equality of treatment and fight against discrimination. In addition, immigration and asylum aspects are also relevant for the European Neighbourhood Policy launched in 2003.

Research objectives

Research should develop better knowledge of legal and illegal migration flows towards the EU and the transition paths of migrant communities from irregularity into regularity and vice versa.

Task 1 - Illegal migration – collecting empirical evidence in the EU

Problem description

Although not a recent phenomenon, illegal immigration remains a major challenge for the European Union as it affects its political, socio-economic and cultural processes in profound ways. The International Organization for Migration estimates that irregular immigrants account for one-third to one-half of new entrants into developed countries, marking an increase of 20 per cent over the past ten years. It has been suggested that this might amount to some 500,000 irregular migrants entering the European Union every year. However, reliable statistical or other empirical data highlighting the illegal immigration phenomenon are scarce; if they exist at all, their coverage is limited, the collection methodologies diversified and not necessarily reliable. The main questions involved are the ethical methods, the acquisition as well as adequacy of data on underground populations.

Irregular migration includes a variety of movement and status in conflict with migration laws in migrant-transit and migrant-receiving countries. Yet the boundaries of regular and irregular migration have not always been clear; in a single journey or process of migration, a migrant might enter into and out of regularity and irregularity.

In order to get a reliable picture of the growing irregular migration phenomenon it is necessary to make an inventory of already existing empirical data on illegal migration in the EU and to tackle the ethical and methodological issues involved in data

collection which take into account border control data with socio-economic elements. It is also necessary to provide estimations using different methodologies of stocks and flows of irregular migrants in the EU and to analyse the possible ways by which illegal residents may become legal and the conditions which lead legal immigrants to become illegal.

Task 2 - New immigration destinations within the EU. The cases of the EU Mediterranean and Eastern European areas

Problem description

It has been observed that whilst until the 1990's Northern Europe and Germany in particular had been the favourite destination of migrants coming to Europe, during the last 10 years this dominant trend has progressively been over taken by the growing migratory inflows mainly towards the EU Mediterranean Member States. In addition the recent enlargement of the EU has created a new reality in terms of migratory trends within Europe. Most of the new Member States are progressively transformed from sending to receiving countries. Given their unfavourable demographic situation and relatively higher economic growth they have a potential to maintain and further develop their position as countries of migration destination.

In order to get a clearer picture of migratory flows towards the EU Mediterranean and Eastern European geographical areas, research should focus on the causes, characteristics and impact of migratory flows, on the structures in place to deal with legal and illegal immigration and aim at building a model by which projections on future migratory trends affecting the selected areas can be generated.

2.6. Improved means to anticipate crime trends and causes, and to assess the effectiveness of crime prevention policies; assessment of new challenges related to illicit drug use

Policy context

The Commission is stepping up progress towards a European area of freedom, security and justice by advancing work on internal security and guaranteeing at the same time respect for freedoms and fundamental rights. The fight against crime, including terrorism, and the need to increase the security of Europe's citizens remains at the forefront of activities at European level. The Commission has enshrined this priority in its Annual Policy Strategy for 2006 (COM(2005) 73), where one of the four policy priorities is to strengthen citizen security; one of the two main objectives includes further measures in the fight against crime and terrorism.

Research in this area is fundamental. Not only does the Action Plan[35] implementing the Hague Programme on Strengthening freedom, security and justice in the European Union (10th June 2005) invite the Commission to carry out research in certain areas (for example criminal confiscation) but research has also a role to play in evaluating

[35] Council document 9778/2/05

the need for future new policies and monitoring the effectiveness of existing policies or actions.

Research objectives

There is an urgent need for developing measures to reduce crime and terrorism, based on an estimation of the costs (direct and indirect) caused by criminal activities in the EU as well as on an improved knowledge of the effectiveness of strategies to counter-act crime and criminality, including terrorism and drug related crime. Such strategies may indeed take different forms, including two of particular interest: trans-national operational cooperation between national police and judicial bodies and the reinforcement of the legal framework regulating confiscation measures. It is essential to ensure that research in these areas is made accessible to practitioners and policy-makers.

<u>Task 1</u> - Evaluation of the Effectiveness of Criminal Confiscation

Problem description

The Action Plan implementing the Hague Programme on Strengthening freedom, security and justice in the European Union (adopted on 10th June 2005) invites the Commission, by 2008, to "review and, if necessary, strengthen present legislation on confiscation of criminal assets" and to carry out an "examination of standards for the return of confiscated or forfeited assets as compensation or restitution to identifiable victims of crime or charitable organisations". Accordingly, the Commission intends to focus on the serious crime reduction and preventive capacity of confiscation of criminal proceeds.

The objective of the research will be to assess and contrast the crime preventive/reductive capacity of various Member State practices in criminal confiscation; to assess the effectiveness of models for the return of confiscated assets as compensation or restitution to victims and to suggest one or more 'best practice EU models'.

<u>Task 2</u> - The Costs of Crime

Problem description

Estimating the cost of crime as a percentage of the gross national product is an important means to justify spending public money on safety for citizens and security against threats to society. But it is only very recently that EU countries have started generating figures on the cost of crime, and methodological problems still exist in developing the methods of calculating these costs.

For this reason, it is necessary to review existing research and literature on the methods used for assessing the cost of crime and disorder and discuss possibilities for their improvement; to develop models and methodology for calculating the costs of crime (individual and for the society, tangible as well as intangible) taking into account the whole scope of crime, including financial, economic and violent crime, trafficking in human beings, drug crimes as well as terrorism.

Task 3 - Approaches and Methodologies for Cross-border Police Cooperation within the EU

Problem description

The proposal for a Council Decision on the improvement of police cooperation between Member States of the European Union, especially at the internal borders and amending the Convention implementing the Schengen Agreement (COM (2005)317 final) was adopted by the Commission in July 2005. The proposal intends to provide a general framework to improve the operational cooperation, structural coordination and information exchange between law enforcement authorities of EU Member States. The implementation of this Decision will facilitate law enforcement cooperation, especially at the internal borders of the EU to achieve a higher level of security in the European Union. The Proposal responds to the invitation of the Hague Programme to further develop cross-border police cooperation. Besides, the Proposal also aims at amending the Convention Implementing the Schengen Agreement, by removing the limitation to land borders in the context of hot pursuit and extending the possibilities in which cross border surveillance and cross border pursuit can be carried out. One of the main infrastructure proposals presented is to assist and support the above facilitating measures by setting up permanent cooperation structures at the internal borders.

Research is needed to develop a methodology to assess the efficiency and the effectiveness of the existing permanent cooperation structures set up at the internal borders and to conduct an analysis of the current crime situation and police performance where cooperation projects are already implemented. In the second stage the above methodology and analysis should be assessed at regular intervals and conclusions drawn how to refine it in order to provide the law enforcement services in border regions with a comprehensive and workable measurement framework.

2.7. Issues related to civil protection (including biosecurity and protection against risks arising from terrorist attacks), and crisis management

Policy context and research objectives

Risks related to terrorist attacks include a broad variety of possible threats, which cannot all be fully identified and tackled in terms of targeted research. In this context, integrating European knowledge and expertise is required in order to be able to respond quickly and efficiently in case of terrorist attacks or major outbreaks of rare communicable diseases.

The Commission has prepared a programme of action[36] aimed at improving cooperation among the Member States in preparedness, detection and intervention to reduce the consequences of Nuclear, Radiological, Biological and Chemical (NRBC) threats to society.

[36] COM(2001)707, "Civil protection - State of preventive alert against possible emergencies".

It has launched new initiatives to confront the threat of the use of biological and chemical agents in attacks and identified the need for enhanced capacity for surveillance, prevention and response, improved detection techniques, support to stockpiling of vaccines and drugs, vulnerability assessment strategies and improved risk assessment methods.

A Communication summarises on-going activities, in particular in developing and implementing interfaces between the civil protection coordination mechanism, the network for epidemiological surveillance, both at national and European levels, and control of communicable diseases, and activities in key complementary sectors such as research and the pharmaceutical field.

The Communication of 2 June 2003 from the Commission to the Council and the European Parliament on cooperation in the European Union on preparedness and response to biological and chemical agent attacks (Health Security)[37] reinforces the needs in the field of surveillance and modeling, particularly sections 3.2 *Detection and identification of biological agents*, 3.4 *Emergency plans and modeling* and 5.2 *The 6th Framework Programme.*

Task 1 Preparation for establishing a sustainable network of national research activities on countering the effects of biological and chemical terrorism (SSA). Building on the work initiated by the EU R&D Expert Group on countering the effects of biological and chemical terrorism, this project will make an inventory and document initiatives that have been taken to improve pan-European coordination of research, or that have involved the exchange of information on countering the effects of such terrorism. It is expected that the project will cover major fields such as: risk assessments; early warning; laboratory practices; and ongoing research. It should identify short-, medium-, and long-term needs for research, as well as opportunities for sharing experience and best practices between countries. Furthermore the project will provide recommendations on how a network covering relevant competences – such as microbiology, chemistry, toxicology, medicine, veterinary medicine and political and social sciences - could improve European preparedness in this area. It is envisaged that leaders of national research programmes together with scientific experts and relevant stakeholders will be included in the project.

[37] COM (2003) 320 final. Prepared in the framework of the Council and Commission programme of 20 December 2002 to improve co-operation in the European Union for preventing and limiting the consequences of chemical, biological, radiological or nuclear terrorist threats (CBRN-Programme)

3. Underpinning the economic potential and cohesion of a larger and more integrated European Union

3.1. Underpinning European integration, sustainable development, competitiveness and trade policies (including improved means to assess economic development and cohesion)

No tasks opened for this call.

3.2. The development of tools, indicators and operational parameters for assessing sustainable transport and energy systems performance (economic, environmental and social)

Policy context

Energy and transport play a key role in people's lives and are a decisive factor in economic competitiveness and employment. The promotion of sustainable development including its economic growth dimension and continued freedom of movement has become a central objective of European Union policy. Reaching this objective requires comprehensive policy measures, voluntary agreements, financial schemes and support to research and development. These are at the heart of the Commission proposals presented in the *Green Paper* 'Towards a European strategy for the security of energy supply', and in the *White Paper* 'European transport policy for 2010: time to decide'[38].

In setting out different options, these policy documents clearly identify the main factors contributing to current unsustainable development patterns. The continuous increase in energy and transport demand and their growing dependence on imported fuels, notably oil, is undermining the sustainable development of the European economy. Growing congestion, a succession of accidents and energy supply crises has in turn highlighted the risk of disruption in flows both in energy supply chains and in mobility systems.

Research objectives

Research is needed to deliver realistic solutions that support policy monitoring and forecasting and facilitate/enhance the implementation of the transport and energy policy measures and instruments. Research will focus on monitoring the implementation of the European transport and energy policies through an efficient, rapid and secure access to reliable and harmonised data and enhanced forecasting tools, and assessing the impacts of individual policies and policy packages in terms of sustainability indicators and harmonised approaches.

[38] The Green Paper was adopted in November 2000, COM(2000)769, and the White Paper in September 2001, COM(2001)370.

Research will in particular have the following specific objectives: improve European transport models and forecasts (refining the demand analysis, linking with energy models); define/measure the quality of service of the transport system (reliability, congestion, bottlenecks etc.); improve energy models and data sources to evaluate the effects of regulatory action, fiscal measures or other policy instruments on energy security, competitiveness and environment protection; improve appraisal methods and tools; determine sustainability indicators and targets (modal shares, decoupling, shares of renewables etc); analyse, develop and disseminate innovative policy packages and best practices designed to reach the targets defined.

Research under this area will complement and take into account the research to be carried out under the thematic priorities, in particular under Priority 6 (Sustainable development, global change and ecosystems) and Priority 4 (Aeronautics and space).

For transport tasks 1 to 4 of the fifth SSP call listed below, work will be coordinated with related transport projects, and results validated with relevant stakeholders, such as the TRANSFORUM Transport Scientific Forum (coordination action launched under task 4 of the SSP-1 call – see http://www.transforum-eu.net).

Fifth call tasks

Task 1- Quality of transport services in the framework of the common transport policy: to research the further development and validatation of common definitions for *levels of service* (including reliability, congestion, infrastructure scarcity and bottlenecks) for all passenger and freight transport modes and intermodal transport; to propose suitable *indicators* for the level of service and the quality of transport infrastructure (including both nodes and links) and to determine an *accounting framework* and *method to measure these and to assess the impacts of policy actions* through inclusion in a European transport network model covering freight, passenger and intermodal transport. The core approach will be *user-oriented*, and data collection and related institutional issues will be addressed to recommend procedures and roles in the exploitation, uptake and transfer of results (including public authorities, regulators, policy-makers, associations of travel and transport users, operators etc.).

Task 2- Policy packages and best practices: to develop research on tools and approaches allowing a comprehensive socio-economic assessment of innovative transport policy packages and identification of best practices. The work will start from the state-of-the-art and results attained in the SPECTRUM specific support measure (under the 5th Framework Programme Growth programme, see http://www.its.leeds.ac.uk/research/index.html). The activities will be conducted in liaison with task 2 of the SSP-4 call.

Task 3- Integration of energy, technological and/or environmental components to widen the policy assessment and forecasting capabilities of a European transport network model covering freight, passenger and intermodal transport. The work will be based on the state of the art and results attained in the TRANS-TOOLS specific support action (SSP-1 call/task 2, see http://www.inro.tno.nl/transtools/index.html), and will be conducted in liaison with related 6th Framework Programme actions such as SSP-5 task 4 below, and the TRIAS project of DG

Research (Transport-3 call/task10, see http://www.isi.fhg.de/TRIAS), as well as with the NTUAS1 study (http://europa.eu.int/comm/dgs/energy_transport/figures/scenarios/index_en.htm) of DG Energy and Transport and the TREMOVE 2 study (http://www.tremove.org) of DG Environment.
The case for the integration proposed will first be made through research on a detailed *user needs* analysis. The integration of energy, technological and/or environmental components into the European transport network model will be validated, ensuring the *compatibility and coherence* of the transport, energy, technological and environmental assumptions, scenarios, forecasts and impact assessment analyses, and the added-value of this work will be shown by comparisons with results from previous studies.

Task 4- European transport network model refinement regarding freight and intermodal transport to and from the Rest of the world: to attain a more precise representation of the freight flows between European countries and the 'Rest of the World' as well as to extend the model to other world regions (to facilitate use and uptake of direct use in the countries/regions involved). Active participation of participants from INCO target countries and/or international organisations interested in this action will be sought. The work will be conducted in liaison with SSP-5 task 3 above.

Task 5- Best practice, planning, financing and control of costs for the dynamic maintenance of transport infrastructures with prime emphasis on road and rail infrastructures, but addressing also airports and ports should be addressed in this task. Data on the needs for transport infrastructures maintenance in Europe will be collected, and the analysis will be conducted with the support of case studies. The work will be conducted in liaison with the HEATCO specific support action (http://www.ier.uni-stuttgart.de/public/en/organisation/dept/proj_desc.php?pid=267) and with task 4 of the SSP-4 call, as well as with research projects on intelligent network management and on materials and lifecycle analysis.

Task 6 - Transport related sensitive areas: The objective is to research the development of sets of criteria characterising sensitive areas from the point of the view of their sensitiveness to transport activities in the context of EU transport policy. In this respect, sensitiveness should be assessed both regarding nature protection and human health and well-being. At least mountainous and urban areas should be covered and various types of traffic should be equally included in the analysis. The geographical implication of applying sets of criteria for characterising transport related sensitive areas will be explored. The research will provide for the testing of policy instruments in order to assess possible implications of the concept from the EU transport policy point of view. This implies trade-offs between development of transport activities and their impact on economic development, and the objective to preserve sensitive areas will be analysed. A spatially disaggregated valuation of the benefits and costs of transport (including external costs) will be reviewed and used as a starting point to test market-based instruments to mitigate transport impacts.

Task 7 – Quantitative and qualitative evaluation of the impact on EU economy and employment of high oil prices: to evaluate the (i) direct and indirect impacts of temporary and/or permanent increase in oil price on the EU energy and transport sectors, on EU employment and on the whole European economy; (ii) links between oil and gas prices on the EU market; (iii) substitution levels for oil by new and clean energy technologies.

Task 8 - Action Plan for high-priority renewable energy initiatives in Southern and Eastern Mediterranean area: (i) to map the renewables resources in Southern and Eastern Mediterranean area; (ii) to identify potential demonstration sites for wind and concentrated solar projects by overcoming environmental, geopolitical and socio-economic issues; (iii) to involve the main actors able to implement renewable projects in the region; (iv) to set up robust financing schemes for a limited number of priority renewable initiatives.

Task 9 - Economics and policy interfaces for gas and nuclear in the context of energy security of supply and a future hydrogen economy: to address EU energy security of supply issues related to gas and nuclear in the liberalisation context by tackling: (i) economic mechanisms related to the financing and investments in the energy field; (ii) policy governance aspects related to gas and nuclear at the EU-level and beyond; (iii) barriers and prospects for the hydrogen economy based on these two energy sources.

Task 10 - RTD for increasing the share of new renewable technologies in emerging and developing countries: (i) to assess the role of research, technological development and demonstration (RTD&D) and to compare it with other options to implement modern renewable energy technologies in emerging and developing countries also in the context of the Johannesburg Renewable Energy Coalition and the EU Energy Initiative; (ii) to identify the best-practices, especially for capacity-building, technology transfer, training, etc. in emerging economies and developing countries; (iii) to quantitatively evaluate the export potential for EU renewable industry and propose specific measures to achieve this potential.

3.3. Global security analysis and validation systems for transport and research relating to accident risks and safety in mobility systems

Policy context

The assaults on the Madrid railways on 11 March 2004 and on the London underground of 7 and 21 July 2005 have tragically confirmed that mass transport remains a common target for terrorist attacks.

Some Member States confronted with terrorism for decades gained a continuous and longstanding experience on evolving criminal methods used by terrorism. In the perspective of the evolution of mass transport patterns and its development in large cities and the emerging of new prevention and intervention technologies, this experience requires a permanent adaptation of planned responses.

The role of transport operators and their staff has progressively increased and led transport companies to set up procedures to seek maximum efficiency notably in case of emergency and in cooperation with police and civil protection forces.

However according a survey carried out by the Commission[39], in few MS rail and public transport staff is provided with training on how to react to a terrorist incident, although measures are being taken in some MS to make this mandatory. Many MS train most staff in more general terms, for example how to carry out an evacuation of a station for whatever reason, while only managers and senior staff, or staff in charge of security, are trained on how to respond specifically to a terrorist incident.

As the efficiency of the transport sector depends on the capacity of operators and public authorities to design a satisfactory response to terrorism threat both in terms of software and efficient administration or 'manware', the content of training to handle security situations should be developed for transport operator workers.

Operator staff at various levels still has to learn, train and exercise in view to acquire and maintain specific competence to prevent or handle risk situations or terrorist events, as their role in preventing or mitigating attacks has become more and more critical.

Research objectives

Development and dissemination of new solutions of staff training will be addressed in order to improve transport security.

Fifth call task:

Task 1 - Security Training for transport staff. The objective of the project is to conceive, draft and disseminate guidelines for the conduct of emergency training drills, simulations and exercises. It will lead up to the realisation of educational material for the training of metro, train, buses and transport staff in general and conceive a dissemination plan.

Three different staff categories shall be addressed:

Security officers;

Drivers/pilots, field personnel, desks / officers in contact with the public;

Managers.

The project shall identify the necessary knowledge/understanding/proficiency, building up a common harmonised European curriculum for the above staff categories.

[39] The Commission carried out a survey in 2005 to obtain a snapshot of the rail and urban public transport security situation in the EU. Questionnaires were sent to the representations of all Member States. Some 20 have replied.

3.4. Forecasting and developing innovative policies for sustainability in the medium and long term

Policy context

The proposed research will contribute to the EU Strategy for Sustainable Development and the 6th Environment Action Programme and the related Thematic Strategies.

Research objectives

Research will have the following specific objectives: to further develop indicators and assess linkages between different priorities of the Sustainable Development Strategy, to assess the potential for sustainable consumption, to operationalise the sustainable management of coastal erosion, to use life cycle concepts to waste generation, to assess environmental, economic and social impacts of EU initiatives with developing countries on public procurement and to improve tools for the Impact Assessment of EU regulation.

Fifth call tasks

Task 1 - Assessing interlinkages between different priorities of the Sustainable Development Strategy: Develop methods and indicators for assessing the progress towards Sustainable Development in view of developing 'best-needed' indicators that require research work in order to be developed on a regular basis. The research should build on existing work including indicator development by EUROSTAT and other relevant European and international organisations. Tools and methods should be provided which allow the elaboration of forecasts on the basis of available scenarios, and the identification of inter-relationships between selected unsustainable trends in order to explore potential synergies and trade-offs. Potential analytical frameworks to assess interlinkages between trends should be examined, with the aim of comparing the merits of different approaches and making recommendations for their use in monitoring and policy making.

Task 2 –Assessing the potential of various policy instruments for sustainable consumption practices and greening of the market: The purpose is to analyse how policy instruments can lead to more sustainable consumption patterns by individuals and households. The scope of the research proposal goes beyond the classic taxation instruments and should include any instrument found to lead to more sustainable consumption patterns. This would include market-based instruments, such as tradable permits, tariffs or public procurement, and regulatory or voluntary instruments, such as, labelling and increased market transparency, voluntary agreements and trade policy. The research will need to identify instruments already in use, examples of best practice and assess the possibility of extending the use of these instruments to other fields not yet covered (different products, different target actors, different countries, etc.). The research project will evaluate the effectiveness of these instruments and the possible barriers for use. A key element will be the identification

of mechanisms for the greening of the market and the possible suggestion of new forms of market based and other instruments for the EU.

Task 3 - Operationalise key concepts to improve sustainable management of coastal erosion: Implementation of sound coastal erosion management involves determining issues such as strategic sediment reservoirs and delineating coastal sediment cells which can take advantage of past research results. To make these concepts and objectives applicable across the different European coastal zones and in a context of multi-risk assessment, consistent definitions and methodologies to set thresholds on these issues that are tested on the field are required. The research results should contribute to the Maritime Policy definition and Integrated Coastal Zones Management.

Task 4 - Use of life-cycle thinking for the overall mapping of the environmental issues of waste generation and management: Develop and validate a global mapping of the main environmental pressures of waste generation. This research needs to take stock of existing research results and be based on scientific knowledge concerning the pressures that waste generation and management exert on the environment. It shall take into account the life-cycle dimension of such pressures. In addition, it shall provide information on how waste generation shall evolve in the future, in particular as a result of the built-up material stock in the European economy. This research should provide insight on the environmental impacts of materials management and the societal benefits associated with prevention and recovery strategies for wastes in general and not be limited to a particular waste.

Task 5 - Assessing environmental, economic and social impacts of EU initiatives with developing countries concerning public procurement and investment in environmental public services. In the context of numerous trade negotiations in which the EU is involved and in trade agreements which have recently been concluded discussion has taken place on the inclusion of commitments relating to public procurement and investment in areas such as environmental public services. The research objective is to have an in-depth analysis of the economic, social and environmental consequences of openness to international competition (transparency clauses or those on national treatment) in key emerging countries in those sectors of the economy where public procurement plays an important role. This question is clearly linked to the sector of environmental public services, where markets are usually managed by local or national public authorities. The area of public sector markets is particularly relevant because of the importance of European companies at global level, especially in the environmental sectors, as well as its impacts on important social questions (e.g. development, poverty and health).

Task 6 - Improvement of tools for evaluation of economic impacts of Lisbon-type reforms, and for impact assessment of EU regulation: Improve and provide the Commission with various existing multi-country, multi-sector economic models, which include the field of energy and environment, for in-house analysis of the economic impact of structural reforms linked to the Lisbon agenda as well as for the impact assessment of EU level regulations. These models should incorporated dynamic aspects; in particular an adequate representation of technological change is indispensable. Several types of models, including CGE (Computable General

Equilibrium), sectoral and macro-econometric models are necessary. Specific extensions of the models and databases, such as improving modelling of the labour market, R&D sector, households disaggregation for distributional effects or product market competition, will need to be developed throughout this research to fulfil the Commission's emerging requests.

3.5. Information Society issues (such as management and protection of digital assets, and inclusive access to the information society)

No tasks opened for this area.

3.6. The protection of cultural heritage and associated conservation strategies

Policy context

Following the recent enlargement of the European Union, the need for strengthening collaborative efforts on the protection of our common European cultural heritage is now greater than ever.
There is a need for all EU policies and directives to assess their impact on cultural heritage through better understanding the links for instance, between climate effect and archaeological sites, or between air pollution and deterioration of architectural surfaces. Furthermore there is an increasing demand for greater public access to cultural heritage by European citizens and the physical impact of cultural tourism on preservation must be assessed. But equally important is the need to respond to the challenges resulting from the changes of our natural environment as well as from man-made activities, including those posed by the increased threat of theft, illicit trafficking and fraud in relation to movable cultural heritage objects.

Research objectives

Research under this area will mainly contribute to Community interventions and programmes through the 'Culture 2000' framework programme, based on Article 151 of the EC Treaty, and to the Structural Funds, based on Articles 158 and 159 of the EC Treaty; it will also contribute to the Water framework directive and complementary measures including civil protection to be taken in the field of cultural heritage, the EC CAFE initiative (Clean Air for Europe) , a daughter directive of the Air Quality for Europe Directive that explicitly mentions the effects of air pollution on cultural heritage, as the Directive on the return of cultural objects unlawfully removed from the territory of a Member State and the Regulation on the export of cultural goods to third countries.

Multidisciplinary research is needed to provide the necessary scientific and technological basis and cost efficient and effective tools for the protection of both the

immovable cultural heritage and its constituents and for movable cultural heritage objects, while ensuring that all conservation practices meet modern legislation. Research will cover a series of issues including the authenticity and traceability of cultural heritage objects, the best practices for the long-term management of archaeological sites, the protection of cultural heritage from environmental damage particularly in relation to flooding, the durability of protection and conservation treatments for movable cultural heritage objects, relevant training, and the promotion and stimulation of information exchange in relation to cultural heritage research activities.

Fifth call tasks

Task 1 – To verify the authenticity of cultural heritage objects: to develop innovative, or improve the efficiency of, non-destructive methods and technologies in terms of reliability, time and cost, enabling the objective analysis and detection of frauds or copies; this research may include the use of nanotechnologies and molecular biology.

Task 2 – To enable the traceability of cultural heritage objects: to develop or improve the effectiveness of technologies and tools for permanent identification and cross border traceability of moveable cultural heritage objects in particular in the case of theft. The proposed technology should be part of a clear overall strategy for secure management of public cultural heritage collections, from inventory to recovery.

Task 3 – To identify best practices for the long-term management of archaeological sites: to analyse the impact on archaeological sites after excavation, in relation to conservation, protection and reconstruction as well as the effects of tourism and the environment. This research should be carried out through an appropriate and diverse selection of case studies and lead to recommendations for best practices.

Task 4 – To help protect cultural heritage from environmental damage particularly in relation to flooding: to develop preventive conservation strategies, to identify appropriate measures and to provide clear recommendations for mitigating or removing damages from cultural heritage objects, particularly in relation to flooding.

Task 5 – To improve the effectiveness and durability of protection and conservation treatments for movable cultural heritage objects: to develop innovative protection, conservation and remediation treatments to combat degradation processes. To identify the response of cultural heritage materials to indoor and outdoor environmental conditions and assess the impact of protection and conservation treatments and their reversibility. Proposals in relation to paintings, mosaics and glass are particularly encouraged.

Task 6 – To design and organise training seminars on cultural heritage research: The training seminars (one or two seminars) should each address a specific field of cultural heritage and target an area where there is a particular need for sharing best practices on conservation and restoration technologies. Due account should be taken of the most recent emerging results from European research projects. The target audiences should include professionals and post-graduate students.

<u>Task 7</u> – To support cultural heritage research activities: to help identify priorities and develop strategies as input to the European Construction Technology Platform (ECTP) and its Strategic Research Agenda, as well as to future FP7 activities regarding cultural heritage research; in particular to support the organisation of the Focus Area 'cultural heritage' of the ECTP.

3.7. Improved quality, accessibility and dissemination of European statistics

No tasks opened for this area.

B 2. Research priorities under Call SSP5-B INFLUENZA

Avian influenza (AI) is a highly contagious viral infection of birds and highly pathogenic strains (HPAI) can affect all avian species. The current series of outbreaks and rapid establishment of endemicity and spread of the avian influenza H5N1 in birds necessitates the mobilization of extra-ordinary research efforts to address the imminent needs in animal health and the protection of humans from both avian influenza and the potential emergence of pandemic influenza in man with possible devastating consequences. The fight against the disease at the source, i.e. in animals, is therefore crucial as recognised by the three international organisations FAO/OIE/WHO. In parallel, a major effort is needed to ensure the protection of humans through the availabilty of highly performing pandemic influenza vaccines.

The current situation has revealed important gaps in the knowledge of the disease and drawbacks in the available response tools under the conditions prevailing in some countries. The global dimension and complexity of the problem in terms of countries concerned and at risk, number of species, variability of the viruses and rapidity of spread adds to the complexity of the problem. The prevailing situation has also highlighted the need to increase efforts for international collaboration in research, including collaboration between animal and human health disciplines and for technology transfer.

Research should define appropriate sustainable approaches and encourage collaboration, synergies and complementarities at EU and international level between private and public sector stakeholders with multidisciplinary and inter-sectorial approaches. Where appropriate, consortia should benefit from the participation of partners from research and public health institutions from affected areas (transmission epicentes) in third countries as well as relevant international organizations. Particular emphasis should be placed on the participation of INCO target countries.

The following tasks have been elaborated in such a way that they fill urgent and necessary gaps and they are expected to provide crucial deliverables in the relatively short perspective to serve as a foundation for new and longer term research investments in the years to come. The tasks complement each other in that some serve to deliver new tools while others mainly generate new knowledge.

The tasks have been elaborated in the context of the recent developments with H5N1 avian influenza and, given the rapid evolution of events, proposals should take into account the latest developments including shifts in priorities, up to the time of submission. The task descriptions have been developed on the basis of recommendations presented in several fora, such as the EFSA, FAO, OIE and WHO[40][41][42][43][44].

[40] *Animal health and welfare aspects on Avian Influenza*" adopted on 13-14 September 2005 by the Animal Health and Welfare Panel of the European Food Safety Authority

Furthermore, the tasks have also been elaborated with the notion that more than one project might be selected for funding under each task.

For this call, only areas 1.4 and 2.2 of the work programme are open, as detailed below.

1. Sustainable management of Europe's natural resources

1.4. New and more environment friendly production methods to improve animal health and welfare including research on animal diseases such as foot and mouth disease, swine fever and development of marker vaccines

Task 1 Influenza vaccine development for avian species (STREP)

The objective is to assess the efficacy and applicability of conventional and new generation vaccines in different avian species. In particular vaccines which enable the DIVA (differentiating infected from vaccinated) concept through an appropriate companion test and allow simplification of large scale administration and application in developing countries. Studies on antigenic drift in currently circulating viruses and implications of such drifts in vaccine formulation are encouraged.

Task 2 Improved diagnosis and early warning systems (STREP)

The objective is the development and validation of laboratory tests that can be used as early warning systems in surveillance programmes for AI in presence and absence of vaccination (complement other EU funded research). Such systems are to be integrated in harmonised protocols applicable to different compartments of the poultry industry.

Task 3 Ecology and pathogenesis of avian influenza infections (STREP)

The objective is to contribute to the understanding of the pathogenesis, virulence determinants, host-pathogen interactions and the molecular basis for host specificity in animals. It will address the requirements for adaptation of the viruses to a new host and contribute to the understanding of the co-evolution of the viruses and their host

[41] OIE/FAO International Conference on Avian Influenza, OIE Paris, France, 7-8 April 2005 http://www.fao.org/ag/againfo/subjects/documents/ai/OIE_FAO_Recom_05.pdf

[42] FAO/OIE in collaboration with WHO *"A Global Strategy for the Progressive Control of Highly Pathogenic Avian Influenza (HPAI)"* http://www.fao.org/ag/againfo/resources/documents/empres/AI_globalstrategy.pdf

[43] The EU Pandemic Influenza Preparedness and Response Planning and the paper *"Towards sufficiency of Pandemic Influenza Vaccines in the EU"* http://europa.eu.int/comm/health/ph_threats/com/Influenza/keydo_influenza_en.htm

[44] The WHO Global Influenza Preparedness Plan http://www.who.int/csr/resources/publications/influenza/WHO_CDS_CSR_GIP_2005_5/en/index.html

reservoirs. The correlation between bird movements and transmission dynamics within the wild bird reservoir and the ecological characteristics of infection in resident EU wild bird population to generate predictive models relating to the risk of introduction and spread into EU domestic poultry.

Task 4 Migratory birds (STREP/CA)

The objective is to set up a multidisciplinary network for early warning system in real time for influenza viruses in migratory birds in Europe. The network would include ornithological studies and sampling, virus detection, isolation and characterisation and data processing for early warning and risk evaluation. It should bring together a multidisciplinary consortium involving virologists, epidemiologists, modellers and ornithologists and liaising with relevant international organisations and policy makers. Coordination with other EU supported activities in this field should be ensured.

Task 5 AI virus survival (STREP)

The objective is to generate robust scientific data on the survival of AI viruses in faeces and other infective material as well as in the environment of village and free-range poultry so that proper assessments can be made of the likelihood of virus remaining at the time of restocking and for other control measures. It will also address the survival of AI viruses in poultry commodities including the effect of different treatments such as heat, high or low pH etc which may be used for processing poultry products.

Task 6 Reinforcement of the Community and national reference laboratories network for avian influenza (CA)

The objective is to reinforce the Community and national reference laboratories network through better coordination of research efforts as well as exchange and sharing of expertise and scientific information. Laboratories involved in influenza research in mammals (e.g. swine, equine, canidae and others) should be encouraged to participate. Coordination with the corresponding networks for human influenza should be ensured.

Task 7 Transfer of technology and training particularly for INCO target countries (CA or SSA)

The objective of this task is to facilitate transfer of technology and provide training opportunities in situ and / or in the EU laboratories to relevant INCO target countries in order to better respond to the avian influenza outbreaks and in general to infectious diseases of livestock.

2. Providing health, security and opportunity to the people of Europe

2.2. Public health issues, including epidemiology contributing to disease prevention and responses to emerging rare and communicable diseases, allergies, procedures for secure blood and organ donations, non-animal test methods

Task 1 Clinical research on the immunogenicity of pandemic influenza vaccines (STREP)

The objective is to enhance the capacity of pandemic influenza vaccines to evoke a strong and long lasting immune response in humans. Research should focus on the development of antigen sparing strategies and studies demonstrating the effects of immuno-modulatory molecules with or without new or existing adjuvants in humans are encouraged. Projects should aim to bridge the gap between pre-clinical studies and clinical research in humans. Research projects should include standardised measurement of immune responses, identification of correlates of protection (both for B and T cells), appropriate animal models, testing and pre-clinical validation and proof of principle testing in humans. Projects may also include early stage challenge studies in humans (including clinical phase IIa trials) with attenuated virus strains.

Task 2 Defining molecular markers of pathogenicity in highly pathogenic influenza (STREP)

The research will aim to reveal the biological basis of intra- and/or inter-species transmission, adaptation, host/pathogen interaction, host specificity and pathogenicity of highly pathogenic influenza strains. Research will also analyse viral variations and address their correlation with different serum and cellular markers in order to develop an improved understanding of the genetic evolution of the virus.

Task 3 Strengthening of the research support to surveillance of influenza (STREP)

The objective is to provide the necessary research support to the surveillance, control and public health activities in line with the strategy of the European Centres for Disease Prevention and Control in the area of influenza surveillance. Research should aim to improve case definitions and disease manifestations and should include sero-epidemiological studies in exposed and affected populations.

Task 4 European Coordination Conference/Workshop on influenza research – (SSA)

The aim is to gather scientists, industry and policy makers to discuss detailed aspects and/or the state-of-the-art of European avian/pandemic influenza research from both

the human and animal health sectors with a view to increase cross-project collaborations and to draw up a European research agenda for the next few years. Projects facilitating coordination and integration of European influenza research with global initiatives are also welcome.

3. Overview of calls for Proposals foreseen in this Work Programme (Annex A)

Overview of Calls for Proposals foreseen in this Work Programme (see relevant work programme part for details) - SP1

1. Life sciences, genomics and biotechnology for health	(i) FP6-2002-Lifescihealth - publication 17/12/2002; closure 25/03/2003; budget 513 M€ (ii) FP6-2003-Lifescihealth-I - publication 15/07/2003; closure 13/11/2003; budget 411 M€ (iii) FP6-2003-Lifescihealth-II - publication 15/07/2003; closure 15/04/2004; budget 4 M€ (iv) FP6-2003-Lifescihealth-3 - publication 13/12/2003; closure 24/03/2004; budget 12 M€ (v) FP6-2004-Lifescihealth-4 – publication 15/06/2004; closure 09/09/2004; budget 4M€ (vi) FP6-2004-Lifescihealth-5 – publication 15/06/2004; closure 17/11/2004; budget 540M€ (vii) FP6-2005-Lifescihealth-6 – publication 30/6/2005; closure 9/11/2005; budget 362M€ (viii) FP6-2005-Lifescihealth-7 – publication 30/6/2005; closure 9/11/2005; budget 171M€
2. Information Society technologies	(i) FP6-2002-IST-1- publication 17/12/2002; closure 24/04/2003; budget 1070 M€ (ii) FP6-2002-IST-FET Open domain-publication 17/12/2002; closing 31/12/2004; budget 60 M€ (iii) FP6-2002-IST-NMP-1 (joint) - publication 17/12/2002; closing 24/04/2003; budget 60 M€ (iv) FP6-2002-IST-2- publication 17/06/2003; closure 15/10/2003; budget 525 M€ (v) FP6-2004-IST-3- publication 8/06/2004; closure 22/09/2004; budget 28 M€ (vi) FP6-2004-IST-NMP-2 (joint) - publication 8/06/2004; closing 14/10/2004; budget 180 M€ (vii) FP6-2004-IST-FET Proactive initiatives-publication 8/06/2004; closing 22/09/2004; budget 80 M€ (viii) FP6-2004-IST-4 - publication 16 Nov 2004; closure 22/03/2005; budget 1120 M€ (ix) FP6-2004-IST-5 - publication 17 May 2005; closure 21/09/2005; budget 638 M€ (x) FP6-2004-IST-C publication 8 Dec 2004; closure 20/09/2005; budget 60 M€ (xi) FP6-2005-IST-41 publication 18/10/2005; closure 20/12/2005; budget 52.5 M€ (xii) FP6-2005-IST-6 publication 20/12/2005; closure 24/04/2006; budget 140 M€
3. Nano-technologies and nano-sciences, knowledge-based multifunctional materials, and new production processes and devices	(i) FP6-NMP-1- publication 17/12/2002; closures 6/03/2003 and 10/04/2003; budget 400 M€ (ii) FP6-2002-IST-NMP-1-(joint) publication 17/12/2002; closing 24/04/2003; budget 60 M€ (iii) FP6-NMP-2- publication 17/12/2002; closure 10/04/2003; budget 40 M€ (iv) FP6-2003-NMP-NI-3- publication 13/12/2003; closure 02/03/2004; budget 245 M€ (v) FP6-2003-NMP-TI-3- publication 13/12/2003; closure 12/05/2004; budget 105 M€ (vi) FP6-2003-NMP-SME-3- publication 13/12/2003; closure 02/03/2004; budget 80 M€ (vii) FP6-2002-STEEL-3(joint) - publication 13/12/2003; closing 17/03/2004; budget 25 M€ (with 20 M€ from FP6, the balance from the Research Fund for Coal and Steel) (viii) FP6-2004-IST-NMP-2 (joint) - publication 8/06/2004; closing 14/10/2004; budget 180 M€ (ix) FP6-2004-NMP-NSF-1 - publication 8 June 2004; closing 14/10/2004; budget 6 M€ (x) FP6-2004-NMP-NI-4 - publication Dec 2004; closing 17/03/2005; budget 150 M€ (xi) FP6-2004-NMP-TI-4 - publication Dec 2004; closing 15/09/2005; budget 120 M€ (xii) FP6-2004-NMP-SME-4 - publication Dec 2004; closing 17/03/2005; budget 100 M€

4. Aeronautics and space	(i) FP6-Aero-1- publication 17/12/2002; closure 20/03/2003; budget 240 M€ (ii) FP6-Aero-2- publication 17/12/2002; closure 20 March 2003 and 23 September 2003; budget 7 M€ (iii) FP6-2002-TREN-1 (joint)-publication 17/12/2002; closures 18,20/03/2003 and 15/04/2003; budget 140 M€ (iv) FP6-2003-TREN-2 (joint)-publication 17/06/2003 closure 17/12/2003; budget 175 M€ (v) FP6-2002-Space-1- publication 17/12/2002; closure 20/03/2003; budget 60 M€ (vi) FP6-2003-Aero-1- publication 13/12/2003; closure 31/3/2004; budget 300 M€ (vii) FP6-2003-Aero-2 - publication 13/12/2003; closure 31/3/2004, 28/9/2004, 30/3/2005, and 20/10/2005; budget 7 M€ (viii) FP6-2003-Space-1 - publication 13/12/2003; closure 31/3/2004; budget 60 M€ (ix) FP6-2003-TREN-3 (joint)- publication 8/06/2004; closure 8/12/2004; budget 252 M€ (x) FP6-2004-Hydrogen-1 (joint) - publication 8/06/2004; closure 8/12/2004; budget 35 M€ (xi) FP6-2004-Hydrogen-2 (joint) - publication 8/06/2004; closure 8/12/2004; budget 4.5 M€ (xii) FP6-2005-Aero-1 - publication 12/3/2005; closure 13/7/2005; budget 240 M€ (xiii) FP6-2005-Space-1 - publication 12/3/2005; closure 13/7/2005; budget 46.5 M€ (xix) FP6-2005-TREN-4 (joint)- publication 28/06/2005; closure 4/11/2005; budget 214 M€
5. Food quality and safety	(i) FP6-2002-Food-1 - publication 17/12/2002; closure 15/04/2003; budget 204 M€ (ii) FP6-2003-Food-2A & B - publication 5/11/2003; closures 5/02/2004 and 29/09/2004.; budget 197 M€ (iii) FP6-2004-Food-3-A - publication 24/7/2004; closure 7/10/2004; budget 152 M€ (iv) FP6-2004-Food-3-B - publication 24/7/2004; closure 8/02/2005; budget 59 M€ (v) FP6-2004-Food-3-C - publication 24/7/2004; closure 7/09/2005; budget 5 M€ (vi) FP6-2005-Food-4-A - publication 5/7/2005; closure 5/10/2005; budget 83 M€ (vii) FP6-2005-Food-4-B - publication 5/7/2005; closure 5/10/2005; budget 34 M€ (viii) FP6-2005-Food-4-C - publication 5/7/2005; closure 8/2/2006; budget 8 M€
6.Sustainable development, global change and ecosystems	(a) Sustainable Energy Systems: (i) FP6-2002-TREN-1(joint)-publication 17/12/2002; closures 18,20/03/2003 and 15/04/2003; budget 140 M€ (ii) FP6-2002-Energy 1- publication 17/12/2002; closure 18/03/2003; budget 198 M€ (iii) FP6-2003-TREN-2(joint)- publication 17/06/2003; closure 17/12/2003; budget 175 M€ (iv) FP6-2003-Energy-2- publication 4/10/2003; closure 17/12/2003; budget 3 M€ (v) FP6-2003-TREN-3 (joint)- publication 8/06/2004; closure 8/12/2004; budget 252 M€ (vi) FP6-2004-Hydrogen-1 (joint) - publication 8/06/2004; closure 8/12/2004; budget 35 M€ (vii) FP6-2004-Hydrogen-2 (joint) - publication 8/06/2004; closure 8/12/2004; budget 4.5 M€ (viii) FP6-2004-Energy-3 - publication 8/09/2004; closure 8/12/2004; budget 190 M€ (ix) FP6-2005-TREN-4 (joint)- publication 28/06/2005; closure 4/11/2005; budget 214 M€ (x) FP6-2005-Energy-4 - publication 22/09/2005; closure 10/01/2006; budget 20 M€
	(b) Sustainable surface transport: (i) FP6-2002-TREN-1(joint)-publication 17/12/2002; closures 18,20/03/2003 and 15/04/2003; budget 140 M€ (ii) FP6-2003-TREN-2 (joint)-publication 17/06/2003 closure 17/12/2003; budget 175 M€ (iii) FP6-2002-Transport 1- publication 17/12/2002; closure 15/04/2003; budget 170 M€ (iv) FP6-2002-Transport 2- publication 17/12/2002; closure 3 April 2003 and 23 September 2003, and 1/9/2005 budget 5 M€ (v) FP6-2003-Transport-3 - publication 13/12/2003; closure 6/4/ 2004; budget 150 M€ (vi) FP6-2003-Transport-2 - publication 13/12/2003; closure 6/4/2004 and 22 September 2004; budget 5 M€ (vii) FP6-2003-TREN-3 (joint)- publication 8/06/2004; closure 8/12/2004; budget 252 M€ (viii) FP6-2004-Hydrogen-1 (joint) - publication 8/06/2004; closure 8/12/2004; budget 35 M€ (ix) FP6-2004-Hydrogen-2 (joint) - publication 8/06/2004; closure 8/12/2004; budget 4.5 M€ (x) FP6-2004-Transport-4 - publication 12/3/2005; closure 1/9/ 2005; budget 150 M€ (xi) FP6-2005-TREN-4 (joint)- publication 28/06/2005; closure 4/11/2005; budget 214 M€

	(c) Global change and ecosystems: (i) FP6-2002-Global 1-publication 17/12/2002; closure 8/4/2003; budget 170 M€ (ii) FP6-2003-Global 2-publication 3/07/2003; closure 9 October 2003 and 17 February 2004; budget 180 M€ (iii) FP6-2004- Global 3-publication 16/06/2004; closure 26 October 2004; budget 205 M€ (iv) FP6-2005- Global 4-publication 19/07/2005; closure 3 November 2005; budget 205 M€
7. Citizens and governance in a knowledge-based society	(i) FP6-2002-Citizens 1-publication 17/12/2002; closure 15/04/2003; budget 20 M€ (ii) FP6-2002-Citizens 2-publication 17/12/2002; closure 15/04/2003, budget 33 M€ (iii) FP6-2002-Citizens 3-publication 17/12/2002; closure 10/12/2003; budget 48 M€ (iv) FP6-2002-Citizens-4-publication 8/12/2004; closure 13/04/2005; budget 60 M€ (v) FP6-2002-Citizens-5-publication 8/12/2004; closure 13/04/2005; budget 52 M€ (vi) FP6-2002-Citizens-6-publication 8/12/20042; closure 13/04/2005; budget 4 M€
8. Policy support and anticipating scientific and technological needs	(a) Policy-oriented research: (i) FP6-2002-SSP 1 - publication 17/12/2002; closure 13/03/2003; budget 149,1 M€ (ii) FP6-2003-SSP-SARS 1 - publication 3/7/2003; closure 30/09/2003; budget 9 M€ (iii) FP6-2003-SSP3 - publication 4/10/2003; closure 5/01/2004; budget 83.1 M€ (iv) FP6-2004-SSP-4 - publication 28/10/2004closure 1/2/2005; budget 77.8 M€ (v) FP6-2005-SSP-5A - publication 22/12/2005; closure 22/3/2006; budget 77 M€ (vi) FP6-2005-SSP-5B INFLUENZA - publication 22/12/2005; closure 22/3/2006; budget 20 M€
	(b) New and Emerging S&T problems and opportunities: (i) FP6-2003-NEST-A-publication 26/02/2003; closure 22/10/2003; budget 28M€ (ii) FP6-2003-NEST-B1, B2, B3, B4 - publication 17/12/2003; closure 14/4/2004 and 15/9/2004; budget 30M€ (iii) FP6-2003-NEST-Path - publication 17/12/2003; closure 14/4/2004; budget 35M€ (iv) FP6-2004-NEST-Path - publication 01/12/2003; closure 13/4/2005; budget 35M€ (v) FP6-2004-NEST-C1, C2, C3, C4 - publication 01/12/2003; closure 13/4/2005; budget 30M€ (vi) FP6-2005-NEST-Path - publication 15/10/2005; closure 1/2/2006; budget 50M€
9. Horizontal research activities involving SMEs	(i) FP6-2002-SME 1-publication 17/12/2002; closure 27/11/2003; budget 155 M€ (ii) FP6-2002-SME 2-publication 17/12/2002; closure 6/03/2003; budget 40 M€ (iii) FP6-2003-SME 1-publication 17/12/2002; closure 21/10/2004; budget 75 M€ (iv) FP6-2003-SME 2-publication 17/12/2003; closure 6/04/2004; budget 41 M€ (v) FP6-2003-SME 3-publication 17/12/2003; closure 6/04/2004; budget 2 M€ (vi) FP6-2004-SME-COOP-publication 15/12/2004; closure 14/09/2005; budget 75 M€ (vii) FP6-2004-SME-COLL-publication 15/12/2004; closure 26/05/2005; budget 65 M€

10. Specific measures in support of international co-operation	(i) FP6-2002-INCO- DEV 1- publication 17/12/2002; closure 11/09/2003, budget 50 M€ (ii) FP6-2002-INCO- MPC 1-publication 17/12/2002; closure 7/05/2003; budget 25 M€ (iii) FP6-2002-INCO- WBC1-publication 17/12/2002; closure 7/05/2003, budget 13.5 M€ (iv) FP6-2002-INCO- DEV/SSA 1 - published 17/12/2002; open call; final closure 6/03/2006; budget 1 M€ for 2003, 1.9 M€ for 2004, 2M€ in 2005, 2.4M€ in 2006 (v) FP6-2002-INCO- MPC/SSA 2 - published 17/12/2002; open call; final closure 6/03/2006; budget 0.6 M€ for 2003, 0.9 M€ for 2004, 0.9M€ in 2005, 1M€ in 2006 (vi) FP6-2002-INCO- WBC/SSA3 - published 17/12/2002; open call; final closure 8/09/2004; budget 0.6 M€ for 2003, 0.9 M€ for 2004 (vii)FP6-2002-INCO-Russia+NIS/SSA-4 - published 17/12/2002; open call; final closure 6/03/2006; budget 0.6 M€ for 2003, 0.9 M€ for 2004, 0.8M€ in 2005, 0.7M€ in 2006 (viii) FP6-2002-INCO-COMultilatRTD/SSA 5 - published 17/12/2002; open call; final closure 6/03/2006; budget 0.6 M€ for 2003, 1.5 M€ for 2004, 1.5M€ in 2005, 2.2M€ in 2006 (ix) FP6-2003-INCO-DEV-2 - publication 17/12/2003; closure 14/09/2004, budget 36.2 M€ (x) FP6-2003-INCO-MPC-2 - publication 17/12/2003; closure 14/9/2004; budget 27.1 M€ (xi) FP6-2003-INCO-Russia+NIS-1 - publication 17/12/2003; closure 27/4/2004, budget 14 M€ (xii) FP6-2004-INCO-DEV-3 - publication 17/12/2004; closure 13/9/2005, budget 60 M€ (xiii) FP6-2004-INCO-MPC-3 - publication 17/12/2004; closure 13/9/2005, budget 10 M€ (xiv) FP6-2004-INCO-WBC-SSA-3- publication 17/12/04; closure 07/03/2005, budget 3 M€ (xv) FP6-2005-INCO-WBC-SSA-3- publication 17/12/05; closure 06/03/2006, budget 4 M€
11. Support for the co-ordination of activities	(i) FP6-2002-ERA-NET-1-CA-SSA - publication 17/12/2002; open call; final closure 4/10/2005; budget, 51.4 M€ for 2005 (25.1 M€ for the 2/3/2005 closure date and 26.3 for the 4/10/2005 final closure)
12. Support for the coherent development of policies	(i) FP6-2005-KNOW-REG-2 - publication 31/12/04; closure 19/05/2005, budget 8.5 M€ (ii) FP6-2006-FORESIGHT - publication 14/11/2005; closure 27/2/2006; budget 0.471 M€ (iii) FP6-2005-RTD-OMC-NET - publication 2/9/2005; closure 3/2/2006; budget 8.7 M€ (iv) Cf. FP6-2005-INNOV-9 - publication 05/10/2005; closure 05/1/2006; budget 2 M€
D. Promotion of co-operation with Associated Candidate Countries: "Reinforcement of the Associated Candidate Countries' Research Capacities"	(i) FP6-2003-ACC-SSA-General - publication 26/03/2003; closure 26/06/2003, budget 9 M€ (ii) FP6-2003-ACC-SSA-*NMP;* FP6-2003-ACC-SSA-*Aero-Space;* FP6-2003-ACC-SSA-*Food;* FP6-2003-ACC-SSA-*Energy;* *(iii)* FP6-2003-ACC-SSA-*Transport* - publication 26/03/2003; closure 26/06/2003, budget up to 4 M€ (iv) FP6-2004-ACC-SSA-2 - publication 15/06/2004; closure 14/10/2004, budget 19.8 M€
E. Promotion of co-operation with targeted third countries	(i) FP6-2004-TC-SSA-General - publication 15/06/2004; closure 14/10/2004, budget 2.9 M€

4. Common evaluation criteria for evaluating proposals (Annex B)

A number of evaluation criteria are common to all the programmes of the Sixth Framework Programme and are set out in the European Parliament and the Council Regulations on the Rules for Participation (Article 10). These are:

a) "Scientific and technological excellence and the degree of innovation;
b) Ability to carry out the indirect action successfully and to ensure its efficient management, assessed in terms of resources and competences and including the organisational modalities foreseen by the participants;
c) Relevance to the objectives of the specific programme;
d) European added value, critical mass of resources mobilised and contribution to Community policies;
e) Quality of the plan for using and disseminating the knowledge, potential for promoting innovation, and clear plans for the management of intellectual property."

Furthermore, in applying paragraph (d) above, the following criteria are also to be taken into account:

a) "For networks of excellence, the scope and degree of the effort to achieve integration and the network's capacity to promote excellence beyond its membership, as well as the prospects of the durable integration of their research capabilities and resources after the end of the period covered by the Community's financial contribution;
b) For integrated projects, the scale of the ambition of the objectives and the capacity of the resources to make a significant contribution to reinforcing competitiveness or solving societal problems;
c) For integrated initiatives relating to infrastructure, the prospects of the initiative's continuing long term after the end of the period covered by the Community's financial contribution."

As set out in the Rules for Participation, the calls for proposals determine, in accordance with the type of instruments deployed or the objectives of the RTD activity, how the criteria set out above are applied by the Commission.

The purpose of this annex is to indicate how these criteria shall be applied. In particular, as the Sixth Framework Programme contains a differentiated set of instruments, the way in which each criterion translates into the issues to be examined as the basis for marking proposals will differ. In evaluating against these criteria, the checklists of issues set out in the following pages are intended to be universal for each type of instrument.

Unless otherwise specified in the relevant parts of this work programme, the principal issues set out below (i.e. the main numbered headings) will be given equal weighting in the evaluation. For each principal issue, a minimum score to be achieved is also indicated as well as a minimum overall score for each instrument. Proposals that fail to achieve these minimum threshold scores shall be rejected. Any departures from these threshold scores are indicated in the relevant part of this work programme.

In addition to the basic checklists below and any specific criteria or interpretations of the criteria required for a call, the following issues are also addressed for all proposals at any appropriate moment in the evaluation: