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**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE
EUROPEAN PARLIAMENT, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

TOWARDS JOINT PROGRAMMING IN RESEARCH :

Working together to tackle common challenges more effectively

SUMMARY OF THE IMPACT ASSESSMENT

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1. PROCEDURAL ISSUES AND CONSULTATION OF INTERESTED PARTIES

1.1. Introduction

This impact assessment is in support of the initiative presented in the European Commission's Communication entitled "Towards Joint Programming in Research". The Joint Programming (JP) initiative is one of five policy initiatives planned by the Commission in 2008 as a follow-up to the Green Paper on "The European Research Area: New Perspectives" responding to the "Optimising research programmes and priorities" dimension. JP is the process whereby Member States engage on a voluntary and "à la carte" basis in the definition, development and implementation of common research agendas addressing a specific field or specific topic. This can involve the coordination of existing national programmes, or the setting up of entirely new ones, pooling resources and collectively monitoring and reviewing progress. By increasing and improving the cross-border collaboration, coordination and integration of Member States' publicly funded research programmes in a limited number of strategic areas, it aims to help Europe to boost the efficiency of its public funding and to better address major societal challenges. The proposed approach is to promote Joint Programming through a high-level political process driven by the Member States, which would offer flexibility in terms of instruments, geometry, and level of programme coordination and integration. Joint Programming is targeted at public research programmes, and therefore involves public-public rather than public-private cooperation. However, industry may play a role in its implementation.

1.2. Political and stakeholder support

At the political level, clear support for enhanced and more effective coordination of research activities in Europe has been reiterated over the last 15 years: the 2008 Spring European Council encouraged the Commission and Member States *"to continue developing initiatives for joint programming of research in areas where this approach is appropriate, allowing a more strategic and better structured approach to the launch of new joint programmes and common calls for projects from the end of 2010"*.

Amongst policy shapers, researchers and citizens, too, there is a widespread consensus that Europe's pressing and common challenges – such as climate change, energy, security, health and ageing – need to be tackled jointly at the European level. These stakeholders also believe that research has a key role to play in addressing these challenges, but feel that joint agenda setting and enhanced coordination of research in Europe will be necessary if research is to make an effective contribution.

2. PROBLEM DEFINITION

2.1. The need to improve Europe's capacity to meet its societal challenges through stronger coordination and joint strategic focus of public R&D

To be able to meet its societal challenges, Europe's research system must be capable of producing results of the highest standard. However, Europe has been unable to rapidly increase its spending on research, and must therefore continue its efforts to make better use of its scarce R&D resources by investing them more efficiently and effectively. In this context, the public sector has an important role to play by seeking to increase the return on public R&D funds.

There are many ways of trying to boost the impact and efficiency of public R&D. One of the paths which has been under-exploited and which offers great potential gains is to improve the organisation of Europe's public R&D investment through increased cross-border programme collaboration and coordination.

While Member States have set up many mechanisms over the years to enable trans-national R&D cooperation, it is still the case that around 85% of civil public research in Europe is programmed, financed, monitored and evaluated at national level. By comparison with other structural policy areas, such as competition, trade, industry, etc., R&D remains less integrated and coordinated in Europe.

In response to this problem, several recent initiatives have been launched at Community level aimed at stimulating coordination of national public R&D, such as the Open Method of Coordination, the ERA-NET scheme for networking national and regional research programme owners and managers, and taking advantage of Article 169 of the Treaty which enables the Community to participate in research and development programmes undertaken by several Member States. However, these efforts are still extremely modest in terms of the volume of funding involved, and have had limited success in achieving full programme integration owing to a lack of strategic direction and support from the Member States.

2.2. The need for a new approach

There is a growing recognition that a new, more strategic approach is needed for the coordination of public R&D programmes in Europe, focused on those areas that can contribute solutions to Europe's pressing societal challenges, and where coordination can deliver gains in the efficiency and impact of research. Past efforts to promote Joint Programming have clearly been hampered by a lack of high-level political commitment on the part of Member States, by a lack of sufficient and credible data on and insights into the particular structure and organisation of respective S&T fields, and by the rigidity of the instruments used.

Now, however, is a good time to launch a new policy initiative on Joint Programming. The wider policy context has changed, as commonly faced major societal challenges have moved decisively to the top of the policy agenda in every Member State and at Community level, and the costs of non-coordination is becoming apparent. Combined efforts need to be channelled towards areas of pan-European challenges, and for this to succeed the full commitment of the Member States will be essential. The new initiative should be shaped by the views of stakeholders and by past experience.

It is important that a process for moving towards Joint Programming should be neither too "top-down", with the Commission in the driving seat, nor too "bottom-up", resulting in a lack of coherent strategy and focus.

An effective process would involve Member States together identifying areas of common concern where collective action can be more effective in tackling important societal challenges. In particular, it must use suitable criteria agreed by all parties in order to determine the fields in which Joint Programming could most usefully be launched. To make these criteria operational there must be a solid information base. Information on existing national and regional programmes in various areas has to be gathered, including what they cover and where there are gaps, duplication or a lack of scale and scope.

There is also a need for a variable-geometry approach which allows flexibility in terms of the participating countries. Not all Member States share the same challenges in every area, especially in the expanded European Union of 27 countries.

Finally, an effective process must allow for a graduated response by selecting the most efficient instruments to use in a given field.

2.3. Subsidiarity and European added value

The right for the Community to act in this field is enshrined in several articles of the Treaty which provide for research coordination and cooperation between Member States and the Community (Articles 165, 169, 171). The proposed process for Joint Programming can justifiably be considered as necessary because it is unlikely to be achieved sufficiently by Member States via purely inter-governmental actions. Expansion of such actions has stalled in recent years, and most initiatives aimed at multilateral programme coordination have been developed within the context of Community activities. Member States acting alone are therefore unlikely to be able to address these problems.

The European added value of the proposal stems in part from the trans-national nature of some of the key challenges (climate change, for example) where Member States need to act together in order to properly tackle the problems. It can also be justified in terms of offering the potential for greater scale, scope and effectiveness of public R&D programmes in Europe by addressing common challenges jointly and developing common solutions, overcoming barriers to entry, such as high start-up and operating costs in certain S&T fields, pooling data and expertise, achieving higher scientific, technological and innovation impacts, eliminating cross-European programme duplication, increasing programme depth, and reducing programme management costs.

3. OBJECTIVES

3.1. General policy objectives

The general policy objectives of the JP initiative are to enhance the EU's capacity to achieve its high-level policy goals and respond to the major challenges it faces in the coming years:

- (1) to contribute to the achievement of the objectives of the revised Lisbon Strategy;
- (2) to help Europe respond more effectively through research to key societal challenges;
- (3) to contribute to the achievement of the European Research Area (ERA) objectives.

3.2. Specific objectives:

In order to contribute to achieving these general policy objectives, it will be necessary to improve the efficiency and effectiveness of public research programming in Europe in areas where it is facing major societal challenges. Specific objectives are:

- (1) to strengthen the coordination of EU national public research programmes in areas which can provide solutions to important societal challenges and where there is evidence of an added value from adopting a joint cross-border approach;
- (2) thereby to increase the impact of these programmes, in terms of both S&T impacts (scientific excellence, pooling of resources, data and expertise, achievement of critical mass, facilitating of programme optimisation) and economic and societal impacts.

3.3. Operational objectives:

In order to promote the above improvements in impact and efficiency, the operational objectives are:

- (1) to provide an effective process which will promote a more strategic approach to coordinating national research programmes aimed at helping to tackle Europe's societal challenges;
- (2) to ensure that this process and the ensuing joint public research programming initiatives enjoy a high level of stakeholder support and ownership;
- (3) through this process, and the use of appropriate instruments, to promote cross-border public research programme integration and structuring effects, notably the achievement of a critical mass of R&D effort;
- (4) to put in place a process that allows for a graduated response in terms of Joint Programming instruments, as well as variable geometry in terms of country participation;
- (5) to ensure that joint initiatives are based on up-to-date and accurate information on national and regional programming activities;
- (6) to promote stronger consistency across policies.

4. PRESENTATION OF THE POLICY OPTIONS

In order to meet these objectives, four policy options were considered. The main differences between them centred on two key issues: the way in which Joint Programming areas are identified and the range of instruments considered for implementation¹.

Under the "business-as-usual" option (Option 1), Joint Programming topics are identified in an ad hoc, bottom-up manner by a variety of Member State stakeholders. Implementation takes place through a limited number of instruments (essentially the ERA-NET Scheme and Article 169) and is loosely coordinated. Moreover, a flexible approach is adopted towards critical mass (in terms of number and relevance of partners) and towards the level of programme integration being sought.

The "Article 169 maximization" option (Option 2) shares some of the characteristics of the "business-as-usual" option, as Joint Programming topics are identified in a bottom-up manner by the Member States and implementation takes place through the same two instruments (essentially the ERA-NET Scheme and Article 169). Where this option differs from the "business-as-usual" option, however, is in proposing a proactive approach in which . ERA-NET and ERA-NET Plus Actions part of the ERA-NET Scheme would be rigidly positioned as a preparatory stage for Article 169. Joint Programming topics would have to coincide with the Framework Programme, ensuring systematic overall horizontal policy consistency, and more attention would be paid to the critical mass and the level of programme integration.

The main difference between the "Community-driven strategic option" (Option 3) and the two previous options is that it is strategic rather than bottom-up. The starting point is the identification of major societal challenges and the assessment of the need for a critical mass of publicly supported research in the respective S&T fields. Under this option, it is the Community which takes the lead in carrying out these strategic assessments and proposing suitable Joint Programming areas. It is also the Community that selects the most appropriate instrument from among a broader range of familiar Community instruments.

The "strategic European process" option (Option 4) resembles the "Community-driven strategic" option in that it, too, is strategic and based on tackling major societal challenges, but there is a crucial difference as regards the roles played by the Community and by the Member States. Under the "strategic European process" option, it is the Member States (not the Community) which identify topics for JP. It is also the Member States which select or develop the most appropriate instruments to the specific circumstances of the respective S&T field (including Community instruments like the ERA-NET Scheme and Articles 168, 169, 170 or 171; "SET-Plan" or "security research"-type approaches; the creation of new European institutions and/or new kinds of Networks of Excellence²; ERC-type or Euratom-type initiatives; Structural Funds; etc.). The Commission plays the role of facilitator. It is responsible for reporting back to Council at each stage in the process, and for evaluating the process as a whole as well as the progress made in specific areas.

¹ See Table 2 in the Impact Assessment Report for an overview of the four options.

² Involving the funding not just of integration activities but also of joint research.

5. ASSESSMENT OF IMPACTS

For each option, a wide variety of impacts were assessed, including the level of stakeholder support and 'ownership', strategic focus, structuring effect, policy consistency, S&T impacts, and wider societal impacts³. The conclusion of this assessment was that the preferred policy option is the "strategic European process" option.

The "business-as-usual" option was rejected because of its lack of strategic focus, its weak structuring effect, its negative impact on horizontal policy consistency, and its weak societal impact. The "Article 169 maximization" option was rejected because of its lack of strategic focus, its "one-size-fits-all" approach, and its limited structuring effect. The "Community-driven strategic" option, which has great potential impact, was rejected because of the risk it entails: i.e. it is very likely that it will not be supported by stakeholders. This in turn will negatively affect its strategic focus, structuring effect, and societal impact. In addition, it is unlikely that the Community by itself would have a sufficiently detailed knowledge of Member States' research programmes to propose suitable Joint Programming topics and instruments.

The "strategic European process" option enjoys the highest levels of support from stakeholders, who agree: that there is a need to define strategic research agendas and to implement them in a coordinated manner, especially for the purpose of tackling common societal challenges; that a partnership, which combines a voluntary, bottom-up approach with strategic top-down guidance is indispensable for ensuring flexibility and customisation to programme specificities; that the principles of subsidiarity, variable geometry and real European added value need to be respected; and that a "one-size-fits-all" approach is not workable.

The process proposed for choosing Joint Programming topics and instruments, combined with the high levels of stakeholder support, means that option 4 provides the best guarantees of obtaining the greatest aggregate systemic structuring effects. This in turn will create the ideal conditions for fully realising the S&T benefits of Joint Programming, which include:

- Overcoming barriers to entry
- Pan-European programme optimisation
- Scientific excellence
- Jointly tackling common challenges, developing common, standardised solutions, and speaking with one voice
- Cross-border project collaboration (with its own set of benefits, such as the pooling of data and expertise, rapid dissemination, cross-border human resources mobility and training, and increased scientific, technological and innovation impacts)
- Reduced national costs for managing integrated programmes
- The improvement of non-integrated programmes, and

³ Table 3 in the full Impact Assessment Report provides an overview of these impacts.

- Improved accountability and transparency.

The benefits for industry include 'open innovation'; the rapid dissemination of research results; the development of common, standardised solutions; better access to public research support; easier development of joint public-private strategic research agendas; and faster horizontal policy coordination.

Ultimately, these S&T impacts translate into a higher societal return on public research investment, which means higher economic growth, competitiveness and employment, and quicker and better solutions for social and environmental challenges.

For these reasons, option 4 – the "strategic European process" – is the preferred option.

6. RISK AND RISK MITIGATION

There are various risks associated with the preferred option. The main risk is that the required political commitment does not materialise.

While this risk would appear to be smaller now than it perhaps was in the past (due to the growing recognition in the Member States of the societal challenges Europe is facing, of the S&T and societal costs of non-coordination as well as of the S&T and societal benefits of Joint Programming), the proposed policy process has also been designed specifically to mitigate this risk. A high-level political process is proposed, which rests squarely on the Member States with the Commission services in a facilitating role. The process assigns an important and continuing role to the Council in terms of :

- Inviting the Research Ministers of the Member States to mandate personal representatives for an ad-hoc high-level group to identify suitable JP areas;
- Monitoring the process on an annual basis (through obligatory annual reporting by the Commission); and
- Reviewing the process after three years.

The proposed process is evidence-based and grounded in an in-depth strategic analysis of respective S&T fields, which will ensure that only feasible Joint Programming initiatives are taken. Moreover, the proposed approach is characterised by instrument flexibility⁴, variable geometry, and flexibility in terms of the extent of programme integration pursued (partial cycle, full cycle).

Other risks include institutional inertia and the lack of the requisite evidence base. However, appropriate risk mitigation strategies have been put in place.

In summary, the main risk mitigation strategy underlying the proposed process is that of respecting better regulation practices: i.e. working closely with the Member States in a transparent manner; respecting the principles of subsidiarity, European added value and

⁴ The full tool box of public research instruments (National and regional research programmes, Intergovernmental research organisations and collaborative schemes, Research infrastructures, Mobility schemes...) should be explored and used to implement the individual Joint Programming Initiatives.

proportionality; preparing and launching concrete initiatives on the basis of an extensive, credible evidence base; and ensuring the accountability and transparency of the process via proper monitoring and evaluation systems.

7. EVALUATION AND MONITORING

Appropriate arrangements have also been made for monitoring and evaluation. These are based on the Commission reporting to the Council after each of the phases of the JP process, and an in-depth review of the process by the Commission, together with the Member States, after three years. Regular monitoring of and evaluation of progress towards the (SMART) objectives in each JP area will also be ensured.

In addition, an increased transparency will be provided on collaboration and coordination of national and regional research programmes by developing a specific module for the ERAWATCH web service.