Seventh Framework Programme for research, technological development and demonstration activities (2007-2013)

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COMMISSION'S IMPACT ASSESSMENT

For further information regarding the context of this issue, please refer to the summary of the Commission's initial proposal COM(2005)0119 concerning a proposal for the Council and European Parliament decision on the 7th EC Framework Programme (FP7) for research, technological development and demonstration activities (2007-2013).

1- POLICY OPTIONS AND IMPACTS

In examining policy options, 3 key factorswere taken into account. Firstly, FP7 should be tailored to European S&T needs: acting as an instrument to promote Lisbon and other key policies, while addressing the specific needs of the diverse research players, and having a strong EU added value. Secondly, it should relate to the strong demand for new actions in the fields of industrial and basic research. Thirdly, it should respond to stakeholders' requests for a more user-friendly and outcome-based FP.

1.1- Option 1 - the do-nothing option: this serves to analyse whether without EU intervention it is possible to reach the same objectives. It relates to a policy of no financial intervention at EU level in the field of research and technological development (discontinuation of FP). It is an essential benchmark for demonstrating the full added value of the FP7 proposal (option 3), which cannot be deduced simply from its marginal effect in relation to the status quo (option 2).

1.2- Option 2 - the business as usual option: this would mean launching FP7 as a continuation of FP6, with the same budget allocations, the same objectives, the same institutional actors, the same research priorities, the same instruments, etc. The premise underlying this option is that FP6 can adequately address the major challenges facing Europe in the next few years without introducing any major changes to its size, structure and organization. This option also responds most clearly to the important concerns about continuity and stability of EU research actions.

1.3- Option 3 - the proposed FP7: this concerns a restructured Framework Programme, twice as large as FP6, and designed so as to better respond to the targets set at Lisbon. It starts from the observation that circumstances have changed very significantly since the launching of FP6, and proposes an action that builds upon the accomplishments of FP6, but is characterised by a new scale, scope and ambition.

CONCLUSION: the Commission considers that the proposed FP7 combines incremental change with continuity. The continuity of FP7 compared with FP6 lies in the thematic priorities, which will be largely the same as under FP6, and the instruments, many of which will be the same as under FP6.

IMPACTS

Economic impacts: in order to estimate the possible aggregate economic impactsof the FP7 proposal, an econometric model was used. Various scenarios were simulated for long-term trends in FP funding and national/sectoral flows of financing. On the basis of this modelling, it is concluded that the estimated aggregate economic impacts of FP7 are large. Compared to its modest share of European public R&D

funding, the FP achieves significant impacts, especially in the long-term, mainly because of high crowding-in and economic multiplier effects. The proposed doubling of FP7:

- Will boost Europe's economic growth. Depending on the rate of growth of FP funding after FP7, doubling FP funding would generate at least 0.45 and up to 0.96 percent of extra GDP over and above the business-as-usual scenario of moderate growth in FP funding by the year 2030. In other words, assuming a GDP of 100 under the business-as-usual scenario for the year 2030, and given that the extra GDP generated by doubling FP funding would amount to from 0.45 to 0.96 percent of GDP by that same year, then total GDP would reach between 100.45 and 100.96 in the year 2030. Given the comparatively small size of the FP this constitutes a large impact. When correcting for quality - i.e. taking account of the fact that as a result of technical progress the quality and capabilities of products increase significantly - the impacts on European economic growth are larger still. Doubling FP funding would then generate at least 0.69 and up to 1.66 percent of extra GDP over and above the business-as-usual scenario of moderate growth in FP funding;

- Will create extra jobs for European citizens (up to 925,000 extra jobs by the year 2030, of which up to 215,000 in research);

- Will raise Europe's competitiveness (extra-European exports are increased by up to an extra 0.64 percent by the year 2030, imports reduced by up to 0.3 percent), and increase Europe's R&D intensity (the extra growth in Europe's R&D intensity could reach 0.2 percent).

The FP is more effective than national funding in reaching these results. On the other hand, under the no framework programme option:

- Europe would lose up to 0.84 percent of GDP by the year 2030 compared to the business-as-usual scenario and up to 800,000 jobs, 87,000 of them research-related;

- Extra-European exports would be lower by 2 percent and imports higher by 1.85 percent;

- Europe's R&D intensity would be lower by 0.09 percent, making it harder to achieve the 3 percent objective.

Social impacts: the proposed FP7 has large potential aggregate social impacts. It will contribute to the achievement of the Lisbon strategy and to addressing the main future social and political challenges of Europe. Through both thematic efforts in diverse areas as e.g. industrial technologies, energy, transport, ICT, food, agriculture, fisheries, maritime affairs, water management, life sciences, etc., as well as through research that directly aims at the advancement of Social Sciences, FP7 can further enhance issues such as health and safety, social cohesion, human capital, well-being, governance, human rights and ethics, self-sufficiency, equity, etc.

Therefore, the new research effort in FP7 will enhance the impact of innovation and competitiveness, both on individual economic entities but ultimately also on the quality of life in society as a whole. Research on ethics at European level is critical for arriving at a responsible approach towards S&T, which is consistent with the European Charter of Fundamental Rights and reflects public sentiment. The Lisbon Agenda and the European Research Area (ERA) clearly identify the need for innovative and competitive technological progress in line with environmental and socio-economic needs.

Environmental impacts: Advances in knowledge and innovation further sharpen the competitive edge of societies which possess the know-how and capacities and have become key factors in decoupling economic development from adverse environmental impacts. To address the different challenges, research and technological development affecting the environment in FP7 should aim to identify win-win technologies, improve natural resources management and services and understand and predict the

environment more precisely. Furthermore, FP7 should recognise the need for research activities for the analysis of sustainable development, scenario building and impact assessment. Crosscutting enabling technologies, such as nanotechnology, biotechnology and industrial technologies can also have a positive environmental impact.

As far as the **time dimension** associated with these impacts is concerned, while showing significant results in the short term, investment in research shows its greatest impacts in the medium to long term as it takes time to transform research results into new products and processes.

As far as **impacts on particular groups** are concerned, care has been taken to make sure that all players in the European S&T system, including SMEs and the new Member States, will benefit to the maximum extent possible from the implementation of the FP. EU scientific achievements have a significant global impact – notably in developing countries, the Mediterranean, the Western Balkans and newly independent countries of the former Soviet Union – and cover key areas such as agriculture, human health, food processing, post-harvest conservation, water treatment, erosion and environmental protection.

2- FOLLOW-UP

- Monitoring of implementation management would be ensured by operational senior management within the Commission on a continuous basis with annual checkpoints and using a common set of management performance indicators. Adequate resource would be given to this process. The annual results of this exercise will be used to inform senior management and as an input to the ex post assessment exercise.

- An interim evaluationof the FP would be carried out by independent scientific panels which would assess the quality of the research activities, progress towards the objectives set and the scientific and technical results achieved. Such an interim evaluation of FP7 (of 7 years duration) would therefore take place 3-4 years after the start. It could be complemented by a similar exercise at the end of the programme to feed into the ex post assessment (see below).

- A coordinated programme of studiesshould be developed for: horizontal assessments of such topics as the impact of research on issues such as productivity, competitiveness and employment; structuring effects of the FP on the ERA (fragmentation, excellence, coordination) through the formation and development of commercial and knowledge networks, and the creation and support to infrastructures; and the impact of Community research on strategic decision making in companies and research organisations and national, European and regional authorities; assessment of impact and achievements at portfolio, programme and higher levels against the strategic objectives and indicators that are set within a clearly defined programme logic.

- An independent ex post programme evaluationof FP7 would be undertaken within 2 years of its completion. This would be supported by the coherent set of independent studies, and other evaluation activities carried out over the lifetime of the FP. The report of this exercise would be presented to all interested stakeholders, including the Parliament and Council. Furthermore, this report would feed into future ex ante evaluation and impact assessments by the Commission.

- Furthermore, ex-ante impact assessmentswill be carried out at FP level and at the level of specific programme areas before the next FP proposal is made. The articulation between ex-ante impact assessment and ex-post evaluation will also be enhanced, as recommended by the Ormala Report of December 2004, in particular through ensuring the two exercises are timed to feed into each other. Ex-post work will therefore be available in time for the impact assessment of future policy options, and, in turn, the new policy objectives and performance indicators will feed into later ex-post work.