

2001

**Annual monitoring report on the
RTD activities conducted under
the EC and Euratom research
framework programmes**

FIFTH FRAMEWORK PROGRAMME

EUROPEAN COMMISSION

2001
Annual monitoring report
on the RTD activities conducted
under the EC and Euratom
research framework programmes

Directorate-General for Research
Planning, programming and evaluation

As a response to the changing research landscape in EU and to the Commission Reform process, the Monitoring exercise 2001 of Community research activities has undergone major changes compared to the system set up in 1995.

For the first time, the exercise has been enlarged to examine the implementation of policy. The European Research Area (ERA), which since the European Council of Lisbon in March 2000, constitutes the main reference framework for European research policy, was subject to both a separate monitoring of its implementation and to a particular emphasis in the Framework Programme monitoring.

The changes introduced also encompassed a major revision of the monitoring set up as such. The main aim was to streamline the overall process, ensuring in particular a better link between the monitoring at Framework Programme and specific programme levels, the provision of self assessments produced by the services, and increased attention to the diffusion and follow up of recommendations.

All monitoring reports and the Commission's responses to their recommendations can be found on CORDIS at the following site: <http://www.cordis.lu/FP5/monitoring>.

The Commission takes this opportunity to thank warmly the chairman of the 2001 Framework Programme Monitoring panel, Mr Manfred Horvat. It is due to his very considerable commitment and efforts as well as those of his fellow panel members that the report is of such a high standard and that the entire exercise has contributed to improving the implementation of research policy and programmes.



*Achilleas Mitsos
Director General
Directorate General Research*

TABLE OF CONTENTS

Contents - Part A

1	Executive Summary	1
2	Introduction	4
3	Horizontal Policy Issues	5
3.1	Progress in ERA and the Lisbon Strategy	6
3.2	The Lisbon Strategy and the International Context	8
3.3	Contribution to Enlargement	10
3.4	Participation of SMEs & Commercialisation of Research	11
3.5	Women and Science.	13
3.6	Supporting the Development of EU Policies and Instruments	14
3.7	Linking Research, Education & Training	17
3.8	The Joint Research Centre	18
4	Programme Management Issues	19
4.1	Central Management Issues	19
4.2	External Communication and Information Dissemination	21
4.3	Project Monitoring and Evaluation Methodology,	22
4.4	Project and Programme Impact Methodology	23
4.5	Other Issues	24
5	The Impact of Framework Programme Research in 2001	26
6	Follow-up of Previous Monitoring Recommendations	30
7	Conclusions & Recommendations	33
7.1	Strengths and Weaknesses	33
7.2	Key Recommendations	33
8	Specific Programme Monitoring Reports	35
8.1	The European Research Area (ERA).....	35
8.2	The User-Friendly Information Society Technologies (IST)	36
8.3	Quality of Life and Management of Living Resources (QoL)	37
8.4	Competitive and Sustainable Growth (GROWTH).....	38
8.5	Non-Nuclear Energy (NNE)	39
8.6	Environment and Sustainable Development (ESD)	40
8.7	Controlled Thermonuclear Fusion (Fusion)	41
8.8	Nuclear Fission and Radiation Protection (Fission)	42
8.9	Improving the Human Research Potential (IHP).....	43
8.10	Confirming the International Role of Community Research (INCO)	44
8.11	Innovation and SMEs (INNO).....	45
9	Annex	47
9.1	Recommendations.....	47
9.2	FPMP Methodology.....	52
9.3	Bibliography	53
9.4	Broad Guidelines	56
9.5	Monitoring Panels & Panel Members.....	81
9.6	Abbreviations.....	85

Contents - Part B

Response of the Programme Management to the External Monitoring Report.

PART A

**REPORT OF THE 2001
FRAMEWORK PROGRAMME
MONITORING PANEL**

**BY AN
INDEPENDENT PANEL
CHAIRLED BY**

PROF. MANFRED HORVAT

MAY 2002

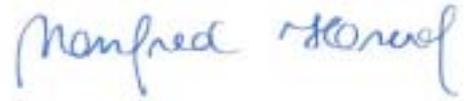
THE 2001 FRAMEWORK PROGRAMME MONITORING PANEL

We, the undersigned, are pleased to present our report to the European Commission.

Mr. M. Horvat (Austria)

Chairman of the Panel

Professor, Director, Bureau for International Research and Technology Co-operation



Mr. T. Casey (Ireland)

Rapporteur of the Panel

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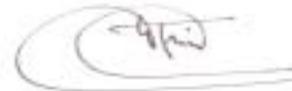
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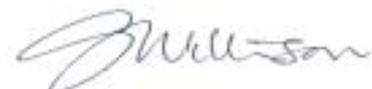
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Mr. Achilleas Mitsos
Director General
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European Commission
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B-1049 Brussels

Dear Mr Mitsos,

on behalf of the 2001 Framework Programme Monitoring Panel, it is my pleasure to present to you the 2001 Monitoring Report on the E.U. Framework Programme for Research and Technological Development. The Report is the outcome of the work of the Panel of 14 independent experts.

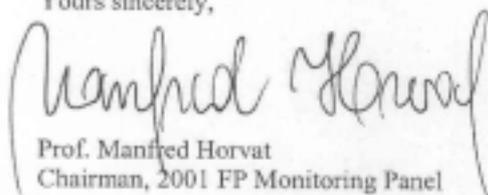
The Panel welcomed the new organisation of the Monitoring exercise ensuring close interaction and synergies between the FP Monitoring Panel and the ERA and Specific Programme expert groups respectively.

This is also the right moment to emphasise the Panel's appreciation of the Commission services' commitment in managing the 5th Framework Programme while at the same time implementing new procedures connected to a major internal management reform and preparing for the next Framework Programme. The Panel wishes to pay tribute to the directors, the heads of units and the scientific officers for the positive spirit in the 2001 Monitoring exercise, based on the common understanding that such an exercise makes sense only if it becomes an integrated part of the overall programme management.

The 2001 FP Monitoring Panel has focused on selected horizontal issues, on programme management issues and on the impact of FP research in 2001. The development of the European Research Area was a major issue of concern, where the Panel saw an urgent need for targeted actions at member states and Commission level. Other points were the request for a smooth launch and a careful monitoring of the new instruments as well as an improved utilization of the knowledge and expertise of the Commission services in planning and developing the Framework Programme. The Panel emphasised that there is an urgent need for an effective Management Information System to support the implementation of the Framework Programme and to ensure a profound basis for providing adequate data to the member states and the associated countries.

The Panel was committed to contribute to the positive development of the European research and technology activities. It is with satisfaction that I can notice on behalf of the Panel that the numerous recommendations have been carefully analysed by the Commission services and that the follow up is well under way.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Manfred Horvat', is written over a printed name and title. The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Prof. Manfred Horvat
Chairman, 2001 FP Monitoring Panel

1 EXECUTIVE SUMMARY

This is the report of the Framework Programme Monitoring Panel (FPMP) on the management of the Framework Programme (FP) during 2001. It provides the Commission Services with a means of reflection on the efficient and effective running of the world's most complex research programme, with a budget of €15 billion over five years, and a staff of over 1000 people. The Report is written in the context of the *Lisbon Strategy*, which sets Europe a new strategic goal: "to become the most competitive and dynamic knowledge-based economy in the world..." - with major implications for current and future Framework Programmes.

In its work, the FPMP has interviewed, collectively and individually, well over 100 individuals - Directors, Heads of Unit, Scientific Officers, Researchers and Research Administrators in the Member States and the Candidate Countries along with a number of representatives from interested institutions and politicians. It has also received near 100 information documents of various hues from the Commission Services to add to the ERA and Specific Programme Expert Group Reports.

The Findings

Solid progress in a number of areas: The year 2001 has seen the Commission Services responsible for the FP make solid progress in a number of areas, 1) The development of the European Research Area (ERA) concept, 2) Planning and defining instruments and procedures for the Sixth Framework Programme (FP6), 3) Implementing the Commission-wide management reforms, 4) Undertaking its own management restructuring ahead of FP6, and, at the same time, 5) Continuing the normal Programme management of FP5, as well as still-running FP4 projects. In all, this represents a considerable workload for the staff and they are to be congratulated on the skill and hard work, which they have shown over the year.

Facing three major challenges: The FP has faced a number of challenges including: 1) Overly complex and burdensome legal and administrative requirements, 2) Difficulties in coordination across the FP and between and within Specific Programmes (SPs) and 3) Research planning procedures which could be better supported by policy analysis based on existing FP experience.

Three "Priorities for Action": The Panel sees three priorities for action by the Commission Services:

1. An *Action Plan* for the implementation of the European Research Area should be put in place – including provisions for Candidate Countries.
2. An internal *Intelligence System*: an internal system of analytic reports on the research activities which it manages – how SMEs participate in research projects should be first on the list, followed by the operation of Integrated Projects and Networks of Excellence. The full implementation of the *Strengthening Evaluation*¹ initiative is essential in developing such a system.
3. A central *Management Information System* is needed. This has been an unsolved problem for years, leading to Programme and Programme Management inefficiencies and ineffectiveness on the one hand, and being unable to satisfy the information needs of Member States and Candidate Countries on the other hand. This has to be solved – now!

As for Monitoring, it should be developed as an integral part of Specific Programmes' own quality improvement system – it should not be an "end-of-pipe" or "bolt-on" activity.

¹ European Commission, 2000, "Focus on Results: Strengthening Evaluation of Commission Activities" SEC (2000) 1051

The Recommendations

The FPMP drew up a number of recommendations aimed at supporting Programme Management in working towards the Lisbon Strategy and an effective and efficient ERA development and Framework Programme implementation. *The detailed, operational recommendations are contained within the main text and listed in Annex 9.1*

The ERA

The ERA urgently needs to have a concrete *Action Plan* drawn up showing how it will meet the Lisbon Strategy and Objectives. To get the ERA moving, Member States, Candidate Countries, and the Commission need to set up *ERA Policy Fora*, along with a coordinating Task Force at Community level. It might also think about becoming the *European Research & Innovation Area*, if it is to work fully with industry and other parts of the society in fulfilling the Lisbon Strategy.

The International Context

Based on the Science and Technology Co-operation Agreements with certain countries and on the dialogue with specific world regions, the Commission should develop an effective international and global strategy for ERA in co-ordination with other Community policies. This should ensure that Europe has access to and shares in the development of global research and its benefits. And that EU policies, European as well as international, in areas such as e.g. environment, energy, health and trade are fully backed by the best research.

Working with Candidate Countries

The development of Candidate Countries' scientific research and innovation systems should immediately become a key element of the ERA. It should be an item on the ERA "*Tableau de Bord*". Also there should be a re-examination of the small print of regulations and measures to ease their participation in the FP.

SMEs & Innovation

The Commission should examine, *how* – not simply how many - SMEs are working with the FP, and draw up *appropriate* measures / policies for effective SME participation in FP6. The Member States and Candidate Countries, with the support of the Commission, also need to find out what works within the National Contact Point (NCP) system, and get the system working effectively in *all* participating countries, ensuring a minimum level of high quality services.

Women in Science

The gender issue should be introduced into all FP6 documentation. Gender balance should become an issue within the Commission Services, themselves. The Member States and Candidate Countries with the support of the FP and DG Education should work together to ensure an effective European effort in "Girls into Science and Research".

Developing FP Policy and Instruments

The new FP is very different – for researchers, for institutions, for SMEs. There is a need to prepare carefully and ensure an effective launch of the new instruments avoiding inherent risks. A specific, close monitoring and feedback – with the help of independent external experts - on these launch activities would be useful. The new concept of integrating research and education and training activities should be actively developed as an important means for fostering innovation,

At an analytic level, the FP needs to be better able to follow and support its planning and operational activities. This needs a nerve system of intelligence –analysis of data and activities - across the whole FP. Further, scientific research -the work of the FP - should directly support EU policies, and we suggest one very practical mechanism – linking research to EU Directives.

Central Management Issues

The lack of a central Management Information System (MIS) has long severely hampered efficient FP management. It must be sorted out – now. It is such an important issue that the FPMP feels that the Director General of DG Research should have a direct supervisory role. Also, an effective electronic proposal submission needs to be put in place, immediately – and the possibility of an electronic support of the evaluation system should be explored.

The Commission should establish the minimum, effective Time to Contract and Payment and eliminate unnecessary delays. In addition, the Commission should publish an indicative timetable with each Call for Proposals running from proposal to first payment.

Project Monitoring & Evaluation needs consistency across the FP. Heads of Units should be provided with an appropriate set of project monitoring and evaluation tools – before FP6 starts. Similarly, Project / Programme Impact Assessment also needs some consistency across the FP – again requiring that Heads of Units be provided with an appropriate set of project impact assessment tools – again, before FP6 starts.

Then three specific issues 1) Human Resources management needs strengthening. The Commission should write an outline HR Development Plan - before FP6 starts. 2) A “Project Centred” Publications Policy is required to assist in the valorisation of the actual research sponsored by the EU, and finally, 3) to simply note that the Fusion Programme requires a decision to be made on its future.

The Impact of Framework Programme Research

The economic, social and environmental impacts of FP cannot be ascertained without project / Programme impact assessment by the Commission. Four SPs have undertaken impact assessment exercises (Non-Nuclear Energy, Growth, QoL and INCO) and the IST Programme is about to undertake such work. They are to be congratulated. Their work begins to indicate the major importance such analysis will have for efficient and effective EU research project and Programme development. It underlines the importance of the full implementation of the *Strengthening Evaluation*² initiative. However, lack of standardised methodology is a severe limitation on comparability of results and the Panel recommends that “appropriate tools” be provided and cross-programme communication and collaborative learning be enhanced.

The indications from the initial impact assessments are good at the technical level and in terms of furthering specific EU policy, such as environmental policy. It is more difficult to judge the impacts when it comes to the broader policies such as employment and regional development. The 2001 Monitoring Panel recommends that all SPs, which have not done so, should carry out an impact assessment of the research, which they have funded.

Monitoring & Last Year’s Recommendations.

The major concern of the 2001 Monitoring Panel has been the late response of the Commission Services to the previous 2000 FPMP Report. The formal response only came in February 2002 - following continual requests from *this* Panel. As of mid-April 2002, the 2000 FPMP Report has not been published. However, major effort in the follow up of recommendations could be noted. The recommendation is thus:

- Reply to the FPMP Report within three months of its formal submission and publish it in the following month.

² European Commission, 2000, “Focus on Results: Strengthening Evaluation of Commission Activities” SEC (2000) 1051

The Specific Programmes take part in the annual monitoring exercise in very different ways. The most successful seems to be to integrate monitoring into the individual Programme's own quality improvement system. Thus, we recommend that:

- The annual monitoring exercise should be visibly linked to each SP's quality improvement system

2 INTRODUCTION

This is the overall Framework Programme Monitoring Panel (FPMP) Report³ on the management of the Framework Programme (FP) during 2001. It provides the Commission Services with a means of reflection on the efficient and effective running of the world's most complex research programme, with a budget of €15 billion over five years, and a staff of over 1000 people.

The 2001 management review takes place against a rapidly changing background:

- The Lisbon Strategy had just set Europe a new strategic goal for the next decade: "to become the most competitive and dynamic knowledge-based economy in the world..." - with major implications for current and future Framework Programmes.
- The European Research Area (ERA) was solidifying as a concept.
- Planning for FP6 was in progress and
- Major changes in management structure and procedures were taking place in the Commission and in the FP – at the same time as normal FP5 activities were continuing.

The Framework Programme Monitoring Panel (FPMP) mandate, as defined by the Commission, was to examine⁴,

- A number of "horizontal" issues (Section 3): Progress in the ERA, The International Context, Enlargement, SMEs and Innovation, Women in Science, and Moves towards FP6.
- A number of Programme Management issues including (Section 4): Management issues, particularly the chronic MIS problem, Communications and Information, Project Monitoring and Evaluation, Project and Programme Impact Assessment.
- The impact of Framework Programme research during 2001 (Section 5).

In addition, the Panel examined the follow-up of the previous FPMP Report and reflected on the future of the Monitoring exercise as we move towards FP6 (Section 6). The Report then provides a brief synopsis of conclusions and recommendations (Section 7). The Annexes are important in that they provide in Section 9.1 a full detailed listing of recommendations, and in Section 9.2 the details of the Panel's methodology.

³ Formally, it is the 2001 External Monitoring Report on the activities of the Framework Programme. It covers the ongoing projects and activities still being funded by the Fourth Framework Programme (FP4) as well as the third year of the Fifth Framework Programme (FP5). It is required under Article 5.1 of the Council Decision setting up FP5 and that of the Euratom Framework Programme.

⁴ European Commission, 2001, "Broad Guidelines for the 2001 Monitoring Exercise", Brussels.

3 HORIZONTAL POLICY ISSUES

We have written this report at a time when there are increasing economic, social and environmental expectations being placed on Europe's researchers and research spending.

- **The Lisbon Strategy (2000)** set Europe a new strategic goal for the next decade: "*to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion*". - With major implications for current and future Framework Programmes.
- **The Barcelona Declaration (March 2002)**⁵ which re-emphasises the role of R&D in closing the gap between the EU and its major competitors, the need to increase overall spending in the EU to 3% of GDP by 2010, and the need to better integrate innovation into all knowledge activities, as well as the importance of the development and exploitation of "frontier technologies" for future growth – as well as implement the Community Patent.

During 2001, those working in and with the Framework Programme have developed and worked through major strategic changes, as well as reorienting ongoing work, with the objective of fulfilling the *Lisbon Strategy*.

The strategic work has included the definition and development of

- The European Research Area concept⁶ and
- The Sixth Framework Programme (FP6) and its specific programmes and the rules for participation^{7 8}

The Lisbon Strategy

"The European Council asks the Council and the Commission, together with the Member States where appropriate, to take the necessary steps as part of the establishment of a European Research Area to:

- Develop appropriate mechanisms for networking national and joint research programmes on a voluntary basis around freely chosen objectives, in order to take greater advantage of the concerted resources devoted to R&D in the Member States, and ensure regular reporting to the Council on the progress achieved; to map by 2001 research and development excellence in all Member States in order to foster the dissemination of excellence;
- Improve the environment for private research investment, R&D partnerships and high technology start-ups, by using tax policies, venture capital and EIB support;
- Encourage the development of an open method of coordination for benchmarking national research and development policies and identify, by June 2000, indicators for assessing performance in different fields, in particular with regard to the development of human resources; introduce by June 2001 a European innovation scoreboard;
- Facilitate the creation by the end of 2001 of a very high-speed transeuropean network for electronic scientific communications, with EIB support, linking research institutions and universities, as well as scientific libraries, scientific centres and, progressively, schools;
- Take steps to remove obstacles to the mobility of researchers in Europe by 2002 and to attract and retain high-quality research talent in Europe;
- Ensure that a Community patent is available by the end of 2001, including the utility model, so that Community-wide patent protection in the Union is as simple and inexpensive to obtain and as comprehensive in its scope as the protection granted by key competitors.

<http://ue.eu.int/fr/Info/eurocouncil/index.htm>

⁵ European Commission, 2002, "European Council – Barcelona: Conclusions of the Presidency", SI (2002) 300 – 16th March 2002.

⁶ Official Journal, 2000, "Council Resolution of 15 June 2000 on Establishing a European Area of Research and Innovation", 2000/C 205/01

⁷ Council of the European Union, (2001), "Common Position Adopted by the Council with a view to the Adoption of a Decision of the European Parliament and of the Council concerning the Sixth Framework Programme of the European Community." 2001/ 053 (COD).

Council of the European Union, (2001), "Council Decision concerning the Sixth Framework Programme of the European Atomic Energy Community ..." Brussels 12 Dec 2001, SN 4891/01

The more operational work has included

- Restructuring DG Research management to be coherent with future FP6 activities⁹,
- Adopting and developing new management approaches and simplification of procedures^{10 11}
- Operating FP5: the world's most complex research programme,
- Continuing to monitor and finance a number of FP4 projects and to assess FP4 and FP3 project and programme impact.

This report reviewed these activities and finds that, by and large, they have been well undertaken by a dedicated, sometimes too hard worked Programme Management, Project Officers, and support staff. However, if the Lisbon objective of "Research Leadership by 2010" is to be taken seriously and achieved, much is still required.

3.1 PROGRESS IN ERA AND THE LISBON STRATEGY

The development of the ERA is central to the EU's ability to achieve the economic, social, and environmental objectives of the Lisbon Strategy. Over the Year 2001, the Commission Services have made progress in the definition and preliminary implementation of the ERA^{12 13} and its relationship to EU development^{14 15}. In this context, the Commission Services have:

- Started to define "specific themes for action"¹⁶ and drawn up a Tableau de Bord of the 14 most important issues¹⁷ in the implementation of the ERA.
- Nominated a Chef de File for each issue and put in place a management structure to follow the progress under each issue.

Achieving the Lisbon Strategy

While a start has been made¹⁸, the ERA must be rapidly moved forward if it is to make a significant contribution to the Lisbon Strategy by 2010. While the ERA is just moving out of its definitional phase, and is still politically sensitive, a number of concerns were raised on the level of implementation:

⁸ The planning and detailing of the new FP has continued apace. While there are still areas of uncertainty, the modalities of implementation and the rules of participation are becoming better detailed. The potential outlines of "Networks of Research" and "Integrated Projects" have become much clearer – although this does not necessarily assuage the concerns of many as to their effective operation. In particular, the Mapping of Excellence / Networks of Excellence activities require a definition of *excellence* which is both recognises the diversity of the scientific enterprise across Europe and the need for a complementarity between the very different possible indicators of excellence.

⁹ By and large, this restructuring was undertaken rapidly and effectively, despite the need to incorporate the existing activities of the INCO Programme into the vertical Specific Programmes, and the parting of the IHP Programme into meaningful modules. In general, The Panel sees the change as well timed, avoiding the problems, which would be generated by changing management at the same time and changing Programmes. However, there was a notable loss of expertise in many Units due to the nature of the changes, and the relationships between ERA Directorates and SPs are still unclear. In addition, the creation of the new ERA directorates had to be based on a constant number of staff, that meant a substantive reduction of staff in some areas, where in general many SP Panels report staff shortages and work overload of scientific officers.

¹⁰ Official Journal, 1999, "Council Decision of 22 December 1998 concerning the Rules for Participation", Brussels, 1/2/99.

¹¹ DG Research and DG Information Society, 2001, "DG RTD and INFSO Report to Commissioners Busquin and Liikanen on Simplification of Implementation Procedures for FP6" Brussels, 24 Oct 2001.

¹² European Commission, 2000, "Towards a European Research Area", COM (2000) 6 final.

¹³ ERA Panel, (2002), "Monitoring Report on the Implementation of the European Research Area", DG Research, Brussels.

¹⁴ Official Journal, 2000, "Opinion of the Committee of the Regions on *Towards a European Research Area*", 2000/C 226/07
Official Journal, 2000, "Opinion of the Economic and Social Committee *Towards a European Research Area*", 2000/C 204/16

¹⁵ European Commission, 2001, "The Regional Dimension of the European Research Area" COM (2001) 549 final.

¹⁶ - "Towards a European Research Area", Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions, January 2000, - Com (2001) 756 final, 12/12/2001 Areas include: (1) A series of material resources and facilities optimised at European level, 2) More consistent use of public instruments and resources, 3) More dynamic private investment, 4) A common system of scientific and technical reference for policy, 4) More abundant and mobile human resources, 5) A dynamic European Landscape, open and attractive to researchers and investment, 6) Area of shared values

¹⁷ - Benchmarking research & innovation policies, - Ethics, Co-ordination & Networking the national research programmes-- Public understanding of science/young people and science - Mapping scientific excellence in Europe-- Women & science, -Community patent, -- Removing obstacles to the mobility of researchers in Europe, - Co-operation with EIB to support research and technological innovation -- Regional dimension of the European Research Area, - Research infrastructures including a high-speed European electronic network for research, - International co-operation, - Governance including scientific reference systems & bodies of scientific advice- - Other related activities.

¹⁸ European Commission, 2002, "The Lisbon Strategy – Making Change Happen", SEC (2002) 29/2.

- Most importantly, it is now time – two years after Lisbon - for the outline of an operational “Action Plan” for the ERA, indicating how it will achieve its objectives and indicating key achievement milestones, by which success can be judged.
- In addition, the relationship between the development of the ERA¹⁹ and FP6 is unclear and needs to be explicitly articulated in a brief “Definition Paper”,
- The relationship of Directorates General other than DG Research and DG Infosoc to the ERA is unclear and needs to be jointly elaborated.

The Monitoring Panel recommends that:

- The Commission Services develop an outline “Action Plan” indicating how the ERA will develop over the period to 2010 to achieve the objectives of the Lisbon Strategy. The Action Plan should include explicit milestones. It should be available to the Annual Report to Spring Summit, 2003, and progress reported therein.

Working with National Programmes

An essential first step in the development of ERA seems to be the creation of an information structure, which will link Member State and Candidate Countries RTD Programmes together and to the work of the Commission. The setting up in each Member State and Candidate Country of a “European Policy Forum” along with a coordinating Task Force should be seen as the leading priority.

The Monitoring Panel recommends that:

- The Member States and Candidate Countries in conjunction with the Commission Services should establish a high-level RTD “European Research Area (ERA) Policy Forum” in each country, along with a coordinating Task Force. Progress should be reported in the Annual Report to Spring Summit.

Human Resources and Mobility in ERA

As the ERA-Monitoring Panel notes, “*Mobility is not an aim, but a means to reach an objective*”. Despite existing good work²⁰, there is an urgent need for the Commission Services to elaborate the scientific *research objectives* of mobility. Currently, mobility policy is not sufficiently linked to developmental research policy – it concentrates mostly on barriers to mobility, and mobility is seen as an objective in its own right. Mobility needs to be tied into and justified in terms such as – the development of research-excellent institutes, the creation of research-excellent teams in less developed regions - essential to combat brain-drain concerns, the development of cutting-edge multidisciplinary and interdisciplinary teams, the development of university / industry research systems, the development of key industrial research units, etc.

In addition, it is particularly important to ensure that Mobility Activities do not exacerbate the difficulties, common to all mobility programmes, which many doctoral and post-doctoral researchers experience in reintegration into their home system or employment in the host system. In this context, it will also be important to pay attention to some less favoured regions’ concerns about the “brain drain”. Care for inter-sectoral mobility and mobility of senior researchers are an integral part of an overall policy.

Finally, European research mobility statistics are extraordinarily poor and bear no comparison with the quality of NSF data. Developing sound EU research mobility policy requires investment in appropriate data collection systems.

¹⁹ The implementation of the ERA is, of course, not the sole objective of the FP - and many of the decisive conditions for the success of the ERA lie outside the realm of FPs. But, as noted in Section 3.2, the initial definition of the ERA is progressing and the ERA-MP reports satisfactory management co-ordination by the horizontal / policy Directorates A, B, C and D. However, as the emphasis of ERA development starts to move to the operational Directorates running the individual SPs, there will be a need for careful management – not just co-ordination. In this context, the appointment, from April 2002, of a Deputy Director General with responsibility for the ERA including its international dimension is strongly welcomed.

²⁰ European Commission, 2001, “A Mobility Strategy for the ERA” COM(2001) 331 final

The Monitoring Panel recommends that:

- The Commission Services, building on “A Mobility Strategy for the ERA”, should develop an operational strategy, which will indicate how mobility activities will be used to strengthen the scientific, technical, and innovative capabilities of the EU, Member States, and Candidate Countries and to raise research scientist and engineer (RSE) numbers to be competitive at a global scale. This strategy should be reported to the Annual Report to Spring Summit, and detailed in the Annual Report.
- The Member States and Candidate Countries, with the support of the Commission, establish a coherent and consistent system for the collection of data on research mobility and RSE numbers. The first concrete actions should be reported in the Annual Report and progress followed in the Annual Self-Assessment Reports.

The Regional Dimension

Within the context of sustainable economic growth and regional equity, the Commission’s early discussion on the regional aspects of the ERA deserves strengthening and operationalising²¹ now that the detailed operational instruments of FP6 are becoming much clearer. However, the Monitoring Panel makes clear that a regional dimension to ERA/FP6 should in no way compromise the need for scientific and technical excellence in all research activities.

The Monitoring Panel recommends that:

- The Commission Services develop a brief guidance paper, indicating the means by which FP6 and in particular the Integrated Projects, Networks of Excellence and “Article 169” will contribute constructively to the ERA vision: “The Regional Dimension of the ERA”. The paper should be available before the launch of the first Call for Proposals under FP6.

The Innovation Dimension

A number of Specific Programme Expert Groups (SPEGs) and individuals commented on the need for a closer liaison between research and innovation, if the Lisbon Strategy is to be implemented.

The Monitoring Panel recommends that:

- In order to have a broader support from the industrial world, the concept of *European Research Area* should be extended to that of the *European Research and Innovation Area*.

3.2 THE LISBON STRATEGY AND THE INTERNATIONAL CONTEXT

Research is a global activity. If the ERA and FP6 are to be effective in achieving the Lisbon Strategy, then they too must have an international and even global strategy. This is obviously required in the objective “to attract and retain high-quality research talent in Europe”, but such strategy and operational policy is also required in active R&D partnerships with centres of excellence worldwide, and in other forms of research cooperation.

Up until 2001, the international / extra-EU dimension of FP5 had mainly been provided by 1) The SPs working directly with Candidate Countries - the major SP international activity and reviewed in Section 3.3, 2) The SPs working with non-EU countries jointly with the INCO Programme: a comparatively small effort, and 3) The INCO Programme, itself, funding research projects, and related activities.

However, when compared with the USA’s contribution of over 3.5 billion EUR annually, or 4-5 % of the federal research budget to international cooperation, the total amount allocated within the European Union (Member States plus Community) is still rather limited at €600 million (see COM (2001) 346 final, p. 20). More effort at all levels and a powerful and committed leadership are necessary to make ERA an international and global player in international scientific cooperation.

²¹ European Commission, 2001, “The Regional Dimension of the European Research Area” COM (2001) 549 final.

At an operational level, moving towards FP6, Programme Management has to face a number of requirements within the “International Context”:

- The development of the INCO heritage under the new “twin columns” approach.
- Retaining and developing the experience in existing international cooperation programmes
- Strengthening the EU policy position in global fora.

Developing the INCO Heritage

In 2001, the Commission published a Communication “The International Dimension of the European Research Area”²². In principle, EU research and technology activities should be open to the whole world. However, the FPMP is concerned that after the restructuring of the Commission Services, there is still no clear evidence how the “international dimension” will be organised and managed, and the European science and research community feels that “INCO is dead”. There is no reference to activities of the DG Dev, such as the “Informal Expert Group on RTD” or the consideration of the “European Foundation for Research and Development”. The existing agreements for science and technology co-operation could have been used much more actively already, following the recommendations of previous Monitoring and Assessment Panels. In principle, the proposed “Forum for international scientific and technological relations” is seen as a positive initiative.

As part of the 2001 management restructuring (See Section 4), part of the operational activity of the INCO Programme have been “mainstreamed” into the SPs²³, emphasising the need for all activities of the Framework Programme to consciously take place within an international – even global context. This “mainstreaming” creates greater possibilities for international cooperation, but it also establishes greater complexity and new requirements, for example:

- Each SP must act within a commonly defined FP International Policy and a monitoring of the implementation of this policy across the SPs is required. For example, this will place new requirements on the annual SP Work Programmes to develop areas of common research interests and SPs to participate in different “regional dialogues”.
- Guiding specialist expertise is needed when working with non-EU and non-Candidate Countries, in particular concerning developing countries. The FPMP is concerned about the continuance of existing experience and know how and how it will be fed into FP6 activities.

Within the new complex “two column approach” in FP 6 - (i) specific international cooperation activities within the seven Thematic Priorities open to global participation and (ii) specific international cooperation measures for certain groups of countries - there is a need for a strong management structure and strong leadership to ensure that a coherent and effective international dimension of ERA / FP6 is developed in line with the Lisbon Strategy.

Developing External Programmes

In addition to mainstream FP international activities, a number of strong associated but external activities have contributed to the international dimension of EU research: INTAS²⁴, COST²⁵ and

²² European Commission, 2001, “The International Dimension of the European Research Area” COM (2001) 346 final

²³ Projects transferred to the thematic directorates have a non location-specific technological dimension or an approach compatible with intra-European concerns of thematic programmes, while horizontal projects, which are location specific with regard to their social, economic, cultural, or environmental context remained centralised. In the transfer, only the scientific management was decentralised. The administrative and financial management remained at central level

²⁴ International Association for Promotion of Co-operation with Scientists from the Independent States of the former Soviet Union.

²⁵ Founded in 1971, COST is an intergovernmental framework for European Co-operation in the field of Scientific and Technical Research, allowing the co-ordination of nationally funded research on a European level. COST Actions cover basic and pre-competitive research as well as activities of public utility. The 34 COST countries have a long experience in the very core objective of the ERA

EUREKA²⁶. These actions and initiatives should be fully exploited in developing the international dimension of FP6 / ERA.

Developing European Policy in International Fora

The European Union is increasingly required to participate in, contribute to, and develop an EU position with respect to international protocols and fora – most obviously Kyoto and Montreal. The development of a sound and beneficial EU position depends more and more on the support of scientific research and derived evidence. Indeed, the US has gone so far as to legislate on the necessary quality of scientific evidence required to back Government's own legislation²⁷, and while one might question the motives, it is a very strong indicator for the need to back the international (and indeed the internal) EU policy position with sound scientific research. The Panel recommends a stronger gearing between EU international policy and its scientific research.

In summary, at Commission level, there is a strong need for

- A clearly defined and co-ordinated EU policy for international scientific and technological co-operation and articulation of a strategy for delivering it.
- A strong linking of EU scientific research to the international issues on which the EU must develop and maintain a policy position.

The Monitoring Panel recommends that:

- The newly appointed Deputy Director General (Research) with responsibility for ERA & international activities develop a brief "International Dimension: Policy and Operations in FP6/ERA" paper, providing principles and operating guidelines – also in a global context and also recognising the needs of the Candidate Countries. It should be available to and reported in the Annual Report to Spring Summit, 2003.

3.3 CONTRIBUTION TO ENLARGEMENT

In 2001, the Commission implemented several measures to support the integration of Candidate Countries into the EU RTD activities. Several Calls for Proposals addressed the issue and information and training measures were carried out. All SPs report a strong effort in working with and integrating the Candidate Countries into the Framework Programme. However, these efforts have not always been fully successful and a renewed effort is required under FP5 and into FP6. A special working group, launched in 2000, with delegates from the Member States and Candidate Countries had the task to prepare an ERA Action Plan for the support of the integration of Candidate Countries. Unfortunately, this Action Plan was never finished nor implemented.

The SPEGs, as well as feedback from co-ordinating National Contact Points in Candidate Countries, indicate that they face a number of problems:

- Lack of experience in competitive tendering, lack of established networks with EU researchers, lack of capital resources and the necessary equipment in research facilities;
- Lack of associated industrial infrastructure, high-tech companies, industry associations, etc.
- Lack of information in the EU Member States on Candidate Countries' research landscapes and potentials²⁸;
- Lack of co-operation between research institutes and industry;
- The novelty and complexity of FP5 documentation and rules for participation,
- The focus of FP research activities on the concerns of the highly industrialised Western Europe, only;
- Major differences between Candidate Countries in relating to and participating in FP5.

²⁶ A decentralised initiative, bringing together 31 European states and the European Union, with the aim of fostering co-operative projects in research and innovation. Whilst each member controls its own funding, EUREKA facilitates the co-ordination of national funding.

²⁷ *Nature*, 21st March 2002, Editorial and p.249

²⁸ An example of best practice to overcome that problem is the CD "Slovenia: Find Your R&D Partner" distributed by the Slovenian Ministry of Education, Science and Sport (October 2001), see also: http://sicris.izum.si/RD_partners/

A number of specific targeted actions of Member States to enhance co-operation with Candidate Countries²⁹ have been successful and should be supported. Such activities might also include

- Increased efforts in bringing the quality of research institutes in the Candidate Countries to the attention of EU researchers: publications, research fora, workshops, etc.,
- Major strengthening of the Candidate Countries' NCPs, including short secondments of NCP personnel into the Commission services relevant for research and technological development;

The Stairway of Excellence should include a number of support measures addressing the specific needs of individual Candidate Countries aimed at assisting the transformation of the S&T systems and the better integration of their RTD potential into ERA. In this context, creating synergies between the Framework Programme and pre-accession and other appropriate instruments would be important for improving research and technology related infrastructures.

Many of the solutions are, of course, beyond the immediate realm of the FP, and require, at a minimum, co-ordination with the Structural Funds and the EIB, as well as major efforts in the Candidate Countries themselves. In addition, consideration should be given to further opening up the pre-accession funds to establish new and enhance existing RTD infrastructure. Within the realm of the FP activities, however, much can be done.

The Monitoring Panel Recommends that:

- There should be an improvement of documentation and information on the FP participation permitting – among other things - possibilities for comparative analyses between participating countries. A re-evaluation of financial rules associated with Candidate Countries participation should take place, particularly related to personnel costs. In addition, the contribution to enlargement should be emphasised within the European Added Value criteria and in the development of European Policies
- The Commission should support the best-practice activities of Member States in working with Candidate Countries. And under FP6, The “Stairways of Excellence” should include a number of support measures addressing the specific needs of individual Candidate Countries
- “Contribution to Enlargement” should be made an additional objective in the ERA *Tableau de Bord*, and the Candidate Countries should be directly involved in the development of the ERA. The 2002 FPMP should be provided with a brief update on how Candidate Countries have been involved in developing ERA during 2002.

3.4 PARTICIPATION OF SMEs & COMMERCIALISATION OF RESEARCH

FP5 has been successful in increasing the number of SMEs taking part in projects and in achieving the 10% participation rates required in the Council Decision. Many SPs have moved well past this participation rate. The specific measures for SMEs (CRAFT) and the use of the Single Entry Point are seen as particularly successful in working with SMEs. The SME NCP network has consolidated its co-operation. Economic and Technological Intelligence initiatives and accompanying measures have played a positive role in stimulating cross-border SME co-operation in CRAFT projects and other participation modes. However, due to major delays in contract negotiations these actions started very late in the Programme. In addition, the financial planning by the SPs was not in line with the contractual arrangements, which lead to a situation where - during the most active phase of these stimulation actions - one deadline had to be cancelled and insufficient financial provisions were available for the final deadline³⁰.

As to the actual quality and benefit of SME participation, it must be said that:

²⁹ The Austrian initiative “Partnership for Research” was mentioned as an example of good practice: <http://www.bit.ac.at/partnership/>

³⁰ E.g. in the Quality of Life programme 20 MEUR are available for the last cut off date and more than 200 CRAFT proposals have been submitted.

- Limited data and little in-depth analysis are available to indicate that participation by SMEs in the FP has been beneficial to either the research or the SME itself – over and above the funding which received³¹. Indeed, the small amount of impact analysis which has been undertaken (See Section 5) raises important and unanswered questions as to how SMEs might most beneficially be associated with the new structure and participation rules of FP6.
- No data and little analysis can be provided on the ways in which the SMEs interact and make use of the possibilities for research and for research co-operation. Such interaction seems to vary 1) By SP and by TA within the SP, 2) By type of SME, 3) By type of project and role in partnership, 4) By geographical location, and so on.

Consequently, at the moment, there are no well-researched objectives for SMEs, over and above participation rates. Similarly, there is no logic or reasoned guidance to the modes of participation of SMEs across the very different research activities and research fields of the Framework Programme. In addition, no information is available on the specific problems SMEs are facing in transnational research and technology co-operation. On the other hand, there are also no studies on the specific benefits that SMEs are gaining from participation in the Framework Programme.

Even at the level of participation rates, increased to 15% for FP6, major concerns are being expressed as to the possibilities of SME participation in the next FP:

- The size and nature of Integrated Projects causes particular apprehension as to the role of SMEs,
- The implications, still unclear, of the “joint & several liability” clause in future contracts,
- The level of support from NCPs seems variable. That means there are not equal standards of information and assistance services available for SMEs across Europe, handicapping some regions’ SMEs’ access to information and practical assistance relating to FP application.

The Monitoring Panel recommends that

- The Commission Services should launch a number of analytic studies exploring the relationships between Research Programmes, SMEs’ activity, and the modes of commercial exploitation of such research. These studies should be available by end 2003, in time for the Five Year Assessment.
- Based on this analysis, by Year-end 2003, the Commission Services should provide a comprehensive policy and guidance paper on 1) the objectives for SME participation in FP6 and 2) the appropriate mechanisms for such participation, across the different research activities of FP6.
- The Member States and the Candidate Countries, with the support of the Commission Services, should briefly examine and define the conditions necessary for high-quality NCP activity. The Commission should then support the development of a system for ensuring quality of such NCP services. The Annual Self-Assessment and the Annual Reports should carry a regular update on an annual update on this work.

The Commercialisation of Research

It is important to do good research, but if research results are to contribute to the competitiveness sought under the Lisbon Strategy, they must impact on firms, on the economy and on society and the whole innovation system in general. The FP impact analysis carried out during 2001 (See Section 5) points to the necessity for the commercialisation of FP funded RTD, if it is to have a strong – and in many cases – *any* economic, social or environmental impact. While the previous recommendation will help to establish a more effective role for SMEs in such research commercialisation, the issue is much broader.

The ERA and SP Expert Group Reports point to a number of areas of concern if Europe is to benefit fully from the FP/ERA research including

- The improvement of university / industry relationships,

³¹ Basic data is available: European Commission, 2001, “Framework Programme V: SME Participation – April 1999 to April 2001” Draft 5 Dec 2001. It should be said that some individual SPs, such as GROWTH, have a record of analysis of SME issues.

- The availability and linkage of seed, development and venture capital to research activities,
- The understanding and functioning of patenting and IPR more generally by researchers and research administrators;
- The competencies of strategic planning and technology and innovation management in SMEs.

The Monitoring Panel recommends that:

- The Commission Services should undertake an examination of university-industry relationships in the context of EU funded research projects and the commercialisation the outputs of such research. The Commission Services should then indicate a number of principles and associated operational policies to improve the commercialisation of such research. The study and operational measures should be available by year-end 2003.
- The Commission Services should seek 1) To create stronger synergies between the Innovation Programme and the Thematic Programme Areas and 2) To better disseminate the results from innovation studies and projects to the Commission Services responsible for and the SMEs participating in the thematic programmes.

3.5 WOMEN AND SCIENCE.

Year 2001 has seen rapid and effective developments in laying the basic framework for the “Women in Science” activities. These have included.

- The reinforcement of a working group “Women in Science” with a representative from each Directorate;
- Undertaking a series of Gender Impact Studies – one within each SP providing a good baseline analysis³² as well as the launch of a study on Women in Science in the Private Sector;
- Holding a major Women in Science conference 8/9th November 2001,

The work has been a balance of policy work and “Gender Watch” activities, with particular emphasis on developing good monitoring processes that will show up deficits and progress in the area. The work has largely been a consensus building activity at the level of the Commission Services. The real challenge is now to start to move the work down to the level of the industrial and academic laboratory and research group – “the move from policy to pragmatic activity, targeting the full use of human potential”. Thus, there is still much to do:

- An active gender policy needs to be implemented within the personnel policies of the Commission Services, particularly DG Research and DG Infosoc, aimed at a more balanced workforce, including correcting vertical stratification (men = top jobs, women = bottom jobs). One SPEG report indicates that such an issue “simply does not seem to exist”, and calls for a specific plan with time points. Here, a strengthening of the “Women in Science” Group might be helpful.
- The good work which has been done by the “Women in Science” Unit, now needs to be translated into change within projects and laboratory bench practice – as some SPs remark, the issues are not, as yet, reflected in the Work Programmes. Here, good data collection, analysis, and reporting systems need to be associated with the forthcoming SPs of FP6. In particular, the project proposal, proposal evaluation and project contracting documentation needs to be prepared with such objectives in mind. In addition, any MIS system being developed requires similar attention to future gender analysis.
- On a wider stage, the interest of women in science and a scientific career is well known to be established at an early age, during primary and secondary education. US agencies such as NSF and NIH invest much effort in programmes at this “K-12” level. Because of more limited charters and statutes, and occasionally a more limited vision of “research policy”, EU research councils and agencies rarely venture towards secondary education. For many reasons, social and economic, a demonstration initiative in this area and in conjunction with DG Education may be of great value.

³² European Commission, 2001, “Gender in Research: Gender Impact Assessment of the Specific Programmes of the Fifth Framework Programme” Synthesis report EUR 2002 and also individual SP reports.

- The target of 40% female participation in evaluation, assessment, and monitoring activities is not being met, although progress has been made³³. One problem may be the need for / expense of childcare facilities associated with travel to Brussels. The German Government with the Max Planck Association have recently introduced child-care funding, outside and in addition to research salaries / research costs to improve female participation rates in the MPIs. The role of such a similar funding scheme in increasing female participation in EU research activities should be explored. At least, for the support of women in FP evaluation such pilot initiatives should be launched.
- The FPMP supports the intended studies on “Gender Relevance” in the “Women in Science” Work Programme.

The Monitoring Panel recommends that:

- The incorporation of the “Gender in Science” dimension into all relevant documentation (proposal forms, evaluation forms, evaluator selection, contracts, reporting, etc.) associated with the forthcoming FP6 Programme and into the development of any associated MIS systems.
- The “Women in Science” Working Group should be strengthened. Each SP should have a brief, published plan for the development of gender balance within its own internal (own personnel) and external (project) activities. It should provide the “Women in Science” Unit with a brief annual report on its progress. A note on the work should be available in the Annual Self Assessment.
- The Member States and Candidate Countries with the support of the FP and DG Education should work together to ensure an effective European effort in “Girls into Science and Research”. A note on the work should be available in the Annual Self Assessment.
- The role of child-care funding should be explored in the context of increasing female participation in EU research activities at all levels – project participation, evaluation exercises, membership in programme committee, in EAGs, and in Monitoring and Assessment Panels. A note on the work should be available in the Annual Self Assessment.
- The intended “Gender Relevance” studies proposed in the Women in Science Work Programme should be rapidly progressed. A note on the work should be available in the Annual Self Assessment.

3.6 SUPPORTING THE DEVELOPMENT OF EU POLICIES AND INSTRUMENTS

The moves towards the new FP have taken place against the background of a major effort to increase the social, economic, and environmental impact of EU research in line with the Lisbon Strategy. At the same time, the ERA concept has started to assume a more defined form. The management, coherence, and analytic support of this policy development processes within and between the Commission and Commission Services is a concern.

- The new structure and terminology of FP6 is causing confusion amongst the customers and will need substantial efforts of information and training. In fact, the new concept of FP5 had no sufficient time to unfold. The regular, five-year periodicity of “breaks with the past” may not be the best strategy to achieve an ambitious goal like the Lisbon objective.
- The FPMP is concerned that at a very advanced state of FP6 preparation many details of the new instruments are not clear - neither for the Commission services responsible for translating the political visions and ideas into practical arrangements, nor for the science and research community in Europe. The FPMP took note of impressive and forward-looking considerations on the new instruments by responsible Commission officers³⁴. However there is an urgent need that these ideas are translated into user-friendly working documents and transmitted to the FP users communities.
- In addition, the FPMP’s concern addresses the risk that the new arrangements might lead to a drastically reduced number of participants in FP6. As for the impact of the EU RTD

³³ See European Commission “Research and technological development activities of the European Union – 2001 Annual Report” COM (2001) 756 final, 12.12.2001, p. 19

³⁴ e.g. Discussion with Peter Kind, Director, DG RES B on 12 April 2002

activities one has to consider more than simply critical mass and possible impact at the level of the individual projects or initiatives. At FP level, critical mass in terms of numbers of participating organisations also has to be achieved in order to create substantial impact at the level of the innovation system. In general, there are concerns regarding the participation of SMEs and of organisations from Candidate Countries.

- The use of the phrase “Centre of Excellence” has caused concern to many researchers, particularly those in smaller institutions. The FPMP considers that it is important that the Commission provides a definition of such Centres which emphasises the diversity of locations in which excellent research is undertaken, and the need for complementarity of a widening set of research skills, from a diversity of institutions and disciplines, to undertake cutting edge research.
- Finally, the development of information and assistance structures will be important for FP6, and an appropriate Programme Committee system for the involvement of Member States and Candidate Countries in Programme implementation has to be ensured.

The FPMP is satisfied that via the “Stairway of Excellence” also the proven instruments such as the targeted RTD projects and co-ordination actions will be available. Efficient use of the “Staircase” along with the smooth launch and monitoring of the new instruments will be essential for the success of FP6.

The Monitoring Panel recommends that:

- The Commission should clarify the definition of a “Centre of Excellence” emphasising 1) the diversity of institutions in which excellent research is undertaken, 2) the increasing need for complementary research skills for many institutions, if an excellent research project is to be undertaken.
- The Commission ensured the setting up of adequate information and assistance structure along with an appropriate Programme Committee structure to work with Member States and Candidate Countries during FP6

At Programme Management level the development of operational research policy can be seen at three levels

- Supporting the development of the new FP6 policies and instruments,
- Ongoing implementation of existing FP5 policies and instruments,
- Linking policies / instruments into a coherent whole.

Supporting New Policies and Instruments.

The new operational instruments of FP6 (Networks of Excellence and Integrated Projects) represent *major changes in European research policy*. The FPMP requested that the Commission Services provide the analytic basis upon which these major changes were being undertaken. The FPMP had difficulties to interpret the reports and analyses provided^{35 36 37} as a sufficiently sound basis for supporting a substantial change of the implementing instruments and arrangements of a dimension as foreseen for FP6. The Commission is, in essence, introducing major changes to EU research policy:

- Without sufficient indication and preparatory analysis as to how the new instruments will work, what their level of risk might be or what their possible outcomes and impact might be.
- With little systematic preparatory study indicating to what extent and in which respects existing instruments (research projects, clusters, research networks, smaller scale projects etc.) are inadequate.

³⁵ The two relevant publications were 1) European Commission, (2001), “Building Blocks for Future EU Research Policy” October 1999. and European Commission, (2001), “Final Report for the Study on Key Issues and Questions Associated with Big Projects in the ICT Area”, 9th Nov 2001

³⁶ Five-Year Assessment of the European Union Research and Technological Development Programmes, 1995-1999, Report of the Independent Expert Panel (Joan Majó et al.), July 2000, p. 7f.

³⁷ Mid-term review on the 5th Framework Programme for Research and Technological Development. Commission Staff Working Paper. SEC (2000) 1780, Brussels, 23.10.2000

The Monitoring Panel recommends that:

- The Commission should ensure a smooth launch of the new instruments accompanied by careful monitoring. A special monitoring panel of independent experts should be created to accompany, support, and advise the Commission services in that decisive process.

Developing Existing Policies and Instruments

The FP5 instruments are meant to achieve a number of goals in relation to strengthening competitiveness, improving the quality of life, strengthening research infrastructure, SME development, to internationalisation, to enlargement, etc. The Panel has been concerned that Directorates and Units have not enough analytical evidence on how their activities are fulfilling FP5 objectives or are lacking communication of analyses made internally. The operational level, “close to the ground” research and analysis of EU RTD activity is not taking place. Consequently, questions such as - how SMEs are best involved in research programmes, how are clusters best constructed, how do research networks work, etc. can only be answered on the basis of personal and individual experience. Similarly, when it comes to developing or reassessing EU Research Policy, the background analysis is not available. This lack of analysis further weakens the well-founded development of any new instruments.

The Monitoring Panel recommends that:

- The Commission services develop a system of *small scale, short term*, internal analytic reports to support the operational Programmes and instruments. The reports would be aimed at quickly illuminating practical issues of concern at a cross-Directorate, Directorate or Head of Unit level. A list of such “operational support documents”, planned or in preparation, should be indicated annually in the Annual Report. A number of such brief reports should be available to the Five Year Assessment Panel.

Linking FP, ERA and EU Policy Development

As noted earlier, the links between ERA and FP6 have still to be better defined and clarified. In addition, close co-operation with other EU policy and concerns will be important and in particular:

- The EU’s structural funds which invest substantial sums in the science and technological infrastructure of less developed regions
- The Commission’s policy DGs, whose policy formation and operational activities may be supported and developed through FP6. For example, linking up with EU foreign and security policy is especially important in the work of international cooperation in research. And it should also be noted, that international cooperation in science and technology often paves the way for closer political and economic relations.
- The need for research effort to be put in place quickly and flexibly in response to new or unexpected policy needs particularly those arising in an international context.
- At a practical level, it would be useful to establish the research needs of policy Directorates in a way, which is visibly linked to the challenges confronting them in achieving the EU objectives. In this context, the FPMP focuses in its recommendation on the “front-line” of these Directorates: their regulatory Directives and their implementation in Member States. These activities will be particularly important in the connection with the utilisation of the policy support actions foreseen in Priority 8 “Specific activities covering a wider field of research”.

Developing these linkages will require a certain effort on the part of Programme Management.

The Monitoring Panel recommends that:

- The Commission Services should prepare a short note indicating 1) the general cooperation policy, which has been agreed with the policy DGs for FP6, 2) the coordination mechanisms which have been agreed for the implementation of this policy. A note on this cooperation should form a regular part of the Self-Assessment and Annual Report.
- European Union Directives with a major scientific/technical focus should be accompanied by a document identifying any research requirements needed to support their development and sound implementation at a European level. This research priority document would be subject to modification over time if necessary. A discussion should be held as to the applicability and possible operational arrangements for this recommendation between DG Research and other relevant DGs. A brief position note, *Supporting EU Directives with Scientific Research* should be available by end-2002”.

3.7 LINKING RESEARCH, EDUCATION & TRAINING

The new concept of integrating research and education and training activities should be actively developed as an important means for fostering innovation;

Increasing importance is being given to the interfacing and integration of education and training activities with research and mobility activities in many Member States and indeed also Candidate Countries. Such work is essential if we are to guarantee that European research will have the required numbers and high quality of researchers in the future, as well as developing a wider potential for innovation. This is an issue for the research DGs as well as DG Education.

The FPMP would like to support current developments within the FP:

- The new instruments, and Integrated Projects in particular, with offer strong possibilities for high-level, high-quality training to be associated with research activities. These should be exploited.
- There is much concern that some of the potentially best minds are not progressing through from the school system to science in university and from undergraduate work into research. These are key issues for Europe’s future and ones, which the Commission is concerned about. Here, the FPMP wishes to support cooperation between DG Research and DG Education in developing pilot cooperation activities in such areas. Similarly, co-operation with European and international organisations of higher education, especially engineering education is to be encouraged.
- In the original ERA documents ³⁸, major deficits of the European Union in comparisons with the main competitors are described. The most important challenge is certainly to raise the number of researchers, scientists, and engineers (RSE) in the innovation system – especially in firms, but also in other areas. Mere strengthening of mobility will be not sufficient because this will create a mobile scientific workforce with no opportunities for adequate employment after being eligible for fellowships. That means in that example, that programme objectives have to clearly address the issue of raising the RSE numbers, by attracting scientists to mobility programmes while at the same time – via concerted actions, measures and instruments of the Member States and Candidate Countries - the adoption capacities of the innovation system for scientists, researchers and engineers are further developed.

³⁸ E.g. European Commission “Towards the European Research Area”. COM (2000) 6, 18.01.2000

The Monitoring Panel recommends that:

- The new concept of integrating research and education and training activities should be actively developed as an important means for fostering innovation. The Panel would welcome a Communication on *Synergies between Research, Education, and Training*, by end 2003.
- The Programme Management should prepare a short paper indicating the general cooperation policy under FP6, which has been agreed with DG Education, and the mechanisms for its implementation.

3.8 THE JOINT RESEARCH CENTRE

The monitoring of the Joint Research Centre (JRC) is undertaken by its Board of Governors³⁹. The JRC Board and the JRC Director of Science Strategy gave a presentation of their findings. The FPMP notes from this presentation and accompanying documentation and in the context of JRC new management directions:

- *A User Orientation*: A concentration and focusing of actions and in particular the major emphasis being placed on user orientation, customer need, scientific support for EU policy making and the development of a service culture inside the JRC.
- *Quality Improvement*: The rapid diffusion of quality improvement- and evaluation systems throughout the JRC institutions, i.e. Total Quality Management on the one hand and evaluation exercises, project prioritisation and benchmarking on the other.
- *Human Resources Development*: The emphasis being given to the development of Human Resources within in the JRC, not only in terms of staff satisfaction and harnessing staff enthusiasm to corporate goals, but also the development of “a family friendly and equal opportunity organisation”.
- *Contributions to ERA and Enlargement*. The development of strategies in support of the European Research Area and Enlargement is most welcome as well as the JRC’s scientific contributions in support of Commission DG’s and Member States.

The FPMP would welcome closer cooperation of the FP relevant DGs with JRC activities with a view to the sharing of experience not only in monitoring, but also in the diffusion of successful experience in developing approaches to areas such as user orientation, total quality management, and human resources development.

³⁹ This is mandated in the Commission Decision of 10 April 1996 (96/282/EURATOM). An interface is ensured with the Framework Monitoring Panel in order to fulfil legal obligations stemming from articles 5(1) of the Framework Programme and article 4 of the Specific Programme.

4 PROGRAMME MANAGEMENT ISSUES

4.1 CENTRAL MANAGEMENT ISSUES

Over Year 2001, Programme Management, Project Officers, and support staff have had to

- Undertake a major management restructuring in preparation for FP6⁴⁰,
- Implement new management approaches (Activity based management, new internal control standards ranging from finance to ethics, etc.)
- Take the first steps in developing
 - An Annual Management Plan with objectives and indicators for their achievement.
 - An Integrated Resources Management System
 - An Annual Report of the DG indicating achievements, resources involved, management activities, etc.
- Prepare new operational instruments, particularly Networks of Excellence and Integrated projects, for FP6 as well as run the Interservices Committees which prove so important in planning the transfer from one Framework Programme to the next.
- Face issues such as the development of an MIS system, the integration of the Candidate Countries, “Women in Science”, internationalisation of SPs, and so on.
- Continue the day-to-day operation of FP5 (call for proposals, evaluation, selection and project management) and even deal with FP4 projects and issues.

It is to the great credit of all staff that this work is progressing relatively steadily. But there are, of course, a number of concerns shared by both the FP Management and the FPMP.

Management Information System.

The harmonisation between SPs and general access to comparable data has been a major problem for at least a decade. Despite 1) continual criticism from bodies such as the Court of Auditors, Monitoring and Assessment Panels as well as Evaluation Reports, and 2) a number of costly external consultant based and internal initiatives - nothing effective has been achieved. Again, during FP5,

- All five involved Directorates General have evolved their own systems, and
- Within DG Research itself, SPs and even Units have developed independent systems.

From such an arrangement, management and project statistics are time consuming and costly to extract and often of doubtful reliability.

Following the work of an Interservices Working Group and a Feasibility Study⁴¹, a modular system is planned with proposal registration and evaluation to be outsourced and available by end 2002 for the first round of FP6, while the project contract contracting and monitoring element (available end 2003) are to be retained within the FP Management. A final system is expected in 2004. All DGs will adapt and migrate, in time, to the system. The system is to evolve over the coming 10 years. However, it is recognised by those involved, that the vast bulk of work must be achieved before the launch of FP6.

Currently, however, the expertise is not available within the FP Management to undertake such work and the system will have to be built using external contracts. It will be a major problem in time and organisation to bring in these supports. In addition, the details of the systems are still

⁴⁰ The restructuring of the 14 Directorates away from the ineffective “Coordination Unit + two Operational Units system” and towards a structure which would not require major alteration under FP6. This change took place at the same time as the Commission reforms moved to delegate both financial and HR management to the lowest possible level. The reallocation of staff seems to have been handled with extraordinary speed (all changes - 1163 statutory and 448 non statutory staff – were negotiated and in place within 4 weeks) and effectiveness (a follow up survey found 97% of staff happy with new position).

⁴¹ Presentation to FPMP; 14th Jan 2002.

under discussion in parallel with the ongoing development and negotiation of the requirements of FP6.

The FPMP is *extremely* concerned that this may become yet another stage in the ongoing Management Information System Saga and that FP6 will continue “eyeless” with implications for management functions ranging from electronic submission to Programme impact analysis – and also providing adequately harmonised information and data to Member States and Candidate Countries. The FPMP believes that this is of sufficient importance to request the direct supervision of the Director General of DG Research.

The Monitoring Panel recommends that:

- A detailed 3–Year Operational Plan for the development, launch and initial migration to the MIS be available at the beginning of the 2002 FPMP exercise.
- Given that all new instruments and procedures should soon be stabilised, a full “user needs” specification should be finalised by end-2002.
- The Director General of DG Research follows this MIS Operational Plan and ensures its successful delivery. Adherence to this plan should be explicitly reported in the Annual Report.

Electronic Submission and Evaluation

Electronic submission rates in some SPs of FP4 were higher than FP5. Rates are now at or near 100% in most research programmes in Member States. The US NSF has already shown substantial proposal-to-contract time and cost savings in using its “Fast Lane” system <https://www.fastlane.nsf.gov/fastlane.jsp>. Electronically supported proposal evaluation requires parallel development. These systems will, of course, have to map onto the proposed MIS system for automatic data capture.

The Monitoring Panel recommends that:

- Develop an effective electronic proposal submission system before the launch of FP6.
- Undertake a short preparatory study on the requirements and limitations of an efficient and user-friendly electronic support for the evaluation system. The study should be available by end 2002.

Simplification of Procedures

There are continual and consistent calls for simplification of proposal, evaluation, selection and, most of all, contractual procedures. These are not just from Monitoring or Assessment Panels, but from Project Officers, Heads of Unit, and Directors. Even the Court of Auditors questioned “The Limitations of a System Based on Cost Reimbursement” (Court of Auditors: Sections 4.19 ff) concurred on the problems generated by the current system. Currently, the legal and financial services are developing a new system for FP6. There are already, growing concerns over some elements of this proposed system, particularly related to the issue of *joint and several liability* and its effects on SME activity.

Much effort has been expended by SPs in reducing “time to contract” or “time to payment” durations⁴². Such efforts place major strains on all concerned and, as some note, may cause problems in other management priorities. At the same time, there has been concern in some quarters, as to the necessity of some elements of the formal procedures. Still others have been concerned that pressure to reduce “time to contract” may be deleterious to the core processes of proposal evaluation and contract negotiation.

⁴² Notable has been IST’s reduction of time-to-contract to 120 days. However, this action was based on a small number of proposals only. The GROWTH Programme is carrying out an exercise based on a large number of proposals.

The Monitoring Panel recommends that:

- The Commission services should analyse the component periods of the *Time to Contract / Time to Payment* process, indicating clearly periods, which are the responsibility of 1) The Commission and Commission services, 2) The Programme Management, 3) The Contractors. By end Y2002, the Commission services should deliver the analysis along with a proposal to the FP6 Programme Committees to eliminate all unnecessary steps and delays.

From the proposer's point of view, the difficulty arises on the one side from the complexity of the processes, but on the other side also from the lack of transparency and the associated uncertainty in the application / evaluation / contract / payment cycle. A clear timetable of critical dates should be published with each call for proposal. This will both guide the applicant's research planning and probably reduce inquiries to the Programme concerned. Following IST Calls for Proposers, for example, the Programme Management has sent such a letter to all co-ordinators of submitted proposals.

The Monitoring Panel recommends that:

- Each Call for Proposals is accompanied by an indicative timetable of critical dates up to 1st payment of successful applicants. This recommendation should become operational immediately.

4.2 EXTERNAL COMMUNICATION AND INFORMATION DISSEMINATION

The external communication and information dissemination is undertaken by

- The individual SPs themselves,
- A dedicated "Information and Communication" Unit⁴³.
- CORDIS, the Web, and data based provider of operational information on FP5⁴⁴.

The FPMP has not had the opportunity to examine the communication and dissemination system in any detail, however one issue came strongly to the fore: the management of the basic material upon which communication and dissemination is based: the Final Project Reports.

- In one SP, only roughly ½ of the research FP4 Final Project Reports were found to be available. In an Impact Analysis Review, only 12 out of 20 recently undertaken Impact / Evaluation Reports could be located. For many reasons, including legal, this is a problem. But most obviously, making an assessment of the impact of a Programme or an ex ante appraisal of the need for further research effort is very dependent on the availability of final project reports.
- In addition, there is a recognised need for synthesised material between the raw scientific reports and the press releases. And not just one synthesis, but a number tailored to different needs and audiences. This is a major path for the valorisation of European research, which is relatively inexpensive to undertake, but is currently near totally unexploited.
- Finally, there needs to be a stronger pressure – part of a publications policy – towards researchers in the publication of their findings in peer reviewed journals and international seminars. Synergy with European scientific societies could strengthen such diffusion of emerging research results.

A strong project-centred publications policy is required to supplement the more general FP publications policy.

⁴³ The Unit provides 1) support of FP implementation, 2) General information to the public and answers an average of 100 communications per day as well as press conferences, major conferences and the launch of FP6 conference etc. and 3) Development of a good image of DG Research as well as the documentation to proposers (publicity and forms) for FP6.

⁴⁴ Cordis has been moving away from the traditional Specific Programme information structure towards a more subject based approached with better quality search facilities. And at the same time providing greater autonomy and responsibility to the suppliers of information

The Monitoring Panel recommends that:

- The FP creates an accessible central data store in which one copy of all FP5 Final Project Reports (Research, Assessment, Monitoring, Evaluation, etc.) is deposited either in paper or (preferably) in electronic form. This store should be in place by end of Y2002.
- The Information and Communication Unit, in conjunction with SPs, draws up a project-centred publications policy consistent with its own more general policy. This sub-policy should include the provision for an annual plan of synthesis and analysis reports and publications to be undertaken. The operation of this plan should be reported on in the Annual Self-Assessment.
- The Programme Management should explore closer links with the European scientific societies with the intention of regular publication of the results of EU funded research.

There are concerns regarding the special language used in Commission documents, which reflects the fulfilment of legal and financial requirements but is often very difficult to understand by users. In addition, Framework Programme terminology undergoes major changes each five years. This leads to a situation, where for the start of each Framework Programme, substantial time and effort have to be invested to “re-train” even experienced participants.

The Annual Report presents interesting data on the development of FP implementation. However, the tables are presented in a way, that it is not possible for member and associated states to assess their performance in a comparative way. There is a need for cumulative data in addition to annual data. At the moment, in the absence of adequate information and data, all participating states are investing substantial resources in order to develop their own data from the insufficient and fragmented information they receive from the Commission Services responsible for the different SPs. Such data are of key importance for “defending” the FP at national level - not least in discussions with the finance ministers.

The Monitoring Panel recommends that:

- The FP management reviews its communication and marketing strategies in order to develop a more user oriented approach.
- The Annual Report is further developed in a way that Member States and Candidate Countries can compare their performance in support of their FP participation strategies. In addition, the Commission service provide on a regular basis adequate data on the implementation of the Programmes.

4.3 PROJECT MONITORING AND EVALUATION METHODOLOGY,

Given the lack of a central MIS system, the consequent diversity of SP data collection approaches, and the attendant variety in what is collected as “basic project information”, there is a variety to the forms of project monitoring / evaluation undertaken by each SP – and, indeed, within some SPs and, as at least one SPEG reports, different systems by different Scientific Officers! This problem is heightened by the relatively low priority given to such activities within the FP as a whole. The emphasis in the FP is – possibly of necessity caused by personnel shortage - on the call for proposals, evaluation, selection, and contract signing. The remaining sections of project monitoring, valorisation, evaluation, and impact assessment attract far less attention.

However, things are changing. The reform of the European Commission’s evaluation function^{45 46}, *Strengthening Evaluation of Commission Activities*, is expected to be operational by July 2002. It requires 1) the provision of evaluation information on all Commission activities and 2) the use of evaluation information in priority setting, decision making and resource allocation. This has major

⁴⁵ European Commission, 2000, “Focus on Results: Strengthening Evaluation of Commission Activities” SEC (2000) 1051.

⁴⁶ European Commission, 2001, “2001 Monitoring of the European Research Area (ERA), Framework Programmes and Specific Programmes”, 8 November 2001. DG Research

implications for project monitoring and evaluation (this Section) and project and programme impact methodology (the next Section).

Project monitoring will have to provide timely and consistent (consistent over time and consistent across different types of projects and SPs) project information as a base for 1) project evaluation and 2) Programme evaluation. The current approach of individually designed and implemented project monitoring systems just will not do. Even though the development of the common MIS system is awaited, a common approach to project monitoring and evaluation can still be implemented for FP6.

The Monitoring Panel recommends that:

- A basic set of common project monitoring and evaluation principles and associated implementation guidelines be drawn up. These should be available by end Y2002.
- The principles and guidelines should be distributed to all Heads of Unit and Scientific Officers and operational from 1st January 2003, the launch of FP6.

4.4 PROJECT AND PROGRAMME IMPACT METHODOLOGY

As with project monitoring and evaluation, project and Programme impact methodologies must be built up in line with the Communication to the Commission, “*Strengthening Evaluation*”. Impact Analysis is important at a number of levels:

- The necessary transparency / justification of the FP spending to MS, Parliament and the Council,
- The understanding necessary to develop more effective research Programmes in the future - in technical, economic and social terms, and
- The wider ability to influence and inform public opinion on the results from and need for scientific research.

Thus far, on the part of the Commission Services consistent investment of personnel and other resources in monitoring the impact of its research spending has been lacking. The continuous short cycle of calls for proposals, evaluation and contracting within the 5 Year cycle of a FP, has left little time or inclination towards project monitoring or exploring research impact. There has however been some noticeable movement in Year 2001. Four SPs have been involved in their own efforts at impact analysis^{47,48} and the FP itself has commissioned a study on the analysis of socio-economic impact⁴⁹ to follow up the ESTO study of this area. This is a solid base for future development.

As Impact Analysis develops, a number of strategic questions arise for the Commission:

- The relationship / reliance of any methodology on the basic FP (or SP) MIS system. Impact Analysis methodologies may be highly circumscribed by the types of MIS project data routinely gathered by the research Programme. Because of the weakness of central FP MIS, individual Programmes have developed their own basic project data systems, with those working towards Impact Analysis are developing tools such as self-assessment fiches and forms of project-file analysis. The role of the relatively newly introduced Technological Implementation Plan is still unclear. Coordination across SPs and an adequate, overall FP Impact Analysis will prove difficult as long as the central MIS is lacking.
- Which methodology to use? All Impact Assessments used different methodologies⁵⁰, devoted different percentages of project budget, and focused on different data sources. Given the current circumstances, this is understandable. However, basic, good, scientific

⁴⁷ European Commission, (2001), “Clean and Efficient Energies for Europe: Socio-economic Impact of Energy Research Projects” EUR 19464.

⁴⁸ European Commission, (2001), “Qualitative Assessment of Non-Nuclear Energy Proposals Selected in FP5” EUR 19466.

⁴⁹ PREST et al, (2002), “Assessing the Socio-economic Impacts of the Framework Programme”, PREST, University of Manchester.

⁵⁰ Rather than using a tender process to give the IA contract to a group of consultants, one SP decided to try to build up a European wide IA capability in their own area. This has been achieved by a small specialist core in the FP Management working with a broad network of technical specialists across the EU.

practice should be a requirement and should be provided by the “Evaluation Unit” of DG Research and DG Infosoc.

The development of a set of common principles, common operational guidelines and a small “tool box” (sample questionnaire, data collection approach, data analysis approach, practical examples) and their availability to all Heads of Unit will have a strong *de facto* – if not *de jure* - affect on impact analysis. It is important that good, solid, common, and scientific approaches are available from the very beginning of FP6 – even if FP4 and FP5 projects are the first subjects of impact analysis.

The Monitoring Panel recommends that:

- By Year-end 2002, the FP Management publishes an Impact Assessment Policy for FP4-FP5-FP6 projects including principles, guidelines and a “tool box” of support material
- This material should be in the hands of all Unit Heads by the launch of FP6.

4.5 OTHER ISSUES

Human Resources

A number of issues have been addressed in Y2001.

- The special “research staff contract” which has led to difficulty in staff moving to other parts of the Commission has been replaced with a normal contract. This will lead to increased mobility to and from DG Research. However, there was some concern that a cadre of “Flying Managers” might develop, and that there would still be the need for technical competence building and retention within the FP. Overall, it is expected that mobility will lead to improved staff careers and transfer of expertise.
- The current widely ignored “notation” system (the annual personnel appraisal system) is being left fallow and a new structure developed, closely linked to staff career development, will replace it in 2003, again as part of Commission reforms.
- A number of training programmes have been mounted in preparation for new Commission procedures and for FP6.

There is still, however, some concern over the general state of HR management within the FP:

- There is concern that the FP systems generate an excessive work-load on the scientific Officers – while this may be ameliorated by the introduction of improved management, it is possible only the full system reform or the contracting-out of administrative work will make a major change.
- Director and HoU levels will require strong support as Commission reforms move responsibility and decision making down the management chain and calls for the introduction of modern management methods continue.
- The training structures – and the implied training philosophy - may be inappropriate. The vast majority of the training budget is not controlled by DG Research but by DG Admin⁵¹ and is provided on an individual-request basis. It may be more useful to focus training (and HR development) activities primarily on the development of good Unit management.

⁵¹ Staff training in DG Research comes from both DG Research itself, (€90,000 per annum for a staff of some 1,500 people – about €80 per person) and from DG Admin. Within this joint framework, training is organised in conjunction with a network of “training correspondents” in each Directorate coordinated by a group within Directorate L: Resources, who develop an annual training plan. This plan is based on the expressed needs of the Directors (top down) and of the staff (bottom up). In 2001 some 2900 “training requests” were thus generated.

The Monitoring Panel recommends that:

- The FP Management draws up an *outline* Human Resources Development plan for the ERA and FP6, outlining philosophy, training, personnel evaluation, and career development systems linked to improvement of delivery of ERA / FP6 objectives. This plan should be reported in the Annual Report for 2002.

The Fusion Programme

The Fusion Programme, while making good progress during 2001, is in a critical stage. The programme is the world leader in its field and an outstanding example of a completely integrated European Research Area. However, essential decisions on its future have been delayed for years. Decisions on the “Next Step” (ITER) have thus to be taken early during FP 6 if Europe shall retain its world-leading position in energy research in this field.

The Monitoring Panel recommends that

- The European Commission prepares for and actively promotes a decision on, the “Next Step” (ITER) in Fusion research as soon as possible. This includes an enlarged European mandate of negotiations with its international partners, a further development of European sites for ITER and a strengthened management structure for the Fusion Programme.

5 THE IMPACT OF FRAMEWORK PROGRAMME RESEARCH IN 2001

Assessing the impact of FP research is complex for many reasons including:

- The overlap of different Framework Programmes. Some FP4 projects are only just finishing during 2001. Some FP5 projects have not yet started.
- The different timeframes within which impacts occur. Technical impacts tend to occur relatively quickly, economic impacts require longer and social impacts may require a still more distant timeframe.
- The web of multiple causality in all impacts, particularly economic and social impacts, make it difficult to attribute changes directly to Framework Programme research.

However, as indicated in Section 4.4, the Commission Services are becoming increasingly interested in impact analysis and devoting larger resources to such analysis. Four impact analyses reported findings during 2001 – IST, Non-Nuclear Energy, INCO, and GROWTH.

GROWTH

The GROWTH Programme has a strong tradition of impact assessment stretching back nearly a decade to Brite-Euram and IMT assessments. Its most recent analysis, the GOPA Assessment, the findings included:

- Top success is mainly associated with high ambition, high risk (technically and commercially), high strategic importance for the partners, high budget, involvement large companies. High project management capability and commitment of the partners are necessary, particularly if there are large numbers of partners or the project involves significant technical complexity. It is better to select projects with clear RTD orientation. When a project is clearly applied or fundamental in nature it has a significantly higher chance of success compared with those attempting both fundamental research and near market development or which did not exhibit either characteristic very strongly. CRAFT projects have approximately the same probability to create employment, additional turnover, additional market share, ... as RTD projects.

Findings to avoid failure:

- Large partnerships with predominantly smaller sized industrial companies are more likely to be a failure than smaller partnerships of this type without support measures. Vertical partnership consortia are more likely to achieve their major goals than neutral or horizontal consortia. Projects affected by restructuring or the strategic shifts of project partners are significantly more likely to fail.
- Technical risk is not itself a predictor of failure, and should not be avoided in project selection. Many successful projects have overcome technical risks. On the other hand failure to manage technical risks becomes a major contributor to overall failure of where other factors such as weak management or unclear objectives are present. Failure to reach technical and socio-economic objectives is mainly associated with low exploitation potential and low commitment of the partners, poor management, low budget
- There was a clear link between lack of success and lack of strong management / lack of strong drive for exploitation, and whilst the latter were somewhat more frequent in large partnerships with predominance of SMEs, large partnerships or predominance of SMEs were by no means risk factors per se.

Recommendations:

- Greater emphasis should be placed at the project selection stage on technical and managerial competence, commitment, and clarity of objectives. Projects involving considerable technical risk should not be avoided, especially if project teams look competent enough to deal with the risks involved. Conversely, projects involving only modest technical and commercial risks and ambition levels should not be avoided either, for success rates are often high and the benefits to participants appreciable;
- Extra care should be taken when considering projects involving large numbers of partners, for although many of these are amongst the most successful projects, failure rates are also higher amongst this population. This is of particular concern given the emphasis likely to be given to larger projects within FP6. Thought should be given now to the type of support activities, which will be needed during the lifetime of these projects if their failure is to be avoided. Thought should also be given to the type of support activities best suited to projects dominated by large numbers of SMEs, since the risk of failure is also higher within projects of this type.

The study has helped to identify those types of projects where strong follow-up by the Commission would have the highest impact on the degree of success of the projects and points to the importance of the early impact analysis in improving the effectiveness and efficiency of Programmes and component projects. In addition, this type of analysis has evident implications for RTD policy and will support the developments expected by the “*Strengthening Evaluation*” reforms.

Non-Nuclear Energy

The Non-Nuclear Energy Programme reported in 2001 on a pilot impact analysis of some 90 FP4 JOULE projects⁵². The approach was consciously designed to be a relatively rapid feedback mechanism for the development of research policy and Programmes.

The main findings were:

- Impact of the research is “strongly conditioned by the political structure of the energy market. As long as there is no “full pricing” of traditional fuels to include external costs (environmental costs, pollution costs, health care costs, etc.) as well as other more direct subsidies, the impact of such energy research will remain weak. Conversely, research on improving efficiency in the use of traditional fossil fuels is likely to have a much greater commercial impact and, indeed, impact on the environment”.
- Projects were well aligned with EU policy and were expected to have a strong impact on environmental issues, but expected employment impacts were not strong. Short-term impacts centred on relatively traditional cost reductions and increased productivity. But in the longer term the larger projects had a potential to move participants into EU and global markets.

The impact analysis also developed policy implications at the project and Programme level, and noted, in particular, the necessity for the commercialisation of any technical developments if the project was to have any significant economic or social impact.

The QoL Programme

The QoL Programme has undertaken an impact assessment of the results of FP4 projects of the following programmes: BIOMED2, BIOTECH2 and FAIR. While conclusions are pending for BIOTECH2 and FAIR, a report has been issued on the impact of European research in the field of medicine (BIOMED2)

Summary of findings and recommendations as regards BIOMED2

The main findings from BIOMED2 are:

- The scientific priorities in the various areas and sub-areas of the programme have in general been satisfactorily covered by the selected research projects. However, some of the projects selected for funding were *a priori* less likely to succeed due to over ambitious objectives, or to the participation of too many groups, making them difficult to manage. In addition, about one third of the projects did not produce publications in high-impact international peer-reviewed journals, particularly in areas linked to public health and health service research.
- In general, the funded projects had a good European added value in that the programme has made a major contribution in creating a European Research Culture.
- A significant proportion of projects generated protocols or introduced guidelines into clinical practice in more than one country and project results have been used in policy debates or contributed to policy measures in Europe.
- Industrial partnership was established in particular for technological projects and was well represented in pharmaceuticals research and biomedical engineering.
- BIOMED2 served as an important transitional phase for introducing European medical research as an additional model to national research. It has contributed well in generating the required critical mass of knowledge both in clinical and basic research to improve the quality of European research. Lastly, it has served well as a preparation for the concept of a European Research Area.

The INCO Programme

The INCO Programme has initiated an impact assessment exercise focused on the early finalised, or close to finalised FP4 projects. Initial indications are of “identifiable impact of research from

⁵² European Commission, 2001, “Clean and Efficient Energies for Europe: Socio-Economic Impact of Energy Research Projects”, DG Research, Brussels.

INCO in a very diverse programme of activities in many geographical areas and many important scientific fields. As components of this impact the programme projects (i) often demonstrate valuable multi-disciplinary features (ii) are widely appreciated in third countries as well as by institutions in the EU (iii) provide good awareness of the EU and its research activities (iv) provide professional contacts and networks that would otherwise be difficult to achieve (v) train scientists in other countries who in future may well come to work for a time in the EU and contribute to its R&D efforts (vi) through their European dimension encourage the furtherance of the European Research Area (ERA) and foster a valuable international dimension for it and (vii) European components often demonstrate European Added Value (EAV) for the collaboration established with third countries. Overall the programme in FP4 was found to have made a significant contribution to policy-related knowledge and understanding of third countries for EU purposes, the scientific capabilities of these third countries and their socio-economic needs. This study demonstrated that information needs to be archived and accessible in particular ways for impact analysis and continuing work is required on the benchmarking indicators needed for assessing impact in the different areas of the Programme.”

The IST Programme

The IST Programme has started to develop an integrated system of project monitoring / impact analysis aimed at delivering inputs for ex-post evaluation, particularly for the 2003 5-Year Assessment. The elements of this system include

- An overall assessment of available information⁵³,
- Project Fact Sheets,
- Project “Progress Indicators Fiche” (developed by Project Officers and Reviewers)
- Information from the Project Technological Implementation Plans
- Consolidation individual project of “success stories”
- Impact Assessment Fiches (developed by Project Officers) for recording the characteristics of an impact at sector / programme level

This gives rise to a mixture of analytical, demonstrative, and, eventually, synthetic impact analysis.

Conclusion

It is not possible to provide an adequate evidence-based assessment of the impact of the work of the Framework Programme. The necessary tools and procedures are only just being developed and put into practice, and this only in a limited number of SPs. However, indications from SP impact assessment point to:

- Good technical developments from projects along with good support for EU policy, but perhaps not major impacts on employment creation.
- Some support for the efficacy of “Integrated Projects” / Bigger Projects with large-company industrial involvement. At the same time, the need for a much greater care in the way SMEs are involved in FP research. (See also Section 3.4)
- The need for technical and managerial competence from the beginning at the same time as planning for the commercialisation of research, if the project is to have a significant social and economic impact.
- Programme objectives should address clearly defined needs and, in turn, the research delivered must demonstrably match these needs.

Despite the weakness of these indications of the overall FP impact, they evoke major research policy issues. They also heavily underline the need for the full and rigorous implementation of the “*Strengthening Evaluation*” reforms and the integration of evaluation activities into decision-making processes.

⁵³ IST Programme, (2001). “Collection of information about results and impacts arising from IST, ACTS, Esprit and TAP”

The Monitoring Panel recommends that:

- Each SP, which has not already undertaken an impact assessment of the completed projects, which it has funded, should do so. The assessments should use the common tools, which are to be provided. The tools and methodology may be adapted to SP needs, but the launch of the assessments should take place by early 2003. Ongoing impact analysis should be a feature of the Annual Report.

6 FOLLOW-UP OF PREVIOUS MONITORING RECOMMENDATIONS

Activities during 2001

During Year 2001, the evaluation function of DG Research has developed in line with the Communication: "Focus on Results: Strengthening Evaluation of European Commission Activities".

- Monitoring of both policy (ERA) and programmes
- The notion of a European Evaluation Area has developed. This will develop based on the work of the current RTD Evaluation Network across the EU on common principles of evaluation,
- Ex-ante evaluation of SPs / FP were undertaken
- A Work Group across all DGs in RTD on research indicators was set up
- Increased use of evaluations and monitoring are being examined along with associated awareness activities.
- Synergy between ERA, FP and SP evaluation

In addition, all SPs have

- Prepared individual Self-Assessment Reports for the Year 2000 outlining their objectives, activities, and results. These have proved excellent baselines for the work of the SPEGs.
- Replied in a (more or less) standard format to the recommendations of the 2000 SPEGs. Again, the clarity, and transparency provided have contributed to the good functioning of the Monitoring Exercise. Currently, the format used is:

MP Recommendation Commission Services' Response Milestones for Implementation / progress

The Monitoring Panel recommends that - For clarity, the following structure be used:

- *MP Recommendation*
- *Commission Services' Response*
- *Explicit Commission Services' Commitments (if any)*
- *Progress to date*

The Commission Services are also encouraged to be more explicit and specific in their commitments – particularly if there are none. The FPMP recognises that its and SPEG recommendations may, on occasion, not be implementable (outside the terms of reference, outside the capability or authority of the FP/SP Management, not within the logic of the FP/SP activities, be of such a general nature as not to be operational, etc.). In this context:

The Monitoring Panel recommends that:

- All Monitoring Panels should check that their recommendations are 1) Within the terms of reference of the Panel, 2) In line with current EU RTD policy, 3) Well specified, actionable on the part of those to whom they are addressed and verifiable.

It is also noticeable that the use of the external monitoring exercise varies widely between SPs. Some integrate Monitoring into quality improvement management systems, using the interview processes as an annual Programme-wide articulation of challenges and the reporting requirements as a common formalisation of the state-of-the-Programme. Some use the exercise as a "bolt-on" or "end-of-pipe" verification activity to be performed once a year. While there are advantages and disadvantages, the internalisation of the monitoring process seems to be most effective in generating implementable and implemented recommendations.

The 2000 FPMP Report Recommendations

The 2000 Annual Monitoring Report⁵⁴ was formally delivered to Commission Services in May 2001. The Commission Services' formal comments on the Report were received on 28th February 2002, towards the conclusion of the 2001 FPMP exercise. It should be said, however, that the form and content of the Comments were a quantum leap forward as a transparent and verifiable system, which could be used to address FPMP recommendations.

While the Panel feels deep concern over the extent to which 2000 FPMP Recommendations have been operationalised, the weakness and failing of the follow-up system precludes informed comment.

The Monitoring Panel recommends that:

- Commission Services should formally reply to a Monitoring Report within 3 months of its formal submission and in the format indicated. And publish the Report within the following month.

Further, the follow-up by both FP and individual SPs to the recommendations of the FPMP cannot be ascertained. While FPMP recommendations are often at the FP level – and may not require immediate response at the SP level - some recommendations are directly applicable and operationable by SPs.

The Monitoring Panel recommends that:

- Each SP should provide a follow-up to the FPMP Report using the structure indicated above.

The New Monitoring Arrangements

The new monitoring arrangements - with the Chairpersons of the SPEGs constituting, (along with an overall Chairperson and Rapporteur) the FPMP – has had a number of effects on the work of the FPMP:

- The understanding of the operation of the individual SPs improved substantially.
- The focus of the FPMP moved from the overall management of the FP to the management of the FP as it affected the SPs – with both advantages and disadvantages.
- The Self-Assessment Reports of the FP and the SPs represented a substantial improvement of the working bases of the FPMP and the SP Expert Groups.

A number of possible improvements might, however, be made including 1) A review of the *Broad Guidelines* taking into account the specific needs of FP and SPs respectively, while at the same time ensuring the requirements of integration and synthesis, 2) Improving the scheduling of SP and FP meetings, 3) Preparing the Self-Assessment Reports in accordance with the Terms of Reference of the FPMP and the SP Experts Groups and the suggested synopses of the respective reports. 4) Consider launching the SP Expert Groups a month before the FP Panel 5) Improving the initial *Information Dossier* delivered to Panels and refocusing the FPMP on the overall management of the FP, 6) Provide for a substantial time for discussion of recommendations with the appropriate sections of Programme Management, 7) Consider annually alternating “brief” and “full” monitoring exercises. A “brief” monitoring exercise should be based on the Programme Self Assessment Reports (at FP and SPs level), without in depth analysis of horizontal issues, and with a focus on follow-up. The “full” monitoring exercise could be produced by an extended panel of experts, last longer and look in depth to all relevant issues using all the different instruments that are applied at the moment. 8) Further develop the new Monitoring approach and review the activity in the context of increasing its effectiveness moving into FP6.

⁵⁴ European Commission, 2001, “2000 Annual Monitoring Report on the RTD Activities conducted under the EC and Euratom Framework Programmes”, May 2001. DG Research.

Looking at Monitoring more generally, the Specific Programmes take part in the annual monitoring exercise in very different ways. The most successful seems to be to integrate monitoring into the individual Programme's own quality improvement system. Thus, we recommend that:

The Monitoring Panel recommends that:

- The annual monitoring exercise should be visibly linked to each SP's quality improvement system, and be commented upon in the Annual Self-Assessment.
- Following the lines of the new approach, the monitoring methodology should be further developed and adapted to the new requirements of FP6.

7 CONCLUSIONS & RECOMMENDATIONS

7.1 STRENGTHS AND WEAKNESSES

Over the year 2001, the Commission Services have worked solidly along three main axes

- The development of the ERA and of FP6
- The putting in place of new management structures and procedures
- The continuation of FP5 and remaining FP4 activities

Among the main strengths which the FPMP have found are:

- The solid experience and expertise in running research programmes at all levels of staff,
- A respect and trust in the scientific community for the integrity of the Commission Services and a consequent willingness, on both sides, to overcome some of the weaknesses indicated below.
- A solid base of well structured Programme Activities incorporating well thought out scientific challenges, which are supported by a high quality and trusted proposal evaluation system.

Weaknesses include

- An overburdeningly complex legal and administrative system, which leads to overloading of scientific officers and frustration along with excessive administrative reporting requirements being placed on participant researchers.
- A chronic difficulty in coordinating both administrative and research activities across both SPs and the wider FP: the difficulty in installing a central MIS is the most evident manifestation of this problem.

7.2 KEY RECOMMENDATIONS

Overall Framework Programme / ERA Recommendations

The 2001 FPMP were asked to examine a number of general / horizontal issues. The detailed, operational recommendations made to the Commission Services are provided in the body of the text and in Annex 9.1. Here we provide the key strategic axes of the recommendations.

Area	Recommendation
Developing the ERA	<ul style="list-style-type: none"> • Provide a concrete Action Plan showing how the ERA will meet the Lisbon Strategy and Objectives. • With the Member States and Candidate Countries, set up ERA Policy Fora in each country along with a coordinating Task Force • Act immediately to ensure the ERA has an effective international / global reach – incorporating the expertise and achievements of INCO. • And might not <i>European Research and Innovation Area</i> be a better approach to fulfilling the Lisbon Strategy,
Working with Candidate Countries	<ul style="list-style-type: none"> • Include the development of Candidate Countries scientific research and innovation systems as a key element of the ERA – Put it on the “<i>Tableau de Bord</i>” • Re-examine the small print of regulations and measures to ease their participation in the FP
SMEs & Innovation	<ul style="list-style-type: none"> • Find out immediately, <i>how</i> – not simply how many- SMEs are working with the FP, and draw up appropriate measures / policies for sensible SME participation. • With Member States and Candidate Countries, find out what works within the NCP system, and support their

	effective development in all participating countries.
Women in Science	<ul style="list-style-type: none"> • Put the gender issue into all FP6 documentation – mainstream it. • Make gender balance an issue within the Commission Services, themselves. • With Member States and Candidate Countries, explore the synergies of working with DG Education to develop “Girls into Science and Research”.
Developing FP Policies	<ul style="list-style-type: none"> • The new FP is very different; launch it carefully and have a close monitoring of how things are going. • The FP needs a nerve system of intelligence across the whole FP: a strong system of internal analysis of programme activities • The scientific research of the FP should strongly support EU policy across all relevant DGs. It should also support EU Directives. • Strengthen synergies between research, education, and training.

Management Recommendations

Again, the operational recommendations made to the Commission Services are provided in the body of the text and in Annex 9.1. Below are the main lines of the recommendations.

Area	Recommendation
The MIS	<ul style="list-style-type: none"> • The chronic MIS problem must be sorted out. The Director General Research should take a direct responsibility.
Electronic Submission	<ul style="list-style-type: none"> • An effective electronic submission needs to be put in place, now, and we should start examining electronic evaluation.
Time to Contract / Payment	<ul style="list-style-type: none"> • Establish the minimum, effective Time to Contract and Payment.
Timetable for Calls	<ul style="list-style-type: none"> • Publish an indicative timetable – right down to first payment – with each Call.
Valorise Research	<ul style="list-style-type: none"> • Valorise research through a publications policy.
Project Monitoring & Evaluation	<ul style="list-style-type: none"> • Give Heads of Units a set of project monitoring and evaluation tools – before FP6 starts.
Impact Assessment	<ul style="list-style-type: none"> • Give Heads of Units a set of project impact assessment tools – before FP6 starts.
Human Resources	<ul style="list-style-type: none"> • Write a HR Development plan for the ERA/FP6 before FP6 starts
Fusion	<ul style="list-style-type: none"> • A decision on the “Next Step” (ITER) needs to be taken.

Results from Impact Assessments

The work, which has been undertaken so far, has been very valuable in helping Programmes become more effective and efficient. All SPs, which haven’t done so, should undertake an impact assessment exercise.

Monitoring Recommendations

The major concern of the 2001 Monitoring Panel has been the late response of the Commission Services to the previous 2000 FPMP Report. The formal response only came in February 2002, even if efforts have already been made in the follow-up on recommendations. The recommendation is thus: Reply to the FPMP Report within three months and publish it the following month. Finally, the annual monitoring exercise should be visibly linked to each SP’s quality improvement system.

8 SPECIFIC PROGRAMME MONITORING REPORTS

8.1 THE EUROPEAN RESEARCH AREA (ERA)

ERA is the first attempt to set up a European policy. National research policies and Union policy overlap without forming a coherent whole. If more progress is to be made a broader approach is needed. ERA monitoring is a new kind of monitoring. Previous monitoring dealt with the implementation of Framework Programmes and their Specific Programmes. In the case of ERA, monitoring is not devoted to a precise scientific programme but to the implementation of a major policy. The Expert Group recognizes the ERA "Tableau de bord" as a useful tool and one that must be developed and exploited.

- . **Coordination and Networking of National Research Programs.** The successful development of Community research depends on the creation of a better research climate in Europe, and on common efforts to create synergies between European, national, regional and Community programs.
- . **Infrastructures** of European significance could provide essential services to a Europe-wide research community with unique opportunities for R and D at the cutting edge of science and technology and with the capacities for creating a world-class scientific environment.
- . **Mobility in EU** concerns both transnational mobility and intersectorial movement. Factors against mobility are rigid employment rules, lack of employment opportunities in Europe, lack of re-entry positions in Europe, insecurity of career paths combined with rigid sectoral segregation.
- . **The regional dimension of ERA** may play a "motor" role in the overall context of economic growth based on research, technology and innovation. But, strong differences exist in economic performance.
- . **International co-operation.** International RTD cooperation is recognized as a central component of the of the European Research Area. The ERA must be open and attractive to scientists everywhere in order to offer well-balanced cooperation to the world.
- . **Governance.** The "action lines" defined to complement activities foreseen to implement ERA and the Action Plan "Science and Society" must be executed during 2002.
- . **Public understanding of science/young people and science** in which stepping up the science/society dialogue must be one of the main goals.
- . **Mapping scientific excellence** should allow visibility rising across borders, by disseminating the mapping results widely to: industry (with special attention for SMEs) and investors; policy makers; RTD managers; public services, etc.
- . **Benchmarking research and innovation policies** is good for integration and a necessary step for the ERA. At the EU-level as well as in the Member States, the three key issues of research policy are: Fragmentation (sub-criticality), Resources (brains and money), and Frame conditions.
- . **Contribution to Enlargement** . In the implementation of ERA more emphasis must be put on Enlargement, i.e., on the integration into ERA of newly associated countries, and Enlargement should be an explicit issue in the ERA "Tableau de bord".
- . **Participation of Industry especially SMEs by stimulating Investment in Research** SMEs and universities must be encouraged, motivated and helped to engage more in patenting, and financing facilities should be made available.
- . **Community patent.** Serious efforts must be spent on reaching an agreement on a Community patent.
- . **Stimulating Investment in research, including European Investment Bank Co-operation.** The goal could be reached trough a close cooperation between the Commission and EIB in stimulation of private investment in Research and Innovation.
- . **Women and science.** Efforts must be increased that support women interest and participation in the Framework Programs, for example by integration of gender in the evaluation process and in the evaluation criteria.

. **Main management issues.** The Expert Group finds that the weakest link in the implementation of ERA is the interface with the Member States. All managerial aspects must be improved with in specific programmes member states are involved in programme committees.

. **Evaluation and Monitoring Methodology, including indicators.** Critical success factors and adequate indicators are needed.

In Europe, the situation concerning research is worrying. Without concerted action to rectify this, the current trend could lead to a loss of growth and competitiveness in an increasingly global economy. It is time therefore to define a policy approach in order to reinvigorate research in Europe: The European Research Area.

8.2 THE USER-FRIENDLY INFORMATION SOCIETY TECHNOLOGIES (IST)

The IST Programme was successfully delivered during 2001. Of particular note was the action taken to raise the participation level of Newly Associated States and the progress made to improve core processes such as "time to contract", where the average time was reduced significantly from 250 days to 150 days. These results demonstrate both the responsiveness of the Programme to its user community and management's capability to carry through major change. The continued production of an annual Self-Assessment Report also shows commitment to analysis and improvement.

The recommendations of the 2001 IST Monitoring Panel focus on four main issues in the delivery of the Programme. In making its recommendations, the IST Monitoring Panel recognises that the responsibility for a specific issue does not always fall within the remit of the IST programme itself.

Urgency in the Transition to FP6. Preparations are well underway for the launch of the IST Programme under this Framework; however there are areas where the Panel considers that urgent action is required to address current concerns and future challenges. These include:

- strategy, delivery plans, communications and consultation
- measures to address the concerns of NAS and SMEs
- policy and plans for the involvement of women
- applicability and emphasis on civil society
- consideration of a strategy of wider international cooperation.

An Opportunity to Improve Processes. Building on the significant and valuable progress in the last year, there is a continuing opportunity in FP6 for significant changes to make the RTD process more effective and efficient for all players. In particular, the Panel recommends:

- initiating a continuous improvement programme
- delivering a consistent communications policy
- improving management information on project and programme progress.

Making the Best Use of Human Resources. The success of the IST Programme to date is due to a dedicated and hard-working team in DG Information Society. However, there are a number of issues that require strong management efforts in order to obtain the best use of human resources. In particular, the Panel recommends the definition of a clear Human Resource policy that includes specific attention to issues such a gender.

Assessing Impact. During 2001, the IST Programme initiated a number of important steps to address this issue. However, much is yet to be done and the time is ripe for a systematic approach. The Panel recommends that IST Programme management develop an appropriate methodology and implement a properly resourced plan for an impact assessment scheme. In the wider context, the Panel also recommends that a requirement for systematic and independent impact assessment should be embodied in the legal texts of FP6 and its Specific Programmes.

8.3 QUALITY OF LIFE AND MANAGEMENT OF LIVING RESOURCES (QoL)

The Panel made its assessment based on extensive interviews with QoL Directors and staff, examination of documentation, and consultation with Programme Committee members.

The Panel concluded that management targets have been effectively met in 2001, including:

- Positive reaction to general and specific recommendations of the 2000 Monitoring Panel
- Completion of many FP5 projects, and progress with dissemination of results
- Effective support of strategies to build European Research Area
- Work to lay the basis for the 6th Framework Programme

Our Report has included a number of recommendations, the most important are here summarized

1. Reaction to new problems arising during the period analysed has been efficient, but even more rapid and effective responses are needed as well as quicker, more pre-emptive approaches to new problems (e.g. TSEs; bioterrorism) early in their emergence, or even their pre-emergence.

2. Proposal success rates vary from about 14 to 26%. Resubmission rates remain high, with a relatively small increase in chance of success in most Actions (overall about 16.5% for first submissions, and 21% for resubmissions). Such results disappoint many applicants and give a poor impression of the potential for QoL support. Some projects could be accepted with revision, rather than rejected. The detailed comments of evaluators (full “peer review”), instead of the ESR summary should be sent to the proposers of failed applications.

2 bis. The overall participation of SMEs in QoL was considered to be very good, although lack of impact studies make it impossible to measure the improvements achieved through SME participation, and how effectively the results of the projects have been exploited. Attention should be given within QoL to substantial differences in SME involvement among countries, mainly resulting from different levels of availability of National advice and support e.g. via National Contact Points, and from the various degrees of traditional involvement and cooperation between research centres and research institutions.

More positive advice for patenting should also be given, in view of the fact that European patenting rate is so poor as compared to Americans and Japanese.

3. QoL took a number of methodological experimental initiatives, such as sending out projects for evaluation for some limited, but important areas; making good use of two-step selection; and including “calls for expressions of interest.” In our opinion these initiatives are very valuable means for improving relevance and comprehensiveness of key elements of Actions, and should be encouraged and pursued more widely.

In order to improve the selection of project evaluators, the Commission could consider using the considerable knowledge and contacts within key Scientific Societies, or Journal editors, to help identify effective evaluators, and the deliberate selection of former (effective) Project Coordinators. While appreciating the problems of confidentiality, we believe that it would be worth re-evaluating the possibility of sending, at least Part B or summaries of proposals, to evaluators prior to the evaluation sessions.

Some of the concerns presented by this panel seem to have been already taken into account for FP6, such as the proposed change in the means for selection of evaluators, the plan to have a two-stage proposal submission procedure, or the promised access to databases during the evaluation sessions.

4. Some data seem to question the assumed higher quality of outcome of larger versus smaller projects. The evaluation system of projects under ERA should consider the implementation of measures to make more accurate predictions in terms of the quality of the projects’ final outputs and outcomes (including publications, patents and commercial exploitation etc).

5. Overall, the methodology for communication of research results and policies at a European and at an international level should be carefully reconsidered and exploited. In particular, it should be considered to send material regularly to Scientific Societies, for reproduction in their journals or

newsletters, many of which reach thousands of individual members, or for other means of dissemination, e.g. at their local or national meetings.

6. Commission rules and guidelines for applications and managing of projects have become steadily more complex over the years, for seemingly good reasons. However, there is now a general impression that the complexity has increased so much as to be counterproductive. A substantial simplification of all procedures is foreseen in the 6th Framework Programme, most probably at the level of the whole Commission's Research support activities. An adequate information system is also urgently needed.

8.4 COMPETITIVE AND SUSTAINABLE GROWTH (GROWTH)

2001 marks the third year of response of the Competitive and Sustainable GROWTH to the challenges of "improving the EU industry's scientific and technological capability and competitiveness" via the successful implementation of the Key Actions, Generic Activities and horizontal elements that constitute the Programme.

The 2001 monitoring was launched on November 8, 2001 and completed on April 8, 2002. During this period the monitoring panel met six times, at regular intervals. The 2001 - monitoring report expresses the Panel's consensus views and is the direct result of interviews and document analysis performed by the panel members. The support of the Programme management and Commission staff members to this monitoring exercise was reflected by high quality and quantity of received information and openness of all interviewed.

The good progress in the Programme implementation has continued in 2001. GROWTH evidently contributes to greater sustainability and quality of life by promoting new approaches, policies, technologies and materials capable of producing goods that are safer, faster, more reliable, recyclable or biodegradable, cheaper, less polluting and consuming less energy. Activities in all elements (via open and dedicated calls) have been successfully realised, using input from previous calls and in conformity with the Programme Road Map. Calls for proposals (based on the modified Work Programme/ed. Dec. 2000) and related evaluations have been on time and completed with transparency and fairness. Funding of *Large Projects, Thematic Networks, Targeted Research Actions, Technology Platforms, Critical Technology Projects, and Infrastructures* has been further enhanced in 2001, preparing the way towards FP6 and contributing to the creation of ERA. The success of the activities in relation to the Candidate Countries (amendment of Work Programme for 2001-2002/ed. Dec. 2000), Women in Science, Workshops, Conferences & Seminars and the actions to reinforce international collaboration should be acknowledged. The support of the External Advisory Groups (EAGs) has been effective in targeting research activities towards future needs.

Having looked in detail at the implementation of the Competitive and Sustainable GROWTH Programme for the year 2001, the Programme self-assessment report, the monitoring reports covering 1999, 2000 and the devoted resources as well as the existing rules and constraints, the Panel comes to the conclusion that the GROWTH Programme continues to progress satisfactorily, achieves high performance levels, responds to the stakeholders' demand, prepares systematically for FP6, has not yet solved the problem of staff work overload and that it needs improvement of internal and external co-ordination and of IT systems. In some sectors, research activities have had an impact towards substantial, radical innovation, while in others impact has remained rather incremental. However, the overall and long-term impact of the Programme and of the "problem solving approach" will only become apparent later, on the basis of future impact studies. On the basis of the analysis presented in the 2001 - GROWTH Monitoring Report, the main recommendations of the 2001 Monitoring Panel are:

- 1.** Undertake activities to prepare Scientific Officers for a more "policy oriented" role in FP6. The latter necessitates dedicated training and improvement of their contacts with the "public" (e.g. technology developers and users - industry). Introduce a continuing education scheme, with points awarded for participation in public events (e.g. conferences).

2. Substitute the current project "selection-decision" approach by a formal Commission approval of the "Implementation Plan" in order to reduce time-to-contract.
3. Rationalise Project Management Tools. A short-term action could be the setting up a special team with one informatics expert from each directorate with specific funding and responsibilities in order to look at, follow through, and standardise the Project Management Tools. In the long run, tools should be made compatible and integrated with those developed by the Central Information Systems Unit.
4. Modify eligibility rules for SME - participation in CRAFT projects - Develop alternatives for SME participation in the new instruments of FP6; major obstacles that restrain SME participation in CRAFT projects still are lack of information on IPR, and on participation rules. Participation "eligibility rules" should be limited to those that ensure that a CRAFT-project is SME driven. Rules that unnecessarily complicate the negotiation process (e.g. the financial balance rules, proportional sharing of the costs of sub-contracting the RTD performers) should be abandoned. Provide alternative regulation for SME participation in FP6 instruments, e.g. partial liability coupled with partial access to RTD results and limited IPR. Introduce measures for strengthening collective research, user group participation and continue exploratory awards and take-up measures.
5. The position of the Measurement & Testing in FP6 should be revised and improved. Introduction of independent specific actions for M&T are recommended, based - amongst others - on the positive impact of SMT as an independent specific programme in FP4.

8.5 NON-NUCLEAR ENERGY (NNE)

The monitoring panel's methodology involved examining documents provided by the programme management, holding detailed discussions with individual Commission staff members and surveying the Energy Programme Committee and the External Advisory Group members, the NCPs and a few contractors.

Calls published during the year were generally well subscribed with quality proposals in almost all the required areas. The proposal evaluations were well conducted and contracts placed for significant projects. Projects tended to be larger than in previous years. Some clusters were achieved. Existing thematic networks were strengthened and new ones added. Overall, progress was made in establishing the basis of an ERA in energy. However, involvement of SMEs was poor, largely due to the complexity of the application and negotiation process. The time taken to negotiate contracts remains too long.

The plans for the energy part of FP6 have been greeted with mixed feelings. People appreciate the need to strengthen the ERA and the potential benefits of the new procedures. However, there are concerns over the apparent budget cut, the narrow set of topics to be covered, the lack of attention to the conventional energy sources needed to maintain the EU's security of supply, and the strong bias towards large projects.

The pilot study to measure the impact of some FP4 projects was published during the year and a more detailed impact assessment of all the completed FP4 projects is about to be launched. It is, of course, too soon to evaluate the impact of FP5 projects. Until this is done, we cannot know how much the programmes have contributed to the achievement of EU energy policy targets. Communication and dissemination of project outputs to the market able to take up the results remains poor.

The programme is run by enthusiastic people, knowledgeable in their fields, who are dedicated to making the programme work. They are not best served by the administrative procedures with which they have to comply. Neither are they helped by the organisational structure, with its split between two DGs and its many interfaces. Many officers continue to be overloaded and the internal information systems are still not satisfactory.

The monitoring panel's major recommendations are as follows:

- DG Research and DG TREN should investigate the communication flows needed for efficient running of the programme, identify the internal interfaces that hinder this, and take any steps needed to improve the organisational structure.
- The complex and time-consuming procedures currently required for submitting proposals and negotiating contracts should be simplified, more pragmatic and (in the case of contract negotiation) the time duration reduced.
- The internal information systems should be improved so that they become truly effective tools for all parties – scientific, contracts and finance officers and those requiring statistics on the programme.
- The programme managers should develop and implement in a professional way a strategy for communicating and disseminating project outputs to the market.
- The programme managers should put serious effort into measuring the impact of work funded by the programme so far.

8.6 ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (ESD)

Sustainable development is a prime objective of the European Community, not only in terms of the prudent management of its own resources, but also globally. It is appropriate therefore that Environment & Sustainable Development [ESD] issues have been a major element of FP5 and will continue to be a priority theme in FP6. Good progress has been made in 2001 in implementing the final stages of FP5. There were 12 calls for proposals and the 2001 budget was fully utilised. For the first time there were two dedicated calls for proposals addressing newly emerging science issues. This showed the ESD Directorate's willingness and ability to respond flexibly. The overall success rate in 2001 for funded projects was greater than that in 2000 but for proposals involving a candidate country or NAS the success rate was below average.

The Directorate has established clusters of FP5 projects and more extensive Thematic Networks. These larger projects were less difficult to manage than anticipated. Many examples of existing ESD projects and clusters yield important results, particularly in relation to European and international policy formulation and implementation. The Directorate has taken a pro-active role in adapting to the forthcoming FP6 and the philosophy of ERA. It has made important strategic inputs to a number of EU policy documents, commissioned a benchmarking survey of research competence in MS, entered into a cooperative agreement with USA National Science Foundation and established a strategic Policy Unit. The Directorate's reports synthesising research results from the FPs have raised the profile of FP research throughout Europe and internationally, however they are too few in number and lack a systematic arrangement for their production. Although the Directorate has been effective in linking into some international science programmes collaboration with UN coordinated research needs improvement. FP6 highlights the importance of research to underpin EU policy. A formal document listing priority areas for research required to support each scientific and technical Directive should be prepared jointly by Directorate I and the relevant Policy Directorates. ESD sectors in FP4 provide many examples demonstrating research impacts on policy and industrial innovation but here has been no systematic impact study of ESD projects overall. Directorate I should start this work in 2002 but must draw on the experience gained from such assessments made in other research Directorates.

Although the increase participation of NAS has been a high priority over the last few years, involvement in the ESD SP is still unsatisfactory. This is due to difficulties in interpretation of documentation, lack of experience in proposal writing, under developed networking arrangements and limited ability to find appropriate MS partners. Positive steps to address all these issues are needed from the Directorate and the Commission. SME involvement is relatively low in some sectors, but now stands at about 10% overall.

A working group to address gender in science has been established in Directorate I. 25% of scientists in the Directorate are women but there are no women Heads of Unit. 50% of EAG and Monitoring Panel members appointed by the Directorate, but only 24% of Evaluators, are women. Means need to be found to increase women's involvement in proposal evaluation.

Directorate I has managed the SP well but the many changes introduced/imposed have placed an excessive workload on staff who nevertheless have remained effective and committed. Project Coordinators found Commission staff support both helpful and relevant during proposal development and implementation. The insufficient staff resource to carry out all work due to an increase in the range of scientific/administrative tasks required, as well as an understandable wish to be at the forefront of new initiatives, must be addressed. An increase, possibly through the use of PTAs or external consultants, prioritisation and shedding of less urgent activities is needed in order to continue to cope and meet the challenges of FP6 and the ERA. The activities of the Commission officers have to be transparent and accountable but at present there is too much bureaucratic control. There is a widespread and recurrent demand to simplify procedures and use plain language documentation and these requirements must be addressed urgently by the Commission. In addition the Directorate's Management Information System must use more rigorous procedures for data input and be modified to meet an interim arrangement for a centralised system for DG Research. The Directorate also needs to re-examine the roles of NCPs and the EAGs urgently.

The ESD Panel's report contains 21 Recommendations, some of which are specific to Directorate I and others generic.

8.7 CONTROLLED THERMONUCLEAR FUSION (FUSION)

Fusion is the energy source of the sun and all the other stars. Present fusion research is aimed at demonstrating its potential for power generation on Earth. Fusion power is one of only a few options which could in principle, if successfully developed, contribute to the solution of the future energy problem, which will become very serious within the next few decades. Given the importance of this problem and the time scales involved, research into reactors of the future, notably nuclear fusion, is considered to be a priority of European energy policy. The long-term objective of the fusion research funded by the Framework Programmes is "the joint creation of prototype reactors for power stations to meet the needs of society: operational safety, environmental compatibility, economic viability".

The research with the Key Action Fusion currently has three main themes: demonstrating the technology which will be needed in future fusion power plants, improving the basic physics concepts on which fusion devices are based, and preparing for the next very large experiment (the "Next Step" towards a prototype reactor). The Next Step activities, which are the major thrust of the European programme, are carried out as part of a substantial international collaboration to design the ITER fusion device and prepare for its operation.

Briefly summarising its findings the panel concludes:

- The European Fusion Programme is the world leader in its field and is an outstanding example of a completely integrated European Research Area.
- Adopting a Fast Track approach (aiming to demonstrate the feasibility of fusion in 20-30 years) would give a strong impetus to fusion research. This could save substantial public funds and much valuable time
- The Commission's fusion staff has managed the whole European Fusion Programme excellently within the given boundary conditions.
- The programme is, however, suffering from the fact that essential decisions on its future (mainly concerning whether and how to proceed with ITER) have still not been taken.
- The programme is also suffering because reorganisation of DG Research has weakened the formerly strong management structure, which is now insufficient for a project of this size and importance. As soon as a decision is made on ITER, the current management structure should be strengthened.
- The funding foreseen for fusion under FP6 is not sufficient to maintain the present quality and strength of the Fusion Programme.

- These three weaknesses could endanger the present high standing and the future development of the Fusion Programme.

Some of the principal recommendations of the panel are that:

- ITER should proceed as soon as possible and all necessary decisions should be made promptly. While ITER should preferably be achieved by an international collaboration, Europe should be ready to proceed alone if necessary.

The present European mandate of negotiations to establish an ITER Legal Entity with its international ITER partners, should be enlarged in order to address ITER site, organisational and cost sharing issues.

Europe should take the lead on ITER, including promoting European candidate sites.

8.8 NUCLEAR FISSION AND RADIATION PROTECTION (FISSION)

The Euratom 5th FP Nuclear fission and radiation protection programme covers the research and technological development aimed to support the improvement of the Safety of existing nuclear reactors, to reduce the radiological risk in Waste management and to improve Radiation protection practices either in nuclear energy, medical applications of ionising radiations or public exposure of natural ionising radiation. This diversity is sometimes a difficulty for the program, that's means that adapted methodologies are needed for evaluation of this program (mapping of excellence for example)

Specific Comments 1 - Toward ERA through EAV and networking

The objectives of the 5th FP will be covered by the end of 2002. Most of the contracts are merged in clusters, which are today the proper way how to disseminate quickly the results among the interested scientific communities and to emphasise the EAV. Despite the fact that in the EU nuclear fission issues are mainly managed on national basis, EAV emerging from the Fission Programmes are visible. For instance, the development of new reactor concepts, development of Waste management practices in order to reduce its radiological impact and especially people's health and environment related concerns connected with ionising radiation are good example of EAV.

Involvement of candidate countries is a real success in this program due to EU development of common emergency programs in the whole Europe.

The Education and Training activities are prerequisite for maintaining the present culture of Nuclear safety and Radiation protection and are considered as a high priority of EU programmes.

Dissemination of results of the successive FP toward decision-makers and the public is a challenging task and a redefinition of the objectives for a clear dissemination is necessary.

Specific Comments 2 - Management

The actions launched and implemented in 2001 are fully within the scope of the 5th FP. The Unit J 4 has managed with a high level of competence, the numerous yearly tasks required by the 5th FP.

Specific Comments 3 - Major recommendations of the Panel

Many general recommendations coming from different Committees are directed to Unit J 4. The Panel endorses those that are really useful for this Unit. The Panel hopes that its own considerations, of which some are at the border of its mandate, will be useful. Here are recommendations for actions.

General recommendations for the whole ERA/FP

An important step before ERA became a reality in Nuclear Fission and Radiation Protection is to map the situation, in both the Members states and in the Applicant Countries (AC): that should comprise: mapping of competencies, even outside the nuclear fission community where expertise to solve some problems exist, mapping of large instruments for nuclear research, mapping of stakeholders. The commission should launch as soon as possible as part of the 6th FP.

These mappings will show the fields of Nuclear science where expertise is being lost. Specific actions of Training and Education must be urgently promoted in the 6th FP to restore the expertise.

Progress to ERA needs an increased networking to facilitate organisation of the future research in large Programmes. Next calls for proposals of the 6th FP must clearly point out this need.

In view of very dissimilar nuclear development in the Member States and Accessing States, a common view on safety should have a high level of priority. Regulators must be more involved in participation in some projects or in sharing results.

To make visible the EAV in different areas of the Fission Programme, launching handbooks of the best practices and of the use of the best tools should be recommended in specific areas as done for decommissioning, which should help to improve safety based on common basis of references.

Specific recommendation to Unit J 4 for management

Launch actions to fulfil the general recommendations to make ERA a reality and in particular prepare the nuclear community for ERA by: dissemination of specific documents, giving clear definition of the different instruments to encourage people to work together, set up an Editorial Committee for dissemination of results.

Recommendations addressing the evaluation and monitoring methodology

The two levels monitoring, which allow extending the scope of monitoring, must be continued. The yearly "Self-Assessment of Programme Implementation", which is a valuable document must be continued.

8.9 IMPROVING THE HUMAN RESEARCH POTENTIAL (IHP)

As of the year 2001 the Improving the Human Research Potential and the Socio-economic Knowledge Base (IHP) has been dismantled as a unified programme. Following the objectives set out under the European Research Area, the management of the programme has been split across four different directorates. This division has made it even more obvious how many different activities take place under the IHP banner. The Panel sees the merits of this split in light of the ERA and the 6th Framework Programme (FP6). The restructuring has however taken up a lot of valuable management time, particularly for Directorates D and K, and led to many staff vacancies that took a good part of the year 2001 to fill. In this turbulent setting the Commission services had to manage "business as usual" and in addition prepare for FP6. The Panel appreciates the huge efforts by the Commission's Staff that went into this process.

In general terms the various parts of IHP have a valuable role to play in the European science and research community and are well appreciated. Some parts of the IHP programme have the additional mission to link research results with the policy community and the general public. We have seen various examples of these efforts, which had good visibility, not only with policy makers in the Commission but also those in the member states. Achievements have been made in all parts of the programme.

Overall the programme is well managed and practices are in place to run the process efficiently. However there are a number of concerns:

- Little has been done to define the impact that the Actions are aiming for and further to set up systems to measure these impacts.
- The dissemination of results, particularly from RTD projects and studies, done as accompanying measures should be improved.
- In 2001, the Commission services could not prepare themselves well for the implications of FP6, due to the lack of transparency in the FP6 decision making process. The problems lie not so much in the contents of the future research themes, but more in terms of the implementation of the new instruments and the consequences of FP6 in the entire

management cycle. From February 2002 the Commission services could make progress on preparing for the implementation of FP6.

From a full set of recommendations in the Monitoring Report the following stand out:

- 1 Overall the IHP should put more effort into defining the desired outcomes and impacts that they envisage with their respective activities and subsequently develop assessment indicators that match these envisaged objectives. Particularly the impact of mobility schemes on the researchers and European research systems needs further examination.
- 2 The Fellows in Research Training Networks (RTN) should more actively be encouraged to move from one laboratory to another within the network, in order to further enrich their research experience.
- 3 A horizontal high level interface between the scientific community for social sciences and humanities and the research and innovation policy community should be developed at European level. Currently there are too few organisations supporting the position of these science areas in the ERA. Socio-economic research still needs to be reinforced at European level.
- 4 Preparations and training for the practical implementation of FP6 should cover all IHP activities. More transparency should be given to the various user groups of IHP in the changes in FP6, both in terms of contents and research management.

8.10 CONFIRMING THE INTERNATIONAL ROLE OF COMMUNITY RESEARCH (INCO)

INCO is a diverse international cooperation research programme pursued through two complementary routes; firstly a dedicated research programme targeting several distinct socio-geographical areas and secondly an international cooperation dimension integral to the other Thematic Programmes (TP) in the Framework Programme (FP).

The Expert Group devoted some effort to assessing the implications of the ERA concept on international scientific cooperation and the way in which this can be developed in FP 6 as well as its current implications for FP 5. The Expert Group has benefited greatly from the thinking embodied in the Commission Communication (COM 346 (2001) final) on The International Dimension of ERA and sees this as a significant baseline document at a strategic level. The document is particularly important in view of the perceived lack of international thinking in TPs. The Expert Group is concerned that the legacy of INCO is not abandoned and that its philosophy is carried forward into the TPs if the character of EU international scientific cooperation is not to be damaged. The Expert Group's main recommendation which reflects such concerns is:

- A strategic analysis of the various components of international cooperation needs to be developed that builds on the Commission Communication COM 346 (2001) final. The Commission's strategies should embrace the role of nurturing scientific expertise in particular countries or particular circumstances not least to enhance its own influence and standing.
- Management issues have been another important area for analysis as a result of the major re-organisation undertaken in DG Research at the start of the year. The abolition of the Directorate previously responsible for the INCO Programme in FP 5 and the transfer of the scientific management of a significant number of projects to other Directorates represented a considerable upheaval for the staff that remained. The Expert Group remains concerned about the wisdom of this and the way in which it was planned, communicated, and implemented at this stage of FP 5. It is a credit to individual staff members that on-going work and new initiatives were dealt with effectively by the two Units representing what used to be the former INCO Directorate and reporting to the Deputy Director-General who retired during the course of the year. Fortunately the INCO programme had an excellent management information system in place to assist it in this difficult period. The Expert Group is concerned however for the future of international cooperation in FP 6 in the absence of clear operational planning for its modes of delivery. There is an urgent need to build on the strategic concepts set out in COM 346(2001) final and communicate these to the wide range of stakeholders involved in many countries if EU international cooperation is to have global credibility. The main recommendation here is:

The Commission needs to consider the ways in which it will deliver international cooperation in the context of FP 6 and more widely and what actions are needed to make this work in particular areas and circumstances "on the ground". In order to develop operational coherence in the context of the FP 6 Thematic Priorities and Specific measures in support of international cooperation and other instruments the Expert Group recommends establishing an international cooperation strategic steering team (ICST) or unit and small steering committee under the responsibility of the Deputy Director-General.

- The Expert Group has also made a number of specific recommendations relevant to the INCO Programme as operated in FP 5. Inter alia the Expert Group is keen to see yet more emphasis on assessing the outputs of work undertaken in the Programme, the dissemination of the resulting information, the effectiveness of take-up, and the eventual outcomes. Benchmark indicators that can be used to relate outputs to Programme and project objectives would also be highly beneficial for the Monitoring process particularly in the field of international cooperation where areas of activity and targets can be very diverse. INCO has made a start in this area in the form of a prototype study of the impact of a modest number of completed projects in FP4, which could form a useful starting point for the development of further methodological approaches relevant to ERA and FP 6.

8.11 INNOVATION AND SMEs (INNO)

The monitoring of the specific programme in the field of Innovation and SMEs for the year 2001 showed again *good progress* in many parts of the programme.

- The active participation of the SMEs in CRAFT, beyond the *objective of 10 % of the funds invested in SME-projects* is a real achievement. Besides the direct benefit in improvement of the R&D capabilities of the SMEs, indirect benefits are the extension of their network and consequently a genuine contribution to the internationalisation of SMEs.
- **Some highlights** in the 2001 activities of Directorate Innovation were
 - the four new calls of proposals,
 - the improvements and increasing use of the CORDIS online-database, and
 - the improvements in the networking of innovation in Europe.
 - A major achievement was the launch of the European Innovation Scoreboard, with *high visibility, motivating power and political importance*.

Besides the presentation and discussions with the Commission's directors, the panel found it worthwhile to gather information *outside* the Commission's services. The panel carried out a *questionnaire to the NCP-SME network*. It also held a selected number of interviews with SME-leaders, university professors, and consultants in European research projects, in order to collect feedback from participants to European projects.

The panel has witnessed that concrete action has been taken on most, although not all, of the recommendations from the previous monitoring exercise. However the basic concern, already expressed by the 2000 monitoring report and verified by the customer's interviews, is the administrative burden. The lack of flexibility and the burdensome procedure are working counterproductive, both for the internal staff and for the users. From a customer's point of view, the administrative procedure discourages entrepreneurs, especially from dynamic SMEs. The system does not allow the administrators to take initiatives.

The reduction of administrative burden should be the first priority and the major recommendation of the panel, with priority on simplification and reduction of the time to contract. Feed-back on the status should improve communication.

A focus towards the customer should transform the Commission from an internal-oriented administration into a service-oriented organisation. An inter-departmental training program and change management would help in this respect.

A value chain analysis of the projects and directorates, together with a qualitative analysis of the needs of the customer will ensure a more effective use of the means of the Commission. These actions on value chain analysis and simplification of administration would also help to solve the problem of work overload and understaffing of many units.

A qualitative analysis of the benefits of participation of SMEs in European research programmes, besides the existing quantitative approach, should help to design adequate programmes corresponding to the needs of the SMEs.

Finally, in order to have a broader support from the industrial world to the rather academic notion of ERA, the panel recommends to extend the concept of a European Research Area towards a European Innovation Area, or better to integrate both in a **European Research and Innovation Area (ERIA)**. **ERA + EIA = ERIA.**

9 ANNEX

9.1 RECOMMENDATIONS

	Recommendation	Time Point / Indicator of Accomplishment
Developing the ERA & International Relations		
1a	The Commission Services develop an outline "Action Plan" indicating how the ERA will develop over the period to 2010 to achieve the objectives of the Lisbon Strategy. The Action Plan should include explicit milestones.	Annual Report to Spring Summit, 2003
1b	The Member States and Candidate Countries in conjunction with the Commission Services should establish a high-level RTD "European Research Area (ERA) Policy Forum" in each country, along with a coordinating Task Force.	Annual Report to Spring Summit
1c	The Commission Services, building on "A Mobility Strategy for the ERA", should develop an operational strategy, which will indicate how mobility activities will be used to strengthen the scientific, technical, and innovative capabilities of the EU, Member States, and Candidate Countries and to raise research scientist and engineer (RSE) numbers to be competitive at a global scale.	Annual Report to Spring Summit, and detailed in the Annual Report
1d	The Member States and Candidate Countries, with the support of the Commission, establish a coherent and consistent system for the collection of data on research mobility and RSE numbers.	Annual Report and progress followed in the Annual Self-Assessment Reports
1e	The Commission Services develop a brief guidance paper, indicating the means by which FP6 and in particular the Integrated Projects, Networks of Excellence and "Article 169" will contribute constructively to the ERA vision: "The Regional Dimension of the ERA".	Before the launch of the first Call for Proposals under FP6.
1f	In order to have a broader support from the industrial world, the concept of <i>European Research Area</i> should be extended to that of the <i>European Research and Innovation Area</i> .	
1g	The newly appointed Deputy Director General (Research) with responsibility for ERA & international activities develop a brief "International Dimension: Policy and Operations in FP6/ERA" paper, providing principles and operating guidelines – also in a global context and also recognising the needs to the Candidate Countries.	Annual Report to Spring Summit, 2003
Working with Candidate Countries		
2a	There should be an improvement of documentation and information on the FP participation permitting – among other things - possibilities for comparative analyses between participating countries. A re-evaluation of financial rules associated with Candidate Countries participation should take place, particularly related to personnel costs. In addition, the contribution to enlargement should be emphasised within the European Added Value criteria and in the development of European Policies.	Annual Self Assessment
2b	The Commission should support the best-practice activities of Member States in working with Candidate Countries. And under FP6, The "Stairways of Excellence" should include a number of support measures addressing the specific needs of individual Candidate Countries.	Annual Self Assessment
2c	"Contribution to Enlargement" should be made an additional objective in the ERA <i>Tableau de Bord</i> , and the Candidate Countries should be directly involved in the development of the ERA. The 2002 FPMP should be provided with a brief update on how Candidate Countries have been involved in developing ERA during 2002.	Annual Self-Assessment / Note to 2002 FPMP.

SMEs & Innovation

3a	The Commission Services should launch a number of analytic studies exploring the relationships between Research Programmes, SMEs' activity, and the modes of commercial exploitation of such research.	Available to 5 Year Assessment Panel / End 2003.
3b	Based on this analysis, the Commission Services should provide a comprehensive policy and guidance paper on 1) the objectives for SME participation in FP6 and 2) the appropriate mechanisms for such participation, across the different research activities of FP6.	End 2003
3c	The Member States and the Candidate Countries, with the support of the Commission Services, should briefly examine and define the conditions necessary for high-quality NCP activity. The Commission should then support the development of a system for ensuring quality of such NCP services.	Annual Self-Assessment and the Annual Reports
3d	The Commission Services should undertake an examination of university-industry relationships in the context of EU funded research projects and the commercialisation the outputs of such research. The Commission Services should then indicate a number of principles and associated operational policies to improve the commercialisation of such research.	End 2003
3e	The Commission Services should seek 1) To create stronger synergies between the Innovation Programme and the Thematic Programme Areas and 2) To better disseminate the results from innovation studies and projects to the Commission Services responsible for and the SMEs participating in the thematic programmes.	Annual Self Assessment

Women in Science

4a	The incorporation of the "Gender in Science" dimension into all relevant documentation (proposal forms, evaluation forms, evaluator selection, contracts, reporting, etc.) associated with the forthcoming FP6 Programme and into the development of any associated MIS systems.	Before FP6 Launch
4b	The "Women in Science" Working Group should be strengthened. Each SP should have a brief, published plan for the development of gender balance within its own internal (own personnel) and external (project) activities. It should provide the "Women in Science" Unit with a brief annual report on its progress.	Annual Self Assessment
4c	The Member States and Candidate Countries with the support of the FP and DG Education should work together to ensure an effective European effort in "Girls into Science and Research".	Annual Self Assessment
4d	The role of child-care funding should be explored in the context of increasing female participation in EU research activities at all levels – project participation, evaluation exercises, membership in programme committee, in EAGs, and in Monitoring and Assessment Panels.	Annual Self Assessment
4e	The intended "Gender Relevance" studies proposed in the Women in Science Work Programme should be rapidly progressed.	Annual Self Assessment

Developing EU Research Policy		
5a	The Commission should ensure a smooth launch of the new instruments accompanied by careful monitoring. A special monitoring panel of independent experts should be created to accompany, support, and advise the Commission services in that decisive process.	Annual Report
5b	The Commission services develop a system of <i>small scale, short term</i> , internal analytic reports to support the operational Programmes and instruments. The reports would be aimed at quickly illuminating practical issues of concern at a cross-Directorate, Directorate or Head of Unit level.	Annual Report and to Five Year Assessment Panel
5c	The Commission Services should prepare a short note indicating 1) the general cooperation policy, which has been agreed with the policy DGs for FP6, 2) the coordination mechanisms which have been agreed for the implementation of this policy.	Self-Assessment and Annual Report.
5d	European Union Directives with a major scientific/technical focus should be accompanied by a paper identifying any research requirements needed to support their development and sound implementation at a European level. This research priority paper would be subject to modification over time if necessary. A discussion should be held as to the applicability and possible operational arrangements for this recommendation between DG Research and other relevant DGs. A brief position note, <i>Supporting EU Directives with Scientific Research</i> should be made available.	End 2002
5e	The new concept of integrating research and education and training activities should be actively developed as an important means for fostering innovation. The Panel would welcome a Communication on <i>Synergies between Research, Education, and Training</i> . The Programme Management should prepare a short document indicating the general cooperation policy under FP6, which has been agreed with DG Education, and the mechanisms for its implementation.	End 2003 Annual Report
5f	The Commission should clarify the definition of a “Centre of Excellence” emphasising 1) the diversity of institutions in which excellent research is undertaken, 2) the increasing need for complementary research skills for many institutions, if an excellent research project is to be undertaken.	Annual Report
5g	The Commission ensured the setting up of adequate information and assistance structure along with an appropriate Programme Committee structure to work with Member States and Candidate Countries during FP6	Annual Report
Management of the Framework Programme		
6	The Management Information System <ul style="list-style-type: none"> • A detailed 3–Year Operational Plan for the development, launch and initial migration to the MIS. • Given that all new instruments and procedures should soon be stabilised, a full “user needs” specification should be finalised by end-2002. • The Director General of DG Research follows this MIS Operational Plan and ensures its successful delivery. 	Available to 2002 FPMP End 2000. Annual Report
7	Electronic Submission & Evaluation <ul style="list-style-type: none"> • Develop an effective electronic proposal submission system before the launch of FP6. • Undertake a short preparatory study on the requirements and limitations of an efficient and user-friendly electronic support for the evaluation system. 	Before launch of FP6 By end 2002

8	<p>Time-to-Contract & Timetable</p> <ul style="list-style-type: none"> The Commission services should analyse the component periods of the <i>Time to Contract / Time to Payment</i> process, indicating clearly periods, which are the responsibility of 1) The Commission and Commission services, 2) The Programme Management, 3) The Contractors. By end Y2002, the Commission services should deliver the analysis along with a proposal to the FP6 Programme Committees to eliminate all unnecessary steps and delays. Each Call for Proposals is accompanied by an indicative timetable of critical dates up to 1st payment of successful applicants. 	<p>By End 2002.</p> <p>Immediate</p>
9	<p>Communications / Publications Policy</p> <ul style="list-style-type: none"> The FP creates an accessible central data store in which one copy of all FP5 Final Project Reports (Research, Assessment, Monitoring, Evaluation, etc.) is deposited either in paper or (preferably) in electronic form. The Information and Communication Unit, in conjunction with SPs, draws up a project-centred publications policy consistent with its own more general policy. This sub-policy should include the provision for an annual plan of synthesis and analysis reports and publications to be undertaken. The FP management reviews its communication and marketing strategies in order to develop a more user oriented approach. The Annual Report is further developed in a way that Member States and Candidate Countries can compare their performance in support of their FP participation strategies. In addition, the Commission service provide on a regular basis adequate data on the implementation of the Programmes. 	<p>End 2002</p> <p>Annual Self-Assessment.</p> <p>Annual Self Assessment</p> <p>Annual Report</p>
10	<p>Project Monitoring & Evaluation</p> <p>A basic set of common project monitoring and evaluation principles and associated implementation guidelines be drawn up. The principles and guidelines should be distributed to all Heads of Unit and Scientific Officers.</p>	<p>By Launch of FP6</p>
11	<p>Project Impact</p> <p>The FP Management publishes an Impact Assessment Policy for FP4-FP5-FP6 projects including principles, guidelines, and a “tool box” of support materials. This material should be in the hands of all Unit Heads by the launch of FP6</p>	<p>By Launch of FP6</p>
12	<p>Human Resources</p> <p>The FP Management draws up an <i>outline</i> Human Resources Development plan for the ERA and FP6, outlining philosophy, training, personnel evaluation, and career development systems linked to improvement of delivery of ERA / FP6 objectives.</p>	<p>Annual Report for 2002</p>
13	<p>Fusion</p> <p>The European Commission prepares for and actively promotes a decision on, the “Next Step” (ITER) in Fusion research as soon as possible. This includes an enlarged European mandate of negotiations with its international partners, a further development of European sites for ITER and a strengthened management structure for the Fusion Programme.</p>	<p>Annual Report</p>
Programme Impact		
14	<p>Each SP, which has not already undertaken an impact assessment of the completed projects, which it has funded, should do so. The assessments should use the common tools, which are to be provided. The tools and methodology may be adapted to SP needs, but the launch of the assessments should take place by early 2003.</p>	<p>Annual Report</p>
Monitoring Recommendations		

15	<ul style="list-style-type: none"> • Commission Services should formally reply to a Monitoring Report within 3 months of its formal submission and in the format indicated. And publish the Report within the following month. • Each SP should provide a follow-up to the FPMP Report using the structure indicated. • The annual monitoring exercise should be visibly linked to each SP's quality improvement system, and be commented upon in the Annual Self-Assessment. • Following the lines of the new approach, the Monitoring methodology should be further developed and adapted to the new requirements of FP6. 	Annual Self Assessment
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9.2 FPMP METHODOLOGY

The 2001 External Monitoring Report on the activities of the Framework Programme covers the third year of the Fifth Framework Programme (FP5) including

- The actual Calls for Tender, evaluation, contracting and running of FP5 projects in 2001,
- The ongoing monitoring, finalisation and evaluation of projects and activities still being funded under the Fourth Framework Programme (FP4)
- Preparation for the Sixth Framework Programme (FP6)
- Development of the European Research Area initiative.

It is required under Article 5.1 of the Council Decision setting up FP5 and that of the Euratom Framework Programme⁵⁵. However, it takes place against a background of a major reform of the European Commission's evaluation function (European Commission, 2000, "*Focus on Results: Strengthening Evaluation of Commission Activities*" SEC (2000) 1051.), which is associated with wider reform of Commission management through the *Action Plan for Reform* and the introduction of Activity Based Management^{56 57}. The *Strengthening of Evaluation* focuses on:

- The provision of evaluation information on all Commission activities and
- Use of evaluation in priority setting and resource allocation.

While there is no direct reference to External Programme Monitoring, the Panel has seen it as important for its work to be consistent with and supportive of the *Strengthening of Evaluation* reforms, particularly in the areas of project monitoring and impact activities.

In addition, based on reflection within the Commission Services, and recommendations of various Monitoring Panels, the structure of the 2001 FPMP was substantially changed.

- Until 2011, the FPMP had been a group of independent experts to whom the Chairpersons of the SPMPs had simply reported their findings in interview and written drafts.
- This year, the FPMP was composed of the Chairpersons of the individual SPMPs along with its own Chairperson and Rapporteur. In addition, a "European Research Area" Monitoring Panel was instituted to follow the progress of the implementation of the ERA.

This restructuring had two main effects on the work of the FPMP:

- The understanding of the operation of the individual SPs improved substantially.
- The focus of the FPMP moved from the overall management of the FP to the management of the FP as it affected the SPs – with both advantages and disadvantages.

The 2001 FPMP held its first meeting in November 2001 and submitted its Final Report at the end of April 2002. The number of experts on the FPMP was increased to 14 (Chairperson, Rapporteur + 12 Chairpersons of the Specific Programme Monitoring Panels) while the number on the individual SPMPs was reduced to 3 or 4. The full Panel formally met on five occasions, and operated as follows:

- The first two meetings focused data and information collection based collection of documentation and interviews with the Commission Services. In addition, Panel Members individually interviewed members of CREST, The European Parliament, the Commission Services, and representative bodies. In all over 100 individuals and organisations were interviewed.

⁵⁵Official Journal, 1999, "Decision No. 182/1999/EC of the European Parliament and Council of 22 December 1998 concerning the Fifth Framework Programme of the European Community for Research, Technological Development and Demonstration Activities 1998-2002".

Official Journal, 1999, "Council Decision of 25 January 1999 adopting a specific programme of Research, Technological Development on Quality of Life and Management of Living Resources 1998-2002" 12/3/1999. Similar Council Decisions for "a User Friendly Information Society, and other SPs.

⁵⁶ European Commission, 2000, "Focus on Results: Strengthening Evaluation of Commission Activities" SEC (2000) 1051.

⁵⁷ European Commission, 2001, "2001 Monitoring of the European Research Area (ERA), Framework Programmes and Specific Programmes", 8 November 2001. DG Research

- This information, along with very early “pre-drafts” from the SPs, formed the basis for a first discussion document at the third FPMP meeting and the very early indication of Panel priorities and possible areas of recommendation. A second discussion document was prepared for the fourth FPMP meeting based on earlier discussions and Draft SP Reports.
- Based on the Final SPMP Reports, a Draft FPMP Report was circulated to SPMPs and the Commission Services for discussion. A Final Draft of the FPMP was then drawn up and presented for discussion to a joint meeting of Commission Services, the FPMP, and the SPMPs. The findings of this joint meeting were further discussed by the FPMP and the Report finalised and presented to the Commission.

The FPMP was accompanied in its work by the Planning, Programming, and Evaluation Unit of DG Research and extends its thanks for their timely and supportive assistance.

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- IST Impact Assessment in IST: Background and Analysis
- IST Impact Assessment: Completed Templates
- IST Impact Assessment: Growth Programme's Scheme
- IST Impact Assessment: Presentation made to 2000 IST Monitoring Panel
- IST Impact Assessment: Technology Implementation Plan (TIP)
- IST Impact Assessment: Template
- Report on "Evaluation of finished projects of the E.C. research programmes in the fields covered by the present growth programme", also referred to as "the GOPA report", ContractGOMA-CT-2000-02010, 1999 D 4 Report Publishable Synthesis Report submitted to DG RESEARCH of the EUROPEAN COMMISSION, March 2002.
- Report: "An assessment of COST", 7 and 8 March 2002.
- Summary of findings and recommendations as regards BIOMED2; QoL Programme.

Main Web Sites

- European Research Area: <http://www.cordis.lu/rtd2002/home.html>
- FP6: <http://europa.eu.int/comm/research/nfp.html>

2001 MONITORING

OF THE IMPLEMENTATION OF

EUROPEAN RESEARCH AREA (ERA), FRAMEWORK

PROGRAMMES

AND SPECIFIC PROGRAMMES

BROAD GUIDELINES

This document contains the Broad Guidelines for the 2001 annual monitoring exercise. The Guidelines support the work of external experts and Commission staff involved in the exercise. They seek to ensure flexibility in accommodating the particular features of individual Specific Programmes while ensuring a coherent and timely input to, and interaction with, the monitoring of implementation of ERA and of Framework Programmes.

8 November 2001

BROAD GUIDELINES OF THE 2001 MONITORING OF ERA AND RESEARCH PROGRAMMES IMPLEMENTATION

1. INTRODUCTION

A changing context

The years 2000-2001 have broadened the perspectives of Community research policy towards the dimensions of the European knowledge society and economy and, in this context, the establishment of a European Research Area (ERA).

With the objective to reach the Union's new strategic goal "to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs", the "Lisbon strategy" has been endorsed by the Heads of State and Governments at the European Council in Lisbon in March 2000. This strategy aims in particular at "preparing the transition to a knowledge-based economy and society by better policies for the information society and R&D", as well as by stepping up the process of structural reform for competitiveness and innovation and by completing the internal market". It thereby attributes a central role to research in this process. A new open method of co-ordination was introduced as a key implementing instrument of this strategy.

Following the Commission Communication "Towards a European Research Area (ERA)"⁵⁸, the conclusions of the European Council in Lisbon and subsequent ones aim at the rapid establishment of ERA. The European Parliament⁵⁹, the Council⁶⁰, the Economic and Social Committee⁶¹ and the Committee of the Regions⁶² have also expressed their support to the implementation of ERA.

In this same spirit and in line with the recommendations from the five year assessment panel (1995-1999), the Commission has submitted proposals for a Framework Programme (FP) 2002-2006⁶³ aiming at contributing towards the creation of ERA. It has been proposed as a tool for genuine research policy making at European level. New features include research policy measures with structural effects beyond project funding, including benchmarking and co-ordination of national and European research policies and activities, new instruments for programme level co-operation, increased potential and mobility in human resources in RTD and a strategy for development of research infrastructures.

In the context of the Commission's administrative reform, the Commission has reinforced the role of evaluation to strengthen both the decision making process and accountability, transparency and cost-effectiveness in policy implementation. Evaluation and monitoring are no longer limited to expenditure programmes, but should encompass all activities and they have as such been given a particular role in the implementation of activity based management in the Commission. This implies an increased focus on evaluation as a tool in policy making, implementation, management

⁵⁸ COM (2000) 6 final of 18.1.2000

⁵⁹ Resolution of 18 May 2000 PE 290.465, p. 48

⁶⁰ Resolution of 15 February 2001.

⁶¹ Resolution of 15 June 2000, OJ C 205, 19.7.2000, p.1.

⁶² Resolution of 16 November 2000, OJ C 374, 22.12.2000, p.1.

⁶³ Opinion of 24 May 2000, OJ C 204, 18.7.2000, p.70.

⁶⁴ Opinion of 12 April 2000, OJ C 226, 8.8.2000, p.18.

⁶⁵ COM(2001)94 of 21.02.2001

and follow-up and on the development of improved methods and practices in evaluation (including standards).

Legal and political requirements for monitoring

The main legal and political bases for the monitoring exercise include:

- Lisbon European Council⁶⁶ and Council⁶⁷ conclusions:

Point 12 of the Presidency conclusions of the Lisbon European Council on 23-24 March 2000 state: “12. Given the significant role played by research and development in generation economic growth, employment and social cohesion, the Union must work towards the objectives set out in the Commission’s communication “Towards a European Research Area”. Research activities at national and Union level must be better integrated and co-ordinated to make them as efficient and innovative as possible, and to ensure that Europe offers attractive prospects to its best brains. The instruments under the Treaty and all other appropriate means, including voluntary arrangements, must be fully exploited to achieve this objective in a flexible, decentralised and non-bureaucratic manner. At the same time, innovation and ideas must be adequately rewarded within the new knowledge-based economy, particularly through patent protection.”

- Fifth Framework Programme (FP5) and specific programmes (SP) requirements:

Article 5(1) of the FP5 Decisions states “1. The Commission shall continually and systematically monitor each year, with the help of independent qualified experts, the implementation of the fifth framework programme and its specific programmes in the light of the criteria set out in Annex I and the scientific and technological objectives set out in Annex II. It shall assess, in particular, whether the objectives, priorities and financial resources are still appropriate to the changing situation. Where appropriate, it shall submit proposals to adapt or supplement the framework programme and/or the specific programmes, taking account of the results of this assessment.”

Article 4 of the SP decisions states “ In the light of the criteria referred to in Article 3, and the scientific and technological objectives and priorities set out in Annex II, the Commission:

(a) shall monitor, with appropriate assistance from independent external experts, the implementation of the specific programme and, where appropriate, submit proposals to Council for adapting it, in accordance with Article 5 (1) of the fifth framework programme;”

- Commission Communication "Focus on results: strengthening evaluation of Commission activities"⁶⁸ :

P. 2 introduction:

"Regular evaluation of activities and results in achieving policy objectives is one of the necessary pillars for the new policy-driven decision-taking mechanism. It should become a routine part of good management".

P. 11 par 3.2 "Upgrading monitoring systems":

" The basis for reliable reporting is that DGs and Services have in place

⁶⁶ http://europa.eu.int/comm/off/index_en.htm
2272. Council Research 9411/00 (Presse 210)⁶⁷

⁶⁸ SEC (2000) 1051 of 26.7.2000

systems for monitoring the implementation of activities so that data relating to costs, outputs and results will be available. Ideally this should be based on indicators defined at the outset of each activity to allow comparability over time and review of progress. This mean more than occasional *collection* of qualitative judgements, the key tasks being *identification* indicators and putting in place methods for the collection of data. The full development of IRMS tool will considerably help the processing and delivery of monitoring information".

- Commission Communication on Activity Based Management ⁶⁹ (p.3, paragraph 3.3.2)

"Evaluation is a crucial information tool on policy performance for services and for decision-making. There is already a culture of evaluation in the Commission, and a practice which is constantly improving throughout the services. However, still more effort is needed to enable evaluation to become the basis for informed decision-making in the planning and programming cycle

- Commission Internal control standards⁷⁰

The standard 23 states: "Each DG shall establish or have access to a properly staffed evaluation function responsible for carrying out or commissioning ex ante and ex post evaluation of all its activities. It shall prepare an evaluation plan which sets out the timing of the planned evaluations and against which progress is regularly reviewed. It shall ensure the systematic follow-up of the conclusions of evaluation reports."

2. OVERALL OBJECTIVES OF MONITORING

On this background and in accordance with the mandate of the 2001 monitoring exercise (cf. Annex 1), the overall objectives of the monitoring of the implementation of ERA and of FP5 and its specific programmes are set out as follows:

- To monitor the overall progress in ERA, FP and SP implementation in relation to their respective objectives, priorities and financial resources.
- To establish practices for intersection and feedback between day-to-day management and the establishment and follow-up of S/T or political priorities.
- To constitute input to policy makers and managers, particularly in the form of input to the spring progress report on ERA to the European Council, to the annual report on Community RTD activities (pursuant to Article 173 of the Treaty), to the five-year assessment (1999-2003), to the Commission's Annual programme and planning cycle and to the Annual Activity Reports of relevant Commission Directorate Generals.

3. MONITORING APPROACH

Main characteristics of the simplified set-up in 2001

To face the new challenges and opportunities, the Commission services have felt the need to revise somewhat the current monitoring system, which has hitherto proven effective. The revised system has the following main features:

⁶⁹ SEC (2001) 1197/6&7 of 25.7.2001

⁷⁰ SEC (2000)2203 doc 3 of 13.12.2000

- A monitoring of all Community research activities (in particular the implementation of ERA , FPs and SPs) is carried out by the Commission with the help of independent qualified experts;
- An expert panel for FP5 and small expert groups for the SP and ERA activities outside the FP are set up and work in an integrated and co-ordinated manner;
- The Commission services submit to the expert groups a set of self assessments of ERA and programme implementation and other data, documentation and studies
- The panel and expert groups present their analyses and recommendations to the Commission in the form of respectively a Synthesis Monitoring Report and Specific Monitoring Reports
- The Commission services take position on the recommendations and make them available to the panels and expert groups and to other stakeholders
- The Commission services follows regularly up on recommendations and decisions for change induced by them.

In the simplified set-up involving in total fewer experts, but more evaluation professionals, and introducing closer links between FP and SP level monitoring, it is expected to

- *enhance the quality of the monitoring exercise (a professionalised approach)*
- *Change the perception and use of monitoring (from constraint to opportunity);*
- *Make FP and European research policy more responsive, efficient and effective.*

Operating modalities

A. Panel and expert groups

1. Composition of expert groups:

- The FP Panel consists of 14 independent experts: a chairperson, a rapporteur and one representative for each SP and for ERA activities and one expert originating from a candidate country. The experts have been carefully selected in order to ensure an overall balance in the composition of experts groups from a point of view of geographical, gender, competence, type of organisation and research area origin. Due account has been taken to the Commission 's target of 40% women participation in advisory bodies.
- SP and ERA expert groups consist of 3-5 experts, including a co-ordinating member who is also representative to the FP Panel, a rapporteur and, possibly, expert(s) with specific analytical assignments;
- As in the past, the JRC will continue to be monitored by its Board of Governors on the basis of its Annual Report. Its contribution to the FP Monitoring will be given via a formal exchange of views between a designated member of the Board of Governors and the FP Monitoring Panel.

2. Meetings

The meetings scheduled according to the calendar in annex 2 include:

- 3 joint meetings with all experts (launch, mid-term, end);
- 6 FP panel meetings “coupled” with 6 SP expert groups meetings;
- 1 co-ordination meeting with the Commission services
- bilateral contacts with Commission staff and as, appropriate, members of programme committees and expert advisory groups, National contact points and other major sources of information on programme implementation;

B. Commission infrastructures

1. Information providers

- Programme management;
- ERA/ policy Units;
- Directorate DG RTD/A, including the Evaluation Sector;
- Informatics Unit;
- Other Commission staff, as appropriate.

2. Information tools

- CORDIS (<http://www.cordis.lu/en/home.html>: ...)
- Websites of relevant Directorates General :
 - . Research DG: http://europa.eu.int/comm/dgs/research/index_fr.html
 - . JRC: <http://www.jrc.cec.eu.int/index.asp>
 - . Information Society DG: http://europa.eu.int/information_society/index_en.htm
 - . Environment DG: http://europa.eu.int/comm/dgs/environment/index_en.htm
 - . Fisheries DG: http://europa.eu.int/comm/dgs/fisheries/index_en.htm
- internal information system in relevant DGs:
http://europa.eu.int/comm/dgs_fr.htm

Content

1. Input

The Commission services will provide the following input to the experts:

- Self assessment of ERA and programme implementation produced by Commission services, including qualitative and quantitative data (cf. Suggested minimum format included in annex 3) at Monitoring start .,)
- Consolidated statistics for 2001 (end February 2002)
- Ad hoc analyses and studies, including as appropriate, e.g. “client” satisfaction surveys; impact studies;
- progress on follow-up of previous recommendations from both monitorings and five year assessment;
- Selection of outreach and communication material.

2. Reporting (output)

The experts on one hand and the Commission services on the other will provide the following output:

- One main FP synthesis Monitoring report with recommendations to the Commission on horizontal issues and on SP specific issues, subject to Commission services comments;
- Specific reports for SP/ERA activities with distinct recommendations on respectively horizontal issues and SP issues of a general nature, subject to Commission services comments only for the specific questions directly linked to the activity concerned.
- Commission services replies to the proposed recommendations, presented at the level concerned

Suggested synopses for reports are presented in annexes 4 and 5.

Dissemination

The FP synthesis Monitoring report and the Commission services comments are circulated for information to

- CREST;
- EURAB;
- Programme committees;
- ITRE secretariat;
- STOA;
- European RTD Evaluation Network;
- Published on the WWW (CORDIS).

SP/ERA specific monitoring reports are circulated for information to

- Relevant programme committees;
- ITRE secretariat;
- STOA;
- Relevant EAG;
- Published on the WWW (CORDIS).

4. ISSUES FOR 2001 MONITORING

The issues to be addressed in the monitoring may be divided in two categories:

General issues (valid for all exercises)

- Follow-up of previous Monitoring and Five year assessment recommendations (FP Monitoring 2000 and the latest Five-Year Assessment recommendations are summarised in Annex 6);
- Progress in programme and ERA implementation (management and achievement of objectives);
- Evolution of work-programmes/ action plans;
- Programme contributions to the implementation of ERA ;
- Significant results and impact in the European and international context;
- Evaluation and monitoring methodology including indicators
- Main strengths and weaknesses encountered;
- New recommendations.

Specific issues for the 2001 exercise

- Impact of workprogrammes adjustments (instruments and priorities) in the context of ERA
- Participation of Accession Countries;
- Participation of SMEs;
- Women and science
- Follow-up on impact of previous/current research FPs and SPs and set up of new instruments for the follow up of impact of coming FPs and SPs
- Main management issues (including in particular overall organisation, streamlining and simplification of procedures, internal information system, time to contract, human resources and training).

These issues may, within this overall framework, be supplemented as appropriate by more detailed issues specific to SPs or ERA activities.

5. TIMETABLE FOR THE 2001 MONITORING

Whereas a detailed calendar of meetings and deliveries is presented in annex 1, the main milestones can be summarised as follows:

End October 2001:	Contract letter and first information to experts
Start November 2001:	Launch of exercise by first joint meeting of all experts
End March 2002:	SP and ERA expert groups' specific Monitoring reports
End April 2002:	FP panel synthesis Monitoring report
July 2002:	Comments from Commission Services

ANNEXES

Annex 1:	Mandate/terms of reference for the 2001 monitoring
Annex 2	Indicative timetable of the Monitoring 2001 exercise
Annex 3	Suggested minimum format for Self assessment of ERA and programme implementation by the Commission services
Annex 4:	Suggested synopsis of the FP Synthesis Monitoring Report
Annex 5:	Suggested synopsis of SP and ERA specific Monitoring reports
Annex 6:	Cover pages
Annex 7:	Standard introductory page
Annex 8:	Main recommendations from previous FP monitoring and five-year assessment exercises
Annex 9:	List of documents to be given to the experts Groups / Panels of 2001

ANNEXE 1

Mandate/terms of reference of the panels of independent experts to help the Commission in its task of continuous, systematic monitoring of the implementation in 2001 of the European Research Area, of the research framework programmes (1998 to 2002) and of the specific programmes

Introduction

In the year 2000 research policy broadened its horizons as it took on the dimensions of the European Research Area (ERA). In response to the communication from the Commission "Towards a European Research Area",⁷¹ the Lisbon European Council in March 2000 and the Santa Maria de Feira European Council in June 2000 reached conclusions aiming, with a view to generating employment and economic growth, at rapid establishment of a European Area of Research and Innovation. The European Parliament,^{72 73} the Council,^{74 75} the Economic and Social Committee⁷⁶ and the Committee of the Regions⁷⁷ also endorsed the creation of the European Research Area.

In accordance with Article 5(1) of Decision No 182/1999/EC of the European Parliament and of the Council⁷⁸ and with Article 5(1) of Council Decision 1999/64/Euratom of 22 December 1998,⁷⁹ the Commission must continually and systematically monitor, with the help of independent qualified experts, the implementation of the framework programmes and of the specific programmes given the criteria set out in Annex I and the scientific and technological objectives set out in Annex II to the framework programmes (operation hereinafter referred to as "monitoring").

In the context of reform, the Commission has reinforced the role of evaluation⁸⁰ and expressed a wish for better integration of evaluation in decision-making. It has also made evaluation an important part of the plans for activity-based management (ABM).⁸¹

All these factors will have to be taken into account for the purposes of monitoring the programmes and research activities undertaken during the year 2001.

⁷¹ COM (2000) 6 final of 18 January 2000.

⁷² Resolution of 18 May 2000 PE 290.465, p. 48.

⁷³ Resolution of 15 February 2001.

⁷⁴ Resolution of 15 June 2000, OJ C 205, 19.7.2000, p. 1.

⁷⁵ Resolution of 16 November 2000, OJ C 374, 22.12.2000, p. 1.

⁷⁶ Opinion of 24 May 2000, OJ C 204, 18.7.2000, p. 70.

⁷⁷ Opinion of 12 April 2000, OJ C 226, 8.8.2000, p. 18.

⁷⁸ OJ L 26, 1.2.1999, p. 1.

⁷⁹ OJ L 26, 1.2.1999, p. 34.

⁸⁰ Communication to the Commission on strengthening the evaluation system. SEC(2000)1051/3 of 27 July 2000.

⁸¹ Communication to the Commission on implementing activity-based management in the Commission. SEC(2001)1197/6&7 of 25 July 2001.

Practical arrangements:

Expert Groups are set up to monitor implementation of the ERA, of the (EC and Euratom) framework programmes and of each of the specific programmes concerned. Fourteen experts monitor the framework programmes. With the exception of the chair, the rapporteur and one expert from a candidate country, these experts are also the spokespersons of the panels monitoring the specific programmes and the ERA. Three to five experts monitor each specific programme and the ERA.

This monitoring mechanism provides a quick response offering an annual review of progress in the research programmes and activities. External experts give an independent opinion to help the Commission ensure cost-effective implementation of the activities. The Expert Groups examine implementation of the ERA and of the programmes, and in particular whether the objectives, priorities and financial resources are still appropriate to any changes in the situation. In particular, they take account of the management aspects, in so far as they influence attainment of the objectives. Where appropriate, the Expert Groups make recommendations to the Commission to adapt or supplement the research programmes and activities in the light of the results of their review.

This year's monitoring exercise should focus, in particular, on the following main issues:

- 1) follow-up of the recommendations made by the monitoring panels for the year 2000
- 2) contribution to implementation of the ERA;
- 3) participation by accession countries;
- 4) SME participation;
- 5) women and science;
- 6) impact of earlier research framework programmes.

Timetable:

The work of the panels of experts monitoring the specific programmes and the ERA and of the panel monitoring the framework programmes will be closely co-ordinated.

Work will start in November 2001. The specific reports should be available in March 2002 and the report of the panel on the framework programmes should be completed in April 2002.

ANNEXE 2 INDICATIVE TIMETABLE FOR THE 2001 MONITORING EXERCISE

The final Report will need to be available, in hard copy and electronic version (preferably in Words for Windows format), no later than **1 May 2002**, this implies the following suggested timetable:

2001	
<i>Wednesday, 7 Nov.</i>	Working dinner FP Panel
<i>Thursday, 8 Nov.</i>	Am - Joint meeting SP/ERA/FP – <u>all experts</u> General presentation of the System/FP/ERA Pm - SP/ERA Expert Groups meetings (launch of activities)
<i>Tuesday, 27 Nov.</i>	<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>FP panel meeting (launch of activities) Presentation by thematic programmes</p> </div> <div style="flex: 1; font-size: 3em; margin: 0 10px;">}</div> <div style="flex: 1;"> <p style="text-align: center;">AND</p> <p>Division of responsibilities, planification of work (individual consultations, additional analysis/studies, identification of needs for more information)</p> </div> </div>
<i>Wednesday, 28 Nov</i>	
<i>[Monday, 17 Dec.</i>	SP Expert Groups meeting (*) of programmes Growth, IST, Q.of Life]
2002	
<i>Tuesday, 15 Jan.</i>	Am - FP Panel meeting Pm - Joint meeting SP/ERA/FP – <u>all experts</u> Presentations by Directors in charge of horizontal matters and ERA
<i>Wednesday, 16 Jan.</i>	SP/ERA Expert Groups meetings
<i>Wednesday, 27 Feb.</i>	SP/ERA Expert Groups meetings (preparation of Specific Monitoring reports)
<i>Thursday, 28 Feb.</i>	FP Panel meeting
<i>Thursday, 7 March</i>	<u>DRAFT SPECIFIC MONITORING REPORTS</u> from SP/ERA Expert Groups circulated to FP Panel and Evaluation Sector (ISG)
<i>11 March 15 March</i>	} Meetings: SP/ERA Expert Groups' Coordinators – Commission
<i>Wednesday, 20 March</i>	SP/ERA Expert Groups meetings - FINAL SPECIFIC MONITORING REPORTS
<i>Thursday, 21 March</i>	FP Panel meeting
<i>27 March</i>	<u>DRAFT FP MONITORING REPORT</u> circulated to Evaluation Sector (ISG and SP/ERA Expert Groups)
<i>Tuesday, 9 April</i>	Meeting FP Chairman, Rapporteur, Commission
<i>Tuesday, 23 April</i>	FP Panel meeting - FINAL FP MONITORING REPORT
<i>Wednesday, 24 April</i>	Joint meeting SP/ERA/FP – <u>all experts</u> PRESENTATION OF FP REPORT EVENTUAL PRESENTATION OF THE REPORT TO OTHER PUBLICS

(*) To be confirmed. Depending on programme's requirements.

ANNEXE 3

Suggested minimum format for Self assessment of ERA and programme implementation by the Commission services

1) Monitoring - Self Assessment of Programme implementation 2001-10-17 Liste of "Fiches"

Fiche 1	EXECUTIVE SUMMARY		1 page
	INTRODUCTION		
Fiche 2	Overview of the activities 2001 - Calls for proposals (per call) : * Small very synthetic table * Qualitative comment, including on evolution of size of projects and number of participants - Budgetary situation	- number of proposals received - number of proposals recommended for funding - number of contracts signed - financial contribution requested, planned and committed - total funding (EC + contractor's contributions) of received proposals and of signed contracts Budgetary execution	1 page
Fiche 3	Overview of the activities 2001 - Other activities	e.g. international activities, studies, seminars	½ to 1 page
	STRATEGIC OBJECTIVES		
Fiche 4	Impact from previous and, as appropriate, current FPs - European added value - Social impact - Economic impact	e.g. results from impact studies	1 to 2 pages
Fiche 5	Policy related aspects - ERA - Enlargement - Links with other relevant EU policies (including cohesion) - SMEs - Women and Science - Ethics	- e.g. contribution to objectives and activities - e.g. results from impact studies - e.g. opinion delivered by the European Group on Ethics and follow-up	1 to 2 pages
	SCIENTIFIC AND TECHNOLOGICAL OBJECTIVES		
Fiche 6	Work-programme - Coverage of current work-programme by selected proposals - Reports of External Advisory Group and strategic orientations given - Priorities for next work-programme		1 to 2 pages
Fiche 7	Key actions : progress and achievements <i>(per key action or generic/horizontal activity)</i> - Objectives and priorities for 2001 - Major progress and achievements - Future perspectives		Max ½ page per key action

	MANAGEMENT ASPECTS [including procedural aspects, strengths and weaknesses]		
Fiche 8	Programme management - Programme management organisation - Evaluation of proposals - Programme integration mechanisms (clustering) - Project monitoring and review (including auditing) - Dissemination - Exploitation - Impact tracking - Human resources, gender balance and training	- e.g. organisation of conferences - e.g. use of TIPs	3 to 5 pages
Fiche 9	Relationships with other European activities - Other specific RTD programmes - Other EU activities or programmes - Other European activities	- e.g. Eurêka, COST, administrative agreements	1 to 2 pages
Fiche 10	FOLLOW-UP OF RECOMMENDATIONS OF 2000 MONITORING PANEL AND OF FIVE YEAR ASSESSMENT (overview)		1 page

	ANNEX : Major strategic projects launched and emerging results of ongoing projects	List of individual projects	
	ANNEX : Results and impact from previous FPs	e.g. Success stories	
	ANNEX : Follow-up of commitments made in response to recommendations of 2000 Monitoring panel and Five Year assessment	Tabular presentation – snapshots of 31 October 2001	
	ANNEX : Basic Statistics (<i>Which may not be fully included in the final version of the “fiches”</i>)	<i>per call/batches and per key action/generic activity</i> - Time to contract (list below ⁸² definitions suggested in co-ordination with Unit A2) - number of proposals received - number of proposals selected for funding - Success rate - number of contracts signed - financial contributions requested, planned and committed - total funding of projects (EC + contractor’s contributions) of received proposals and of signed contracts - number of participations in projects selected for funding * per category (SMEs, universities...) * per country (MS, candidate, other associate, others) * per gender (contract co-ordinators only)	

⁸² Programme name; Call identifier; Opening date of the call (OJ reference); Closing date of the call; Evaluation period; Details on evaluation process (number of proposals/week; number of evaluators/week; number of panels/week); Date of Decision to start negotiations; Data on number of rejected, non-eligible and to be negotiated proposals; date of quick letters to applicants; First opinion by the Committee; Last opinion by the Committee; First Commission Decision date on fundable projects; Last Commission Decision date; First contract signed (Commission); Other contracts sent out in batches of weeks; Last contract signed; per batch, the volume of proposals as well as the budget.

<p>ANNEX : Basic Statistics (<i>Which may not be fully included in the final version of the “fiches”</i>)</p>	<p><i>per call/batches and per key action/generic activity</i></p> <ul style="list-style-type: none"> - Total funding of projects (EC + contractor's contributions) by received proposals and signed contracts <p><i>per programme (FP4-FP5)</i></p> <ul style="list-style-type: none"> - number of TIPs received/number of completed contracts <p><i>per key action</i></p> <ul style="list-style-type: none"> - budgetary execution by 31st October 	
<p><i>Based on the previous statistics, GRAPHS could be produced on time to contract, budgetary aspects, number of contracts, participations.</i></p> <p><i>As an example : Graphs - Time to contract :</i></p>	<ul style="list-style-type: none"> - % contracts started/Nbr of days or weeks. Plus, min., max., average, median - Median (50% of projects signed) from call deadline to contract signature (project start) (average values) - Call broken down by Key action difference between Commission signature date of contract and closing date of call - Per call, time taken from closing date of call to contract signature 	

2) Monitoring - Self-assessment of ERA implementation 2001-10-17

Liste of "fiches"

EXECUTIVE SUMMARY		1 page
INTRODUCTION		
Contribution to a knowledge-based society and to the creation of ERA (Lisbon strategy) (Overview) <ul style="list-style-type: none"> - Structural aspects - Science and society - Human factor 		1 page
OPERATIONAL OBJECTIVES		
<ul style="list-style-type: none"> - Benchmarking national RTD policies - Networking the national RTD programmes - Mapping scientific excellence in Europe - Research and innovation, including SMEs and Community patent - Research infrastructures, including a high-speed European electronic network for research - Governance and scientific reference systems - Bodies of scientific advise - Ethics - Public's understanding of science/Young people and science - Women and Science - Mobility of researchers - Regional dimension of the European Research Area - Openness to the rest of the world, international co-operation and enlargement - Links with other policies 	e. g. Commission Communications, Commission staff working papers, activities of High Level Groups...	Max .½ page per objective
MANAGEMENT ASPECTS [including procedural aspects, strengths and weaknesses]		
ERA Activities management <ul style="list-style-type: none"> - Implementation of activities - Dissemination - Exploitation - Impact tracking - Human resources and gender balance 		3 to 4 pages
Links with other European policies and activities <ul style="list-style-type: none"> - Specific RTD programmes - Other EU activities or programmes - Other European activities 		1 to 2 pages

ANNEX : Conferences, workshops,,,		
ANNEX : Advisory groups		
ANNEX : Other major strategic actions launched		

ANNEXE 4 SUGGESTED SYNOPSIS OF THE 2001 FP MONITORING SYNTHESIS

REPORT

STANDARD COVER PAGE
STANDARD INTRODUCTORY PAGE

ANNEXE 6
ANNEXE 7

PART A: REPORT OF THE 2001 FRAMEWORK PROGRAMME MONITORING PANEL

1 EXECUTIVE SUMMARY (major recommendations).....	max 1,5 page
2 PANEL METHODOLOGY	max 1 page
3 INTRODUCTION (major events and achievements of 2001; main programme objectives; state of implementation; perspectives)	max 1 page
4 ANALYSIS AND FINDINGS	about 10 pages
4.1 STRATEGY - OBJECTIVES	5 pages
4.1.1 Progress in ERA and programmes implementation	
4.1.2 Significant results in the European and international context	
4.1.3 Contribution to Enlargement	
4.1.4 Participation of SMEs	
4.1.5 Women and science	
4.1.6 Towards new FP: state of play (modalities of implementation)	
4.2 MANAGEMENT AND PROCESSES	5 pages
4.2.1 Main management issues (including in particular evaluation of projects, time to contract, projects monitoring, simplification of procedures, internal information system, human resources, training)	
4.2.2 Communication and information dissemination	
4.2.3 Evaluation and Monitoring Methodology, including indicators	
4.2.4 Follow up on impact of previous research FPs and SPs	
4.2.5 Other relevant aspects (if any)	
4.3 IMPACT OF PREVIOUS RESEARCH FPs and SPs	about 1 page
4.4 FOLLOW UP OF PREVIOUS MONITORING AND FIVE YEAR ASSESSMENT RECOMMENDATIONS	about 1 page
5 CONCLUSIONS AND RECOMMENDATIONS	about 3 pages
5.1 Majors trends/ main strengths and weaknesses encountered	
5.2 Recommendations (a limited number of key recommendations) :	
. Recommendations of general significance for the whole FP/ERA	
. Recommendations on selected items at SP/ERA level as appropriate	
. Recommendations addressing the evaluation and monitoring methodology	
6 ANNEXES	
6.1 ERA/FP5 specific programmes Monitoring Panels executive summaries, including main recommendations	max 1 page
6.2 Budget for FP5 + criteria + article 5 FP Decision + main conclusions on ERA	
6.3 Abbreviations	
6.4 Information provided to the experts by the programme Management	
6.5 Other	

PART B: COMMISSION's SERVICES COMMENTS ON THE 2001 SYNTHESIS FP MONITORING REPORT

ANNEXE 5 SUGGESTED SYNOPSIS OF THE 2001 SP/ERA SPECIFIC MONITORING REPORTS

ANNEXE 6
ANNEXE 7

STANDARD COVER PAGE
STANDARD INTRODUCTORY PAGE

PART A: REPORT OF THE 2001 FRAMEWORK PROGRAMME MONITORING PANEL

1 EXECUTIVE SUMMARY (major recommendations).....	max 1, 5 page
2 PANEL METHODOLOGY	max 1 page
3 INTRODUCTION (major events and achievements of 2001; main programmes objectives; state of implementation: budget, coverage of calls, contracts signed...; perspectives).....	max 1 page
4 ANALYSIS AND FINDINGS	about 10 pages
4.1 STRATEGY - OBJECTIVES	5 pages
4.1.1 Progress in ERA and programmes implementation	
4.1.2 Significant results in the European and international context	
4.1.3 Participation of candidates countries	
4.1.4 Participation of SMEs	
4.1.5 Women and science	
4.1.6 Towards new FP: state of play (modalities of implementation)	
4.2 MANAGEMENT AND PROCESSES	5 pages
4.2.1 Main management issues (including in particular evaluation of projects, time to contract, projects monitoring, simplification of procedures, internal information system, human resources, training, relations with other SPs)	
4.2.2 Communication and information dissemination	
4.2.3 Evaluation and Monitoring Methodology, including indicators	
4.2.4 Follow up on impact of previous research FPs and SPs	
4.2.5 Other relevant aspects (if any)	
4.3 IMPACT OF PREVIOUS RESEARCH FPs and SPs	about 1 page
4.4 FOLLOW UP OF PREVIOUS MONITORING AND FIVE YEAR ASSESSMENT RECOMMANDATIONS.....	about 1 page
5 CONCLUSIONS AND RECOMMENDATIONS	about 3 pages
5.1 General conclusions/majors trends/ main strengths and weaknesses encountered	
5.2 Recommendations (a limited number of key recommendations):	
. Recommendations specific to the SP programme / ERA related activities	
. Recommendations of general significance for the whole FP/ERA	
. Recommendations addressing the evaluation and monitoring methodology	
6 ANNEXES	
6.1 Budget for FP5 and SPs + Criteria + Article 5 FP Decision + main conclusions on ERA	
6.2 Abbreviations	
6.3 Information provided to the experts by the programme Management	
6.4 Other	

PART B: COMMISSION'S SERVICES COMMENTS ON THE 2001 SPECIFIC PROGRAMMES MONITORING REPORT

**[2001 SPECIFIC MONITORING REPORT ON THE
SPECIFIC PROGRAMME FOR
RESEARCH AND TECHNOLOGICAL
DEVELOPMENT**



**IN THE FIELD OF
.....”]**

OR

**[2001 SPECIFIC MONITORING REPORT ON
EUROPEAN RESEARCH AREA ACTIVITIES (ERA)
RELATED
ACTIVITIES]**

OR

**[2001 SYNTHESIS MONITORING REPORT ON
THE RDT ACTIVITIES CONDUCTED UNDER THE
ERA RELATED ACTIVITIES, AND EC /
EURATOM FRAMEWORK PROGRAMMES)**

This is part of the series of the external annual monitoring reports prepared for the EC Framework Programme and the Euratom Framework Programme, and their constituent Specific Programmes, and also -as a novelty- covers also the implementation of the European Research area related activities (ERA),

The Commission has over the years been placing increasing emphasis on the evaluation of Community R&D activities. With the overall Reform of the Commission, evaluation activities are more and more placed in the heart of the decision process.

In line with this continuous effort for improvement,, a revised programme monitoring scheme has been introduced in 2001, based on the system launched in 1995 which involved independent external experts in the monitoring activities. The new mechanism launched this year, has been built in order to better involve the experts monitoring the implementation of ERA and specific programmes, by representing them in the Framework programme Panel. The timely response by the Programme management to the recommendations produced by the experts will be enhanced, providing the basis for a quick response mechanism to programme developments, as the follow up of experts recommendations will be receiving still more attention.

This report is the third covering the Fifth Framework Programme; the report also highlights progress in relation to implementation of ERA and results and impact of previous Framework Programmes. The report should help reinforce establishment of best practices and identify the scope for further improvements in programme implementation.

The report consists of two parts:

Part A: *External monitoring report prepared by the following independent external experts:*

.....
.....
.....

Part B: *Responses of the Programme management to the external monitoring report.*

ANNEXE 8: Main recommendations from previous FP Monitoring 2000 and Five year assessment (1995-1999) exercises

1) FP MONITORING 2000 REPORT

Executive Summary

This is the 2000 External Monitoring Report on the activities of the European Union's Research and Technological Development Framework Programmes. It covers the ongoing projects and activities still being funded by the Fourth Framework Programme (FP4) as well as the second year of the implementation of the Fifth Framework Programme (FP5). It is required under Article 5.1 of the Decisions setting up the multi-annual European Community and Euratom Framework Programmes.

The 2000 Framework Programme Monitoring Panel must formally congratulate the Fifth Framework Programme's management, scientific officers and support staff on the:

- successful launch and running of such a huge and complex programme;
- efforts made at improving information and procedures;
- follow-up of last year's FPMP recommendations.

THE 2000 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS:

CONCERNING THE FP STRATEGIC OBJECTIVES:

- 1) The European Research Area (ERA) should already be considered the cornerstone of the FP strategy and the structural effect be should be strengthened.
- 2) In order to foster support for small and medium sized enterprises (SMEs), the innovation cells and the network of National Contact Points should be reinforced and the Community patent should be adopted as soon as possible in the interest of European industry in general.
- 3) The FP organisation should enhance the international component of the ERA to address appropriately the needs of international co-operation with the candidate countries, developing countries and relationships with the industrialised countries.

CONCERNING THE FP STRUCTURE AND ORGANISATION:

- 4) The management culture of the European Commission should be reinforced in line with the reform of the Commission and an adequate programme for training people should be implemented.
- 5) The European Energy RTD Programmes should be managed consistently.

CONCERNING THE FP PROCESSES AND MANAGEMENT TOOLS:

- 6) The efforts to improve the information provided to the R&D Community must be continued.
- 7) Acceptable targets have to be set for procedures and for time to contract.
- 8) Objectives and a timetable to improve the FP information system should be set up.

2) FIVE YEAR ASSESSMENT REPORT:

Executive Summary and Recommendations

The EU currently faces great challenges. At the March 2000 meeting of the European Council in Lisbon, the Union set itself the goal of becoming the most competitive and dynamic knowledge-based economy in the world. This puts research and technological development (RTD) policy at the heart of development strategies.

The most important conclusion of our Panel is that the Framework Programme alone will not be enough to serve the goals set at Lisbon. Although there is much to commend in past and current Framework Programmes, the challenges we face as we move towards the new economy call not only for the Framework Programme itself to become a much more flexible policy instrument, but also for additional instruments and actions.

RTD policy is inextricably linked with policies in other spheres, especially education and innovation. **Our Panel is convinced that the required changes need to be conceived within an overall strategy for Europe, articulated at the level of the EU and supported by all the Member States.**

Framework Tomorrow

The Framework Programme has helped academic and industrial partners all across the EU to tackle problems collaboratively. It has also contributed to the training of researchers and to the development of the European research infrastructure.

There is still a need for these activities and they deserve to be continued, but the scope of the Framework Programme should also be increased in line with the need to meet the Lisbon goals and the demands of enlargement. The Panel recommends:

Maintaining the emphasis on social relevance and continuing to use Key Actions as a way of focusing programmes;

Maintaining a strong emphasis on collaborative RTD projects supplemented by a variety of other actions;

Emphasising excellence and the participation of leading-edge researchers;

Encouraging participants to propose 'riskier' projects;

Enhancing measures encouraging the mobility of researchers within the EU and between the EU and elsewhere;

Retaining support for generic, competence-building RTD activities;

Increasing the emphasis on the research needed to support other EU policies.

But more is needed in Europe today. The EU Treaty allows for the use of other policy instruments to support scientific and technological activity. Some of these have been used, but **the Panel is convinced that existing policy tools need to be further exploited in a restructured and expanded Framework Programme.**

This under-utilisation is a consequence of the way the Framework Programme is determined and implemented. **The Panel recommends a major review of the systems and procedures used to decide overall goals, specify delivery mechanisms and implement programmes.** Specifically, we are convinced of the need to distinguish carefully between these activities and to allocate responsibility for them accordingly. **We recommend adoption of a European RTD strategy at the highest political levels. The Heads of Government should then delegate the task of formulating and implementing this strategy to the European Commission, supported by an appropriate advisory structure.**

These changes will necessitate a greater level of trust by the Member States in the ability of the Commission to deliver an effective Framework Programme. In particular, **the Panel sees no need to continue the Programme Committees.**

At the level of implementation, a review of the management and administration of the Framework Programme should concentrate on ways of **re-engineering existing structures and procedures to delegate responsibility for tasks downwards within the Commission, or externalise them.** At present there is excessive focus on adherence to procedures and not enough emphasis on ensuring overall goal attainment.

The changes recommended by the Panel to create a more flexible, expanded Framework Programme will require support at the highest political levels. This is because they call into question some of the basic principles governing the operation of the European Commission as a whole, not just the way research policy is formulated and implemented.

Beyond Framework

It will be necessary for Heads of Government to reconsider the priority attached to science, technology and innovation. These activities are critical to the development of the knowledge-based society envisaged at Lisbon. Accordingly, **the Panel recommends increasing the relative size of the budgets allocated to science and technology compared to other policy domains.**

The Panel is convinced that the percentage of GDP spent in the EU on public and private RTD should rise to at least 3% over the next ten years. Higher levels will be necessary without parallel efforts to avoid duplication of effort across the EU. Private sector RTD expenditure will need to be stimulated if Europe is to keep pace with its competitors. **The Panel recommends the use of indirect measures such as RTD tax incentives across the EU** in order to flag to the rest of the world that Europe is an attractive place to conduct RTD.

RTD policies in the Member States need to reinforce rather than duplicate each other. In the Panel's view, the European Commission has a key facilitation role to play in this area. The Commission should take the lead in outlining the steps needed to pool infrastructure and policy-intelligence resources across the EU. The Panel also urges all the Member States to lend their unequivocal support to these efforts.

The enlargement of the EU presents great social and economic opportunities for all, but only if appropriate actions are taken. The Central and Eastern European countries are waiting for the EU to take the lead by implementing a European RTD strategy which takes their needs fully into account. **The Panel recommends that support provided to these countries for RTD activities be channelled temporarily through the existing scientific Academies until new competitive structures for the organisation of science and industry can be developed.**

The Panel recommends urgent action to counter envisaged skill shortages over the next decade. This will involve measures to increase the attractiveness to young people of careers in science, actions encouraging retraining, and steps to ensure that the potential increase of scientific talent as a result of enlargement is fully tapped. The Panel also supports the creation of truly European centres of teaching and research excellence capable of attracting the best minds in the world to live and work in the EU.

Innovation is another policy area in which new initiatives are needed to improve the position of Europe. Innovation policy is linked with RTD policy but is much broader, involving financial, market, legal, fiscal and cultural aspects, and will require actions outside the Framework Programme. The Panel supports such endeavours and **urges the Commission to ensure that**

innovation-related activities are high on the agenda of actions supported by the Community Structural Funds and the Accession Funds for the applicant countries.

Framework Assessment

The Panel's positive assessment of activities over the last five years is the basis for recommending continuation and expansion of the Framework Programme. The emphasis on collaborative RTD projects was much appreciated by academic and industrial participants, allowing them to undertake strategically important work which would have been difficult to undertake otherwise. Networking, training-related activities and adequate procedures for the involvement of SMEs were also widely regarded as successful features of the Framework Programme.

Concerning programme administration, many participants were dissatisfied with application procedures and, to a lesser extent, with payment delays. **The Panel recommends making procedures much simpler and easier to understand.**

The overall orientation of the Fifth Framework Programme was endorsed by the Panel, though the initial implementation of the programme was not smooth. The new matrix management structures put in place to ensure adequate communication within and across programme areas did not function well. **The Panel recommends an urgent re-engineering of the overall management and administration of the Framework Programme.**

The system of evaluation can be considered as well established. Impact assessment should become one of the most important elements of evaluation

<u>ANNEXE 9</u>	LIST OF DOCUMENTS TO BE GIVEN TO THE EXPERTS GROUPS /PANEL OF 2001 MONITORING
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1) TO THE FP PANEL:

- Presentation of the revised 2001 Monitoring system (see the whole document)
- Broad guidelines 2001 (see the whole document)

- Fifth Framework Programme Decisions + Rules of participation (see the whole document if needed):
 - . Council Decision 1999/65/EC of 22 December 1998, OJ L 26, 1.2.1999, p. 46.
 - . Council Decision 1998/66/Euratom of 22 December 1998, OJ L 26, 1.2.1999, p. 56.
- Specific programmes Decisions (see in particular Annexe I " Indicative breakdown of the amount deemed necessary" and in Annexe III "General outlines , S&T objectives and priorities": "Introduction" and "Strategic objectives")
- Proposals for the Framework Programme (2002-2006) (see the whole document)

- Communication "Towards a European research area" (COM (2000) 6 final 18.01.2000 (see in particular from p. 4 to 7 "Situation and objectives" and 10 to 21 "a European research area")
- European Parliament Resolution of 18 May 2000, PE 290.465, p. 48 (ERA) (see p. 40 to 44)
- European Parliament Resolution of 15 February 2001(ERA) (see p. 48 to 55)
- Council Resolution of 15 June 2000, OJ C 205, 19.7.2000, p. 1 (ERA) (see the whole document)
- Council Resolution of 16 November 2000, OJ C 374, 22.12.2000, p. 1 (ERA) (see the whole document)
- Economic and Social Committee Opinion 24 May 2000, OJ C 204, 18.7.2000, p.70 (ERA) (see in particular points 1 "Executive summary" p. 70 and "Conclusions and recommendations" p. 81)
- Committee of Regions Opinion of 12 April 2000, OJ C 226, 8.8.2000, p. 18 (ERA) (see the whole document)

- Communication to the Commission on strengthening the evaluation system. SEC(2000)1051/3 of 27 July 2000 (see in particular "Evaluation in the context of Reform" p. 3 , "Conclusions" p. 13 and Annexe III "Summary of measures defined in the Communication")
- Communication to the Commission on implementing activity-based management in the Commission. SEC (2001)1197/6&7 of 25 July 2001 ") (see the whole document)
- Communication " the regional dimension of European research area" COM (2001) 549 final of 03.10.2001 (see in particular point 2.2 on "The role for the regions in the European area context)

- Call for applications 99/C 120 A/02 published in OJ C 120 A, 1.5.1999 (for the record).

- Monitoring reports FP/SPs 2000 (see in particular "Conclusions and recommendations" for the FP report and "Executive summaries" for SP reports)
- Five Year Assessment reports (1995-1999) (see in particular "Conclusions and recommendations" for the FP report and "Executive summaries" for SP reports)

- Auto-evaluations "fiches"
- Success stories
- Evaluation and impact studies
- Total list of evaluation and impact studies

2) TO THE ERA/SPs EXPERTS GROUPS:

- Presentation of the revised 2001 Monitoring system (see the whole document)
- Broad guidelines 2001 (see the whole document)

- Fifth Framework Programme Decisions + Rules of participation (see the whole document if needed):
 - . Council Decision 1999/65/EC of 22 December 1998, OJ L 26, 1.2.1999, p. 46
 - . Council Decision 1998/66/Euratom of 22 December 1998, OJ L 26, 1.2.1999, p. 56.
 - the Decision concerning the SP monitored by the Expert Group (see in particular Annexe I "Indicative breakdown of the amount deemed necessary" and in Annexe III "General outlines , S&T objectives and priorities": "Introduction" and "Strategic objectives")
 - Proposals for the Framework Programme (2002-2006) (see the whole document)

- Communication "Towards a European research area" (COM (2000) 6 final 18.01.2000 (see in particular from p. 4 to 7 "Situation and objectives" and 10 to 21 "a European research area")
- European Parliament Resolution of 18 May 2000, PE 290.465, p. 48 (ERA) (see p. 40 to 44)
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- Council Resolution of 16 November 2000, OJ C 374, 22.12.2000, p. 1 (ERA) (see the whole document)
- Economic and Social Committee Opinion 24 May 2000, OJ C 204, 18.7.2000, p.70 (ERA) (see in particular points 1 "Executive summary" p. 70 and "Conclusions and recommendations" p. 81)
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- Communication to the Commission on strengthening the evaluation system SEC(2000)1051/3 of 27 July 2000 (see in particular "Evaluation in the context of Reform" p. 3 , "Conclusions" p. 13 and Annexe III "Summary of measures defined in the Communication")
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- Call for applications 99/C 120 A/02 published in OJ C 120 A, 1.5.1999 (for the record).

- Monitoring reports 2000 of FP and of the SP monitored by the Expert Group (see in particular "Conclusions and recommendations" for the FP report and "Executive summaries" for SP reports)
- Five Year Assessment report of FP and of the SP monitored by the Expert Group (1995-1999) (see in particular "Conclusions and recommendations" for the FP report and "Executive summaries" for SP reports)

- Auto-evaluations "fiches" specific to the ERA or the SP monitored by the Expert Group
- Success stories specific to ERA or the SP monitored by the Expert Group
- Evaluation and impact studies specific to the ERA or the SP monitored by the expert Group
- Total list of evaluation and impact studies

9.5 MONITORING PANELS & PANEL MEMBERS

FRAMEWORK PROGRAMMES

Ms. P. Boekholt Director, Technopolis BV	The Netherlands
Mr. B. Brandt Director of Administration, The Swedish Foundation for Strategic Research	Sweden
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Mr. Y. Fassin Managing Director, A.C.F.	Belgium
Ms. M. Founti Associate Professor, Mechanical Engineering Department, Thermal Engineering Section, National Technical University of Athens	Greece
Mr. M. Horvat (Chair) Professor, Director, Bureau for International Research and Technology Co-operation	Austria
Mr. J. Konopacki Professor, Department of Neurobiology, University of Lodz	Poland
Ms. L. Krickau-Richter Head of EuroConsult – Research & Education, University of Bonn	Germany
Mr. H. Métivier Professor, Director of Researches, IPSN	France
Mr. G. Pogorel Professor, Head, Department of Economics and Social Sciences, Ecole Nationale Supérieure des Télécommunications	France
Ms. J. Stammers Principal, J R Stammers	United Kingdom
Mr. B. Wilkinson Professor, Director, Centre for Ecology and Hydrology, Natural Environment Research Council	United Kingdom

EUROPEAN RESEARCH AREA

Mr. N. Busch Director, Busch and Partners	Denmark
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Ms. C. Demain-Paternotte General Director, Université Catholique de Louvain	Belgium
Mr. D. Thomas (Rapporteur) Chairman scientific board, lab.direct., bioengineering department, Université de Technologie de Compiègne	France

QUALITY OF LIFE AND MANAGEMENT OF LIVING RESOURCES

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Ms. A.M. Pelacho University Professor, Horticulture, Botany and Gardening, University of Lleida	Spain

USER-FRIENDLY INFORMATION SOCIETY

Mr. F. Casali President, ALCANET International	Italy
Mr. P. Jenkins (Rapporteur) Joint Managing Director and Principal Consultant	United Kingdom
Ms. E. Lindencrona Ohlin Director, Swedish Agency for Innovation	Sweden
Ms. L. Montandon Head, Education & Training Unit, Software Engineering Division, SchlumbergerSema Spain	Switzerland
Mr. G. Pogorel (Chair) Professor, Head, Department of Economics and Social Sciences, Ecole Nationale Supérieure des Télécommunications	France

COMPETITIVE AND SUSTAINABLE GROWTH

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Mr. G. Giarda GIARDA S.r.L	Italy
Ms. S. Harvey Director, Traffic Solutions Limited	United Kingdom
Mr. K. Lechnitz (Rapporteur) Kurt Lechnitz	Germany
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ENERGY, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

***ENERGY* Sub-Panel**

Mr. M. Heikkila Research Manager, Fortum Power and Heat Oy Technology Centre (Imatran Voima Oy)	Finland
Ms. J. Stammers (Chair) Principal, J R Stammers consulting	United Kingdom
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ENVIRONMENT Sub-Panel

Ms. P. Perini (Rapporteur) Manager, Technologies for the Information Society, ASTER, Agenzia per lo Sviluppo Tecnologico dell'Emilia Romagna	Italy
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Mr. C. Bogliotti Senior Expert and Partner, S.A.R.I.	Italy
Mr. K. Harrap (Rapporteur) Managing Director, Science Consultancy LTD	United Kingdom
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PROMOTION OF INNOVATION AND ENCOURAGEMENT OF SME PARTICIPATION

Mr. J.-P. Chassetuillier Product Manager, Multimedia Division, France Telecom - Consumer Branch	France
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Mr. M. Merino Titular Professor, Organización de Empresas, Escuela Técnica sup. de Ingenieros Industriales, Vigo University	Spain
Mr. J.S. Walsh College Lecturer in Management, Department of Management and Marketing, University College Cork	Ireland

IMPROVING HUMAN RESEARCH POTENTIAL AND THE SOCIO-ECONOMIC KNOWLEDGE BASE

Mr. M. Basle Professeur des Universités, CREREG-IREIMAR - CNRS, Chaire Jean Monnet Faculté, Sciences Economiques, Université Renne S-1	France
Ms. P. Boekholt (Chair) Director, Technopolis BV	The Netherlands
Mr. S. Paleocrassas Councilor-Senior Researcher, Vocational Education, and Research Documentation and Educational Technology, Pedagogical Institute	Greece
Ms. K. Runeberg Scientific Adviser, Nordic Council of Ministers	Finland

NUCLEAR ENERGY

FUSION Sub-Panel

Mr. B. Brandt (Chair) Director of Administration, The Swedish Foundation for Strategic Research	Sweden
Mr. J. Calvo former Director de Area para Nuevos Proyectos Internacionales, ENDESA Internacional	Spain
Mr. G. Lehner Professor Emeritus and former Director of Inst., Department of Electrical Engineering, Institute for the theory of electrical engineering, University of Stuttgart	Germany

FISSION Sub-Panel

Mr. R. Guillaumont Professeur Université (retired), Radiochimie, Université Paris - Sud Orsay Institut Physique Nucléaire	France
Mr. H. Métivier (Chair) Professeur à l'Institut National des Sciences et Techniques Nucléaires (CEA/ Institut de Protection de sûreté nucléaire)	France
Mr. I. Vasa Head of Department, Nuclear Power and Safety Division, Nuclear Research Institute Rez Plc	Czech Republic

9.6 ABBREVIATIONS

Abbreviations

BRITE	Basic Research in Industrial Technologies for Europe
CORDIS	Community Research and Development Information System
COST	European Co-operation in the Field of Scientific and Technical Research
CRAFT	Co-operative Research Action for Technology Stimulation Measures for SMEs
CREST	Scientific and Technical Research Committee
DG	Directorate General
EAG	External Advisory Group
EAV	European Added Value
EC	European Commission
EIB	European Investment Bank
ERA	European Research Area
ESD	Energy, Environment and Sustainable Development
ETAN	European Technology Assessment Network
EU	European Union
EURAM	European Research in Advanced Materials
EUREKA	Co-operation between European firms and research institutes in the field of advanced technologies (1985-....)
FP	Framework Programme
FP5	Fifth Framework Programme
FP6	Sixth Framework Programme
FPMP	Framework Programme Monitoring Panel
HoU	Head of Unit
ICT	Information and Communications Technologies
IHP	Improving Human Research Potential and Socio-Economic Knowledge Programme
IMT	Industrial and Materials Technologies
INCO	The International Role of Community Research Programme
Infosoc	Information Society Programme
INNO	Promotion of Innovation and Participation of SMEs Programme
INTAS	International Association for Promotion of Co-operation with Scientists from the Independent States of the former Soviet Union
IPR	Intellectual Property Right
IRC	Innovation Relay Centre
IST	Information Society Technologies Programme
IT	Information Technology
JRC	Joint Research Centre
MIS	Management Information Systems
MS	Member States
NAS	New Accession States
NCP	National Contact Point
NSF	National Science Foundation (US)
PC	Programme Committee
PO	Project Officer
QoL	Quality of Life and Management of Living Resources Programme
R&D	Research and Development
RTD	Research and Technological Development
SME	Small and Medium Sized Enterprises
SO	Scientific Officer
SP	Specific Programme
TIP	Technological Implementation Plan
WP	Work Programme

PART B

**COMMISSION SERVICES'
COMMENTS
ON
THE 2001 FRAMEWORK PROGRAMME
MONITORING REPORT**

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
	Developing the ERA & International Relations			
1a	The Commission Services develop an outline 'Action Plan' indicating how the ERA will develop over the period to 2010 to achieve the objectives of the Lisbon Strategy. The Action Plan should include explicit milestones.	Annual Report to Spring Summit, 2003	<p>The Commission Services have already developed a European Research Area (ERA) 'tableau de bord' to monitor progress in ERA implementation. This will evolve and will be used as a means to formulate more precisely the objectives, plans and milestones, in line with the recommendations of the ERA Monitoring Panel.</p> <p>A Commission Communication on ERA progress and perspectives will be published in the second half of 2002.</p>	<p>Regular improvement and updating of the ERA 'tableau de bord'</p> <p>On 16 October 2002, the Commission published the Communication "The ERA: providing new momentum (COM(2002)565 final). The Communication assesses the ongoing activities and proposes measures for strengthening, re-orienting and opening up new perspectives</p>
1b	The Member States and Candidate Countries in conjunction with the Commission Services should establish a high-level RTD 'European Research Area (ERA) Policy Forum' in each country, along with a co-ordinating Task Force.	Annual Report to Spring Summit	The Commission Services are ready to support Member States initiatives of the type suggested towards the implementation of ERA. Such initiatives cannot be instigated in the absence of specific requests from the Member States.	
1c	The Commission Services, building on 'A Mobility Strategy for the ERA', should develop an operational strategy, which will indicate how mobility activities will be used to strengthen the scientific, technical, and innovative capabilities of the EU, Member States, and Candidate Countries and to raise research scientist and engineer (RSE) numbers to be competitive at a global scale.	Annual Report to Spring Summit, and detailed in the Annual Report	These points have been thoroughly examined by the High Level Group (HLG) on Improving Mobility of Researchers and national contributions are detailed in the HLG final report of April 2001. The Commission Communication 'A mobility strategy for the ERA' (June 2001) is based on the conclusions of the HLG report and proposes a series of concrete actions to remove the obstacles to mobility. Progress has been made towards implementing these actions and a steering group, with representatives from the Member States and Candidate Countries, has been set up to support the process. A report 'Progress achieved in the Implementation of the strategy in support of researchers	Progress report beginning 2003

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			<p><i>mobility'</i> will be presented beginning 2003 by the Commission.</p> <p>As regards the 6th Framework Programme, the new instruments will support mobility and training activities.</p> <p>In the 5th Framework Programme, Research Training Networks, Marie Curie fellowship schemes, as well as high level scientific conferences support transborder mobility.</p>	
1d	The Member States and Candidate Countries, with the support of the Commission, establish a coherent and consistent system for the collection of data on research mobility and RSE numbers.	Annual Report and progress followed in the Annual Self-Assessment Reports	This is a part of the actions proposed by the Communication (<i>point 1c</i>). A first survey will be launched at the beginning of 2003, after the launch of methodological workshops.	First survey beginning 2003
1e	The Commission Services develop a brief guidance paper, indicating the means by which FP6 and in particular the ' <i>Integrated Projects</i> ', ' <i>Networks of Excellence</i> ' and ' <i>Article 169</i> ' will contribute constructively to the ERA vision: ' <i>The Regional Dimension of the ERA</i> '.	Before the launch of the first Call for Proposals under FP6	<p>Guidelines relevant to the regional perspective are provided in the Communication mentioned. By taking these guidelines fully into account, the 6th Framework Programme, including the new instruments, will offer substantial opportunities to implement most regional aspects as described in the Communication. 6th Framework programme projects will permit regional participation either from a legal entity representing the region or by means of parallel financing.</p> <p>The very nature of the new instruments embodies an important regional perspective. '<i>Integrated Projects</i>' and '<i>Networks of Excellence</i>' can be considered as knowledge-cluster building instruments that will exploit the potential links that come from geographical proximity and mutually dependent research and industrial activities, at regional and interregional levels. Since all regions are able to bring forward some technological and scientific assets, the</p>	<p>http://europa.eu.int/comm/research/conferences/2002/index_en.html</p>

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			<p>regions may play a major role in the 6th Framework Programme. This approach could also be usefully exploited under the future programmes co-ordination actions such as ERA NET (the second strand of the specific programme 'Integrating research and strengthening the foundations of the ERA') at national and regional level. The regional public bodies in charge of financing or managing research activities could implement ERA-NET projects in a way to refine their R&D strategies or to reinforce the position of their regional innovation potential in the European landscape.</p> <p>The Commission Services are currently working on informing the regional actors about the opportunities arising from the 6th Framework Programme, using many formal and informal channels. A major Conference with 250 participants about interregional co-operation in the field of science and technology foresight has taken place on 24-25 September in Brussels.</p> <p>In November 2002 the Commission will be holding a special session devoted to highlighting the importance of regions during the 3-day launch Conference of the 6th Framework Programme (2002-2006) (11-13/11/2002</p>	<p>Conference Europe-Regions: shaping the future- The role of Foresight 24-25 September 2002</p>
1f	<p>In order to have a broader support from the industrial world, the concept of the European Research Area should be extended to that of the 'European Research and Innovation Area'.</p>		<p>The Commission Services share the view that research activities and instruments should better integrate the innovation dimension. A dedicated part of the 6th Framework Programme has even been devoted to explore further this issue. It is well recognised that there is a strong relationship between research and technological innovation. However, innovation should be considered in its broadest sense including also business and societal innovation.</p> <p>The extended concept of "European Research and</p>	

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			Innovation Area" was discussed in the context of the adoption of the 6 th Framework Programme. Finally, the term adopted by the European Parliament and the Commission is the "European Research Area".	
1g	The newly appointed Deputy Director General (Research) with responsibility for ERA & international activities develop a brief ' <i>International Dimension: Policy and Operations in FP6/ERA</i> ' paper, providing principles and operating guidelines – and also recognising the needs of the Candidate Countries.	Annual Report to Spring Summit, 2003	<p>The Commission agrees that in the preparations of the 6th Framework Programme through 2002, in particular in terms of implementing the means of international co-operation and in fine-tuning thematic priorities, particular attention is needed to deliver on the international dimension of ERA.</p> <p>The new Deputy Director General of Directorate General RTD will prepare a discussion paper identifying the strategic and operational issues of international cooperation in the thematic activities according to the priorities expressed by the different Thematic Priorities. This paper will be discussed at DG level.</p>	Discussion paper end 2002
	Working with Candidate Countries			
2a	There should be an improvement of documentation and information on the FP participation permitting – among other things – possibilities for comparative analyses between participating countries. A re-evaluation of financial rules associated with Candidate Countries participation should take place, particularly related to personnel costs. In addition, the contribution to enlargement should be emphasised within the European Added Value criteria and in the development of European Policies.	Annual Self Assessment	<p><i>Framework Programme participation analysis</i></p> <p>An important element of the Annual Reports is the statistics that are provided on the implementation of the Framework Programme including comparative levels of participation by countries. This is the most important indicator of benefit derived from the Framework Programme (see also point 9b).</p> <p><i>Rules associated with Candidate Countries</i></p> <p>The Rules for Participation in the 6th Framework Programme include equal treatment of participants from associated Candidate Countries and Member States. The provisions of the draft model contract for the 6th Framework Programme provide sufficient flexibility for <u>all</u> participants</p>	

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			to reflect adequately their own real costs of carrying out research. The Newly Associated States (NAS) are participating in Working Groups on the Model Contract and on the costing principles for the 6 th Framework Programme and can thereby make their particular needs known. In addition, they participate in CREST where the priorities have been discussed. It should also be remembered that several important steps have already been taken under the 5 th Framework Programme to reflect the separate needs of NAS, including dedicated calls, training and information.	
2b	The Commission should support the best-practice activities of Member States in working with Candidate Countries. And under FP6, The 'Stairways of Excellence' should include a number of support measures addressing the specific needs of individual Candidate Countries.	Annual Self Assessment	<p><i>Best practice</i></p> <p>Two of the mechanisms through which best practice is being disseminated are:</p> <ul style="list-style-type: none"> • awareness and Training accompanying measures. For each action, support from a member state was compulsory. • Detached National Experts from Candidate Countries joining the staff of Programmes. This is expected to continue under the 6th Framework Programme. <p><i>Specific Targeted Research Projects and Coordination Actions</i></p> <p>As stated under point 2a, the provisions of the 6th Framework Programme model contract should provide equality of treatment with sufficient flexibility to permit participants to identify their own real costs. The contractual provisions for 'Specific Targeted Research Projects' and 'Coordination Actions' (which will be implemented in the spirit of 'Stairways of Excellence' in the thematic priorities) should not differ for the Candidate Countries, although specific measures are currently being developed to encourage their participation in these instruments. Specific facilities are foreseen, also under the 'Networks of</p>	

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			<i>Excellence'</i> .	
2c	'Contribution to Enlargement' should be made an additional objective in the ERA 'Tableau de Bord', and the Candidate Countries should be directly involved in the development of the ERA. The 2002 FPMP should be provided with a brief update on how Candidate Countries have been involved in developing ERA during 2002.	Annual Self-Assessment / Note to 2002 FPMP	<p>The Candidate Countries are already involved in European Research Area (ERA) activities such as the High Level Groups for the exercise on 'Benchmarking' and 'Mapping of Excellence'.</p> <p>Their integration in all European Research Area as well as Framework Programme activities is foreseen and will be monitored, e.g. in the context of the Monitoring self-assessment of the Programmes. To add this specific point as an additional objective of the ERA 'Tableau de Bord' is not regarded as offering any advantages and could possibly even limit the process of integration with ERA and the Framework Programme.</p> <p>Candidate Countries are treated like Member States under the 6th Framework Programme. As part of this, specific support actions for Candidate Countries will be implemented in the thematic priorities.</p>	The 2002 self-assessment including a brief update on Candidate Countries involvement in ERA
	SMEs & Innovation			
3a	The Commission Services should launch a number of analytic studies exploring the relationships between Research Programmes, SMEs' activity, and the modes of commercial exploitation of such research.	Available to 5 Year Assessment Panel / End 2003	The Commission Services have launched a study on the qualitative and quantitative aspects of SME participation in the 5 th Framework Programme. This includes the role of SMEs as project leaders and co-ordinators.	SME study to be completed by Spring 2003.

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
3b	Based on this analysis, the Commission Services should provide a comprehensive policy and guidance paper on 1) the objectives for SME participation in FP6 and 2) the appropriate mechanisms for such participation, across the different research activities of FP6.	End 2003	<p><i>Objectives</i></p> <p>An information document "Support to the participation of SMEs in the 6th Framework Programme" has been prepared by the Commission Services describing Horizontal Research Activities involving SMEs and measures to encourage the participation of SMEs to the priority thematic areas. This document is available on the DG research web-site.</p> <p>New approaches for SME involvement in the 6th Framework Programme have been developed after taking careful note of the preliminary results of SME participation in the 5th Framework Programme. The Commission Services have – throughout the decision making process – made major efforts to ensure that SME interests are fully reflected and they work closely with National Contact Points and bodies representing SME interests to ensure that opportunities for them in the 6th Framework Programme are recognised and taken up.</p> <p><i>Appropriate mechanisms</i></p> <p>The mechanisms for SME participation in research actions under the 6th Framework Programme include the specific instruments identified in the Annex III of the Framework Programme regarding co-operative and collective research in these instruments. The associated contractual provisions developed for these actions reflect these provisions. In addition, specific measures for encouraging the participation of SMEs in the new instruments of the 6th Framework Programme are foreseen and under study.</p> <p>Within DG RTD, better SME involvement in the 6th</p>	<p>Dedicated instruments under 6th Framework Programme</p> <p>Concentration in one single Unit of the SME measures and</p>

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			<p>Framework Programme will be achieved through a reorganisation in which all SME expertise is brought together, thereby giving SMEs even more transparent access point and guidance to services and advice.</p> <p>Finally, it must be remembered that the quality of SME participation is also linked to the presence of particular priorities suited to their needs.</p>	<p>of the monitoring of the SME participation in FP6</p> <p>Monitoring report of SME participation in the Sixth framework Programme by summer 2003</p>
3c	The Member States and the Candidate Countries, with the support of the Commission Services, should briefly examine and define the conditions necessary for high-quality NCP activity. The Commission should then support the development of a system for ensuring quality of such NCP services.	Annual Self-Assessment and the Annual Reports	<p>The Commission Services agree with this observation and believe that stimulating intensive training of National Contact Points (NCP) and the exchange of best practice will be efficient ways of raising effectiveness and thereby supporting potential participants (in particular SMEs) in the 6th Framework Programme. The Commission has set out new principles, structure and training of new NCPs for the 6th Framework Programme. The Commission Services used the transition period between 5th and 6th Framework Programmes to promote awareness amongst NCP of the new arrangements and support relevant training.</p> <p>A large number of NCPs have participated in the project TRANSTRACC (Transnational Training and Accreditation of SME NCP). The aim of which was to encourage the support activities and to generate a best practice guide. All partners have evaluated the activities of their NCP and a majority have implemented ISO 90001:2000 or EFQM certification to formalise the best practice activities and also to encourage continuous improvement within the organisations. This has benefited standardisation of working practices, the improvements of skills, the development of networking methods and closer contacts with other NCP.</p>	Revision of principles, structures and training of NCPs 2002

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
3d	The Commission Services should undertake an examination of university-industry relationships in the context of EU funded research projects and commercialisation of the outputs of such research. The Commission Services should then indicate a number of principles and associated operational policies to improve the commercialisation of such research.	End 2003	<p><i>Examination of university-industry relationships</i></p> <p>Some general aspects will be addressed in the Communication from the Commission foreseen 2002/beginning 2003 on the role of universities in Knowledge Europe at the crossroads of research, education and innovation.</p> <p>Some specific work in this area is already underway. The Commission has negotiated a contract on 'access to private innovation financing and tools for better knowledge exploitation', for the creation of a network of industrial liaison and technology transfer offices linked to universities and research institutes. The purpose of this network will be to examine university-industry relationships and the commercialisation of outputs of research. The work will involve taking a lead in the collection and dissemination of good practice and improved tools for research commercialisation., The network is expected to run from September 2002 through September 2006.</p> <p>The link between universities and industry will also be addressed in the 5-year assessment of the Framework programme and the preparatory studies linked to it as from 2002.</p>	<p>Communication end 2002/first quarter 2003</p> <p>First results of specialist network expected by end 2003 and ongoing after that.</p> <p>Report of an Expert Group on good practices regarding IPR arrangements in Industry/University collaboration expected in April 2003.</p> <p>Preparatory study of the 5-year Assessment of the Framework Programme – 2002 – 2003</p>
3e	The Commission Services should seek 1) To create stronger synergies between the Innovation Programme and the Thematic Programme Areas and 2) To better disseminate the results from innovation studies and projects to the Commission Services responsible for and the SMEs participating in the thematic programmes.	Annual Self Assessment	<p><i>Stronger synergies between Innovation/thematic areas</i></p> <p>The Commission Services take note and agree that there is a need to create stronger synergies between the Innovation Programme and the thematic programmes. It is expected that experience built-up during the 5th Framework Programme will help to strengthen interactions between the services, especially in the context of the 6th Framework Programme.</p>	Innovation dimension of RTD projects has been strengthened in FP6 by encouraging consortia to include "innovation related activities" within a project proposal.

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			<p><i>Better dissemination of results of innovation studies and projects</i></p> <p>The dissemination within the Commission Services of the results of Innovation Projects has already started through the Innovation Co-ordination Group. A self assessment of the activities of the innovation Coordination Group has been launched. In all cases responsibility for the follow-up step rests with the project officers and the projects of the thematic programmes. Two main approaches are considered for external dissemination of results:</p> <ul style="list-style-type: none"> • electronic distribution and facilitation of use - a major overhaul of the presentation of all innovation activities on the CORDIS server has already started and a new 'Innovation Policy Portal' is planned to be implemented in the course of 2002/03; • distribution of physical documents - the feasibility of a means to directly alert and/or offer documents to specific target groups will be investigated. The possibilities for further improvement include: electronic alert messages offered to targeted audiences and limited direct distribution of paper documents to identified end users. 	<p>First results of self assessment expected in October 2002</p> <p>Innovation Policy Portal 2002/2003</p>
	Women in Science			
4a	The incorporation of the 'Gender in Science' dimension into all relevant documentation (proposal forms, evaluation forms, evaluator selection, contracts, reporting, etc.) associated with the forthcoming FP6 Programme and into the development of any associated MIS systems.	Before FP6 Launch	<p>In the working groups preparing the implementation of the 6th Framework Programme, (in particular, defining standard documentation) the gender issue is being carefully considered. In particular:</p> <ul style="list-style-type: none"> • the draft model contract for all instruments to be used under the 6th Framework programme includes a specific mention of the contractual obligation for contractors to 	Model contract end 2002

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			<p>endeavour to promote equal opportunities between men and women in the implementation of the project;</p> <ul style="list-style-type: none"> the gender dimension will be made explicit in the common evaluation manual describing the procedures for evaluating proposals under the 6th Framework Programme. The gender issue both in terms of improving women's participation in science as well as the gender dimension in research will be taken up in the evaluation criteria, detailed in each work programme; In addition, some measures are foreseen which could help increase the participation of women in the evaluation process, e.g. the increased use of remote evaluation for the individual reading and assessment of proposals; (<i>see point 7</i>) the gender of all persons named in all documentation arising from the 6th Framework Programme must be specified and recorded in the new informatics system for the Programme. 	<p>Evaluation manual September 2002.</p> <p>Publication and documentation resulting from the 6th Framework Programme Ongoing activity</p>
4b	The 'Women in Science' Working Group should be strengthened. Each SP should have a brief, published plan for the development of gender balance within its own internal (own personnel) and external (project) activities. It should provide the "Women in Science" Unit with a brief annual report on its progress.	Annual Self Assessment	<p><i>Working Group</i></p> <p>Plans to strengthen the Working Group are under discussion.</p> <p><i>Plans for the development of gender balance</i></p> <p>Initiatives for the promotion of gender balance within <u>internal</u> personnel include the Commission Services annual exercise for setting objectives for recruitment and promotion of women into the A-grade category. The results are reviewed twice yearly and followed-up at both the level of the Directorates General and within each Directorate to ensure that objectives are well known and included into</p>	<p>Follow-up twice year</p>

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			<p>recruitment and promotion exercises;</p> <p>At the <u>external</u> level, Specific Programmes have undertaken awareness activities to promote the values of participation in science and research. Further progress to provide gender balance should be based on the outcome and recommendations of the gender impact studies commissioned by the Specific Programmes.</p> <p><i>Brief annual report</i></p> <p>The annual self-assessment of programmes reports on progress made at both the internal and external level. Results will be made available to 'Women in Science' Working Group.</p> <p>The Working Group on 'Women & Science' will publish a progress report on its activities.</p>	<p>Programme Self-Assessment Autumn 2002</p> <p>Women and Science Progress Report Spring 2003</p>
4c	The Member States and Candidate Countries with the support of the FP and DG Education should work together to ensure an effective European effort in 'Girls into Science and Research'.	Annual Self Assessment	<p>The gender dimension is taken into account in the co-operation between the Commission Services responsible respectively for research and education.</p> <p>An Expert Group will be launched on promoting gender equality in science in Central and Eastern European countries and the Baltic states.</p> <p>Co-operation with Member States and Candidate Countries is provided in the context of the "Helsinki-group" composed of representatives of their countries.</p>	<p>Expert group launched in September 2002 - final report end 2003</p> <p>Ongoing activity</p>
4d	The role of child-care funding should be explored in the context of increasing female participation in EU research activities at all levels – project participation, evaluation	Annual Self Assessment	The Commission agrees that progress needs to be made in this direction. Under the model contract for the 6 th Framework Programme, it may be possible to include some costs of child-care funding, (either directly in certain specific cases or by means of a direct contribution to	Model contract under 6 th FP 2002

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
	exercises, membership in programme committee, in EAGs, and in Monitoring and Assessment Panels.		<p>general overheads) which could be used, in part, to offset such costs.</p> <p>Strong encouragement through personal contact and other means such as widespread publicity is being given to attract more female scientists, technologists and industrialists to evaluation committees and ad-hoc advisory groups. Wherever possible, the Commission will promote the participation of women speakers in conferences, which it supports and / or organises. It should be pointed out however that the limited number of women currently involved in some fields of research is itself a difficulty for the successful implementation of the recommendation.</p> <p>It is also important that women's issues are dealt with alongside other social and economic factors in the context of a 'people focus' rather than creating a 'women only' corner.</p>	
4e	The intended "Gender Relevance" studies proposed in the Women in Science Work Programme should be rapidly progressed.		<p>The Commission Services agree and will promote, through the relevant internal Working Group, the development of such activities in the Specific Programmes.</p> <p>Progress will be monitored through various means, including particularly the 'Women and Science' Working Group.</p>	
	Developing EU Research Policy			
5a	The Commission should ensure a smooth launch of the new instruments accompanied by careful monitoring. A special monitoring panel of independent experts should be created to accompany, support, and advise the Commission services in that decisive process.	Annual Report	<p><i>Smooth launch of new instruments</i></p> <p>The Commission has taken measures to ensure the recommended smooth launch. These include:</p> <ul style="list-style-type: none"> • the timely elaboration of working papers, available on the web for discussion; • the presentation at seminars in Member States; • the launch of a call for expressions of interest dedicated to the new instruments – the result of which has been 	Regular reporting on their application including in the Annual report pursuant to Article 173.

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
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			<p>more than 11,000 submissions from the European research community.</p> <p>The preparation of the model contract for 6th Framework Programme instruments is being carried out in full consultation with Member States and Newly Associated State representatives, which should help to ensure that participants from these countries are aware of the contractual provisions for the new instruments prior to their launch. In addition, a publicly accessible website has been established to ensure wider access to the working documents of the group.</p> <p><i>Network of Panels of independent experts</i></p> <p>In compliance with the provisions in the 6th Framework Programme an independent review of the instruments of the Programme will be organised in 2004.</p> <p>The IST Programme will carry out a preparatory study "Analysis via cases studies of the instruments used in the IST programme".</p>	<p>Independent review of instruments in 2004</p> <p>Start last quarter of 2002.</p>
5b	The Commission services develop a system of <i>small scale, short term</i> , internal analytic reports to support the operational Programmes and instruments. The reports would be aimed at quickly illuminating practical issues of concern at a cross-Directorate, Directorate or Head of Unit level.	Annual Report and to Five Year Assessment Panel	In terms of basic approach, the Commission has established an inter-service support structure to co-ordinate the launch of the 6 th Framework Programme and this structure will continue to monitor its implementation, including the new instruments.	Establishment of an internal support structure.
5c	The Commission Services should prepare a short note indicating 1) the general cooperation policy, which	Self-Assessment and Annual Report	<i>See point 5 d)</i>	

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
	has been agreed with the policy DGs for FP6, 2) the coordination mechanisms which have been agreed for the implementation of this policy.	Report		
5d	European Union Directives with a major scientific/technical focus should be accompanied by a paper, identifying any research requirements needed to support their development and sound implementation at a European level. This research priority paper would be subject to modification over time if necessary. A discussion should be held as to the applicability and possible operational arrangements for this recommendation between DG RTD and other relevant DGs. A brief position note, 'Supporting EU Directives with Scientific Research' should be made available.	End 2002	The Commission agrees with the Panel on the need to assure effective scientific support to design of Community policies, including Directives, and support to their implementation.	Work programme and launch by end-2002 Impact Assessment (ex-ante) standard for all policy initiatives as from 2003
5e	The new concept of integrating research and education and training activities should be actively developed as an important means for fostering innovation. The Panel would welcome a Communication on <i>Synergies between Research, Education, and Training</i> . The Programme Management should	End 2003 Annual	The Commission is already developing activities designed to strengthen the synergies between Research, Education and Training. This is done through different Working Groups. A common work plan has been established between the Directorates General responsible for education and research, with a view to real cooperation in the fields of education, universities and researchers' mobility.	

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
	prepare a short document indicating the general cooperation policy under FP6, which has been agreed with DG Education, and the mechanisms for its implementation.	Report	A Communication is planned to be adopted by the Commission end 2002/beginning 2003: <i>'The Role of Universities in "Knowledge Europe" at the Crossroads of Research, Education and Science'</i> .	Communication end 2002/beginning 2003
5f	The Commission should clarify the definition of a <i>'Centre of Excellence'</i> emphasising 1) the diversity of institutions in which excellent research is undertaken, 2) the increasing need for complementary research skills for many institutions, if an excellent research project is to be undertaken.	Annual Report	<p><i>Definition of a Centre of Excellence</i></p> <p>In response to this recommendation it is appropriate that three concepts involving "excellence" be clarified.</p> <p>The <i>'Centres of Excellence'</i> concept has only been used under the current INCO programme under the 5th Framework Programme. It was defined as an existing working unit, either independent or functioning within a locally established research organisation or own of the countries concerned, having its own specific research agenda and preferably distinct organisational and administrative boundaries. 34 Centres of Excellence were established in the Candidate Countries with the aim of helping to restructure the science and technology sectors of the countries concerned.</p> <p>The <i>'Networks of Excellence'</i> concept has been developed for the 6th Framework Programme. Their purpose is to strengthen and develop Community scientific and technological excellence by means of the integration, at European level, of research capacities currently existing or emerging across Member States or Associated States at both national and regional level.</p> <p>Finally, a pilot exercise is underway to explore the <i>'Mapping of Excellence'</i> in specific fields (nanotechnologies, biosciences, and economics).</p>	

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
No.	Description	Panel's requirement		
			The evaluation criteria in these different contexts vary according to the objective of the instrument, but all emphasise the need for diversity and complementarity.	
5g	The Commission ensures the setting up of adequate information and assistance structures along with an appropriate Programme Committee structure to work with Member States and Candidate Countries during FP6.	Annual Report	<p>The programme committee structure and functioning have been discussed with the Member States in the context of the adoption by the Council of the Specific Programmes under the 6th Framework Programme.</p> <p>The Commission has initiated a discussion process with Member States and Associated States to agree on revised guiding principles for establishing an improved National Contact Point (NCP) system for the 6th Framework Programme.</p> <p>The Commission emphasises that national governments are responsible for establishing, performance monitoring and quality assurance of their NCPs. The Commission will provide frequent training and permanent exchange of information on all aspects of the 6th Framework programme to National Contact Points nominated by Member States and Associated States.</p> <p>The discussion of the document on guiding principles has been finalised and adopted. The request for nominations is ongoing.</p>	<p>New programme committee structure (cf Commission declaration to SPs) autumn 2002</p> <p>Revised guidelines for NCPs and nominations Summer 2002</p> <p>Training sessions for NCPs planned for last quarter of 2002</p>

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

	FP Panel recommendation		Commission Services' Response	Services' Commitment (if any)
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	Management of the Framework Programme			
6	<p>A detailed 3–Year Operational Plan (<i>be established</i>) for the development, launch and initial migration to the MIS.</p> <p>The Director General of DG RTD follows this MIS Operational Plan and ensures its successful delivery. Given that all new instruments and procedures should soon be established, a full 'user needs' specification should be finalised by end-2002.</p>	<p>End 2000</p> <p>Annual Report</p>	<p>An operational plan for the development, launch and initial migration to a new 6th Framework Programme web-based informatics system to be used by all Research Directorates General was established in October 2001. At the same time an interservice 6th Framework Programme IT Project Office was created to oversee its execution.</p>	<p>See 6th Framework Programme IT websites http://intranet-rt-d/fp6it/fp6_it.htm http://europa.eu.int/comm/research/fp6/it-system/index_en.html</p> <p>User specification end june 2002</p>
	Electronic Submission & Evaluation			
7	<p>Develop an effective electronic proposal submission system before the launch of FP6.</p> <p>(A) short preparatory study (<i>should be prepared</i>) be on the requirements</p>	<p>Before launch of FP6</p> <p>By end 2002</p>	<p><i>Electronic proposal submission</i></p> <p>A call for tenders for the development and operation of a new electronic proposal submission system (EPSS) was launched on 2 February 2002 in conjunction with that for the extended Evaluation Service Provider. This makes</p>	<p>Proposal System operational by July 2003</p>

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

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	<i>be prepared</i>) be on the requirements and limitations of an efficient and user-friendly electronic support for the evaluation system.		<p>the extended Evaluation Service Provider. This makes provision for the electronic submission of proposals both on-line via the Internet and on CD/diskette. The call for tenders makes provision for a full service back-up to enable operation 24 hours per day, 7 days per week with a multi-lingual Help desk for users available from 07.00 to 22.00 weekdays and 08.00 to 17.00 on Saturdays. Contracts were established by summer 2002</p> <p><i>Preparatory study</i></p> <p>The suggested preparatory study is unnecessary. The anticipated new electronic proposal submission system (see above), will be accompanied by a service provider for support to evaluation logistics. The contract specifications for this service include a requirement for developing an electronic support to the proposal evaluation process which can be used both within the central evaluation facility in Brussels and on-line by experts working from home or their place of work.</p> <p>The calls for tender for this service are closed and the contractors have been selected. The system should be operational by early 2003 for the first evaluations under the 6th Framework programme.</p>	Electronic evaluation system operational early 2003
	Time-to-Contract & Timetable			
8	The Commission services should analyse the component periods of the <i>Time to Contract / Time to Payment</i> process, indicating clearly periods, which are the responsibility of 1) The Commission and Commission services, 2) The Programme Management 3) The Contractors. By	By End 2002	The Commission Services will proceed with an analysis of events and procedures involved in the time to contract process identifying the responsibilities of the actors involved in this process. It is hoped to complete this review by the end of 2002.	Review completed by end 2002

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

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	<p>Management, 3) The Contractors. By end 2002, the Commission services should deliver the analysis along with a proposal to the FP6 Programme Committees to eliminate all unnecessary steps and delays.</p> <p>Each Call for Proposals is accompanied by an indicative timetable of critical dates up to 1st payment of successful applicants.</p>	Immediate	<p>It is the intention under the 6th Framework Programme to include more information in the calls for proposals relating to the timetable up to the first payments which successful applicants would receive. This could include, for example, the procedural milestones from the call's closing date.</p>	<p>Information to programme committees last quarter each year</p>
	Communications / Publications Policy			
9a	<p>The FP creates an accessible central data store in which one copy of all FP5 Final Project Reports (Research, Assessment, Monitoring, Evaluation, etc.) is deposited either in paper or (preferably) in electronic form.</p> <p>The Information and Communication Unit, in conjunction with SPs, draws up a project-centred publications policy consistent with its own more general policy. This sub-policy should include the provision for an annual plan of synthesis and analysis reports and publications to be undertaken.</p>		<p><i>Framework Programme data store</i></p> <p>The Commission acknowledges that there are weaknesses in the system. An internal control standard has been set for an archiving system with specific deadlines and minimum requirements.</p> <p>DG RTD has begun a project on this issue in co-operation with the EC Office of Publications. The aim is to set up an electronic archiving system providing the public with an easy access to DG RTD publications.</p> <p>In the specific area of evaluation, work is underway to develop a database for archive and retrieval.</p> <p><i>Project centred publication policy</i></p> <p>The Commission Services have set out a policy for 'electronic' publication of project-centred documents. This would serve the dual purpose of meeting the requirements of both EU research policy and being consistent with the</p>	<p>Compliance with internal control standard</p> <p>Prototype by end 2002</p>

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

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			Commission Reform process. The aims would be to address general issues and policies and to inform a wide but educated public, including the press, on European research results and initiatives.	
9b	<p>The FP management reviews its communication and marketing strategies in order to develop a more user oriented approach.</p> <p>The Annual Report is further developed in a way that Member States and Candidate Countries can compare their performance in support of their FP participation strategies. In addition, the Commission services provide on a regular basis adequate data on the implementation of the Programmes.</p>	Annual Report	<p><i>Communication strategy - user oriented approach</i></p> <p>The Commission's communication strategy on RTD aims to provide information on European Union research initiatives, policies and Programmes, aimed at mainly scientific and industrial professionals – so as to stimulate their participation in these activities and make the results of these activities known.</p> <p>'CORDIS' is the major source of information on the Framework Programme. It is under review with the aim of increasing its user friendliness. At the same time a complete reorganisation of the research web site on 'Europa' has begun. It is intended it will evolve towards being a genuine 'portal' that will provide a wide range of information on European research (wherever it is managed in the Commission, and to a lesser extent even outside the Commission) to a range of visitors with varying interests and needs.</p> <p><i>Annual report</i></p> <p>The comparability of national data contained in the Annual Report can be improved, so as to include information on research funding and thus enable more thorough appraisal of national performance in the Framework Programme. This however can only take place within the limits imposed by the new measure of autonomy and flexibility foreseen for the participants, notably in the new instruments, which will not provide any breakdown of the overall budget</p>	Increased user friendliness of CORDIS and research sites on EUROPA

2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE

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			between participants of the research projects. The provision of data on Programme implementation should remain an annual activity – and not become more frequent – both in order to avoid overburdening the reporting system beyond manageability and in order to ensure adequate representativeness and comparability of the data provided.	Improved data comparability (national funding, cumulative figures), starting with the 2003 Annual Report (on RTD activities conducted in 2002).
	Project Monitoring & Evaluation			
10	A basic set of common project monitoring and evaluation principles and associated implementation guidelines be drawn up. The principles and guidelines should be distributed to all Heads of Unit and Scientific Officers.	By launch of FP6	<p>A number of guidelines concerning the preparation of proposals and managing contracts are foreseen, such as evaluation guidelines, negotiation guidelines, financial guidelines, consortium agreement guidelines, IPR guidelines etc.</p> <p>The forthcoming evaluation manual will set out guiding principles, the role of independent experts, and the different actors involved including external experts.</p> <p>Project monitoring will be carried out on a more systematic basis by Project Technical Assistants (PTAs).</p>	<p>Guidelines Autumn 2002</p> <p>Evaluation Manual Autumn 2002</p>
	Project Impact			
11	The FP Management publishes an Impact Assessment Policy for FP4-FP5-FP6 projects including principles, guidelines, and a “tool box” of support materials. This material should be in the hands of all Unit Heads by the launch of FP6	By Launch of FP6	A document on overall policy and programme evaluation strategy for 2002-2006 will be presented by the Commission by end 2002. This will set out the evaluation principles, methods and timing and address the different types of evaluation foreseen: monitoring; 5-year assessment; mid-term review of instruments; ex-ante evaluation; and impact assessment.	Evaluation Strategy document - end 2002
	Human Resources			
12	The FP Management draws up an <i>outline</i> Human Resources Development plan for the ERA and FP6, outlining philosophy, training, personnel evaluation, and career	Annual Report for 2002	<p><i>HRD plans</i></p> <p>Several measures are under way in the Commission to strengthen the Human Resources Management (HRM) of the Directorates General in the pursuit of the Framework</p>	

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

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	development systems linked to improvement of delivery of ERA / FP6.		Programme and European Research Area objectives and these could be reported in the Annual Report for 2002. Among such measures there are for example, the new recruitment system; the development of the career guidance function; the introduction of a very comprehensive job description exercise; the training plan for the Directorates General; and the follow-up of the mobility guidelines and of the December 2001 Commission Communication on the convergence between research staff and operating budget staff. However while the ongoing design and implementation of the Commission reforms in the area of human resources is in progress, it will not be possible to develop comprehensive Human Resources Development (HRD) plans.	
	Fusion			
13	The European Commission prepares for and actively promotes a decision on, the "Next Step" (ITER) in Fusion research as soon as possible. This includes an enlarged European mandate of negotiations with its international partners, a further development of European sites for ITER and a strengthened management structure for the Fusion Programme.	Annual Report	<p><i>Preparations for International Thermonuclear Experimental Reactor (ITER)</i></p> <p>The Commission's proposal for the Specific Programme (Euratom) of the 6th Framework Programme foresees that a decision on the joint implementation of ITER could be sought in the period 2003-2004, so that construction could effectively start during the period 2005-2006.</p> <p><i>Negotiating mandate</i></p> <p>The Commission formally requested an extension of its negotiating mandate at the meeting of the Council of Ministers on 11 March 2002. This extension was granted by the Council on 27 May 2002, and enables the Commission to negotiate with the other ITER partners on siting and cost issues. The role of the European delegation in the negotiation process has been strengthened by the extension of the negotiation mandate.</p>	<p>Anticipated decision to proceed with ITER Construction start 2005-2006</p> <p>Negotiating mandate May 2002</p>

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

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			<p>of the negotiation mandate.</p> <p><i>European sites</i></p> <p>In January 2002, the French Minister for Research asked the EU that the French proposal to realise ITER in Cadarache be considered, and requested that the conditions under which a European site could be proposed for ITER construction be defined. Technical work on Cadarache as a possible site has progressed considerably and has led to the launch of the licensing procedure with the French authorities. The case for a European site for ITER has been further strengthened by the notification of a decision by the Spanish Government to offer a candidature for the European siting of ITER at Vandellós, near Barcelona. The Commission is supporting the technical studies for possible Spanish and French sites.</p> <p>The level and nature of EU participation in ITER funding will depend on the outcome of the negotiations with the international partners, and on the location of the ITER site. If ITER was located in Europe, the EU participation would also include contribution to the costs to be borne by Europe as a Host Party.</p> <p><i>Management structure for ITER</i></p> <p>The negotiations currently taking place between the ITER partners concern the juridical and institutional conditions of the establishment of an ITER Legal Entity and negotiations for its joint implementation. The Commission will determine the most appropriate form for a European Legal Entity, which will have responsibility for the European contribution. Such an entity will need a strong unified</p>	<p>Commission support to the technical studies of possible Spanish and French sites.</p>

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

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			management and organisational structure. The management structure within the Commission will be considered in the context of the overall management of ERA activities and the specific ITER needs. The prospect of implementing a fast track approach will be taken into account, subject to the budget in future Framework Programmes.	
	Programme Impact			
14	Each SP, which has not already undertaken an impact assessment of the completed projects, which it has funded, should do so. The assessments should use the common tools, which are to be provided. The tools and methodology may be adapted to SP needs, but the launch of the assessments should take place by early 2003.	Annual Report	<p><i>Current arrangements</i></p> <p>Two aspects are to be considered - impact assessment as a tool for <i>ex-ante</i> planning and <i>ex-post</i> assessment. As regards <i>ex-ante</i>, an important new initiative was launched with the 'Better Lawmaking' package, adopted by the Commission on 5.06.2002. Part of this includes the Communication on <i>ex ante</i> impact assessment, which requires that, gradually from 2003, all major initiatives adopted by the Commission will require an impact assessment.</p> <p>Concerning <i>ex-post</i> assessment, the Commission's current strategy for research evaluation in general and the approach to assessment of research impact in particular, was established in 1995. At a strategic level, impact issues are dealt with by the 5-year Assessment of the Framework Programme covering all of the Specific Programmes, while these also conduct individual impact assessments in their own research areas.</p> <p>A forthcoming Commission paper will set out a new strategy for research policy and programme evaluation. (<i>see point 11</i>) The strategy paper will encompass the question of Specific Programmes' impact assessment.</p>	Evaluation strategy document by end 2002

**2001 FRAMEWORK PROGRAMME MONITORING PANEL RECOMMENDATIONS
COMMISSION SERVICES' RESPONSE**

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	Monitoring Recommendations			
15	<p>Commission Services should formally reply to a Monitoring Report within 3 months of its formal submission and in the format indicated. And publish the Report within the following month.</p> <p>Each SP should provide a follow-up to the FPMP Report using the structure indicated.</p> <p>The annual monitoring exercise should be visibly linked to each SP's quality improvement system, and be commented upon in the Annual Self-Assessment.</p> <p>Following the lines of the new approach, the Monitoring methodology should be further developed and adapted to the new requirements of FP6.</p>	Annual Self Assessment	<p>The Commission Services agree on the importance of the follow-up of monitoring analyses and recommendations and agree with the specific suggestions made. This implies that the Commission Services will develop the following approach in order to make the monitoring exercise more effective and efficient:</p> <ul style="list-style-type: none"> • the 3-month deadline recommended for formal responses and subsequent electronic publication one month later will serve as a useful target; • a follow-up of recommendations at European Research Area, Framework Programme and Specific Programme level - first at the time of the launch of the subsequent year's monitoring (in the self-assessment) and approximately a year after. This would fall into line with the Commission's management cycle including the timing of the Annual Activity report. 	Improved Monitoring methodology incl. follow-up