

**2002 SYNTHESIS MONITORING REPORT ON THE
ACTIVITIES CONDUCTED UNDER THE EUROPEAN
RESEARCH AREA AND THE EC / EURATOM
RESEARCH FRAMEWORK PROGRAMMES**



FINAL REPORT
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This Report is part of the series of the annual monitoring reports relating to the EC Framework Programme and the EURATOM Framework Programme, and their constituent Specific Programmes as well as to the European Research Area (ERA).

The Commission has over the years made several attempts at increasing emphasis on the evaluation of Community RTD activities. Furthermore, with the overall reform of the Commission, evaluation activities were placed in the heart of the decision making process.

In line with this continuous effort for improvement, a revised programme monitoring scheme was introduced in 2001, based on the system launched in 1995 which involved independent external experts in the monitoring activities. The new mechanism aims at a better synergy between the monitoring of ERA, the Framework Programmes and the Specific Programmes

The aim was to enhance the timely response by the Commission services to the recommendations produced by the experts, by attaching still more attention to their follow up, thus providing the basis for a quick response mechanism to policy and programme developments.

This report is the fourth covering the Fifth Framework Programmes; the report also highlights progress in relation to implementation of ERA as well as to the launch of the Sixth Framework Programmes and results and impact of previous Framework Programmes. The report aims at helping to reinforce the establishment of best practices and identify the scope for further improvements in implementation of policy and programmes.

The report consists of two parts:

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

Wilhelm Krull (Chairman)

Patries Boekholt (Rapporteur)

Bruno Amoroso

Giampiero Giarda

Karel Klusacek

Helga Kromp-Kolb

Sören Norrby

Ana M. Pelacho

Judith Stammers

Daniel Thomas

Arto Timperi

Giorgio Tuninetti

James Walsh

Georges Wanet

Part B: *Responses of the Commission Service to the external monitoring report.*

**PART A:
REPORT OF THE 2002 FRAMEWORK PROGRAMME MONITORING
PANEL**

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ABBREVIATIONS

5YA	Five Year Assessments
ABM	Activity Based Management
ACC	Associated Candidate Countries
AMP	Annual Management Plan
APS	Annual Policy Strategy
AS	Associated States
CC	Candidate Countries
CORDIS	Community Research and Development Information System
COST	European Co-operation in the Field of Scientific and Technical Research
CREST	Scientific and Technical Research Committee
DG	Directorate General
EAG	External Advisory Group
EC	European Commission
EFDA	European Fusion Development Agreement
EIB	European Investment Bank
EIF	European Investment Fund
EoIs	Expressions of Interest
ERA	European Research Area
ESD	Environment and Sustainable Development
EU	European Union
EURATOM	European Atomic Agency
EUREKA	Co-operation between European firms and research institutes in the field of advanced technologies
FP	Framework Programme
FP3	Third Framework Programme
FP4	Fourth Framework Programme
FP5	Fifth Framework Programme
FP6	Sixth Framework Programme
GDP	Gross Domestic Product
GMES	Global Monitoring for the Environment and Security
IHP	Improving Human Research Potential and Socio-Economic Knowledge Programme
INCO	The International Role of Community Research Programme
INTAS	International Association for Promotion of Co-operation with Scientists from the Independent States of the former Soviet Union
IP	Integrated Projects
IPR	Intellectual Property Right
IRC	Innovation Relay Centre
IRMS	Integrated Resources Management System
IST	Information Society Technologies Programme
ISTAG	Information Society Technologies Programme Advisory Group
IT	Information Technology
ITER	International Thermonuclear Experimental Reactor
JRC	Joint Research Centre
KA	Key Action
KA4	Key Action Four
M&T	Measurement and Testing
MS	Member States
MIS	Management Information Systems
NAS	Newly Associated States
NCP	National Contact Point

NoE	Network of Excellence
NNE	Non-Nuclear Energy
OECD	Organisation for Economic and Cooperation Development
OMC	Open Method of Co-ordination
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 Programmes
SPP	Strategic Policy Planning
TIP	Technological Implementation Plan
TMR	Training and Mobility of Researchers
TSER	Targeted Socio-Economic Research
VCF	Venture Capital Fund
WP	Work Programme

1 Executive summary

European research policy is operating in a rapidly changing social, environmental and technological context, bringing a whole set of challenges for European research. The political goal of developing the European Union (EU) into the most competitive knowledge-based economy in the world by 2010, strongly indicates the willingness of Europe's political leaders to respond to the changes and challenges.

The Sixth Framework Programme (FP6) and Specific Programmes (SP) Decisions were adopted in 2002. Simultaneously the European Commission services managed FP5 which had its final calls for proposals in 2002. This meant that on the one hand the Commission had to deal with **change and transition**, preparing for FP6 and adapting the policy approaches and the Commission's organisation to ERA objectives. On the other hand the Commission had to **maintain and develop existing management practices** to implement a final set of activities within FP5.

The recommendations of the 1999-2001 Monitoring Panels ranged from very specific programme management issues to very broad strategic policy issues. They tended to address issues, which require structural and medium to long term changes in the operations of the Commission. The analysis of consecutive monitoring reports in FP5 shows that the Commission often responds by pointing out that work on a particular issue is in progress, studies are being prepared, discussion papers are to be published, or expert groups will be formed. Organisational inertia, work overload and legal constraints prevent the Commission from addressing many of these issues from one year to another. These organisational changes apparently need a long preparation time.

The 2002 FP Monitoring Panel makes the following recommendations:

- 1 Despite the launch of a Task Force preparing the New Instruments for FP6 there is still widespread confusion amongst the user community concerning the exact arrangements and the Commission's perception of networks' of excellence and integrated projects. Continued efforts, e.g. by establishing a special support group, should be made to disseminate coherent information on these new instruments
- 2 The Commission should clearly define the role of the various advisory groups, which picked up their work in the second half of 2002. So far, there are conflicting perceptions whether they have a role to play in the strategic planning, and whether they can make an impact on the implementation of the respective activities
- 3 In particular with a view to making more efficient and effective use of the existing infrastructure for research in Europe, there is a need for better co-ordination, and especially for co-financing of large facilities. This is one area where the European added value of the ERA concept could be demonstrated
- 4 The Panel recommends that the Commission's human resource management should be linked more closely to the Activity Based Management processes,

which the Commission has introduced in 2002. This will allow a better allocation of staff over the many activity areas and over different types of tasks (from administrative to scientific tasks). This could help to alleviate understaffing in some parts of the Commission, to reinforce the interaction between scientific officers and the user community, and to improve the overall efficiency of the organisation

- 5 One of the crucial issues across all Specific Programmes seems to be the problem of disseminating the research results. There are no accessible archives for finalised reports. Dissemination reinforces the interaction between producers and users of new research results, and thus supports the potential exploitation of publicly funded research. The Commission should address this issue urgently, not only for FP6, but even more urgently for the flood of FP5 contracts that will reach completion in the near future. This links to a wider issue of stimulating a better public awareness of research, which the Commission should continue to support
- 6 The Panel welcomes the fact that the Commission has reinforced its evaluation tasks, as impact assessment remains a weak point. With impact assessment the Panel refers to the socio-economic, as well as to the scientific and technological impact of the Commission's activities. However, impact assessment should not be considered as a one-off activity linked to the FP's Five Year Assessment exercises. In order to make robust observations this requires a systematic approach. Therefore the Panel recommends that this approach starts with setting clear objectives for all activities, making ex-ante assessments of expected impacts, defining impact related performance indicators and developing the data collection methods to measure impacts. This philosophy needs to be taken on board in all parts of the Commission dealing with RTD
- 7 The Panel welcomes the Action Plan for supporting CCs and the initiatives to be launched under this plan. We recommend that communication efforts to inform the potential user communities in the CCs, as well as targeted actions to increase the competence levels in the CCs are kept at a high level during FP6
- 8 The role of SMEs in FP6 needs clarification and rethinking. It seems that the overall target to have a 15% participation of SMEs, should allow for variations between different priority areas, as the participation of SMEs is not evident in all areas of research. In many cases a sub-contracting role might be more appropriate than full participation in for instance the integrated projects. An ill-considered approach to the 15% target might also endanger the quality of research performed
- 9 The four year period for FPs seems too short to really achieve the medium to long term objectives that the Commission has set itself by adopting ERA. The Panel recommends to rethink this four year structure and replace it by a six to seven year Framework Programme, which sets out the broad lines of research priorities. Within this longer term framework, it is imperative that flexibility remains in adapting work programmes to changes in the needs of science, technology, and society. In this context the Commission needs also to rethink how it will acquire the necessary strategic intelligence to make these adaptations. Part of this strategic intelligence would need to come from a transparent system of advisory groups, which are in touch with the major scientific, economic and societal developments

10 The annual monitoring exercise seems to have developed into a "routine operation" with Monitoring Panels choosing to cover a wide range of both managerial and strategic issues, regardless of their annual mandates. The exercise needs to be transformed into a more powerful tool. We recommend that the cycle of monitoring is brought in line with the programme life cycles of the Framework Programmes, where the monitoring exercises provide the programme management with feedback with a more consistent focus on a small number of major issues in effective and efficient programme management, and when appropriate, strategic issues. An alternative option could be to reconfigure the annual monitoring exercise as an essentially internal management process and to complement it with external reviews, especially a mid term review. The Panel also recommends that in future the JRC is monitored alongside the FP/ERA monitoring exercise, using the same approach. If the Commission chooses to keep this a separate exercise, the outcome should not be included in the FP/ERA Monitor Report.

2 Introduction

At the beginning of the 21st Century, there is widespread agreement that we are experiencing an unprecedented pace of social, environmental, and technological change. The ongoing transition in the international division of labour from hands, tools, and machines to brains, computers and laboratories as well as the increasing importance of electronic communication for international networking, make it imperative for research policy-makers as well as public and private funders of research and technological development (RTD) to enter into a process of assessing strengths and weaknesses, reviewing funding modes and institutional structures, and subsequently adapt to the changing environment of knowledge production.

The contribution of RTD to economic growth and competitiveness has become vital to the socially, environmentally, and culturally sustainable development of Europe. The quality and accessibility of new knowledge and relevant RTD expertise are decisive for the future well-being of our societies. This puts even more emphasis on the training of excellently qualified researchers who can take over leading functions not only in our universities and research organisations, but also in business and in wider sectors of society. The provision of a continual flow of highly qualified researchers must increasingly be seen as the most important means for the transfer of expertise out of publicly funded research projects in universities and other research organisations.

The continuing RTD gap between the EU and particularly the US is another concern that asks for a sophisticated policy approach. Various European policy reports show that this gap is mainly due to differences in business R&D intensity, but they also point towards a widening input gap in higher education and research. Encouraging industry to boost their R&D investments and to collaborate with researchers in the publicly financed sector, asks for both direct RTD-related policy actions, but particularly for improving the general framework conditions to create an environment in which knowledge intensive business can flourish.

Against this background of rapid changes and numerous challenges the Lisbon European Council in March 2000 launched the creation of a European Research Area (ERA) which in due course became “the main reference framework for thinking on and discussion of research policy issues in Europe, as well as a reference point at international level.”¹ The political goal of developing the European Union (EU) into the most competitive knowledge-based economy in the world by 2010 set in the Lisbon declaration, and the complementary objective defined at the Barcelona meeting in March 2002 of increasing RTD investments across the EU from today’s 2 % of gross domestic product to 3 % by 2010 strongly indicate the willingness of Europe’s political leaders to respond to the changes and challenges listed above.

¹ The European Research Area: Providing New Momentum. Strengthening – Reorienting – Opening up new perspectives. Communication from the Commission of the European Communities, COU (2002) 565 of 16 October 2002, p.3.

The European Community's Sixth Framework Programme (FP6) is an important tool for the realisation of ERA. Further to the changes resulting from the necessity of contributing to the achievement of ERA, the missions of the FP remain the same: support to European industrial competitiveness, reinforcement of its technological and scientific basis and support to other Community policies.

The Framework Programme Decisions were adopted in June 2002, and decisions on the Five Specific Programmes in September 2002. The launch of FP6 followed in November 2002, accompanied by a large launching conference in Brussels. The first calls for proposals were published in December 2002. Launching this new Framework Programme was preceded by an impressive amount of preparation by the European Commission services: new work programmes had to be written, administrative and legal arrangements for the newly introduced instruments to be made, new management information systems and information technology (IT) tools designed and implemented, among many other preparatory tasks.

Simultaneously in 2002 the European Commission services managed the Fifth Framework Programme (FP5) which had its final calls for proposals in 2002. As part of the normal workload, Programme Officers monitored and supervised a vast number of contracts (including some originating from FP4).

Thus, it is not an overstatement to suggest that 2002 was an extremely busy year, where on the one hand the Commission had to deal with **change and transition**, preparing for FP6 - which is in some ways radically different from FP5 - and adapting the policy approaches and the Commission's organisation to ERA objectives. On the other hand the Commission had to **maintain and develop existing management practices** to implement a final set of activities within FP5. Finding the balance between transition and coping with ongoing management obligations, has proven to be difficult.

Amidst this turbulence, the European Commission decided to implement a reorganisation of the Research Directorates in order to fit the organisational structure better to the objectives of ERA and FP6. This has meant a reshuffling of units and Commission staff, while at the same time having to deal with the changes and challenges mentioned above. Whereas DG Research had started a first reorganisation along the lines of ERA in 2001, the 2002 reorganisation in DG INFSO happened quite late, thus disrupting the preparation process of FP6.

Both the achievements and problems in the year 2002 should be seen in this rapidly changing context.

2.1 Achievements in 2002

The year 2002 has been exceptionally busy since the Commission staff among many other activities had to:

- Ensure the transition to fit Commission's RTD activities with the new ERA policy objectives as an overarching concept for research policy
- Manage the final year of FP5 and deal with all aspects of respective calls for proposals
- Monitor ongoing contracts from FP4 and FP5
- Prepare new work programmes for FP6 including implementation documents
- Define and get acquainted with the details of the new instruments
- Prepare completely new Guidelines for Proposal Evaluation, Infopacks and Guides for Proposers
- Process over 12.000 Expressions of Interest as an input to the work programmes
- Manage the reorganisation of the Research DGs and adjust to new structures
- Adapt to new IT systems for FP6.

In terms of strategic policy issues, some major challenges were faced in 2002 as well:

- Ensuring the Council and European Parliament Decision on FP6 and the Council Decision on the Specific Programmes
- Implementing ERA and adjusting FP6 to its objectives
- Responding to the Barcelona target to increase Europe's R&D investment with the aim of approaching 3% of GDP by 2010
- Dealing with the enlargement and the full integration of the Candidate Countries in FP6.

In 2002 a total of 4112 contracts were signed by the Commission, involving over 22.000 contractors, according to the following repartition (Table 1):

Table 1 Number of contracts signed in 2002

Programme	#
Quality of Life	568
IST	823
Growth	557
Energy and Environment	
- Environment	270
- Energy	213
Nuclear Energy	173
INCO	346
Innovation / SMEs	101
IHP	1061

Type	#
Accompanying measures	864
Support of Networks	358
Shared Cost Actions	1922
Fellowships	921
Concerted Actions	47

The Monitoring Panel is impressed by the way the Commission staff have dealt with all these activities and changes and by the progress that has been made in many respects.

3 Analysis and Findings

3.1 Analysis and synthesis of recommendations and their follow-up from the 1999 to 2001 monitoring exercises

One of the 2002 Monitoring Panel's mandates is to analyse and synthesise the recommendations from the 1999 to 2001 monitoring exercises. As FP5 is now followed up by FP6 this is a good moment to see what progress has been made on issues that consecutive monitoring panels have identified as points for improvement. Annex 5.5 provides an overview of key recommendations in the period 1999 –2001 and observations on the Commission's responses.

Reviewing the recommendations of the consecutive Monitoring Panels shows that their scope has been very wide, ranging from recommendations on very practical programme management issues to long term strategic policy issues.

Recurring recommendations of the 1999, 2000 and 2001 Framework Programme Panels are focused on a number of key issues.

- The appropriateness and efficiency of the Commission's management processes, particularly time-to-contract, and strategic planning issues. Part of this problem lies in the deficiency of the internal Management Information Systems and IT support tools to facilitate project level monitoring as well as strategic management decisions. More structural issues are the need for an effective decentralisation of financial control and delegation of responsibilities to lower levels in the hierarchy, in order to speed up decision making processes
- Closely related to this issue is the development of a Human Resources Strategy and a training plan for the Commission's staff. The problem of understaffing and extreme workloads has been raised in almost all Monitoring Reports
- The need to improve the dissemination of RTD results was particularly addressed in the 2001 Monitoring Report
- Encouragement and support for the participation of SMEs in FP5 (and analysis of the consequences of the new instruments on SME participation in FP6)
- Making information more transparent to users, and in several respects more user friendly (possibly through better equipped NCPs and electronic submission)
- Establishing the socio-economic impact of FP5 and the development of impact assessment methods. The newly introduced TIPs are met with many critical views in relation to their appropriateness and user friendliness
- The lack of a coherent strategy for international co-operation has been raised by all Monitoring Reports

Other recommendations that have been put forward more than once in the FP5 Monitoring Panels are:

- Strengthening of gender awareness and ‘Women in Science’ activities (1999 and 2001)
- Improve the follow-up system of annual monitoring exercises (1999 and 2001)

As FP6 approached, more recommendations were made to prepare well in advance, particularly on managerial aspects of launching and implementing FP6 and managing the transition.

The Commission’s responses to the Monitoring Reports were usually made public with a considerable time lag (6 to 9 months after the presentation by the Panel). The analysis of consecutive Monitoring Reports in FP5 shows that the Commission often responds that work on a particular issue is in progress, studies are being prepared, discussion papers are to be published or expert groups will be formed.

It seems that the monitoring exercise has become an annual routine operation to which the Commission routinely answers. Some of the key issues have been addressed seriously only in the design and preparation of FP6. This is partly due to the fact that many recommendations were of a strategic nature and could only be picked up in the context of the next FP, but it also raises the question whether an annual monitoring exercise really has added value both to the Commission services and to the users and stakeholders.

On a number of the above mentioned issues, the Panel believes that adequate progress has been made over the years:

- The Commission is taking a more systematic approach in its strategic management by introducing Strategic Planning and Programming Cycles and Activity Based Management (see Section 3.2.1)
- The Commission has reinforced its support and exchange of information to NCPs, particularly in FP6, and in favour of Candidate Countries
- For FP5 the Commission has not succeeded to implement IT systems for programme and project management that can be used across Research DGs (DG Research, DG INFSO, DG Enterprise, DG TREN and DG Agriculture and Fisheries) and even across directorates within one DG. The Panel is however pleased that an enormous effort has been made to develop an integrated IT system for FP6 and designed to last beyond FP6. The full system is currently not operational yet, so the Panel can not comment whether these efforts have led to the expected results. A backward compatibility with project management for FP4 and FP5 is not possible
- The Commission has launched several pilot initiatives to improve Human Resource development and introduced staff reforms on a Commission services-wide basis
- The Gender awareness activities have received a strong public profile in FP5, evaluation and expert panels have a better gender balance and gender related statistics have been approved.

There are several issues where the Panel feels that insufficient attention has been paid to in the course of the years:

- Although FP6 has set an even more ambitious target than FP5, namely that 15% of the funds for FP6's thematic priorities should be allocated to SMEs, it is not clear how this target will be achieved as the new instruments apparently raise the entry barriers for SMEs. The Specific Monitoring Panel on 'Innovation and SME' is also concerned how under these circumstances the promotion of innovation will progress in the new FP6 and feels that attention to the non-technical aspects of innovation should remain an important element of FP6
- Impact assessment exercises have been stepped up in some parts of the Commission, however there is still no overall strategy to provide a state-of-the-art picture across the whole of FP5. The lack of reliable data on project and programme level, and subsequently also the lack of appropriate indicators remain obstacles for the upcoming Five Year Assessments. The Panel is however pleased that several evaluation studies have been commissioned to underpin the 5 Year Assessment (5YA) exercise and that the TIPs are currently being examined. A number of SP Monitoring Reports have pointed out that their design needs to be revised
- International co-operation, mainly rooted in the INCO programme, still suffers from a lack of coherent strategy, with regard to the content and implications of the international dimension of ERA. The SP Monitoring report concludes that the new concept of international cooperation in FP 6 – although meant to strengthen the international dimension of the Framework Programme - does not seem to be based on a comprehensive strategic approach because international co-operation is being addressed in very different ways and with quite diverse objectives in the three different routes for delivering it. It is also important that the Commission, given the complex relation between competition and co-operation, takes into account the competitive aspects of international co-operation with partners from outside the EU.

3.2 Monitoring of the implementation in 2002

3.2.1 Follow up of 2001 recommendations

The 2001 FP Monitoring Report consisted of 38 recommendations to the Commission. The recommendations were partly of a strategic nature, partly focused on programme management issues. The report addressed a fair number of issues which dealt with the preparation for FP6. The Commission's response was published eight months after the publication of the Panel's report in May 2001.

Many of the Commission's responses referred to activities already undertaken or ongoing, studies to be launched or finalised, or discussion papers to be published in the course of the year to come. Although this is partly due to the very nature of such follow-up activities, more attention should be paid to the responses in the next monitoring exercise in order to make sure that adequate action has been taken.

The remainder of this chapter discusses the major topics that have been addressed in the 2001 Monitoring Report and which are still ongoing issues in 2002. A summary of the recommendations 1999-2001 and comments on their follow up is given in Annex 5.5.

The implementation of ERA and the contribution of FP5/FP6 to ERA

FP6 and ERA are closely inter-linked as FP6 is considered as the main instrument for implementing ERA. The implementation of ERA is the subject of a separate Monitoring Panel (see 2002 Specific Monitoring Report European Research Area Activities). The aforementioned Communication of October 2002 gave an overview on progress achieved in the implementation of ERA.

Three years after the ERA initiative was launched, most Member States (MS) do not appear to be prepared to participate fully. This could prevent the programme from reaching its full objectives. However, there have been some notable achievements. The ERA Panel's conclusion is that the Commission must press the ERA forward through the operational activities, particularly benchmarking and networking. The political mandate to apply the Open Method of Coordination (OMC) will help the MS and Associated States (AS) greatly to move towards the goals of Lisbon and Barcelona. CREST is a principal forum through which the OMC will operate and it needs to be strengthened to fulfil this role effectively.

The involvement of EU regions in ERA activities is essential but the regional decision makers need to become more aware of the contribution they can make in advancing the ERA and the value to them in being associated with it. While the Directorate General RTD is taking the issue forward, more direct contacts with those working in the regions are needed.

Europe is rich in scientific and technological skills and produces one third of the world's scientific and technical knowledge, but laudable as this may be there is the need to bridge the gap between such knowledge and the application and innovation leading to the development of science-based European policies and commercial take up. Both will give European enterprises a competitive edge globally. An important factor in this respect is to increase awareness of the importance of IPR across the research community and to establish a climate throughout the ERA leading to closer links between enterprises, universities and public research organisations. The political agreement reached by the Competitiveness Council, which should lead to rapid adoption of a Community Patent's regulation and other associated steps, is a major advance in this respect and very important in an ERA context.

The objective of increasing EU research funding to 3% of GDP is applauded by the Panel. There are major difficulties to be overcome, nevertheless the Commission has entered into a constructive debate with national authorities, industry and the financial sector. A small but important step has been made through a co-operative agreement between the Commission and the EIB and EIF such that laboratories, universities, companies, and other organisations planning to participate or taking part in the FP, can seek financial support from the EIB, which will be complementary to the programme's grants. Under the same agreement the Commission and the EIB might

also fund RTD indirectly through Venture Capital Funds (VCFs). These opportunities need to be more widely publicized, particularly to SMEs. Although the Panel welcomes these new initiatives, there is some doubt in how far these instruments will be suitable for the needs of SMEs.

Mobility of researchers is an essential element in the development of the ERA and funding for training and mobility has nearly doubled in FP6 compared to FP5. The Commission has taken a number of important initiatives e.g. the development of a European Network of Mobility Centres. A number of obstacles still need to be removed before the uninhibited movement of researchers in Europe is achieved.

Management and implementation in 2002

The key challenge for the Commission is to translate its long term vision into a policy strategy, and to implement this strategy in its day-to-day work. In FP5 such a systematic approach of policy, strategy and implementation seemed to be missing and Monitoring Reports have repeatedly addressed this issue.

As part of the overall Commission reform, Strategic Policy Planning (SPP) and Activity Based Management (ABM) have been introduced as instruments for **policy planning and implementation**.² These are introduced to clarify objectives, identify actions, allocate resources to those actions and define performance indicators matching the objectives. This is envisaged to improve reporting and follow up of the Commission's efforts.

One year ahead, the Commission defines its Annual Policy Strategy (APS) setting out the major policy priorities, the key actions and resources. Thus in 2002 the whole SPP system has been implemented to plan for activities in 2003. After a dialogue with the EU institutions, the Commission translates the Policy Strategy into an Annual Work Programme. The Directorates General (DGs) in their turn translate this into the Annual Management Plan (AMP) with objectives, resources and indicators at DG, Directorate and Unit level. The latter also consists of the DG's mission statement, strategic objectives, APS key initiatives and the evaluation plan. The Integrated Resources Management System (IRMS) is the Commission wide IT system which hosts the Annual Management Plan.

Although the internal systems for strategic policy planning seem to have been improved, the status of external sources, e.g. advisory groups and mechanisms such as the Expressions of Interest caused some confusion in the user communities. Some Specific Programmes have made extensive use of the input from Advisory Groups, High Level Expert Groups, and other forms of stakeholder consultation to develop the new work programmes. Other SPs have made very little use of consultation platforms that were available to them. The status and mandate of the advisory bodies was therefore neither uniform nor transparent and has sometimes caused irritation with its members.

² First pilots were launched in 2001, and an entire annual cycle was introduced in 2002. It is expected to be effective from 2003.

The Commission received over 12.000 Expressions of Interest (EoIs) to collect ideas for areas of research in FP6. The research community did not clearly grasp the purpose of the exercise or understand that feedback would not be given on individual EoIs. If this tool is going to be used in future, it should be made even more clear to the user community how these EoIs will be used and published by the Commission.

The Panel welcomes efforts to introduce more policy planning as well as the increased focus on outputs and performance indicators. Future monitoring exercises could be one of these feedback loops to provide the Commission's management with advice on programme management issues. Progress and achievements made by the Commission in following up recommendations, should be looked at more systematically in consecutive monitoring exercises.

The overall IT systems and **Management Information Systems (MIS)** in particular have been subject to criticism for many years. Only very late in the course of FP5 have MIS been implemented in the programmes, however the harmonisation between SPs has not been achieved. In 2002 much of the focus was on developing harmonised and integrated systems for FP6. An inter-service FP6 IT Project Office was created in October 2001. It has been working towards a system common to all Research DGs that will enable the receipt, evaluation, selection for funding and the contracting and project management of all types of proposals under FP6. End-user Consultation Groups were formed to validate the specifications produced by the IT Project Office.

The system is built around a number of modules each one dealing with different aspects of the cycle. The system is designed in such a way that some key modules can last beyond FP6: they can be replaced or adjusted if for instance new instruments are introduced. The system is not backwards compatible with previous FPs: management of those contracts will be carried out using the existing MIS designed for FP5. Thus compiling strategic statistical data overarching more than one FP will not be possible. For later impact assessment purposes, the Commission should ensure that these data are not lost and key statistics can be compiled for policy analysis.

In Spring 2003 when the first calls for proposals are being evaluated, the system is only partly operational. The Electronic Submission tools have not worked well. The Contract and Project Management modules are expected to be finalised in August 2003.

The Panel welcomes the fact that the Commission has put serious efforts in developing a harmonised system for all Research DGs. This has been asked for by many Monitoring Panels in the past. It also endorses the fact that the Commission has sought support from external specialist IT companies to help develop a solution. However, at this moment, with FP6 already launched a few months ago, too many modules in the system are not functional yet. This means that for the interim period temporary solutions are being used (e.g. FP5 systems) that need to be integrated in the FP6 system again, once the full system is operational. This once again illustrates that timely planning of huge operational changes is necessary.

A key aspect of good management is an adequate policy for Human Resource Development for the Commission's staff. The 2001 Monitoring Report raised a number of concerns, particularly the excessive workload on scientific officers, the

lack of directorate and unit level management tools as responsibilities are moved downwards, and possible weaknesses in the training policy. The Panel is pleased to see that progress has been made to address some of these pressing issues in a Commission wide manner. The Activity Based Management approach could be helpful to allocate human resources in line with activities performed. Pilot projects have been put in place in the IST programme, such as training programmes and teleworking, and these will be spread out across the Commission. Early in 2002, DG Admin has initiated a comprehensive staff reform as part of the wider Commission Reform, which includes plans for training, clearer job descriptions and so forth.³ It is too early for the Panel to judge whether these plans have been successful in addressing the problems that have been identified by consecutive Monitoring Panels.

Evaluation, monitoring and impact assessment

In the context of the Commission's administrative reform, the Commission has reinforced the role of evaluation to strengthen the decision making process, and policy implementation to increase accountability, transparency and cost-effectiveness. Evaluation and monitoring are no longer limited to expenditure programmes, but should encompass all activities, from strategy formulation to implementation to take-up actions and impact assessment. They have as such been given a particular role in the implementation of activity based management in the Commission. An RTD Evaluation Strategy document that elaborates on these new responsibilities will be published.

The Panel welcomes the fact that evaluation and monitoring have been given more prominence in the Commission's policy planning cycle. Nevertheless in the SP monitoring of the progress made in 2002, a number of concerns are raised:

- The SPs have witnessed increased efforts to conduct impact assessment in various programmes which they applaud, but there are still concerns that appropriate data and statistics are not available to conduct these assessments properly
- There seems to be confusion among programme managers concerning the measurement of outputs and the measurement of impacts, two different activities which are often regarded as the same. The two activities require different data as well as methodological approaches. Whereas the Commission is better placed to measure outputs, the impact measurements remain a challenge, which can very usefully be supported by external experts
- There is a general concern that the TIPs, although in principle a valuable tool, are not used very well and are not user-friendly. Users find it difficult to fill in, and at the same time they are not used systematically by the Commission services. There is a strong appeal from the SPs to reform this tool. A study is currently underway to look into the use of the TIPs
- A more fundamental problem is that the effectiveness of the FP/ ERA implementation, and the SPs can not be truly evaluated given the lack of clearly defined objectives and goals. With the introduction of new policy planning tools, in particular activity based management, specifying objectives, actions, resources and performance indicators, a more systematic foundation for the subsequent follow-up of results and effects is being laid.

³ DG Admin, An administration at the service of half a billion Europeans, Staff Reforms at the European Commission, State of Play: Spring 2002

SME Participation, Innovation Promotion and the Role of Regions

With regard to the specific activities to encourage SME participation in FP5, their objective is simply put as encouraging SME participation in European research. There is some difficulty, therefore, in measuring performance against objective. The self-assessment report counts success in terms of 20,000 SMEs participating in the Framework Programme between 1996 and 2001. Although the absolute number may sound impressive, this confirms the fact, frequently overlooked, that the great majority of SMEs do not have the capability to participate in Framework Programmes.

Serious concerns remain as to how 'SME Participation' and 'Innovation Promotion' will be progressed and implemented in FP6. The main route for SME participation will now be through *networks of excellence, integrated projects and specific targeted research projects* in the seven priority research areas. This is expected to raise the entry barrier for SME participation in EU research and to impact adversely on SMEs of limited research intensity. At the same time, the closer integration of innovation promotion with the research activity is in danger of reinforcing the perception that innovation is merely the successful application of research results. This could impair recent progress made in putting the innovation process at the heart of enterprise and promoting policies that recognise the diversity of factors influencing innovation.

The Panel is concerned that the new instruments in FP6 could reduce the capacity of SMEs to participate, even if the promise of procedural and contractual simplification is realised. It is critical, therefore, that the Commission is aware, from the outset of the new programme, of the potential difficulties ahead. Consideration should be given to possible mechanisms for reducing the barriers to SME participation that are likely to arise.

The 2001 FP Monitoring Panel's concern that the regional dimension of ERA and the possibilities for regions to benefit from FP6 remains an issue. There are discussions between DG Research and DG Regio to increase the RTD content of the Structural Funds so that support to SMEs could be channelled via regional innovation measures. However it is important to note that the allocation and use of Structural Funds is the responsibility of the Member States and the regions.

Integrating the Candidate Countries

The participation of Candidate Countries (CCs) in FP5 was lower than expected. The Panel is concerned that the potential participants from CCs are still facing huge barriers to enter in FP5, and probably also FP6. It is important to note that there are huge differences between Candidate Countries in terms of their RTD activities. Therefore, Commission strategies to involve the CC should take account of these differences and not treat this group of countries as one homogenous block.

In 2002 the Commission has stepped up efforts to prepare for the full integration of Candidate Countries in FP6. Several measures were adopted to integrate CCs into Framework Programmes.

- Through Awareness and Training accompanying measures (INCO)
- Strengthening of NCPs in the CCs
- Extensions of on-going FP5 projects to include CC partners
- Promotion activities by Commission staff.

The Commission has launched an Action Plan for the implementation of the Specific Support Actions for CCs provided for in FP6, which was endorsed by Ministers of the CCs.

Currently, the CCs are fully associated with FP5, the majority of them will join the EU in 2004. However, the efforts for integration that were taken by the EU and CCs have not been fully successful, and there are still some problems to cope with. Annex 5.3 gives an account of the issues CCs face in their efforts to participate in the Commission's FPs.

3.2.2 Attainment of objectives

On the political level the Commission achieved a number of key objectives. In 2002 the necessary legal framework for FP6 was put in place, and the FP decisions were adopted in June and subsequently the SPs decisions in September.

A strategic Communication "More Research for Europe" addressed the actions needed to achieve the goal set by the Barcelona Council on increasing R&D investment in the EU, with the aim of approaching 3% of GDP by 2010.⁴ A second Communication "The European Research Area: Providing new momentum"⁵ took stock of the progress achieved so far in reshaping the European research policy landscape. As reported in section 3.2.1, notwithstanding considerable progress the ERA initiative could have been enhanced by a more intensive participation of the Member States.

The Panel believes that the Commission has succeeded in achieving the overall objectives in terms of implementation, as specified in the 2002 work programmes of the SPs. The coverage over research areas in the work programme was considered to be satisfactory, with some minor exceptions such as some sub-areas in the Environment Programme. The SPs had their final calls, where in a few areas such as

⁴ COM (2000) 499, 11.9.2002

⁵ COM (2002) 565, 16.10.2002

Research Infrastructures very little budget was left for 2002, while in other areas such as non-nuclear energy these last calls were used to fill gaps in the work programmes.

Nevertheless the Panel feels it is difficult to give a precise answer to the question whether objectives have been achieved, as the objectives of the FP are often defined in very general words, and not specified in terms of short to medium term goals, targets and key performance indicators. More precise goals and targets are defined on the level of the SPs and especially the work programmes. However it is difficult to translate the data of achievement to the aggregate level of the Framework programme. Consequently, there is some difficulty in measuring performance against objectives at the FP level.

3.2.3 Managing the transition from FP5 to FP6

The Commission still has a large legacy of FP4 and FP5 contracts to manage. These are projects requiring project review and evaluation, followed by payments and the oversight of Technology Implementation Plans, final reports, exploitation and ultimately impact assessment. Yet there seems to have been no clear planning how project officers divide their time between dealing with this legacy and simultaneously preparing for FP6.

The transition from FP5 to FP6 is more complex than previous transitions between FPs:

- The Specific Programmes have been translated into thematic priorities and horizontal activities under the headings 'Structuring the ERA' and 'Strengthening the Foundations of ERA'. For some SPs this means an almost one to one transition into a thematic priority area, while other SPs see their activities divided across various parts of FP6 (e.g. the IHP programme, International Co-operation)
- A new set of instruments has been introduced in FP6, particularly the Integrated Projects and the Networks of Excellence, which include new rules of participation, a new approach to evaluation of proposals and a very different way of project management and monitoring.

The Commission has established an inter-service support structure to co-ordinate the launch of the 6th Framework Programme and this structure will continue to monitor its implementation, including the new instruments. The simultaneous transition to FP6 and the reorganisations in the Research DGs that were implemented to fit the ERA structure, in many respects were not very well timed. The Commission's staff had to cope with too many changes at the same time. This lesson should be taken into account in preparing for the next FP. Another issue that needs to be addressed in the preparation of future FPs are difficulties surrounding programmes and priority areas managed by more than one Directorate General, such as is the case in for instance the non-nuclear energy programme. This leads in some cases to a lack of coherence as well as a lack of synergy, which could be achieved otherwise. This management by multiple DGs should be avoided in the future.

The Panel is impressed by the huge effort that has been devoted to preparing for the new instruments. However, a concern remains that despite the dissemination of information, confusion remains in the European RTD community about the intentions

and the exact rules of the new instruments. The information that has been circulated, including those by the Commission's project officers, has not always been consistent. More efforts are needed to inform the research community on the exact details of the new instruments and to ensure consistency in the information regarding the new instruments.

Therefore we welcome current plans for the establishment of a specific High Level Expert Panel, to look more deeply into the implementation process and the impact of the new instruments on the respective research community in 2004.

The Commission has set up Advisory Groups attached to the SPs to support management with preparing for FP6 and developing work programmes. The monitoring exercises found that there was a discrepancy between SPs in how these groups were involved and how their factual status is perceived. Whereas in some SPs the Advisory Groups have had an active role in providing strategic intelligence for their programmes, other SPs hardly made use of their Advisory Group. Although these Advisory Groups functioned well in areas such as aeronautics and fusion, several Panels observed already a sense of frustration with members of these Advisory Groups.

3.3 Monitoring of the JRC

The Joint Research Centre (JRC) is a Directorate-General of the Commission with the mission to provide customer-driven scientific and technical support for the conception, development, implementation and monitoring of European Union policies.

The Panel received the Annual Report of the JRC and the comments on this Annual Report by the JRC's Board of Governors. The latter is included as an annex of this Monitoring Report.

The monitoring of the JRC does not fall within the remit of this Panel, but is carried out independently by its own Board of Governors. They observed that in 2002 the JRC focused on the preparation of its multi-annual work programme for 2003 to 2006 and defining its role in the European Research Area and its contribution to enlargement.

4 Conclusions and recommendations

4.1 General Conclusions

For the European Commission services managing the Fifth Framework Programme (FP5), 2002 has been an exceptionally busy year. In the final year of FP5, the last calls for proposals were launched, while a vast number of contracts from previous years were still in progress and had to be monitored. In preparing for the new Sixth Framework Programme (FP6), new work programmes have been written for all priority areas, the Commission services made preparations to work with the new instruments and adapt to the changes in programme and project management resulting from these new instruments. The implementation of the European Research Area (ERA) asked for actions in a number of areas of the Commission, which were taken up by various Directorates and Units. In line with ERA and FP6, reorganisations took place in the DGs involved in FP6 and new management principles were introduced to improve strategic planning. The case of IST shows that reorganisation can take place too late, leaving little time to prepare for FP6. The Panel, however, welcomes the overall objective of restructuring in favour of achieving the goals of FP6.

Thus in 2002 the Commission has had to cope with transition from FP5 to FP6, and at the same time with maintaining good practices and expertise to manage the programme activities launched in previous years. This has proven to be a huge challenge, which called for an enormous effort from the Commission's staff. The absence of appropriate Management Information Systems made this transition period even more hazardous.

The Panel is pleased to see that the Commission has introduced a number of policy planning and management tools to improve its management across the DGs. This will encourage a broadly based 'culture of improvement' throughout the Commission.

The 2002 Monitoring Reports on the Specific Programmes (SPs) praise the commitment of the Commission's staff for dealing with these multiple challenges. The Panel welcomes recent progress that has been made in terms of human resource management within the Commission services. Projects have been put in place such as training programmes and teleworking, and these will be spread out across the Commission. The Panel hopes that newly introduced management systems, in particular the Activity Based Management, will help dealing with understaffing in various parts of the Commission, and at the same time improve the overall effectiveness of the organisation. The introduction of more staff from the Candidate Countries (CCs) as of 2004 needs to be planned carefully.

The changes made during the final year of FP5 in view of implementing ERA and preparing for FP6 seem to have created some confusion in coping with the final round of proposals in some of the SPs. The simultaneous introduction of the new instruments of FP6 added to the confusion. Despite efforts to disseminate information on the new instruments, there still seems to be a need to ensure that new instruments are appropriately understood and used.

In 2002 considerable achievements were made in the implementation of ERA. In this context the networking and opening up of national programmes still seems to be a rather deficient area of achieving the goals of ERA. In spite of efforts made to involve CREST more strongly, there is still room for improvement for the active involvement of Member States in the progress of ERA, and in initiatives to co-ordinate actions. The Commission has started to develop a variety of tools for this co-ordination and interaction such as benchmarking, ERA-net, open co-ordination methods. The Panel realises that during FP5 many Commission activities were only initiated as pilot projects and are expected to fully develop in FP6. Nevertheless, already at the start of FP6 more could be done, particularly on the side of the Member States, to promote and take up new initiatives such as ERA-net.

Impact assessment has been an issue in monitoring reports for quite some time, but it does not appear to have been solved in any of the programmes monitored during this exercise. The Panel acknowledges that this is a complex matter with many methodological problems, which cannot be easily resolved. The Commission's new Activity Based Management process will require the use of clearly defined performance indicators for assessing to what extent the policy objectives have been met. Whether the new performance indicators will actually help to solve the problem still remains to be seen.

In some SPs there is more than one DG involved in conceptualising and managing the respective activities. This leads in some cases to a lack of coherence as well as a lack of synergy, which could be achieved otherwise (e.g., non-nuclear energy). In future FPs this split of strategic responsibilities between DGs should be avoided.

The many efforts by the European Commission and CCs to integrate into FP6 are well appreciated by the user communities in the CCs. The success rates for participating in FP5 vary from country to country and from programme to programme. Nevertheless, there are serious hurdles for full participation of the user communities from these countries, such as for instance the obsolete technical equipment of research facilities in most CCs, and the low levels of industrial participation.

4.2 Conclusions specific to the follow up of 1999-2001 Monitoring exercises

The recommendations of the 1999-2001 Monitoring Panels ranged from very specific programme management issues to very broad strategic policy issues.

The analysis of consecutive monitoring reports in FP5 shows that the Commission often responds by pointing out that work on a particular issue is in progress, studies are being prepared, discussion papers are to be published, or expert groups will be formed. This is partly due to the fact that many recommendations were of a strategic nature and could only be picked up in the context of the next FP.

The annual monitoring exercises tend to address issues, which require structural and medium to long term changes in the operations of the Commission. Organisational inertia, work overload and legal constraints prevent the Commission from addressing many of these issues from one year to another. However, the year 2002 with its

transition to a new FP and numerous reorganisations, demonstrates that some structural issues such as IT systems, strategic management approaches, can be tackled in a new manner. Other overarching issues such as gender awareness and impact assessment only change extremely slowly. These organisational changes apparently need a long preparation time. This raises questions about the added value of **annual** monitoring exercises, other than providing a repetition element. The panel believes that the monitoring exercise should be built in more strategically into the policy cycle of the FP and its SPs to provide useful input on programme management. The scope of the monitoring exercises should vary every year, and focus on a small number of important management issues. And last but not least, due to the implementation of advisory groups, an alternative option could be to reconfigure the annual monitoring exercise as an essentially internal management process and to complement it with external reviews, especially a mid term review.

4.3 Recommendations Related to FP/ERA activities in 2002

Based on the above conclusions, the Panel makes a number of recommendations:

- 1 Despite the launch of a Task Force preparing the New Instruments for FP6 there is still widespread confusion amongst the user community concerning the exact arrangements and the Commission's perception of networks' of excellence and integrated projects. Continued efforts, e.g. by establishing a special support group, should be made to disseminate coherent information on these new instruments
- 2 The Commission should clearly define the role of the various advisory groups, which picked up their work in the second half of 2002. So far, there are conflicting perceptions whether they have a role to play in the strategic planning, and whether they can make an impact on the implementation of the respective activities
- 3 In particular with a view to making more efficient and effective use of the existing infrastructure for research in Europe, there is a need for better co-ordination, and especially for co-financing of large facilities. This is one area where the European added value of the ERA concept could be demonstrated
- 4 The Panel recommends that the Commission's human resource management should be linked more closely to the Activity Based Management processes, which the Commission has introduced in 2002. This will allow a better allocation of staff over the many activity areas and over different types of tasks (from administrative to scientific tasks). This could help to alleviate understaffing in some parts of the Commission, to reinforce the interaction between scientific officers and the user community, and to improve the overall efficiency of the organisation
- 5 One of the crucial issues across all Specific Programmes seems to be the problem of disseminating the research results. There are no accessible archives for finalised reports. Dissemination reinforces the interaction between producers and users of new research results, and thus supports the potential exploitation of publicly funded research. The Commission should address this issue urgently, not only for FP6, but even more urgently for the flood of FP5 contracts that will reach completion in the near future. This links to a wider issue of stimulating a better public awareness of research, which the Commission should continue to support
- 6 The Panel welcomes the fact that the Commission has reinforced its evaluation tasks, as impact assessment remains a weak point. With impact assessment the Panel refers to the socio-economic, as well as to the scientific and technological impact of the Commission's activities. However, impact assessment should not be considered as a one-off activity linked to the FP's Five Year Assessment exercises. In order to make robust observations this requires a systematic approach. Therefore the Panel recommends that this approach starts with setting clear objectives for all activities, making ex-ante assessments of expected impacts,

defining impact related performance indicators and developing the data collection methods to measure impacts. This philosophy needs to be taken on board in all parts of the Commission dealing with RTD

- 7 The Panel welcomes the Action Plan for supporting CCs and the initiatives to be launched under this plan. We recommend that communication efforts to inform the potential user communities in the CCs , as well as targeted actions to increase the competence levels in the CCs are kept at a high level during FP6
- 8 The role of SMEs in FP6 needs clarification and rethinking. It seems that the overall target to have a 15% participation of SMEs, should allow for variations between different priority areas, as the participation of SMEs is not evident in all areas of research. In many cases a sub-contracting role might be more appropriate than full participation in for instance the integrated projects. An ill-considered approach to the 15% target might also endanger the quality of research performed
- 9 The four year period for FPs seems too short to really achieve the medium to long term objectives that the Commission has set itself by adopting ERA. The Panel recommends to rethink this four year structure and replace it by a six to seven year Framework Programme, which sets out the broad lines of research priorities. Within this longer term framework, it is imperative that flexibility remains in adapting work programmes to changes in the needs of science, technology, and society. In this context the Commission needs also to rethink how it will acquire the necessary strategic intelligence to make these adaptations. Part of this strategic intelligence would need to come from a transparent system of advisory groups, which are in touch with the major scientific, economic and societal developments
- 10 The annual monitoring exercise seems to have developed into a "routine operation" with Monitoring Panels choosing to cover a wide range of both managerial and strategic issues, regardless of their annual mandates. The exercise needs to be transformed into a more powerful tool. We recommend that the cycle of monitoring is brought in line with the programme life cycles of the Framework Programmes, where the monitoring exercises provide the programme management with feedback with a more consistent focus on a small number of major issues in effective and efficient programme management, and when appropriate, strategic issues. An alternative option could be to reconfigure the annual monitoring exercise as an essentially internal management process and to complement it with external reviews, especially a mid term review. The Panel also recommends that in future the JRC is monitored alongside the FP/ERA monitoring exercise, using the same approach. If the Commission chooses to keep this a separate exercise, the outcome should not be included in the FP/ERA Monitor Report.

5 Annexes

5.1 ERA/ Specific Programmes Monitoring Reports: Executive Summaries

5.1.1 EUROPEAN RESEARCH AREA

The principal concern emerging is that three years after the ERA initiative was launched most MS do not appear to be prepared to participate fully. This could prevent the programme from reaching its full objectives however there have been some notable achievements. The Group's conclusion is that the Commission must press the ERA forward through the operational activities [particularly benchmarking and networking]. The political mandate to apply the Open Method of Coordination [OMC] will help the MS and AS greatly to move towards the goals of Lisbon and Barcelona. CREST is a principal forum through, which the OMC will operate and it needs to be strengthened to fulfil this role effectively.

The expert group recommends that the commission develops a proposal that will ensure that infrastructure over a range of scales and from different funding sources is considered in a strategic and integrated manner.

Europe is rich in scientific and technological skills and may produce one third of the world's scientific and technical knowledge, but laudable as this may be there is the need to bridge the gap between such knowledge and the application and innovation leading to the development of sound science-based European policies and commercial take up. Both will give European enterprises a competitive edge globally. An important factor in this respect is to increase awareness of the importance of IPR across the research community and to establish a climate through the ERA leading to closer links between SMEs, universities and public research organisations. The political agreement reached by the Competitive Council, which should lead to rapid adoption of a Community Patent, is a major advance in this respect and very important in an ERA context.

The involvement of EU regions in ERA activities is essential but the regional decision makers need to become more aware of the contribution they can make in advancing the ERA and the value to them in being associated with it. While the Directorate RTD is taking the issue forward more direct contacts with those working in the regions are needed.

The objective of increasing EU research funding to 3% of GDP is applauded by the Group. There are major difficulties to be overcome, nevertheless the Commission has entered into a constructive debate with national authorities, industry and the financial sector. A small but important step has been made through a co-operative agreement between the Commission, the EIB and EIF such that laboratories, universities,

companies and other organisations planning to participate or taking part in the FP, can seek financial support from these sources. These opportunities need to be more widely publicised, particularly to SMEs. The latter play a vital role in European competitiveness. In recognition of this FP6 has been structured so as to create the largest programme in the world to support SME research. However the SMEs consider their participation in the current FP will be more difficult than formerly. Their engagement is crucial and these perceived or real difficulties must be addressed.

Mobility of researchers is an essential element in the development of the ERA and funding for this has been doubled in FP6 compared to FP5. The Commission has taken a number of important initiatives e.g. the development of a European Network of Mobility Centres. A number of obstacles still need to be removed before the uninhibited movement of researchers in the ERA market place is achieved.

International co-operation in RTD helps to develop the ERA as a science area authoritative and open to the world. FP6 is well founded in this respect but the programme has to become more transparent internally and externally and management uncertainties over who is responsible for what need to be removed.

Europeans recognize the essential contribution science and technology make to the economic, political, social and environmental scene but many feel remote from it. This detachment is detrimental to the ERA. The inclusion of Science & Society as one of the Commission's principal operating activities within the ambit of the ERA is therefore necessary and some good progress has been made.

The new management arrangements that came into place in 2001 and have been operating during 2002 appear in general to be working satisfactorily but some refinements may be needed. The new management structure puts more focus on research policy and strategic issues and this is needed in order to progress the ERA. However this implies that Commission officers have now to set research needs in a social/political context. Such skills will have to be learnt by some staff or introduced by newly recruited staff.

There are a number of European bodies/activities that involve collaboration and funding between national organisations and also substantial support from the EU [e.g. EUREKA, COST, INTAS etc]. Such networking activities support the ERA and the Commission should retain and fund appropriate arrangements for this.

The FPs have been concerned primarily with applied research. More fundamental, curiosity-driven research has not been prominent. Previous FP monitoring panels have expressed the view that basic research should play a greater role in the FPs but such recommendations have not been fully accepted by the Commission. A way forward may be via a European Research Council (s). Properly constituted research council(s) could contribute to the ERA and should provide answers to problems that can not be addressed through existing structures e.g national research councils, European Science Foundation etc.

5.1.2 QUALITY OF LIFE AND MANAGEMENT OF LIVING RESOURCES

This is the report on the Quality of Life (QoL) Specific Programme (SP) of the 5FP for the year 2002 and on the preparation of the FP6. The report covers the follow up of monitoring-recommendations made since 1999. Since FP6 is starting in 2003, it is the last report of a series of 4 reports made for this SP within FP5. The aim of the report is to assist the Commission in its task to continuously improve the European Research and its management, pursuing the leadership and competitiveness of the European Research in the world.

Three independent experts have elaborated the report between November 2002 and April 2003:

Ana M. Pelacho (Chair)
Elisabeth L. Hooghe-Peters (Rapporteur)
Manfred Schwab (Expert)

Directors, Head-of-Units, Scientific Officers and supporting staff effectively met management targets in 2002, including

- Positive reaction to general and specific recommendations of the 2001 monitoring experts,
- Closing of FP5 projects and dissemination of results,
- Effective support of strategies to build European Research Area (ERA),
- Successful launching of FP6.

The report includes a number of recommendations:

- Consider the use of Technological Implementation Plan (TIP) as an important parameter in standardising impact studies.
- Determine the usefulness of 2-stage evaluation before extending this approach to Priorities 1 and 5.
- Find new ways in overcoming the proposers' problems in understanding the objectives of Expressions of Interest (EoIs) and the characteristics of the new instruments.
- Consider monitoring the impact of National Contact Points (NCP).
- Analyse the impact of SMEs on project outcomes.
- Introduce temporary measures to stimulate the participation of Associated Candidate Countries (ACC) by launching dedicated calls for bi-national projects involving one Member State (MS) and one ACC.
- Evaluate the impact of the provisions that have been taken to address gender issues.

5.1.3 USER-FRIENDLY INFORMATION SOCIETY

This is the EU's Information Society Technologies (IST) Programme's "Monitoring Report" covering the year 2002 and drawn up by a panel of five external experts. It is required by the Council Decision, which established the Programme and has the objective of supporting Programme Management in developing an efficient and effective management, as well as increasing the transparency of the Programme's implementation.

A Year of Major Achievements and Radical Change

The year 2002 has been the final year of the Fifth Framework Programme (FP5) - of which the IST is the largest specific Programme, and the preparatory year for the new Sixth Framework Programme (FP6). As such, it has been a particularly busy year. The major work areas have included:

- Preparation and launch of FP6, including a call for Expressions of Interest, as well as the development of the 2003 Work Programme. The first Call for Proposals was made on 17/12/02.
- Under FP5, the management of two Calls for Proposals, the launch of 823 new projects and the continued management of another 1400 FP5 projects as well as the management of a significant number of still-live, FP4 projects. In total, the whole of the IST FP5 budget of €57M has been committed.
- The organisation of support activities for FP5 including the Annual IST Conference.
- A major structural reorganisation of DG Information Society, the initial phase of a new human resources system and the preparation of systems for A.B.M..

These are major achievements, and it should be constantly remembered that this is a €3.3 billion Programme under FP5 transforming itself into a €3.6 billion Programme with different structures and instruments under FP6, and employing roughly 1,000 people and working with tens-of-thousands of researchers across Europe. Indeed, all this, while it works within the sometimes difficult rules and regulations which govern the overall European Commission.

Focus on Four Key Management Issues

The Monitoring Panel has reviewed IST activities, both in management of FP5 and in preparation of FP6. *Within an overall very satisfactory assessment*, the Monitoring Panel has identified four key areas where improvements are to be recommended. Namely:

The general management approaches across the Programme. Here we found *that greater coherence and consistency* in the approaches, techniques, procedures, and processes used to manage the same activity across the Programme *would be beneficial*. Such an approach would then permit greater integration across the various phases of the research management process (call for proposals, evaluation, selection, contracting, project review, etc.) and a greater effectiveness in implementing feedback to improve the various phases of research management.

The preparations for IST-FP6. Here we found *good, solid work being undertaken* in the detailing of instruments, and the preparation of calls and evaluation procedures. In addition, the preparation of the Programme for the implementation of the ERA is an area in which there will be major challenges requiring, perhaps, major new innovations in working with the Member States.

Human Resources. We recognise that good progress has been made in developing Human Resources management during the last year. However, two issues still require attention: 1) How to develop a common management culture across the Programme and 2) How to improve gender related practices within the Programme.

Monitoring. Since this is the final IST-FP5 Monitoring Report, we reviewed in some depth the experience of IST-FP5 over the last five years, and how to improve its effectiveness.

The detailed recommendations follow these four axes and focus on:

Moving towards much more strongly integrated management processes within the Programme: “end to end” process management, a major effort to build an IST European Research Area across the EU, a greater emphasis on human resources management, especially a move to develop a common management culture across Units and Directorates and a move towards what we call a “sustained management consultancy” model for the External Monitoring function during IST-FP6

End-to-End Process Management The Monitoring Panel believes that *integration* between the different phases of the Programme’s research management activities and feedback/forward loops *needs to be strengthened*, including project review, valorisation, and impact assessment phases.

At the next management reorganisation, DG Information Society should consider moving to a management function” structure, typical of large business organisations. The full definition of the overall end-to-end process is necessary, along with associated management procedures. This should be supported by the development of common management tools for use across the whole IST Programme – including a Key Performance Indicator system for project supervision. It should also include a simple, supportive, quality improvement system. A Chief Operations Officer should have the responsibility for the consistent functioning of the overall system. In addition, we make recommendations on 1) improving the Information System supporting Management (MIS), 2) developing a strong IST-FP6 communications policy with particular focus on policy makers in Member States, 3) improving the take up of the project research outputs, and the development of a Programme-wide impact assessment system.

Building the IST European Research Area

The main recommendations emphasise rethinking and then strengthening the ways in which the IST Programme works with the Member States. In particular, the IST Programme should:

- Develop activities within Member States, which permit greater interaction and discussion. In this context, the support and resources provided to ISTAG as well as its role and structure, should be reviewed with a view to strengthening its work with Member States.
- The IST Programme should review the ERA lines of action; in particular, benchmarking of Member States’ IST policies and programmes and networking of national research programmes would be important.
- We make additional recommendations on 1) The management of the new instruments, 2) Ensuring SME participation, 3) On international co-operation.

Human Resources

We recommend:

- Removing as much routine administration as possible from Project Officers.
- Providing a programme of supportive training to Project Officers.
- Formalising and expanding the activities of the “Project Officers Group” as a support to developing operational management systems and quality improvement across the Programme.
- Strengthening support to Heads of Unit by establishing a common approach to Unit management and investing in a strong, common programme of management training for them.
- Improving the compatibility of professional and family obligations for both women and men and developing a family-friendly HR policy.

The Monitoring Experience during FP5 External and independent Programme monitoring should continue into IST-FP6. However, a move to a “sustained management consultancy” model should be made - this would entail a year round cycle of monitoring, a better follow-up along the life cycle of the programme and greater continuity between years. Adequate resources must be devoted to monitoring.

5.1.4 COMPETITIVE AND SUSTAINABLE GROWTH

The operation of the Competitive and Sustainable GROWTH Programme in 2002 was undertaken in the challenging context of the transition to the new FP6 and the implementation of the management Reform in parallel with administration of the final FP5 Calls covering research issues dealing with the various Key Actions, Generic Activities, Infrastructures and horizontal elements that constitute the Programme.

Specifically relevant to GROWTH, 2002 saw the closure of the Measurement and Testing, Infrastructures Unit and the relocation of its personnel. New Units managing “Nanotechnologies” within Dir. G and “Space Policy ” within Dir. H; were established. Personnel mobility was high and staff numbers in Dir. G fell, particularly in G3 Materials.

In addition there was the need for familiarisation with the philosophy of the new FP6 approach, its related new instruments, integrated projects (IPs) and Networks of Excellence (NoEs), and the preparation of specific Work Programmes and related Calls for 2003. In this respect the Panel was pleased to notice the improved co-operation between DG Research and DG TREN that resulted within key actions KA2 and KA3 in the launching of a single FP6 Priority for Surface Transport Systems referring to a common Work Programme in line with the objectives of ERA and managed through a single Programme Committee configuration.

The overall indication is that excellent progress has continued to be maintained in the management and operation of the GROWTH programme and that the overall objectives of the programme are being attained. These advances have been achieved through the evident commitment of highly dedicated staff in the context of many difficulties, notably significant staff shortages, the need to implement procedures for

activity based management (ABM), the development and launch of both the FP6 work programmes and its associated new instruments, and the extensive reorganisation which has occurred within the respective Directorates in readiness for FP6. The past year has been extremely demanding for staff and has contributed to significantly increased workloads. The situation will continue to be difficult because of the large ongoing FP5 workload and the further demands required for implementation of FP6.

Despite the high competence and remarkable efforts of services-staff, some degree of uncertainties are perceived at the operating level within and outside the Commission. At the FP level, for example, finalising of the contracts for the new instruments were delayed. The administrative process strongly influences the efficiency of the whole system. At this time it is too early to measure the effectiveness and impacts of the Reform which is currently being implemented. It is to be hoped that ABM and the internal reorganisations underway will result in a streamlining of procedures and make the decision-processes more effective in line with the objectives set out by the Lisbon declaration. The administrative system should be examined against measurable indicators such as those identified above during the first half of FP6

Based on the analysis of the Competitive and Sustainable GROWTH Programme in FP5 for the year 2002, the Programme Self-Assessment Report, the Monitoring Reports covering 2000 and 2001, and the results derived from the many interviews undertaken within and outside the Commission, the main recommendations of the 2002 GROWTH Monitoring Group are:

- Plans need to be put in place to investigate the impacts of the Reform and ABM implementation on the efficiency of the administrative process by the next full monitoring exercise in 2004.
- The work loads of Project Officers must be carefully monitored and responsibilities clearly identified and prioritised to ensure that required efforts are reasonable.
- To facilitate the participation of SMEs in FP6, each new instrument should at least consider the provision of a dedicated budget to allow for SME related activities during the project duration.
- Gender issues in relation to the new instruments of FP6 must continue to be developed and reinforced. Institutional support addressing actions for gender equality inside the respective Directorates in cooperation with the unit "Women in Science" should be effected. A monitoring panel, which will target assessment of gender actions in FP6 instruments should be established.
The level of female participation could be a criterion for proposal evaluation.
- Following the closure of the Measurement and Testing, Infrastructures (MTI) Unit, a cross-Framework mechanism should be initiated to enable the extent to which European standards, measurement and testing needs are being met within the various activities of FP6 to be analysed.
- To facilitate coordination of the many ongoing FP5 MTI projects, an appropriate co-ordinating function should be established. This may take the form of a Measurement and Testing , Infrastructure "sector" located within Directorate H.
- An effective monitorable co-operation between Directorates for evaluation and impact assessment of completed projects must be seen to be in place to overcome difficulties exacerbated by the internal reorganisation which has taken place.

An excellent step forward is the new approach being developed through the efforts of Directorate G to promote an innovative form of collaboration between RTD funding and bank loans, which aims to provide uncomplicated fast funding via venture capital. Professional project-screening in relation to its practical European benefits, together with the high scientific competence of Commission staff / Commission scientific officers in evaluating a project's technical relevance, may develop a new mechanism designed to boost and exploit European innovation, power and culture.

5.1.5 NON-NUCLEAR ENERGY PROGRAMME

The major activities of 2002 were selection of the final projects to be funded through the FP5 specific programme Energy, Environment and Sustainable Development, Part B: Energy and launch of the FP6 specific programme Sustainable Energy Systems.

The objectives of the monitoring exercise were:

- To analyse the recommendations of the previous three monitoring groups, and the Commission Services' responses, and
- To examine the follow-up of the 2001 monitoring group's recommendations, the attainment of the objectives of the 2002 work programme, the efforts made to measure the impact of completed projects, the transition from FP5 to FP6, and the preparations for the latter.

The methodology included examining documents provided by the programme managers, holding detailed discussions with individual Commission staff, and surveying the Energy Programme Committee, members of advisory groups and National Contact Points (NCPs).

The monitoring group's main conclusions are:

- A number of issues were raised by the previous monitoring groups year after year. The nature of an FP and the Commission organisation is such that it took several years for some of the recommendations to be implemented, while others could only be taken up in a new FP. One issue that recurred and has never been taken up adequately is the division of the work programme into two distinct parts, one (managed by DG RTD) on medium- to long-term research and the other (managed by DG TREN) on subjects expected to impact on the market in the short term.
- The FP5 projects selected for funding in 2002 were fully in line with the objectives of the work programme. They filled gaps in subject coverage and paved the way for FP6 and establishment of European Research Areas (ERAs) in the different technological sectors of non-nuclear energy (NNE).
- A good start was made on measuring the impact of completed projects. For FP4 and FP5 projects it proved difficult to do much more than list project results. Future projects will need to be designed to facilitate measurement of relevant indicators if a more detailed analysis of primary and secondary impacts is to be achieved.
- The work programme for the FP6 Sustainable Energy Systems programme was completed just in time for the first FP6 calls published in December 2002. It consists of two separate programmes, one managed by DG RTD and one by DG

TREN. The split is more distinct than for FP5. The monitoring group is concerned about this. It considers that only by having one programme that covers fundamental research through to demonstration and beyond can a research strategy be produced, results achieved and ERAs established, that support Europe's need for security of energy supplies and reduction of greenhouse gases. With this in mind, it regrets the omission of work on conventional fuels from the FP6 work programme.

The monitoring group's recommendations concerning the specific NNE programme are:

- Throughout FP6, DG RTD and DG TREN should work together as equal partners to provide "joined-up" management for the Sustainable Energy Systems programme. For each technological sector, the two DGs should work towards the same ultimate goals, agreed between them, and work out together their strategy to achieve these goals. An overall integrated work programme should be prepared for the later FP6 calls. Communication between the two sets of programme managers should be of the highest quality. There should also be good communication between the various advisory groups established to provide strategic steers. Reports relating to strategy should include co-ordinated inputs from both DGs.
- For any future FP (e.g. FP7) specific programme on sustainable energy systems, consideration should be given to placing the management under one umbrella and having one common work programme that covers the whole range of activities from basic research, to applied research, to demonstration through to market introduction.
- Support the establishment of ERAs by doing more to explain the ERA philosophy to the wider scientific community, and doing as much as possible to involve Member States' national programmes.
- Establish a network to encourage those working on conventional fuels through Member States' national programmes to communicate with each other and thus establish an ERA in this field.
- Develop and implement a combined strategy for both DGs for dissemination of project and programme outputs.
- Carry on with the impact assessment of FP3, FP4 and FP5 and plan the impact assessment work to be done on FP6 as part of the work programme. For FP6, ensure that each project is designed to permit measurement of the relevant indicators after the project has ended.
- Develop a combined strategy for international co-operation in sustainable energy systems that includes not only work carried out through the co-operative scientific and technological agreements between the Commission and individual countries but also work carried out through the IEA programme, or through the initiatives of individual scientific officers. Avoid co-operation that does not bring positive benefits to the EU.

5.1.6 ENVIRONMENT

The Commission requested that the Monitoring Panels 2002 put the main foci on: (a) the analyses of the follow-up of recommendations made in the different Monitoring Reports from 1999 to 2001, in preparation of the Five Year Assessment of the research activities undertaken during years 1999-2003 foreseen for 2003 and (b) the questions linked to the transition phase between the successive Framework Programmes (FPs), the legacy aspects of FP4 and FP5 and the preparation for the implementation of FP6.

Following an earlier recommendation for “light monitoring” every other year, the Panel size was reduced from 5 to 3 members, and the days allotted from 180 to 90. This would have been sufficient, had the documents prepared by the Commission for the monitoring exercise been available in time, as recommended by every Panel in the last years. The methodology applied by the Panel remained much the same.

The main activities were the launch of the FP6 activities and the implementation of the FP5 Sub-programme Environment and Sustainable Development (ESD) work-programme including two dedicated calls to improve the participation and integration of the Newly Associated States (NAS), a special call for research to support the initiatives for Global Monitoring for the Environment and Security (GMES) and five other calls concerned with SMEs, Marie Curie Fellowships, Advanced Study Courses and Accompanying Measures.

The 2002 ESD research budget consumption was almost 343 MEURO in total and includes most advance payments of contracts of the last call for research projects of 2001. In 2002, 188 of 562 submitted proposals were accepted for funding. This implies a higher number of contracts with a smaller dimension than the year before. Overall, 373 ESD contracts were negotiated and 303 contracts were signed with a total EU contribution of 312,836 KEURO; including these, a total of 708 FP5 and 13 FP4 ongoing projects were managed by 49 SOs during 2002 (of which 8 were Detached National Experts that in the future can not take the same responsibilities as SOs).

Proposal evaluations, contract negotiations, as well as managing the FP4 and FP5 projects together with the launch of FP6 activities including the call for Expressions of Interests (EoIs) and the definition of the Work-programme have imposed a very high workload on the 115 staff members of Directorate I. Additional demands were placed on the staff by the restructuring of Directorate I in relation to FP6 requirements and by the increase of the horizontal activities of the Directorate, e.g. in order to ensure that Sustainable Development issues are implemented both in the Directorate General Research and in Policy related Directorates. Directorate I staff seems to have accepted that change and work overload is the normal situation: overall motivation is high and preparations for FP6 are willingly made.

Reviewing the management arrangements was not a focal point for the Panel, but in view of the personnel reductions that will continue over the next year, it is essential that priorities be set. The Panel feels that if managerial tasks such as contract

negotiations remain in the responsibility of the SOs procedures must be simplified with a reliable system of control to assure quality rather than safeguards.

Reviewing the recommendations made by the ESD Panels since 1999 clearly shows that, although progress is being made in many respects from year to year, a large number of recommendations are found in more than one report. This seem to be especially true for recommendations, that ask for the development of concepts or plans. The replies by the Commission are frequently not sufficiently to the point and rarely give an indication of the importance attached to the issues. As these problems are apparently not limited to the ESD Panel, it is strongly recommended to find ways of making monitoring more effective.

One of the problems that remained unresolved is giving external advice a satisfying function in the Global Change and Ecosystems WP. The three associated External Advisory Groups (EAG) have been reduced to one Advisory Group (AG), but as a consequence of the timing of the transition and the terms of reference neither the old EAGs nor the new AG had a mandate for the decisive phases of FP6 and SP definition. The extent of involvement in the definition of the WP is perceived differently by the Commission and the AG. In order to achieve satisfaction within the AG an in depth discussion on the expectations of both sides should take place at the outset of AG activities.

Although efforts were made, the analyses of the EoIs and of the questionnaires to National Contact Points (NCPs) show, that the need to simplify procedures and to use plain language documentation remains. In conjunction with the problems faced by NAS inherent in the New Instruments, this difficulty in understanding aims and procedures enhances concern that the progress achieved in participation and integration of NAS could be lost again in FP6.

The 4 key actions of FP5 handled by Directorate I do not fully correspond to the 3 Thematic Units of FP6 and a restructuring of the Units has begun to take account of this change. Although this forward planning strategy is helpful for FP6 it can pose problems for the follow up of previous projects.

The situation is especially unfortunate for Key Action 4: “City of Tomorrow and Cultural Heritage”. The protection of cultural heritage and associated conservation strategies is covered to a certain extent within Priority 8.1 Policy oriented Research at a level comparable to FP5 KA4. Involvement of the managing bodies of the URBAN and INTERREG DG REGIO programmes and of DG ENV and DG EAC programmes in the on-going projects is welcome as a means to ensure an effective exploitation of results of KA4. It would be important to include the topic in early FP7 calls, as this would enable the scientific and stakeholder community, which has just begun to take shape through FP5, to continue the scientific effort. ERANET might help to bridge possible time gaps.

Although efforts are needed in all three domains, a clear distinction needs to be made between dissemination of results, exploitation of results and the assessment of the impact of EU research. The problems underlying the continuous lack of dissemination and exploitation of results could be worth a thorough analysis, rather than ad-hoc and

short lived attempts at solutions. An exchange of experiences with other directorates might also be helpful, especially regarding impact assessment.

A central archiving system for project reports with a thematic index should be put in place in close cooperation with CORDIS to make reports easily accessible and results available to a wider community over a longer period of time. For ongoing and future projects the archive could essentially be an electronic archive and the problem of confidentiality could be resolved by a simple agreement to be signed by the consortia.

The significant changes in developing FP6 (e.g. New Instruments) were made in view of specific goals regarding the European scientific landscape. Based on a precise description of these aims, suitable indicators should be developed now to evaluate the performance at mid-term. At the same time, there is wide spread concern that unlooked for side effects could occur regarding e.g. NAS participation or the scale of financial participation of smaller countries, that might need correction at an early stage. It is therefore strongly urged, that an index to monitor the development and a plan to counteract unwanted trends in case of need should be put in place now.

The topics in FP6 1.6.3 and the end of KA4 will cause a shift towards fewer technologically oriented projects in the DI specific programme. Thus the objective of 15% SME participation in FP6 might be difficult to reach in the SP.

The “Policy Support and Anticipating Scientific and Technological Needs” (so-called priority 8) is a very commendable step towards strengthening ties between research and policy DGs by defining research topics in an inter-unit discussion process. The officers of DG SG, ENV, ENTR, EAC, TRADE and REGIO that defined the research need should be involved in the evaluation procedure as well, to ensure that the initial aim is not lost. This part of the programme also opens a welcome window for more flexibility in addressing ad-hoc issues, emerging after the WP has been defined and for high risk research.

The involvement of Directorate I in the Impact Assessment process, the Environmental Technology Action Plan and the Johannesburg Summit are considered to be significant steps towards better integration between DG Research and the Policy DGs. Supported by such tools as the publication on “Socio-economic tools for Sustainability Impact Assessment” they also help to make research results more widely known and used within the Commission.

5.1.7 CONFIRMING THE INTERNATIONAL ROLE OF COMMUNITY RESEARCH

The Report discusses the basic components of the INCO Programme, i.e. the two axes of development (as identified already in FP5) and the three major routes of implementation that have been assigned to it in FP6. The Programme has had a distinct mission to be carried out though a wide geographical area, and has been structured in the form of many actions over the last four years (1999- 2002).

The initial character of the Programme in the defined period has been more in favour of promoting the Scientific and Technological basis of socio-economic reasons of cooperation, rather than the development of pure science and technology. Nevertheless, the program has been able to articulate a number of successful actions in five diverse groups of countries. The objectives of the Programme have been clear from the beginning (see Chap. 4.2.1). The calls were implemented every year and no specific management problems were reported except the time lag between calls and payment of first instalment to the researchers (See Annex 6.1 Typical Calendar).

The management of the Programme had been allocated to an entire INCO Directorate of DG RTD. Half way through the Programme, however, the administration was reorganised and the thematic contents of more than 400 on-going projects were transferred to the Thematic Programmes Directorates. Units 05 and 06, under the direct responsibility of the Deputy Director General remained in charge of the overall coordination of the International Dimension in FP 5 and the programming and implementation of the INCO-specific activities.

A total of 3071 projects, bursaries and coordination activities have been funded throughout the FP5 with satisfactory operational implementation despite strain on human resources.

About half way through FP5, a new vision, that of the European Research Area, and the programming of a new, refurbished and more penetrating FP6 emerged. This exercise of adopting the new values and visions of the ERA and the new targets, policies and instruments of the FP6 was a big challenge for the staff involved because these tasks had to be executed in parallel to the implementation of the INCO Programme under FP5 rules.

The Expert Group recognises the following major achievements for the last year of INCO in FP5:

- The candidate countries received a large pre-eminence, and the total distribution of the budgets has been pushed through, according to the new and enlarged rationale of the new International Dimension of the European Research Area. The Accession Countries have been called to present their new Action Plans.
- Concerning other major world regions, government authorities and the respective Presidencies of the European Commission undertook the role of strengthening geographic cooperation with a number of distinct regions (Latin America, Asia, Mediterranean, ACP, NIS etc). Here, the mechanism of the bi-regional scientific and technological cooperation dialogues surfaced as a better way of mobilising the regional dimension of the international cooperation, for better access to the national priority planning, and for better acquaintance with the policy makers and their activities.
- Programme implementation was done in a successful way

The Report concludes with a number of general conclusions on the evolution of the INCO Programme and recommendations specific to the international dimension in ERA and FP6 as well as recommendations of general significance for the whole Framework Programme and ERA.

Four conclusions and related recommendations are of particular importance:

- 1 The European Commissioner Philippe Busquin's views on the international dimension of ERA, defined: "more important than ever for the transition towards sustainable development and shared prosperity." However, in the reporting period this was not yet reflected systematically in often more Euro-centred positions of documents. The desirable improvement of 'corporate cultural' cohesion on the

- content and implications of the international dimension of ERA calls for an open debate. The Expert Group recommends the establishment of a high level advisory group for the Commissioner with members from the main world meso-regions nominated in their personal capacity and not through political channels.
- 2 The new concept of international cooperation in FP 6 – although meant to strengthen the international dimension of the Framework Programme - does not seem to be based on a comprehensive strategic approach because International Cooperation is being addressed in very different ways and with diverse objectives in the three different routes for delivering it. The international dimension in FP6 as compared to FP5 appears therefore weakened. The Commission services should invest more creative efforts to better and more clearly define the overall objectives of international cooperation and the real aims of ERA.
 - 3 The generic Programme objectives remain ambitious especially in terms of EU external policy and influence (due to the absence of a common foreign policy) and international scientific mobility (due to legal, social and cultural obstacles); however a breakthrough has been achieved in relation to intellectual property protection in a global context (recent adoption of a Community patent).
 - 4 At the management level there is need for a functional decentralisation of the follow-up activities related to awareness, information, impact assessment and horizontal spreading and communication among EU programmes, in order to create more space for the internal “academic” training and elaboration of concepts by the Commission services involved with the international dimension of ERA (See 4.2.7 and 4.2.8.2).

5.1.8 INNOVATION AND SMES

Two different activities, Innovation Promotion and Encouragement of SME Participation in FP5, are coupled together in this specific programme. The historical or other reasons for this arrangement no longer obtain and this fact has been recognised under FP6. On the one hand the participation of SMEs will now have its sponsor in one Unit of DG Research while, on the other, innovation promotion will be under the responsibility of DG Enterprise and shared between two new specific programmes: the policy component goes to *Integrating and Strengthening the ERA* and the research and service elements will be part of *Structuring the ERA*.

These developments are welcomed but serious concerns remain as to how the future of both ‘SME Participation’ and ‘Innovation Promotion’ will be safeguarded and operationalized under the new dispensation. The main route for SME participation will now be through *networks of excellence, integrated projects and specific targeted research projects* in the seven priority research areas. This is expected to raise the entry barrier for SME participation in EU research and to impact adversely on SMEs of limited research intensity. At the same time, the closer integration of innovation promotion with the research activity is in danger of reinforcing the perception that innovation is merely the successful application of research results. This could impair the mission of this specific programme to put the innovation process at the heart of enterprise and to promote policies that recognise the diversity of factors influencing innovation.

Much of the efforts of the Innovation and SME Programme during 2002 were concentrated on the future of its activities under FP6. Another external factor that intruded upon the work of the programme during the year was the problem with management software in DG Enterprise. New 'informatics' were installed in November 2002 but failed to perform to expectation, thus leading to an extension of the 'time to contract' for projects. The planned relocation to Brussels of the Innovation Directorate of DG Enterprise, however, was the issue that impacted most on the work of the Directorate because of its adverse effect on staff morale, resulting in twelve vacant posts (more than 10 per cent) in the Spring of 2003.

Under the circumstances, the commitment and achievements of the programme during 2002 are commendable. Highlights were the work on a new Communication on European Innovation Policy and the increased activity of the IRC network in terms of transnational agreements and the extension of its operations (2002-2004). The latter was prompted by the mid-term review of the network. CORDIS continued to improve its operations and to expand its interactive services. The findings of an external evaluation, however, portray it as an "extremely complex" service, lacking in user-friendliness. With regard to promoting innovation, the report simply states that while "CORDIS is recognised as the web of the R&D programmes . . . users are not yet clearly identifying it as the web for innovation".

This monitoring report reiterates a number of recommendations from 2001 that remain to be acted upon, mainly because the Programme was endeavouring to safeguard and strengthen the future of Innovation and SME activities under FP6. The key recommendations from the 2002 monitoring exercise, however, relate to the transition from FP5 to FP6.

The Panel is of the view that the term "Encouraging SME Participation", as used in the work programme, needs qualification in so far as it does not take cognisance of the fact that the vast majority of SMEs (probably more than 95 per cent) lack the capability to participate in EU research projects. **The Panel recommends early publication of the awaited comprehensive review of all aspects of SME participation in Framework Programmes, with particular emphasis on the nature and quality of that participation.**

The Innovation Directorate has responsibility for articulating an innovation vision and spreading the EU innovation imperative to other policy areas of the Commission. **The Panel is concerned that the directorate is under-resourced to carry out this decisive mandate at a time when "progress towards an innovative European economy is proving tentative and fragile."**⁶

The Panel commends the progress that has been made in the past couple of years towards promoting open policy co-ordination through the medium of the Trendchart, including its Innovation Scoreboard. The credibility of the Trendchart process may be undermined, however, if action is not taken to remedy the limitations in its statistical base. These limitations relate to the poor frequency of the Community Innovation Survey and to the narrow base of the Union's innovation statistics. **The Panel wishes**

⁶ Commission communication on *Innovation Policy: updating the Union's approach in the context of the Lisbon strategy*, COM (2003) 11 final

to know if there are plans to address these concerns about the Union's innovation statistics.

The co-ordination aspect of innovation activities in FP5 was part of the mandate of Innovation and SMEs, which exercised this responsibility by setting up and chairing a co-ordination group with the thematic programmes. The achievements of the co-ordination group in FP5 were adversely affected by competing priorities and a lack of resources. **The Panel wishes to be re-assured that this 'co-ordination of innovation activities', formerly entrusted to the co-ordination group, will be legislated for under FP6.**

The Innovation Directorate has acquired invaluable experience through a number of imaginative actions, designed to promote an understanding of the non-technical aspects of the innovation process. **The Panel recommends that specific measures be put in place to ensure that the economic, social and organisational dimensions of innovation are given emphasis in the new instruments of FP6.**

There is a notable absence of indicators of performance and innovation impact, relating to actions undertaken by Innovation and SMEs under FP5. **In the interest of the imminent Five Year Assessment, the Panel recommends that selected innovation impact studies should be carried out.**

The Panel notes the increased activity of the IRC Network and its extension to newly associated countries, but is concerned that the proportion of IRCs categorised as 'good' in the mid-term review, is only one in five. **The Panel wishes to know if the Commission has an improvement target in mind and how it plans to achieve it.**

The Panel takes note of the findings of the recent report by external experts on the performance of CORDIS, and in particular the finding that CORDIS is not deemed to be fulfilling its mandate to promote innovation. **The Panel wishes to know what actions are proposed by the Commission to address this situation.**

5.1.9 IMPROVING THE HUMAN RESEARCH POTENTIAL AND THE SOCIO-ECONOMIC KNOWLEDGE BASE

The Programme *Improving the Human Research Potential and the Socio-economic Knowledge Base (IHP)* covers two very different areas which are managed through a total of nine activity-lines. This diversity reflects the fact that it was created in 1999 by the fusion of two former FP4 programmes, Training and Mobility of Researchers (TMR) and Targeted Socio-Economic Research (TSER). The nine activity-lines are divided between four directorates, B (1), C (2), D (3) and K (3). FP5 finished in 2002 and the panel notes that in FP6, IHP ceases to exist as an integrated programme. This should not interfere with the successful continuation of the activities since the four directorates manage their activity-lines independently from each other.

On the whole the panel finds that the activity-lines are well managed and that the staff is motivated and hard working. The objectives set in the IHP working programme have largely been attained. As 2002 was the last year of the programme there was fewer calls than 2001. Many of the contracts will of course continue well into FP6.

There are however some areas that give rise to concern. The panel would especially like to mention:

The lack of informatics tools suitable for handling the workflow management of large numbers of relatively small contracts. e.g. Marie Curie Fellowships, Research Training Networks. One effect of this has been on the time to contract which in general has been surprisingly long and for Research Training Networks, unacceptably long.

The prizes. The panel feels that the optimal role for the Archimedes prize has still not been identified. Attention should also be given to the arrangements for the Descartes prize and the prize ceremony with the intention of increasing the publicity. The panel is pleased that a strategic evaluation of these prizes and the Young Scientists Contest is underway.

The panel wishes to note that it is particularly impressed by several aspects of the management. These include:

The implementation of the Marie Curie Fellowships
The organisation and assessment of Access to Research Infrastructures
The preparation work for FP6 by Directorate D which involved eight working groups looking at different important aspects of implementation.

The panel is happy to note that training will be given more importance in FP6 applications e.g. HLSC. This is very much in line with the primary ERA objective; that Europe should become a magnet for excellent researchers and not just an area for European researchers. However it is also important that the research carried out remains of high quality; in our view a balance needs to be maintained between training and quality of research output.

The activity-line Women and Science has a special role in that it keeps an eye on all other activity-lines in IHP as far as the gender issue is concerned. Much work has been done during 2002 in spite of an apparently modest budget. The panel recommends that a study should be initiated to look at the effect of the mainstreaming activities started in the latter part of FP5 and fully developed in FP6. It also feels that an even more pressing issue is the encouragement of girls towards science and would like to see initiatives taken on this aspect in FP6.

The 2002 IHP panel has the following recommendations:

Directorate B.

Access to Research Infrastructures

The next technical review should include panel visits and meetings at various infrastructures to allow the panel to obtain a better understanding of the issues, *particularly those outside their areas of expertise*, and to meet users.

To spread the workload, the next technical review should take place over a longer period than at present.

More effort should be made by facilities to use their web-sites to introduce new users to the opportunities of the Access programme. Consideration should be given to making publicity arrangements a precondition for selection.

Directorate C.

Women and Science.

A study should be initiated to look at the effects on gender balance of the mainstreaming activities started in the latter part of FP5 and fully developed in FP6. An even more pressing issue is the encouragement of girls towards science and initiatives should be taken on this aspect in FP6.

Raising public awareness.

Further effort needs to be made to integrate the Commission's activities with those of national activities in line with the recommendations of the 2001 panel.

Prizes

The concept of the Archimedes prize needs major revision. If a successful format for the prize cannot be found the prize should be abolished. The panel notes that a strategic review of this area is being carried out by external consultants. Attention should also be given to the arrangements for the Descartes prize and the prize ceremony with the intention of increasing the publicity. The panel notes that a strategic review of this area is being carried out by external consultants.

Directorate D.

An informatics system should be installed suitable for handling the workflow management of large numbers of relatively small contracts. The panel consider this to be a matter of considerable urgency.

Marie Curie Fellowships

The web site should be developed so that potential contractors and Fellows can check their eligibility for the programme.

If future evaluations are not going to be carried out at meetings of experts but remotely, there should still be occasional meetings to discuss the criteria used and to check how well the evaluation process is working.

The organisation of scientific workshops at which Fellows describe their projects and overall experience to a multidisciplinary audience is seen to be of value to their training and should continue.

Research Training Networks

Future analysis of questionnaires should be supplemented by visits of experts to the laboratories of a sample of networks.

Directorate K.

Socio-economic Research Key Action

Further ways should be found to improve the dissemination of the results of the research to the research community. It seems likely these would make use of the internet.

Efforts need to be made in FP6 projects to find structures that would make KA projects 'European' from their onset. This should contribute to ERA by attempting to develop a genuine pan-European approach to KA research activity, and avoid the 'nationalisation' of projects as much as possible.

Efforts need to be made to enhance the multidisciplinary interaction potential of KA projects. Such integrative projects are becoming more and more necessary given the complexity of the problems arising across the socio-economic domain.

5.1.10 FUSION

Thermonuclear fusion R&D is a 'Key Action' in the Fifth Framework Programme (Euratom), embracing all the research activities undertaken in the Member States aimed at harnessing fusion energy, and with the long-term objective of the joint creation of prototype reactors for safe, environment compatible, economically viable power production. The programme is carried out by a highly experienced and closely coordinated 'ensemble' of researchers from national Institutions, which have Contracts of Association with Euratom.

A Programme Committee (CCE-FU), whose members are directly appointed by the governments of the countries in Euratom, advises the Commission on the steering of the fusion programme as a whole, while the European Fusion Development Agreement (EFDA) organises the cooperative work among the Associations on JET (Joint European Torus), as well as co-ordinating fusion technology R&D and contributions to international co-operations. Since the CCE-FU and the EFDA Steering Committee carry out a monitoring of the scientific and technical aspects of the execution of the programme, emphasis was given, in the monitoring exercise of the present panel, to an assessment of the work directly involving the Commission Services, which is not subject to a specific assessment by these committees or their sub-committees. However, the panel has also provided an overall assessment of strategy, objectives and implementation of the whole programme, following the mandate established by the Commission.

The year 2002 was marked by significant steps forward in the preparations for a decision on whether to proceed with ITER (International Thermonuclear Experimental Reactor), which should be the 'Next Step' in fusion R&D on the route to fusion power. The formal negotiations on the possible joint implementation of ITER with international partners continued throughout 2002. The Commission submitted offers by the French and Spanish governments to host ITER on their territories: the panel strongly feels the need to take a decision on a European site as soon as possible, so as to keep the European option a very strong one.

The panel finds that, in parallel with ITER and in view of the future prototype reactor, a very good European level of R&D in key technologies and in other approaches similar to the Tokamak line, should be absolutely maintained in the Associations, with appropriate financial resources: the Commission should set up a strategic plan

for the necessary accompanying programme of fusion research and for the construction of ITER.

As far as industry is concerned, the panel finds that wider cooperation with the programme is desirable, and recommends that the transfer of technologies and expertise between industry and the fusion programme be strengthened through a continuing and significant increase in the involvement of industry in the programme.

At the programme organisation level, the fusion committee structure has been streamlined to improve co-ordination, particularly in view of a possible decision on ITER construction. The panel appreciates this, while recalling that it is important that the Commission prepares for further modifications as soon as a decision on ITER is taken: In this context, a strong individual leadership, as in industry, is needed as a complement to the committee 'bureaucracy', which is of course necessary but should be minimised as much as possible.

The Commission is recommended to gather and provide fresh data from the Associations on their staff structure, its age profile, the distribution of women in all roles and levels, with a view to initiating action to reduce any imbalances.

As far as the new Associations in the candidate countries are concerned, the Commission should continue its efforts to assist their increased participation in the programme, and to help them in using the available instruments for acquiring tasks and receiving support.

The Commission should enhance the effectiveness of the organisation of public awareness activities, involving an active engagement of all Associations. This is particularly important in relation to the decision making and start up of the ITER project. Provisions in the Contracts of Association and the capacities of EFDA should also be exploited.

The panel finds that the Commission guidelines for the monitoring process are clear and comprehensive. However they are not well suited to the situation in the fusion programme, which is very different from all other programmes (eg specific requests regarding statistical information on Calls etc). Adapted guidelines should be developed for the fusion monitoring.

Moreover, the present panel strongly supports a general system of two-yearly monitoring, with possibly more limited reports in alternate years, or a midterm review type monitoring. The panel feels this would be a more efficient use of the Commission's resources.

In conclusion, the panel finds that the fusion programme is very professionally managed, in general and at the level of the Commission services in particular. The Commission is recommended to take greater advantage of this example programme when describing and promoting the European Research Area (ERA), of which it represents an excellent, long standing example.

5.1.11 FISSION

The fission and radiation protection programme is carried out under one of two key actions of the nuclear energy research and training programme (EURATOM programme), the generic research on radiological sciences and the support for research infrastructure.

The objectives of the fission key action is to enhance the safety of Europe's nuclear installations and improve the competitiveness of Europe's industry by ensuring the protection of workers and the public from radiation and the safe and effective management and final disposal of radioactive waste. An other objective is to explore innovative concepts and to contribute towards maintaining a high level of expertise and competence in nuclear technology safety.

The objectives of generic research is to consolidate and advance European knowledge and competence in the radiological sciences that are essential for the safe and competitive use of nuclear fission and other industrial and medical use of ionising radiation, including the management of natural radiation sources.

During 2002 officers of Unit J4 negotiated and concluded 45 contracts proceeded from 83 proposals received as responses to the last calls for FP5. The financial contribution to the signed contracts was 11 M€ The main evaluation was performed in February 2002 and covered cost shared actions, concerted actions and thematic networks from all areas of the programme. It also covered extensions of existing contracts to NAS partners. The evaluation performed in July 2002 covered cost shared actions, concerted actions and thematic networks in two sub-topics of the area "radiation protection and health".

An invitation to submit expressions of interest (EoIs) to use the new instruments, Network of Excellence (NoE) and Integrated Projects (IP) in the areas of "management of radioactive waste" and "radiation protection" was made in March 2002. They were assessed in July 2002 with the assistance of external experts and the results were published on CORDIS site in autumn 2002. The commission has noted the weakness of answers as regards the definition of the new tools and for many EoIs the answer was a continuation of FP5 projects, the main difficulty being the establishment of new NoEs.

During 2002, the officers of Unit J4 have spent much time in the preparation of FP6; negotiations in the Council, preparation of the work programme and extensive information activities concerning the instruments to be used in FP6. The first call for proposals was published in December 2002. They have also actively participated in the meetings, thus contributing to the scientific work of international organisations. They have organised conferences and seminars and preparation of useful leaflets for describing the program for decisions-makers and media.

Specific Comment 1: *Implementation of FP5*

The objectives of the programs, in terms of implementation have been fulfilled. 2002 was the final year to select FP5 projects. A good coverage of the programme areas have been achieved over the period 1999 – 2002.

Specific Comment 2: *Staff and efforts for preparing the FP6*

The staff in Unit J4 of DG Research is very competent and quite positive to their work. We also understood that the attitude towards FP6 and the accompanying instruments (IP and NoE) is positive. The self-assessment report was of good quality. We had good and open discussions, meaning that everyone seemed to express his/her view without any real hesitation. Much of the work in 2002 has been devoted to the preparations for FP6. One of these preparations was the Expressions of Interest, an opportunity for organisations to give proposals for possible NoEs and IPs. The evaluation of this indications is of a big interest but also that the understanding of the new instruments, especially NoE, should be improved. The 1st call for proposals was issued in December 2002, in agreement with the time schedule.

Specific Comment 3: *Uncertainties about how to use the new instruments*

The new instruments (NoE and IP) seem to be understood and accepted in principle at the level of advisory committees. But we think that the evaluation of the Expressions of Interest demonstrates that there were uncertainties in the scientific world about when and how to use the new instruments in addition to the earlier ones. This is not strange, but advise and follow up will be needed. It should however be noted that the Commission since this evaluation has undertaken important information activities.

Specific Comment 4: *Dissemination of results*

One issue that needs further efforts is the dissemination of results. Maybe the dissemination to the scientific community works rather well (even if also this could be questioned) but the information of decision makers and the general public still needs to be improved. This will be even more important as we emphasise the ERA in FP6.

We appreciate the individual initiative of scientific managers to produce press releases in collaboration with coordinators when a result seems new and interesting for the media. This is a good initiative. However, there is a tendency for media to focus on selected results rather than applied results for all topics of fission programme. Efforts should be made to achieve a proper balance in media between basic science and applied results.

The panel endorse a former recommendation for creating an editorial board for dissemination of results. We can take as example the special edition of RTD info publication "Talking science" which is clearly written by synergy of scientists and journalists. This document could be largely distributed in universities, institutions, etc.. for the benefit of ERA. This board should also decide on the selection of topics and plans for publication.

Recommendations specific to the SP programme

The panel considers that the general recommendations given below (Recommendations of General Significance) also should be applied for the SP Fission Programme.

- 1 The panel endorses a former recommendation for creating an editorial board for dissemination of results. It strongly recommends also continuing the ongoing efforts for producing comprehensive and informative leaflets.
- 2 Ethical aspects should be considered in defining some projects.
- 3 Balance between applied and fundamental research for radiobiological sciences has to be evaluated.
- 4 The commission has to reinforce cooperation and possible synergies between EURATOM fission and fusion programmes.
- 5 Reinforce/or establish more concerted programmes with USA, Japan, the Russian Federation and other countries, in principle for all parts of the programme.
- 6 Efforts should be made to attract young people both in the research programme as well as in training programmes and we recommend promoting a European thought in member states on education and training in nuclear science.
- 7 It is recommended that the Commission identifies and defines possible research needs, to support the development of the recently proposed directives on nuclear safety and nuclear waste safety.

Recommendations Of General Significance For The Whole FP/ERA

The panel considers that the general recommendations given below also should be applied for the SP Fission Programme.

- 8 Frequency of monitoring should be reconsidered. Also the possibility of having specific themes for monitoring should be considered.
- 9 The new instruments (IP and NoE) seem to be generally supported and seen as useful. However there is a need for help and assistance in how to implement them in an effective way.
- 10 Use TIP actively as a tool for planning and follow up of result implementation but define the process in a more useful way and develop more useful forms.
- 11 Involvement of administrative people both in direct contacts with national research organisations in the contractual phase but also in progress meetings etc in FP6.
- 12 Introducing new terminology and definitions brings some confusion among the research community. In the future, the introduction of new terminology should be restricted to those cases when this is really needed.
- 13 A process is needed by which new member states are given support (when needed) to be able to fully participate to the programme.

5.2 Joint Research Centre

Observations from the Board of Governors to the JRC 2002 Annual Report⁷

During 2002, the JRC focused on the preparation of its multi-annual work programme for 2003 to 2006 and defining its role in the European Research Area and its contribution to enlargement. The increased interaction with and consultation of both the High Level Group of User DGs and the JRC's Board of Governors contributed significantly to the overall content of the work programme. The new Deputy Director General, Dr. Roland Schenkel, and the new Director of the Institute for Transuranium Elements in Karlsruhe, Dr. Gerard Lander, were appointed with the involvement of the Board of Governors in their selection. The Board also endorsed the internal restructuring of senior management in the JRC which was carried out in an efficient and smooth way.

The quest to improve efficiency of services was also continued through development of a time accounting and project management system. The Board of Governors appreciates the JRC management's efforts to rationalise the administrative tasks and reduce costs and to make best use of its human and financial resources.

In this context, the Board makes the following observations for the year 2002:

The provision of sound scientific and technical support to EU policies continued in line with JRC's mission with particular examples shown in this report. Increased user-orientation was evident in the preparation of the JRC's multi-annual work programme and the Board of Governors acknowledges that the JRC has taken into consideration the recommendations of the Board and its Working Groups and that the new work programme will be effective in serving EU policies and ensuring necessary scientific excellence. We believe that the new structure of Integrated Scientific Areas (ISAs) will make better use of JRC multi-disciplinary competencies and enhance the cohesion and focus of the JRC activities.

The Board also acknowledges the JRC's potential to contribute strongly to the aims of the European Research Area in strengthening the EU's position in international research. The JRC ERA Action Plan, **jointly developed between the Board and the JRC management staff**, lays out ambitious targets focusing on the JRC's ability to contribute via Common Scientific Reference Systems, increased networking, targeted multidisciplinary training and mobility, and broadening access and use of JRC's specialised facilities. A further aim of the ERA is meeting the challenge of an enlarged Europe. The Board recognises the results of the JRC programme on 'Collaboration and advanced training' in 2002 which through a series of dedicated workshops and training sessions involved more than 1000 scientists from Candidate Countries.

The JRC's main asset is its highly qualified staff and the Board applauds the initiative taken in 2002 to recognise scientific excellence through young scientist and best publication awards. The Board's own discussions during the year benefited considerably from direct interaction with staff representatives as a part of our meetings.

⁷ The text on the JRC is from the JRC's Board of Governors and is not produced in the context of the monitoring exercise as is the remainder of this report.

The Board welcomed and endorsed the move to give JRC responsibility for the management of the Communities' intellectual property. The JRC will undertake actions to protect and transfer its own results to the market and to develop its networks throughout Europe to foster best practice on innovation and technology transfer.

The Board of Governors notes that the JRC's role in nuclear related activities presents various challenges, notably **the nuclear waste management** and the decommissioning of some of the JRC's own nuclear sites. The Board of Governors encourages the JRC to continue using its know-how and competency in this field to accomplish its mission and looks forward to the **future** development of the High Flux Reactor operation.

5.3 Participation of Candidate Countries in the 5th Framework Programme

The following section is based on the analysis performed by a Monitoring Panel member, Mr. Karel Klusacek, in a number of Candidate Countries (CCs). Given the time constraints, only a limited number of organisations were possible to approach. Therefore this section does not represent any in-depth analysis, it should rather be understood as an attempt to reveal a general feeling of CCs about their participation and to identify main challenges and suggestions for improvements. To evaluate the participation of CCs in the 5th Framework Programme (FP5) is a rather difficult task as CCs are not a homogeneous bloc which could be treated and analysed as a single entity. However, as to the participation in the FP5, there are some similarities and common views, shared benefits and challenges that allow to prepare this information without any differentiation between CCs.

Several measures have been adopted to integrate CCs into Framework Programmes. Currently, CCs are fully associated with the FP5, the majority of them will join the EU in 2004. However, the efforts towards integration undertaken by the EU and CCs have not always been fully successful and there are still some problems to be coped with.

This section provides an overview of main achievements and difficulties related to the participation in the FP5 as received from several sources in CCs and the European Commission:

- 1 Coordinators of the National Contact Point systems (they are often identical with the executive officials at Ministries responsible for research in general and participation in the FP5 in particular)
- 2 Individual experts having good knowledge of Framework Programmes
- 3 Staff of the European Commission responsible for the agenda of CCs

Method

The results were acquired through "face-to-face" meetings, telephone interviews and evaluation of answers to specifically designed questionnaires. The first questionnaire had a form of an interview– interviewed persons answered a set of 20 questions, the second questionnaire had a form of a "scoring table" – interviewed persons were asked to assign marks ("poor"- "fair"- "good"- "excellent") to 21 FP5-related themes to

evaluate situation in their respective country. The questionnaires were mailed to the coordinators of NCP systems and ministries in 13 CCs⁸ responsible for the FP5 agenda. Responses were received from 12 CCs. Additionally, some countries provided their own materials dealing with the analysis of their participation in the FP5. Also individual experts in several CCs (Czech Republic, Slovakia, Hungary, Poland and Estonia) were asked to provide their opinion on their countries' participation in the FP5 and two officials of the European Commission (A. Remond, M. Bauer, DG Research) were interviewed to receive a view from the Commission side.

Results

General findings

Despite some problematic areas, the survey clearly revealed that the opportunity to participate in the Framework Programme on an equal footing with EU partners is highly appreciated in the CCs. The most important benefit to the CCs is the possibility to join a structured European cooperation on a programme level and the possibility to learn by doing under supportive conditions of the FP. Results based on interviews and questionnaires indicated several positive conclusions as well as some problems and challenges. The main positive findings include:

- high interest of research institutes in CCs to participate in the FP research projects;
- good general knowledge of the FP5 in CCs;
- good co-operation between European NCP systems;
- well-established collaborative links to EU research organisations.

Respondents from National Contact Point systems appreciated the support provided by their national governments and the assistance provided by the European Commission received a high ranking. On the other hand, the conclusions based on questionnaires revealed some problems:

- extremely low readiness and interest of large industrial companies in most CCs to participate in the FP5 projects;
- low readiness of SMEs to participate in the FP5 projects while their interest to participate is reasonably high;
- obsolete technical equipment of research facilities in most CCs;
- mobility schemes not suited to the needs of CCs;
- relatively low co-operation between research teams of CCs.

The FP5 orientation and modalities

Most of the thematic and horizontal programmes as well as the key actions were evaluated as relevant to research priorities of CCs. Specifically, the Accompanying

⁸ Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia and Turkey

Measures actions received a positive evaluation , since they provided the opportunity to cooperate with similar types of European organisations.

User-friendliness of FP5

In general, the FP5 is not considered to be user-friendly. The researchers had to study a number of lengthy documents and types of forms, the electronic submission facility (Pro-tool) was problematic and it did not stimulate researchers to submit their proposals electronically. The financial rules and financial reporting appear to be the most difficult part of projects.

Main partners in research projects

The selection of main partners of CCs in research consortia was (in some cases) influenced geographically, however, the most frequent partners were the large EU countries – United Kingdom, Germany, Italy and France.

Mobility schemes

Generally, the mobility schemes offered in the IHP programme were not utilized to the extent anticipated by CCs. One of the main reasons may be the restriction that researchers from CCs may carry out their fellowships only in EU member states. Consequently, the research organisations in the CCs could host only the EU nationals. To summarise the main obstacles as specified by representatives of the CCs:

- a relatively high demand for Marie Curie fellowships in CCs but a very low interest of EU researchers;
- the return fellowships cannot be used by researchers from the CCs;
- the number of suitable candidates for the individual fellowships was limited because of the eligibility criteria (Ph.D. holders, age limit, could only apply to a Member Country);
- as to SMEs participation – the SMEs are too small (and coping with problems to survive) and can rarely afford to let any of their staff go abroad for training, additionally, most of SMEs do not fulfil the criteria for a “host fellowship”.

In general, the new measures adopted for the FP6 mobility schemes were positively acknowledged as being able to solve some of the problems outlined above.

Recommendation made by CCs regarding their participation in FPs

Most recommendations made by representatives of CCs are naturally motivated by improving the CCs’ chances to succeed in the 6th Framework Programme:

- the European Commission should provide an extensive assistance to the training of National Contact Points;
- as the FP6 differs considerably from the FP5 (new instruments, rules and procedures), the European Commission should consider the establishment of a

flexible mechanism for the evaluation of an effective implementation and utilization of the FP6 in CCs, and take corrective actions if required;

- mobility schemes should more reflect the needs of CCs;
- the participation of SMEs from CCs should be supported while particularly taking into account the difficulties they have to cope with in the still not fully developed business environment in some CCs;
- specific measures should be set in place for the improvement of the research infrastructure and management of research projects in CCs

Finally, the CCs welcome the Action Plan for supporting CCs and the initiatives to be launched under this Plan.

5.4 Panel Methodology

The 2002 Framework Programme Panel consists, in addition to its Chairman and Rapporteur, of the Chairpersons of each of the Specific Programme Panels and the ERA Panel and one member especially assigned to look into the Candidate Countries. This composition allowed the 2002 Monitoring Panel to draw upon the findings of each of the other Monitoring Panels. The FP Panel had five meetings in Brussels where discussions on these findings took place, allowing the identification of programme specific and generic issues.

In addition to these valuable discussions, the Monitoring Panel invited approximately 12 representatives from the Commission to present and discuss horizontal issues such as the progress on ERA, the preparation for the new instruments, the Action Plan for Candidate Countries, and the implementation of the Information Systems.

The Panel was also constructively assisted by the Commission's Evaluation Unit providing the Monitoring Panel with documentation, presentations on progress in management systems, evaluation and monitoring as well as the necessary data and documentation. The Panel used a variety of documents relating to the launch of FP6, activities in 2002 and relevant Commission Communications, published in 2002 and early 2003.

5.5 Overview of 1999-2001 Monitoring Recommendations

ISSUES	RECOMMENDATIONS		
	1999-2000	2001	Observations on Responses
1. STRATEGY AND OBJECTIVE			
Overall strategy and objectives		<ul style="list-style-type: none"> • Develop Operational Mobility Strategy • Develop System of data collection on mobility • Paper on contribution of new Instruments on Regional Dimension 	<ul style="list-style-type: none"> • Commission refers to 2001 Communication on Mobility • ERA-NET as possible tools for regions
ERA	<ul style="list-style-type: none"> • Conduct issue analysis and policy development for ERA • Involve scientific community in mapping of excellence • Strengthen the structural effect of the FP to implementation of ERA: • ERA orientations in calls • Support to training and mobility • Facilitate clustering • Role JRC in ERA reinforced 	<ul style="list-style-type: none"> • Develop Action Plan for ERA • Establish High Level ERA Policy Forum • Expand ERA to ERIA • Add “contribution to enlargement” to ERA objectives 	<ul style="list-style-type: none"> • Analysis for ERA has progressed • Commission refers to the ‘tableau de bord’ and the Communication on ERA progress of October 2002
Policy/intervention instruments		<ul style="list-style-type: none"> • Ensure smooth launch new instruments and monitor this • Clarify definition Centre of Excellence 	<ul style="list-style-type: none"> • Commission better prepared for transition compared to FP4-FP5 • Independent Review in 2004 promised
		<ul style="list-style-type: none"> ▪ Re-evaluation of financial rules for CC 	<ul style="list-style-type: none"> • In the context of the Action Plan

ISSUES	RECOMMENDATIONS		
	1999-2000	2001	Observations on Responses
Candidate countries		<ul style="list-style-type: none"> ▪ Add European Added Value criteria ▪ Support best-practice activities in CC 	many activities have been set up mainly in the domain of dissemination of information, awareness and training
International cooperation	<ul style="list-style-type: none"> • Develop with CREST framework for inter-Member State co-operation • Enhance International component of ERA • Create Directorate to design and monitor international (extra-EU) dimension of ERA • Expert Advisory Group to decide on priorities 	<ul style="list-style-type: none"> • New Deputy DG to develop brief on international dimension ERA/FP6 	<ul style="list-style-type: none"> • Still lack of coherent policy strategy in 2002
SMEs	<ul style="list-style-type: none"> • Foster support to SMEs : • Improve efficiency NCPs • Coherence between DGs • Promote Community Patent • Improve co-ordination between innovation cells 	<ul style="list-style-type: none"> • Launch analytical studies on relations programmes and SME activity • Guidance paper on SMEs and FP6 • Ensure high quality NCPs 	<ul style="list-style-type: none"> • NCP quality improvement has been intensified • Although targets have been met for FP5, concern on SME participation remains
Innovation (including patenting)	<ul style="list-style-type: none"> ▪ Strengthen I-TEC and bridges to financial community ▪ Closer co-ordination with Structural, Regional and Social Funds 	<ul style="list-style-type: none"> ▪ Launch study industry-university relations to improve commercialisation ▪ Seek synergies between Innovation programme and Thematic programmes ▪ Disseminate Innovation studies 	<ul style="list-style-type: none"> • Some studies launched • Concern has grown that Innovation does not have a strong position in FP6
Gender awareness	<ul style="list-style-type: none"> ▪ Gender awareness should be strengthened ▪ Increase female evaluators 	<ul style="list-style-type: none"> ▪ Include gender in science dimension to documentation and MIS ▪ Strengthen Women in Science Working Group ▪ Launch Girls into Science and Research effort 	<ul style="list-style-type: none"> • Gender dimension made more explicit in evaluation procedures for FP6 • Gender related data collection started

ISSUES	RECOMMENDATIONS		
	1999-2000	2001	Observations on Responses
		effort <ul style="list-style-type: none"> ▪ Explore role of child care funding to increase female participation ▪ Progress Gender Relevance Studies 	
Public awareness	<ul style="list-style-type: none"> ▪ PAoST set up under each Programme Director, with 5-year plans and with support from IHRP +Socio-Economic programmes 		<ul style="list-style-type: none"> • Does not receive much attention in FP monitoring exercises
2. IMPLEMENTATION, MANAGEMENT AND PROCESSES			
Procedures and tools in general	<ul style="list-style-type: none"> ▪ Develop quality improvement systems and training ▪ Better delegation of decisions within Commission ▪ Analyse productivity of management tools in FP5 	<ul style="list-style-type: none"> ▪ Publish Internal analytic reports on generic practical issues ▪ Short note on co-operation policy and mechanisms in FP6 ▪ EU directives to be accompanied by analysis of research requirements ▪ Analyse Time to contract/payment ▪ Prepare timetable up to first payment ▪ Annual Report to contain performance comparison for countries 	<ul style="list-style-type: none"> • Several of the issues addressed in FP6 with new management tools and IT systems, no solutions for FP5
Launch of activities (calls for proposals, information to proposers, application tools...)	<ul style="list-style-type: none"> ▪ The administration of the Call for Proposals to project contract phase should be improved ▪ Improve information to proposers ▪ Provide interactivity and proposal assistance via the various websites ▪ Reassessment legalistic environment ▪ Bring discrepancy quality NCPs to the attention of MS ▪ Set target of 100% electronic submission 	<ul style="list-style-type: none"> ▪ Develop effective electronic submission by end 2002 ▪ Short study electronic support for the evaluation system 	<ul style="list-style-type: none"> • Info packs reissued for FP6 but confusion on new instruments remains • Efforts are being made on electronic submission but results remain to be seen

ISSUES	RECOMMENDATIONS		
	1999-2000	2001	Observations on Responses
Evaluation and selection of proposals (evaluation manual, time to contract...)	<ul style="list-style-type: none"> ▪ Review Proposal Evaluator database ▪ Clarification of socio-economic requirements and coherence EU policies as selection criteria ▪ Effective feedback system ▪ Set acceptable targets for procedures and for time to contract, while shortening delays 		<ul style="list-style-type: none"> • Database not adapted • Process has remained the same for FP5
Management Information System/ Internal IT system	<ul style="list-style-type: none"> ▪ State-of-the art information system for FP6 should be in place by July 2001 ▪ Address problems current systems 	<ul style="list-style-type: none"> ▪ Install a detailed 3-year operational plan ▪ User needs specifications by end 2002 ▪ Responsibility MIS for the DG 	<ul style="list-style-type: none"> • Progress is made in FP6 only with integrated system
Specific cases /programmes	<ul style="list-style-type: none"> ▪ Unified management structure and co-ordination in IST and Energy programmes 	<ul style="list-style-type: none"> ▪ Prepare decision on the Next Step (ITER) in Fusion Research 	
Dissemination of information and results	<ul style="list-style-type: none"> ▪ The wider dissemination of research results is still not sufficient 	<ul style="list-style-type: none"> ▪ Central data store for all FP5 Final reports ▪ Publications policy on project results ▪ Develop more user friendly approach 	<ul style="list-style-type: none"> • No significant actions taken
Evaluation and monitoring	<ul style="list-style-type: none"> • Develop coherent monitoring and evaluation tools ▪ Data on project impact aligned with contract data ▪ Each programme one individual for Monitoring and 5YA ▪ Develop follow-up system for FPMP recommendations on FP and SP level 	<ul style="list-style-type: none"> ▪ Formally reply to Monitoring in 3 months ▪ Each SP to provide follow-up ▪ Comment on Monitoring in Self-assessments ▪ Adopt Monitoring requirements for FP6 	<ul style="list-style-type: none"> • Target to respond in 3 months not achieved • Monitoring has been adapted and improved during FP5 • No progress on public follow up

ISSUES	RECOMMENDATIONS		
	1999-2000	2001	Observations on Responses
Human resources	<ul style="list-style-type: none"> • Develop HR policy across FP5 ▪ Reinforce management culture and methods in Commission and train people accordingly ▪ Define functions Project Officers more clearly 	<ul style="list-style-type: none"> • Draw up outline HR plan for ERA/FP6 	<ul style="list-style-type: none"> • Start has been made in overall HR policy and training strategies
3. IMPACT OF POLICY AND PROGRAMMES			
Impact assessment (incl.TIP)	<ul style="list-style-type: none"> ▪ Develop R&D Impact mechanisms : ▪ Improve priority of Innovation cells ▪ Support structure for staff dealing with TIP ▪ TIP to be improved and simplified 	<ul style="list-style-type: none"> ▪ Publish Impact Assessment Policy for FP4/5 and 6 ▪ Launch assessment per programme by early 2003 	<ul style="list-style-type: none"> • Progress has been made by the launch of impact studies in various SPs, mainly in preparation to the 5YA
4. OTHERS			
	<ul style="list-style-type: none"> ▪ Explore co-operation mechanisms with national research programmes 	<ul style="list-style-type: none"> ▪ Write Communication on Synergies between Research, Education and Training ▪ Ensure appropriate Programme Committee Structure in FP6 	

PART B:

**Responses of the Programme Management to the
external Monitoring Report**

RESPONSES BY COMMISSION SERVICES TO THE 2002 FRAMEWORK PROGRAMME MONITORING REPORT

Experts Recommendations	Commission Services' Responses	Services' Commitments (if any)	Deadline
1 Despite the launch of a Task Force preparing the New Instruments for the FP6 there is still widespread confusion amongst the user community concerning the exact arrangements and the Commission's perception of networks' of excellence and integrated projects. Continued efforts, e.g. by establishing a special support group, should be made to disseminate coherent information on these new instruments	As recommended in the monitoring report, a new Task Force has been set up regarding the implementation of the New Instruments throughout the thematic priority areas. This Task Force, composed of representatives of all services involved in research programmes, aims at ensuring consistency in the implementation of the New Instruments and at preparing the work of the high level panel of independent experts that will be in charge of the midterm evaluation in 2004. It will also ensure that coherent information on the New Instruments to the outside world is provided.	Achieved Midterm evaluation of new instruments by high level panel of independent experts	Panel report by June 2004
2 The Commission should clearly define the role of the various advisory groups, which picked up their work in the second half of 2002. So far, there are conflicting perceptions whether they have a role to play in the strategic planning, and whether they can make an impact on the implementation of the respective activities	The role of the Advisory Groups was specified in the letter Commissioner Busquin sent to all members on the occasion of their appointment and was reiterated at a meeting he had with Advisory Groups Chairs in February 2003. The Advisory Groups are foreseen to: <ul style="list-style-type: none"> - Provide input in view of the definition of the work programmes and their updates, - Make recommendations in the related discussions aimed at steering programme development within the context of the European Research Area strategy, - Correspondingly assist, if needed, in the development of strategic visions on a European scale for the subject fields addressed, and - Comment, as appropriate, on the strategic nature and exploitation of the proposed work to be carried out. 		
3 In particular with a view to making more efficient and effective use of the existing infrastructure for research in Europe, there is a need for better co-ordination, and especially for co-financing of large facilities. This is one area where the European added value of the European Research Area concept could be demonstrated.	Traditionally, Community support for Research Infrastructures has been limited mostly to the support for Transnational Access. Under the Sixth Framework Programme, Community funding has been extended to the design and construction of new (or upgraded) Research Infrastructures of European or worldwide relevance.		

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	<p>Under the specific programme 'Structuring the European Research Area', a Call for Proposals for Design studies and Construction of New Infrastructures have therefore been published in November 2003, with closing date in March 2004. A report on the results will show the effectiveness of coordination and cofinancing for large activities.</p> <p>Design studies will contribute on a case by case basis, to feasibility studies and technical preparatory work undertaken in one or a number of Member States or Associated States for the development of new Research Infrastructures. Construction of New Infrastructures instead aims at optimising European Infrastructures by providing limited support for the development of a restricted number of projects for new Research Infrastructures with a critical catalysing effect in terms of European added value.</p>	<p>Call for proposals</p> <p>Studies on a case by case basis</p>	<p>Report on the results of the call: August 2004</p>
<p>4 The Panel recommends that the Commission's human resource management should be linked more closely to the Activity Based Management processes, which the Commission has introduced in 2002. This will allow a better allocation of staff over the many activity areas and over different types of tasks (from administrative to scientific tasks). This could help to alleviate understaffing in some parts of the Commission, to reinforce the interaction between scientific officers and the user community, and to improve the overall efficiency of the organisation</p>	<p>DG Research has undertaken several actions in order to improve the adequation between its human resources and the objectives to achieve in the context of the European Research Area and the framework programmes. Thus, in July 2002, to rebalance the human resources between the services according to the new priorities of the Sixth Framework Programme and to the objectives of the European Research Area, a huge 'screening exercise' was launched. It led to new allocations for the Directorates and mobility of around 50 persons. Following the conclusions of the 'screening', a working group was set up to reflect on the best possible repartition of tasks between the 'Financial and Administrative Units' and the 'Operational Units' in view of more efficient use of human resources and more effective project management. This reflection should also result in a new definition of the role of the 'scientific/project officer' and in a more effective and rational organisation of resources.</p>		

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	<p>To ensure the transition between the Fifth and the Sixth Framework Programmes 50 supplementary posts of a temporary nature were requested by DG Research and have been granted by the Budgetary Authority. These posts have been filled in 2003.</p> <p>The links between objectives, activities and resources have been established and will be pursued in the context of the implementation of the Activity Based Management introduced with the Reform of the Commission, including through the Integrated Resources Management System.</p>	Recruitment of temporary staff	End 2003
<p>5 One of the crucial issues across all Specific Programmes seems to be the problem of disseminating the research results. There are no accessible archives for finalised reports. Dissemination reinforces the interaction between producers and users of new research results, and thus supports the potential exploitation of publicly funded research. The Commission should address this issue urgently, not only for the FP6, but even more urgently for the flood of the FP5 contracts that will reach completion in the near future. This links to a wider issue of stimulating a better public awareness of research, which the Commission should continue to support.</p>	<p>Actions have been undertaken under the Fifth Framework Programme to disseminate the results of research, notably through CORDIS: the projects database (over 60.000 records) contains 'projects achievements'; the results database (ca. 10.000 records) contains the 'exploitable results' of the projects; the Technology Market Place relaunched in 2002, offers selected results (over 1.000 records) re-edited to become 'easy to understand' and in five languages; the e-mail alert service informs users automatically about new research results.</p> <p>Concerning the archives for final reports, a comprehensive internal archiving system has been set up in the context of the implementation of the Internal Control Standard 13 (archiving) introduced with the Reform of the Commission. Files, included final reports, are archived according to this system as from 1.1.2003.</p> <p>As regards public awareness, a series of initiatives have already been taken under the Sixth Framework Programme such as:</p>	<p>Use of the archiving system as from 1.1.2003</p> <p>Development of actions for communication beyond the research community</p>	Ongoing

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	<ul style="list-style-type: none"> - introduction into the general conditions of the model contract of the requirement for the contractors to 'engage with actors beyond the research community...' and take 'throughout the duration of the project measures to ensure suitable publicity'; - bilateral meetings with Directors and communication specialists to stimulate and co-ordinate the embedding of communication and education in the thematic priorities; - training meetings with Scientific Officers. <p>Other activities are currently envisaged:</p> <ul style="list-style-type: none"> - to organise a first event, early 2004 in Brussels to provide Sixth Framework Programme coordinators with information on several communication activities; - to design a website offering to the Sixth Framework Programme contractors tips and tools related to communication (how to write press releases); - specific editorial assistance contracts to popularise and disseminate projects results on the Research (Europa) website. 	<ul style="list-style-type: none"> - Event on communication - Website on communication aspects - Editorial assistance 	<p>Early 2004</p> <p>Early 2004</p> <p>Early 2004</p>
<p>6. The Panel welcomes the fact that the Commission has reinforced its evaluation tasks, as impact assessment remains a weak point. With impact assessment the Panel refers to the socio-economic, as well as to the scientific and technological impact of the Commission's activities. However, impact assessment should not be considered as a one-off activity linked to the FP's Five-Year Assessment exercises. In order to make robust observations this requires a systematic approach. Therefore the Panel recommends that this approach starts with setting clear objectives for all activities, making ex-ante assessments of expected impacts, defining impact related performance</p>	<p>Both ex-ante and ex-post impact assessment are important components of the Community's approach to evaluation.</p> <p>Ex-post impacts are assessed both in terms of the effects on different types of actors -commercial, academic, public- as well as against different types of impact economic, social, scientific, environmental, etc. Evaluation studies incorporating ex-post impact assessments are currently undertaken for Specific Programmes and for the Framework Programmes, at national and Community levels. One task of the five-year assessment is indeed to draw together the results from separate evaluation studies. However, these studies have not in the past been undertaken in a coordinated</p>	<p>Establishment of multi-annual evaluation plan in Annual Management Plan</p>	<p>Beginning of 2004</p>

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<p>indicators and developing the data collection methods to measure impacts. This philosophy needs to be taken on board in all parts of the Commission dealing with RTD.</p>	<p>and systematic manner. Such an approach will be sought in the future, including through the establishment of a multi-annual evaluation plan in the Annual Management Plan.</p> <p>Ex-ante assessment is now a mandatory requirement for all future major activities. The results of the assessments, including clear objectives and performance indicators, will be used in future evaluation. In addition, work is underway for the Sixth Framework Programme to improve routine collection of project reporting data. A Commission services working group will be set up to prepare the work for ex-ante and ex-post research impact assessment in 2004.</p>	<p>Set up of a dedicated Commission services working group</p>	<p>Autumn 2003</p>
<p>7. The Panel welcomes the Action Plan for supporting CCs and the initiatives to be launched under this plan. We recommend that communication efforts to inform the potential user communities in the CCs, as well as targeted actions to increase the competence levels in the CCs are kept at a high level during FP6.</p>	<p>Based on the Action Plan, calls for proposals for Specific Support Actions for Candidate Countries were published in the OJ C 79/7 of 2.04.03. The objective is to stimulate, encourage and facilitate the participation of organisations from the Associated Candidate Countries in the activities of the priority thematic areas. The actions foreseen fully meet the recommendations of the Panel.</p> <p>Information efforts were made through regular meetings with Personal Representatives of Research Ministers from Candidate Countries, as well as through conferences in the Candidate Countries.</p>	<p>Follow-up of Action Plan for supporting Candidate Countries</p>	<p>Regular activity</p>
<p>8. The role of SMEs in FP6 needs clarification and rethinking. It seems that the overall target to have a 15% participation of SMEs, should allow for variations between different priority areas, as the participation of SMEs is not evident in all areas of research. In many cases a sub-contracting role might be more appropriate than full participation in for instance the integrated projects. An ill-considered approach to the 15% target might also endanger the quality of research performed.</p>	<p>An Interservices Task Force on SMEs was established in December 2002 to monitor SME participation in the Sixth Framework Programme, to define targets of SME participation per priority thematic area and to develop new measures to facilitate SME participation wherever appropriate. The Sixth Framework Programme offers a wider range of options than the Fifth Framework Programme. SMEs can participate via the specific SME measures (collective and co-operative research) to which 430 M€ have been allocated. In addition, 15 % of the budget of the thematic priority areas (1.700 M€) has been allocated</p>	<p>Follow-up of the Interservices Task Force on SMEs</p>	<p>Regular activity</p>

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	to SMEs. In these areas SMEs can be involved in the traditional and the new instruments as participants or subcontractors, as well as in the uptake of results. It is true, of course, that some areas of research will be more suitable than others for SME involvement.		
9. The four year period for FPs seems too short to really achieve the medium to long term objectives that the Commission has set itself by adopting ERA. The Panel recommends to rethink this four year structure and replace it by a six to seven year Framework Programme, which sets out the broad lines of research priorities. Within this longer term framework, it is imperative that flexibility remains in adapting work programmes to changes in the needs of science, technology, and society. In this context the Commission needs also to rethink how it will acquire the necessary strategic intelligence to make these adaptations. Part of this strategic intelligence would need to come from a transparent system of advisory groups, which are in touch with the major scientific, economic and societal developments	<p>A longer duration of the research framework programmes could be possibly considered for further reflection, not least in the context of bringing its duration in line with that of the future Financial Perspectives. It is recalled that the framework programmes may be adjusted as necessary and appropriate in the course of its life, even with a prolongation of its duration and/or a change of its research priorities and budget. The annual or more frequent adaptations of the work programmes provide the desired flexibility.</p> <p>The Commission will continue to draw and rely on the experience and the knowledge of experts in the course of the implementation of the Framework Programmes. The various Advisory Groups that help the Commission to keep up-to-date with major scientific, economic and societal developments will continue to be important sources of such expertise.</p>		
10. The annual monitoring exercise seems to have developed into a "routine operation" with Monitoring Panels choosing to cover a wide range of both managerial and strategic issues, regardless of their annual mandates. The exercise needs to be transformed into a more powerful tool. We recommend that the cycle of monitoring is brought in line with the programme life cycles of the framework programmes, where the monitoring exercises provide the programme management with feedback with a	<p>The Commission services fully share the view that the monitoring exercise needs to be revised. In 2002 already, the mandate of the Panels were more focused and adapted to the life cycle of the programmes.</p> <p>However, more radical changes seem necessary also in the context of the ongoing Reform of the Commission. In the 1990's, when the current monitoring of the research programmes was set up, no generalised tool existed. With the Reform and the introduction of new tools such as the</p>		

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<p>more consistent focus on a small number of major issues in effective and efficient programme management, and when appropriate, strategic issues. An alternative option could be to reconfigure the annual monitoring exercise as an essentially internal management process and to complement it with external reviews, especially a mid term review.</p> <p>The Panel also recommends that in future the JRC is monitored alongside the FP/ERA monitoring exercise, using the same approach. If the Commission chooses to keep this a separate exercise, the outcome should not be included in the FP/ERA Monitor Report.</p>	<p>Annual Management Plan, the Annual Activity Report, the Integrated Research Management System and Internal Control Standards, the Commission has now set up a comprehensive framework for continuous planning and follow-up of its activities.</p> <p>This major change has to be reflected in the organisation of the monitoring of research activities, while respecting the requirements of the Framework Programme Decisions. As suggested by the Panel, the monitoring will be reconfigured as an essentially - but not exclusively - internal management process. The implementation of the Annual Management Plan and its regular follow-up, possibly accompanied by the opinion of external experts, and the follow up of the recommendations of previous monitoring panels, could be major components of such a revised process. In addition, a focussed external review of the implementation could take place at midterm of a Framework Programme's life cycle.</p> <p>The annual monitoring of the implementation of the JRC Specific Programmes is undertaken by its Board of Governors as mandated in the Commission Decision of 10 April 1996 (96/282/EURATOM) on the reorganisation of the Joint Research Centre. This monitoring is implemented through the Board' Observations on the Joint Research Centre's Annual Report. A closer link to the Joint Research Centre's Monitoring with the Framework Programme Monitoring may be sought. This could be achieved, e.g. by the attendance of a member of the JRC Board of Governors at the relevant meetings in the Framework Programme Monitoring exercise.</p>	<p>Set up of a reconfigured monitoring system in view of the 2003 monitoring exercise</p>	<p>End 2003</p>