

Manual of European Environmental Policy

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The Seventh Research and Technology Development Framework Programme

Formal references		
1982/2006/EC (OJ L 412	Decision of the European Parliament and of the Council	
30.12.2006)	concerning the Seventh Framework Programme of the	
33.12.2000)	European Community for research, technological	
	development and demonstration activities (2007–2013).	
Proposed by 6.4.2005 -	action and demonstration dentities (2007-2013).	
COM(2005)119		
Legal base	Article 182 TFEU (originally Article 166 TEC)	
Binding dates		
Entry into force	01/01/2007	
End of validity	31/12/2013	
2006/977/Euratom (OJ L 400	Council Decisions concerning the Specific Programme to	
30.12.2006)	be carried out by means of direct actions by the Joint	
20.12.2000)	Research Centre	
	Implementing the Seventh Framework Programme of the	
	European Atomic Energy Community (Euratom) for	
	nuclear research and training activities (2007–2011)	
Proposed by 18.9.2002 –	(= · · · · · · · · · · · · · · · · · · ·	
COM(2005)444		
2006/970/Euratom (OJ L 400	Council Decisions concerning the Seventh Framework	
30.12.2006)	Programme of the European Atomic Energy Community	
ĺ	(Euratom) for nuclear research and training activities	
	(2007–2011)	
Proposed by 6.4.2005 –		
COM(2005)119		
Regulation (EC) No <u>1906/2006</u>	Regulation laying down the rules for the participation of	
(OJ L 391 30.12.2006) proposed	undertakings, research centres and universities in actions	
by 23.12.2005 – COM(2005)705	under the Seventh Framework Programme and for the	
	dissemination of research results (2007–2013)	
Regulation (EC) No <u>1908/2006</u>	Regulation laying down the rules for the participation of	
(OJ L 400 30.12.2006)	undertakings, research centres and universities in actions	
	under the Seventh Framework Programme of the	
	European Atomic Energy Community and for the	
	dissemination of research results (2007–2011)	
Proposed by 7.2.2006 –		
COM(2006)42)		

Purpose of the Decision

The Seventh Framework Programme (FP7) is the seventh iteration of the EU's main financial instrument for supporting research and development activities¹. This funding mechanism started on 1 January 2007 and will expire at the end of 2013.

Summary of the Decision

FP7 was established by Decision 1982/2006/EC. Its total budget is €50,521 million. Article 2 of Decision 1982/2006/EC states the objectives and the activities that are organized under four main programmes (see below). Article 4 of Decision 1982/2006/EC sets up the maximum amount available for funding through each Programme.

Regulation (EC) No 2007/970 adds two specific programmes covered by the Euratom Framework Programme, the fusion energy research programme (in particular the International Thermonuclear Experimental Reactor (ITER) development), with the objective of developing the technology for a safe, sustainable, environmentally responsible and economically viable energy source. The second programme covers the activities of the Joint Research Centre in the field of nuclear energy. The Regulation covers a shorter period than the Seventh Framework Programme, as it expires in 2011.

Regulation (EC) No 1906/2006 and Regulation (EC) No 1908/2006 set up the rules of participation and conditions to apply for funding, respectively, for the Seventh Framework Programme and the nuclear research programmes.

The Cooperation Programme

The objective of this programme is to improve the links between research and industry among Member States, but also internationally. The maximum funding amount is set at €32,413 million, which is the largest allocation of the FP7 budget (nearly 64 per cent). It is designed to facilitate trans-national cooperation in a number of areas described as major fields of progress of knowledge and technology, where research should be supported and strengthened. Cross-cutting studies linking different themes are encouraged. It is also under this Programme that environmental and energy-orientated research is funded. The Cooperation programme is sub-divided in ten themes:

- health;
- food, agriculture and biotechnology;
- information and communication technologies;
- nano-sciences, nanotechnologies, materials and new production technologies;
- energy;
- environment (including climate change);
- transport (including aeronautics);
- socio-economic sciences and the humanities;
- · security; and
- space.

The Energy theme has a budget of $\in 2.35$ billion, which encompasses funding for projects related to renewable energy and energy efficiency. The Environment theme, which includes climate change, has a budget of $\in 1.9$ billion.

The collaboration (between Member States and third countries) is organized in four sub-programmes:

• Collaborative research, the core of EU research funding;

- Joint Technology Initiatives for the work undertaken by the European Technology Platforms:
- Coordination of non-Community research programmes;
- International Cooperation.

The Ideas Programme

The Ideas Programme has a budget of €7,510 million and it is targeted at the most innovative research that would fundamentally change a research area. This programme is dedicated to support high risk, 'frontier' research. The scope of subject for research is very wide and can involve sciences, technology, socio-economic sciences and humanities. The projects can be trans-boundary, but this is not compulsory. It is implemented through the European Research Council (ERC)². Decision 1982/2006/EC provides for an option to amend ERC structures during the mid-term review of the FP7, if required.

The People Programme

The People Programme has a budget of €4.75 billion and is designed to 'improve the career prospects of researchers in Europe and attract more high-quality young researchers'. It is designed to encourage people to become professional researchers, and for existing researchers to stay in Europe. It also aims to establish Europe as an attractive place for the best international researchers. Mobility is emphasized as a key element for the development of researchers' careers, but also for the sharing and transfer of knowledge between countries and sectors. The Programme is implemented through the Marie Curie Networks, which provides fellowships, skills conferences and structured training to help researchers. The set of Marie Curie actions is quite diverse and includes:

- initial training of researchers through the Marie Curie networks;
- industry–academia training;
- co-funding of regional, national and international mobility;
- intra-European fellowships;
- international cooperation scheme;
- Marie Curie Awards.

The Capacities Programme

The Capacities Programme has a budget of €4.1 billion and is designed to give financial support to research infrastructures and researches for the benefit of small- and medium-sized enterprises (SMEs) in less successful areas. It seeks to optimize the existing infrastructures and facilitate the development of useful ones. The capacities programme encourages the development of regional research-driven clusters, the dissemination of science into the European society through proper infrastructures and the development of the outermost regions. It covers different areas:

- research infrastructures;
- SMEs-orientated researches;
- region of knowledge;
- science in society;
- specific international cooperation.

Budget allocations

FP7 funding is directed towards different types of schemes, collaborative or individual projects, coordination and support, but also networks of excellence, which link different research centres on a particular field, creating a virtual centre in this area. The money is allocated as grants.

The Joint Research Centre covers the activities in the field of nuclear energy for which €1.751 billion has been allocated, including nuclear waste management, environmental impact and nuclear security.

Funding applications are made in the form of proposals detailing the purpose of the work and its cost. Proposals are submitted in response to calls for proposals that are advertised in the *Official Journal*. The details of calls for proposals are published on the <u>Cordis website</u>, and include indicative budgets, available funding schemes and deadlines. The allocation of funding is then made through a lengthy selection process made in two phases. The proposals are submitted to the Commission which evaluates and ranks the proposals, with the help of external experts. Then successful proposals enter a negotiation phase (second phase) between the Commission and the coordinators of proposal. If the negotiation is successful, the project is given a funding agreement.

The conditions of access to the funds are defined in Regulation (EC) No 1906/2006 and Regulation (EC) No 1908/2006. The minimum condition includes that at least three legal entities must participate, each of which must be established in a Member State or associated country, and no two of which may be established in the same Member State or associated country. The three legal entities must be independent of each other. In addition to the minimum conditions laid down, it is stated that 'specific programmes or work programmes may lay down conditions regarding the minimum number of participants, additional conditions to be met as regards type of participant and, where appropriate, place of establishment'. Any university, research centre, organization or individual, established in any Member State, may participate in a project provided that the minimum conditions laid down are respected. FP7 is not limited to EU countries; it is also available for legal entities from an associated country, a candidate country or a third country.

Development of the Decision

The first Framework Programme was launched for the period 1984–1988. Its adoption by the Council and Parliament was seen as a way to establish a stable system for the European funding of research that up to then had been rather opportunistic and *ad hoc*. As other programmes followed overtime the budget increased as did the scope of funding (see Table 1).

Table 1. Budget allocations for each of the Research Framework Programmes

Framework programme	Budget (billions of euros)
First Framework Programme	3.75
Second Framework Programme	5.40
Third Framework Programme	6.60
Fourth Framework Programme	13.2
Fifth Framework Programme	14.96
Sixth Framework Programme	17.80
Seventh Framework Programme	50.50 Source: CEC 4 .

Decision1982/2006/EC followed the same structure of the Decision that created the FP6 (Decision 1513/2002/EC). It was proposed by (COM(2005)119) with the idea of 'building the European Research Area (ERA) of knowledge for growth' (described in COM(2005)118. The Lisbon agenda placed research and innovation at the core of its strategy to make the European Union the 'most dynamic and competitive knowledge-based economy in the world'. The Seventh Framework Programme builds on the mid-term review process of the Sixth Framework Programme and an impact assessment (SEC (2005) 430) that proposed to renew the structure while integrating a key modification: simplification (SEC (2005) 431). The Seventh Framework Programme was explained by the Commission as being 'both larger and more comprehensive than its predecessors, more flexible with simplified procedure'. It is designed to be a 'key contribution to the re-launched Lisbon strategy'. To that end some modifications were made. The overall system was simplified to make it user friendly with a guide for users. The ERC was created, and settled as the implementation instrument of the Ideas Programme. The Joint Technology Initiative and the Technology Platform were introduced to encourage partnerships with industry. The new framework programme also encourages international cooperation and specialization of areas through the development of regions of knowledge. One other major difference is the length of time covered; FP7 covers seven years, whereas the previous Framework Programmes were established for a five-year period. The creation of an environment title in the FP7 is also significant. Previously, the environmental topics were organized between the food quality and safety programme and the development, global change and ecosystem programme.

Implementation of the Decision

The Seventh Framework Programme is midway through its period of operation and many calls for proposals have been made. The first call under FP7 was made on 22 December 2006, and since then further calls have occurred at frequent intervals. The Commission has a duty continually to monitor the implementation of the programme and to report on the results and releases data at regular intervals. The success rate of FP7 is 21 per cent although it varies according to the programme applied for. The calls were more numerous in 2007 than in 2008. While 20,675 eligible proposals were received in 2007, only 12,500 applications were submitted in 2008. Out of these, 2,850 proposals were selected during the first year to be funded to a total of \in 5.7 billion⁵. In 2008 2,300 proposals have been selected for funding, receiving a total of \in 3.5 billion⁶. The majority of the applications have been channelled through the Marie Curie implementation system. A significant number of the projects were led by SMEs (15.5 per cent). Some third countries have also applied for funding. The five highest applicants have been from the United States, Russia, China, Brazil and India.

The Cooperation Programme attracts 70 per cent of the applicants and 72 per cent of the selected proposals. The majority of environmental funding application emanates from non-profit research organizations and higher or secondary education establishments. Over the two first years of activity, €1.665 billion (which represents 4.7 per cent of the requested EC financial contribution to all applicants in selection) have been requested under the environment theme and approximately the same amount under the energy theme.

In 2009, a report (COM(2010)209) on progress made under the 7FP was published by the Commission which, among other things, took account of its contribution to sustainable development. It noted that the first two years of the FP7 resulted in 44 per cent of the Cooperation programme's budget being allocated to research in support of the renewed EU Sustainable Development Strategy, mainly through projects targeting the environment, energy and food, agriculture and biotechnology themes. Importantly, in April 2010, a special web-based monitoring system FP7-4-SD.EU was launched. It contains information about 1,813 research projects (from the years 2007 and 2008) with the total EU contribution of more than €6.000 million from the 7th EU Framework Programme aimed at achieving different objectives of the EU SDS.

An interim evaluation of the framework programme was concluded by an Expert Group in November 2010, following a public consultation process between July and August 2010. The evaluation identified concrete positive effects of the FP7 including wide diversity and high quality of projects under both Cooperation and People programmes, the establishment of research infrastructure as well as leverage in promoting national research efforts. It noted, however, that tackling excessive administrative burdens, boosting female participation and ensuring the involvement of industry need to be further improved. The evaluation also raised additional issues regarding the coordination of EU and national research activities, low success rates which appear to be territorially differentiated and the ultimate impact of research for the benefit of society 2 . The Commission's response to the interim evaluation was published in February 2011 as Communication (COM(2011)52) that outlined which actions the Commission intends to take or has already taken, while indicating where no obvious or immediate solution exists. It was argued that FP funding should be at least maintained in the future EU budget and it should be informed by a well-articulated innovation strategy and accompanied by a 'quantum leap' in simplification the administrative procedures $\frac{8}{3}$. This would address earlier criticism from the Court of Auditors and leading academics that the rules are complex, subject to repeated changes, poorly supported by advice and result in unnecessary costs to entities in the EU, including small and medium-sized enterprises.

Also in February 2011, the Commission published a Green Paper on a Common Strategic Framework for research and innovation funding (COM(2011)48) which launched a public debate concerning key issues that need to be taken into account in the post-2013 EU Multi-annual Financial Framework. The Green Paper seeks opinions of stakeholders on a number of questions including: linking EU research and innovation funding to the Europe 2020 Strategy; tackling societal challenges (e.g. climate change, energy security, demographic ageing or resource efficiency); strengthening competitiveness; and strengthening Europe's science base and the European Research Area¹⁰. The public consultation was closed in May 2011 after it received an unprecedented high number of responses including 775 position papers and more than 1,300 responses through the online questionnaire.¹¹ The main messages were as follows: there was strong support for the CSF concept to bring research and innovation closer together in order to enhance the impact of EU funding; efforts to simplify the system should be enhanced; EU funding for research and innovation should be closely

aligned to societal challenges (*inter alia* climate change, energy security and efficiency, demographic ageing or resource efficiency); funding opportunities should be less prescriptive and more open; funding should support all stages in the innovation chain and stimulate more bottom-up approaches.

Future developments

On 29 June, the European Commission presented its proposals on the 2014-2020 Multiannual Financial Framework which includes a separate section dedicated to Horizon 2020 - Common Strategic Framework for EU research and innovation funding (COM(2011)500 - Part II). Funding for research and innovation is proposed to increase significantly with a €80 billion total budget. Horizon 2020 will bring together the current Framework Programme for Research (FP7), some parts of the Competitiveness and Innovation Framework Programme (CIP) and the European Institute of Innovation and Technology (EIT). The goal is to pool together all projects in this area in order avoid fragmentation and ensure better coordination between EU funding in this area.

On 30 November 2011, the European Commission published a draft Regulation governing Horizon 2020 (COM(2011)809). Key priorities include support for excellence in science, industrial innovation and addressing societal grand challenges among which the achievement of a bio-based economy, clean energy, sustainable transport systems, climate change and resource efficiency. The proposed 2014-2020 Horizon 2020 Framework programme is of strategic importance for tackling challenges such us climate change, biodiversity loss, energy and resource inefficiency. Four of the grand societal challenges which this programme is set to address have a strong relevance for environmental and climate change policy. The Commission proposes that at least 60 per cent of the total Horizon 2020 budget will be in support of sustainable development objectives, out of which around 35 per cent will be climate change related. The Commission proposal will be discussed by the Council and the European Parliament within an ordinary legislative procedure. The final adoption of the Horizon 2020 package is expected by the end of 2013 with a view to enter into force on 1 January 2014.

Related legislation

FP7 is closely related to other financial instruments, <u>the Competitiveness and Innovation</u> Framework Programme and the Structural Fund.

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