

European Commission



Science and Society **Action Plan**



SCIENCE & SOCIETY

European  
Research  
Area

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## Foreword by Philippe Busquin



In a knowledge-based society, democratic governance must ensure that citizens are able to make an informed choice from the options made available to them by responsible scientific and technological progress.

The latest Eurobarometer published by the Commission indicates the enormous amount of progress that needs to be achieved in this connection: while scientists still enjoy the trust of Europeans, only half of the Europeans consulted said that they were interested in science and many of them consider themselves to be poorly informed.

The aim of the European Commission's Science and Society Action Plan is therefore to pool efforts at European level to develop stronger and more harmonious relations between science and society.

It is at the intersection of three major Community debates.

First of all, it is intended to support the strategic goal set by the European Union in Lisbon of becoming by 2010 the most competitive and dynamic knowledge-based economy in the world.

It is also part of the process of creating the European Research Area, a process set in motion by the European Commission in January 2000, and follows on from the Commission Staff Working Paper of November 2000 on Science, Society and the Citizen in Europe, which launched the debate in this connection.

Thirdly, it is intended to contribute to implementing the White Paper on European Governance and the debate on the future of Europe.

Its objective is to put into practice ideas put forward in these debates concerning the links between science and society. To this end, it proposes 38 actions to be undertaken jointly with Member States, the regional authorities, scientists, policy makers, businesses and other stakeholders in civil society.

It will cover education, scientific and technological culture, the participation of citizens and civil society in the formulation and implementation of science policies in Europe, and the use of scientific knowledge complying with common ethical rules in the formulation of responsible policies.

As with the creation of the European Research Area, this Action Plan will only have a significant impact if the Member States themselves make joint and coordinated efforts. The Commission, for its part, will act as a catalyst to give a sense of direction and ensure consistency at Community level.

A stylized, handwritten signature in black ink.

Philippe Busquin  
Member of the European Commission  
Commissioner for Research

# 1. Promoting scientific education and culture in Europe

## 1.1 Public awareness

If scientific and technological progress is to meet the needs of Europe's citizens and regain their support, they will need to have information that is understandable and of a high quality, as well as ready access to this specific culture.

The media, researchers, research institutions – in particular universities – as well as industry must play their public information role to the full. They must be capable of communicating and engaging in debate on scientific issues in a rigorous and comprehensible professional manner, as well as explaining frankly the benefits and limitations of scientific progress.

### Dissemination of scientific information

In order to provide reliable, relevant information to the general public, it will be necessary to support independent sources of public information through action at European level. It is important at the same time to develop thematic, multilingual scientific training modules aimed at journalists in the written and audio-visual media.

#### Action 1

*The Commission, in cooperation with the Member States, will set up a study group comprising journalists and representatives of the press in order to examine the best way of ensuring efficient dissemination of scientific information at European level, for example by promoting the establishment of a European scientific press agency or by facilitating the creation of a network for the exchange by professionals of information destined for the general public.*

#### Alpha-Galileo

Alpha Galileo Europe is an Internet service for providing tailored information to the media. It is a database of press releases, details of events, images and background information on science and technological development within Europe. An e-mailing alert system based on keywords allows journalists to access breaking news in their fields of interest.

Relations between science and the media can sometimes be polemic. In some countries, guidelines for relations between the media and the scientific community, and vice versa, have been proposed. Journalists and scientists who make a particular effort in this area deserve encouragement.

#### Action 2

*Representatives of the scientific community and the media will be brought together in a forum at European level to encourage and support the development of guidelines for a more fruitful interaction and mutual understanding between the two.*

#### Action 3

*The Commission will stimulate interest in scientific journalism and contribute to improving its quality by creating a special award for those involved in science communication with the public.*

The Commission will study ways of promoting science in all multimedia forms including television (European festival of science films for the general public, exchange mechanisms between audio-visual production structures, networks of regional television channels, etc) under the MEDIA Plus programme<sup>(14)</sup>. The Commission already supports the development and production of audio-visual works, including creative documentaries, for broadcasting on European television channels. These audio-visual works may concern those popularising science and technology.

#### Action 4

*An exchange forum (including an on-line forum) will be set up, taking account of the potential of the Internet for audio-visual dissemination<sup>(15)</sup>, to pursue reflections on the scientific content of multimedia tools.*

Exploitation at European level of existing know-how for popularising science and technology in the major transnational and national research institutes and initiatives, such as the network of European Science museums, will be encouraged.

<sup>(14)</sup> The MEDIA Programme entered into force in January 2001 and aims at strengthening the competitiveness of the European audio-visual industry with a series of measures dealing with the training of professionals, the development of production projects and companies, and the distribution and promotion of cinematographic works and audio-visual programmes.

<sup>(15)</sup> It is worth noting that the European Commission's e-Europe action plan, designed inter alia to facilitate the widest possible access to the Internet, is an important initiative for the dissemination of scientific culture.

#### ECSITE network

ECSITE (European Collaborative for Science, Industry and Technology Exhibitions) is a European network of museums, science centers and other organisations involved in science communication to a wide public. Covering over 35 countries, it promotes the exchange of experience and novel ideas. ECSITE develops transnational projects for raising the public's awareness of science, funded by EC and other sources.

#### Action 5

*The creation of products for broad general dissemination (television programmes, paper publications, etc.) will be promoted through targeted calls for tender and the use of existing instruments for this purpose will be encouraged.*

Excellent scientific information products for the general public already exist in countries of the Union and should be more widely exploited through greater interchange between European countries.

#### Action 6

*Targeted calls for proposals will provide an opportunity for translating the best public communication products (e.g. travelling or permanent exhibitions, documentaries, etc.) to other languages.*

#### Science weeks in Europe

The European Science and Technology Week, created by the Commission in 1993, has become one of the activities under the Research and Technological Development Framework Programme. Member States and the associated countries also organise national activities to promote scientific and technical culture. Similar activities exist at regional and local level.

Member States and the Commission would gain by sharing their experiences and best practices.

#### Action 7

*The establishment of a committee comprising organisers of national science weeks will facilitate synergies between the European Science week and the national science*

*weeks or festivals, in particular through the exchange of best practice and experiences of successful events.*

*The European Science week will be greatly enhanced by linking national science weeks, and conversely national science weeks will be boosted by the organisation of events on a European scale.*

#### Action 8

*The Commission will particularly ensure that the achievements of Community research are better represented in the context of the European Week and contribute to the development of the national weeks.*

#### Comparing national approaches to scientific and technical culture

The Commission has already launched an activity to benchmark national policies in five key areas, including "the promotion of RTD culture and public understanding of science". The results from the first cycle of benchmarking are due by mid 2002. Further activities for evaluating and analysing the current state of RTD culture in Europe will be developed.

#### Action 9

*The impact of activities across Europe for raising public awareness of science, technology and innovation will be analysed through comparative research and studies (including benchmarking).*

#### Promoting scientific culture in Portugal

Launched in June 1996, the Ciência Viva programme is the Portuguese Ministry of Science and Technology's contribution to the promotion of a scientific and technological culture among the Portuguese population. Ciência Viva is supported by Community Structural Funds. It is an open programme, promoting alliances and fostering autonomous actions through the definition of three fundamental action tools: a support programme aimed at experimental teaching and the promotion of scientific education in school, the national network of Ciência Viva centres and national scientific awareness campaigns.

#### Systematic public information on Community research activities

Because of their knowledge, researchers, research organisations and industry now have a particular responsibility vis-à-vis society in terms of providing scientific and technological information to Europe's citizens. Communication of scientific and technological progress should be stepped up, in particular the progress flowing from the Research and Technological Development Framework Programme.

#### Action 10

*The conditions for Community Research and Technological Development Projects will require partners to systematically disseminate to the public in various forms the scientific and technological progress achieved under the Framework Programme for Research: media coverage, exhibitions, products for education and teaching purposes, public debates, etc.*

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### 1.3 Dialogue with citizens

The acquisition of a basic grounding in science and technology by the European public and a regular flow of information to the public from experts are not in themselves enough to enable people to form an opinion. A true dialogue must therefore be instituted between science and society. There have been a great many initiatives in this area over the last few years: consensus conferences<sup>(24)</sup>, citizens' juries<sup>(25)</sup>, national and regional consultations, on-line forums, participative foresight programmes, etc. have emerged to satisfy this need for mutual understanding. Member States and the Commission must foster this type of dialogue at all levels: European, national, regional and local.

#### Towards the establishment of a dialogue at European level

Establishing a dialogue at the European level involves close cooperation between a wide range of stakeholders from research organisations, public authorities, media, citizens, civil society, enterprises, etc. The scientific and technological community will play an essential role by presenting issues of interest to the public at large, and by contributing to the debate.

#### Action 19

*The Commission will examine, with representatives of the European scientific community interested in the promotion of science, the feasibility of holding regular events of high visibility and quality ("A European Convention for Science"). The Commission would assist in holding a major inaugural event in 2004 involving the widest possible range of stakeholders interested in science and technology<sup>(26)</sup> at European level.*

(24) Consensus conferences, contrary to the name, usually spark a debate between experts and citizens on new subjects where regulation does not, as yet, exist.

(25) Citizens' juries usually seek to guide the decision-making process for which the form of "end solution" has already been defined (e.g. location of waste disposal site)

(26) The convention could be inspired by the long-established and well-renowned yearly events of the American Association for the Advancement of Science.

### Local and regional dialogues on "Science and Society"

The local and regional levels are well suited to the "science and society" dialogue when the issues raised are of direct interest to citizens (environment, sustainable development, health, safety, urban transport, etc.). It would be desirable to promote participation by scientists in forums and hearings organised at local, regional and inter-regional (particularly cross-border) level, where the issues are also of pan-European interest.

#### Action 20

*The organisation of local and regional "science and society" forums will be encouraged, inter alia through the development of a database listing scientists with communication skills.*

### Developing the European network of Science Shops<sup>(27)</sup>

There are in Europe various types of Science Shops close to the citizen in which science is placed at the service of local communities and non-profitmaking associations<sup>(28)</sup>. Hosted

by universities or independent, their common feature is that they answer questions from the public, citizens' associations or NGOs on a wide variety of scientific issues. The first Science Shops were opened in the Netherlands in the 1970s and the idea was then taken up by about 10 other countries throughout the world. There are now over 60 Science Shops in Europe, mainly in the Netherlands, Germany, Austria, the United Kingdom and France.

The diversity and scope of questions is such that the most successful centres are having difficulty in satisfying demand. The Science Shops would gain from getting together, with the aid of the Commission, to pool their resources, their work and their experience.

#### Action 21

*The networking of Science Shops in the regions of the Union and the candidate countries will be encouraged in particular through the creation of a permanent inventory and of a structure for the dissemination of work carried out on behalf of citizens and associations (e.g. database), and by the development of promotional tools.*

(27) The English term is used generally.

(28) The SCIPAS project, financed under the 5th Framework Programme, enabled an open European network of Science Shops to be established: <http://www.bio.uu.nl/living-knowledge>