

## **Statement**

by the Scientific Commission of the German Science Council on questions concerning European research policy

### **(1) Funding basic research at European level and establishing a European Research Council**

The German Science Council has already pointed out the importance of funding basic research at European level on many occasions in the past. Consequently the Scientific Commission welcomes the fact that policy-makers and scientists have now fully recognised this necessity and that, following the initiative of the Danish Presidency of the European Council, the first steps towards implementation of such a funding policy are now being publicly discussed. The communication of the European Commission in January this year, in our view, allows sufficient scope for the most diverse options to still be considered.

The Scientific Commission firmly believes it is necessary to establish a European Research Council in order to give research in Europe stronger support and greater international prominence. The fragmentation of Europe into national science systems has so far impeded targeted and fair competition between researchers at European level and obstructed the development of critical mass across national borders. Furthermore, insufficient progress has been made in forging a link between the scientific community and industry which fosters innovation while protecting the interests of publicly-funded basic research. The provision of funding for basic research at European level hopefully means that universities will be strengthened; for they play a major role in basic research and are responsible for training future generations of scientists. Thus one fundamental concern of European funding for basic research should be to promote excellent young scientists and their projects. Apart from the goals inherent to science, European funding for basic research can also help to achieve a number of other long-term goals as formulated by the Expert Group under the direction of Professor Mayor, namely economic growth, Community-oriented cultural and social development and the development of scientific and intellectual potential.

However, to fulfil the immediate scientific goals and the political hopes beyond them, various substantive and organisational requirements must first be met:

- Representation of the entire range of subjects

The Scientific Commission shares the view of the European Research Advisory Board (EURAB), the European Science Foundation (ESF) and other key actors that a future system of European funding for basic research must take into account the entire spectrum of subjects, with the natural and engineering sciences as well as

medicine receiving a great deal of attention. However, some key aspects of science in Europe and the foundations of cultural and social development on our continent would continue to be disregarded if the EU agreed at this landmark stage to further ignore large areas of the humanities and social sciences at European level. Europe's interest in science should not be confined to those aspects which are of direct economic value.

Both the existing European treaties and the draft constitution already provide avenues for funding research which allow more than simply strengthening the scientific and technological foundations of industry in the European Union and developing its international competitiveness (Art. 163 of the Treaty on European Union and Art. III-146 of the draft constitution). Art. 163 by no means limits itself to the scientific and technological foundations of industry in the Community, but covers all activities towards promoting research which are considered necessary in the light of other chapters of the Treaty. In addition to the underlying principles of European Union citizenship, social policy and education and training, these include, in particular, Art. 151 of the Treaty, which requires the Community to promote the advancement of the cultures of the Member States. The scientific investigation of the cultural and social foundations of the Community is inconceivable without comprehensive basic research in the humanities and social sciences. Just as the European Community has developed from a merely economic community to a European community through the development of union citizenship, Community research policy must also advance from purely industrial research to a comprehensive research culture incorporating the scientific foundations of the Community, as was set out in the provision previous to Art. 163 of the Treaty. This goal should be pursued vigorously by the German Government when future European research policy is shaped.

- Funding programme should not be defined according to subject-based priorities

The Scientific Commission believes that the sole point of reference for European funding for basic research should be the initiatives of scientists free to submit all kinds of project proposals. Given the existence of national programme funding and the subject-based funding priorities of the European RTD Framework Programme and, moreover, the fact that the two overlap in fundamental respects, it would make little sense to set up a third programme along the same lines for basic research. This would unduly stifle the creative potential of basic research and would disregard the long-term nature of research as well as the largely unpredictable scale of its results. It would be far more appropriate to introduce non-programme-based, science-driven research funding at European level. Nonetheless, scope should also be provided for transferring projects from European funding schemes for basic research to funding under an RTD Framework Programme, so that results that can be applied may be passed on for further utilisation without delay.

- Ensuring the autonomy of the organisation conducting the research with respect to political requirements and avoiding non-scientific objectives

The European Research Council, the organisation responsible for funding basic research at European level, must – and this is a view which the Scientific Commission shares with many scientific organisations in Germany and Europe and with the Ex-

pert Group – be sufficiently independent to organise its procedures according to scientific requirements, on the basis of sound international scientific practice. Thus it must be ensured that the criteria for selecting and funding the projects relate solely to their scientific quality and fit in with the culture of their subject areas. It must be possible to make use of funding across national borders in order to further facilitate the mobility of European and non-European scientists and support international networks. In addition, the possibility of funding projects not planned in cooperation with other European partners should not be fundamentally ruled out. It goes without saying that one factor in assessing the quality of an application is demonstration of the necessary critical mass. Furthermore, when projects receive public funding, it is possible to guarantee the availability of data from research projects at European level. The critical factor should be the scientific quality of a project, not political objectives such as support for less scientifically-developed regions or aspects of “juste retour” of national funds.

In order to fulfil its mission in the interests of the scientific community, the European Research Council needs a management board experienced in science management and executive organs which enjoy the confidence of the scientific community and whose members are mainly recruited from among the ranks of outstanding scientists right from the start. Excellent scientists should be actively involved at all levels of the organisation. The Scientific Commission recommends that the European Research Council be established as an independent European institution and that it make use of the experience of existing networks such as EMBO or CERN. In the long term, close cooperation with the national funding organisations should help to build up trust within national scientific organisations. Such cooperation should also be used to establish procedures in the European Research Council which have already been tried and tested in practice. Furthermore, the European Research Council should strive to foster bilateral agreements between the national funding agencies, thus smoothing the way for transnational research projects below European level.

- Planning and securing the work of the European Research Council for the long term

The work of the European Research Council must be planned according to the more long-term funding requirements of basic research. To achieve this, European basic research must, among other things, be furnished with adequate financial resources.

It is also, we believe, particularly important that the Member States of the European Union provide additional financial resources for European basic research or that they shift resources from other EU budget items which are less vital to the future so that the Community can move closer to its target of spending 3% of gross domestic product on education, research and development. It would be unacceptable and counter-productive if an increase in funding at European level came at the price of a reduction in national funding for science and research.

## **(2) European coordination on scientific infrastructure**

One of the key elements of a European system of science-driven research funding is the funding of complex infrastructure for basic research, which traditionally has consisted in

large-scale facilities for the natural sciences, but in the future will comprise surveys and databases for the humanities and social sciences.

As the German Science Council explained in its statement on large-scale facilities for basic scientific research, Germany should be the site for several European, multinational or international large-scale facilities managed by scientists working in Germany and should also play a major role in the planning, construction and operation of large-scale facilities located abroad. For this, it is necessary to ensure the uninterrupted continuation of the scientifically broad foresight process, on the basis of which the German Science Council has undertaken to conduct a comparative analysis of the individual projects. The national and international scientific community should be involved in an assessment procedure for the projects. The decisive factor in selecting a large-scale facility with this procedure should be its connection to long-term development prospects for the field in question. In other words, the facility must be instrumental in achieving progress in that particular discipline and must guarantee a certain potential for thematic openness that allows advances to be made towards hitherto unknown territory.

The projects from these procedures which are positively assessed and deemed eligible for European or multinational funding should subsequently be represented by the Federal Government within the relevant EU bodies. At European level, it should be ensured that there is no unnecessary overlapping between large-scale facilities. The Federal Government should make a strong effort to ensure a high level of German participation and the advancement of Germany as a centre of scientific research.

Large-scale facilities should only be tied to those existing scientific institutions which, due to their experience in the provision of facilities and due to their scientific excellence, are in a position to technically and scientifically operate large-scale facilities at a high level. By contrast, centralised European administrative bodies, being remote from scientific research, are less well-placed to ensure the knowledge-based, future-oriented and science-driven management of a large-scale facility. Under no circumstances should EU-sponsored, large-scale facilities be placed under constricting scientific programmes. Facilities financed and constructed multinationally or at European level should continue to be available to a wide circle of users and to a large range of applications.

In its recommendations on "Strategic Research Funding", the German Science Council pointed out that the humanities and social sciences also require an increasingly complex infrastructure comprising elements such as text databases or science-driven statistical surveys. Often it would be advisable for such infrastructure to be coordinated at European level and, if appropriate, also funded at European level. The German Science Council emphasises the importance of European coordination and funding based on scientific interests.

### **(3) Further development of the instruments of the 7<sup>th</sup> RTD Framework Programme**

The Scientific Commission agrees with the criticism already expressed by German scientific organisations in various contexts. The trend being followed by the Commission with the new instruments for the 6<sup>th</sup> RTD Framework Programme and with the European Technology Platforms planned for the 7<sup>th</sup> RTD Framework Programme, namely towards increasingly large research consortia, does not, in the majority of the research fields, serve to strengthen the performance of European research and industry. One of the

concerns of the German Government should be to recommend to the European Commission that these instruments be used flexibly according to the conditions determined by the subject area, thus giving small-scale partnerships comprising researchers and businesses with high-quality project applications the same chance as larger-scale partnerships. There should at least be no rigid quota set for the instruments within the subject-related priority areas.

Moreover, it has become apparent that the available financial resources in many subject-related priority areas are not keeping pace with the intended size of the instruments or with the rising numbers of applicants. Altogether, the success rate has in many areas sunk well below a level at which the idea of submitting a project proposal would seem attractive. High application and administrative costs also constitute an impediment to researchers who do not enjoy the backing of a strong organisation, blocking their path to Europe. For many years there have been complaints that the procedures carried out by the Commission for selecting suitable projects are not consistent and are not approved of by the scientific community. Although it is pleasing to note that, all in all, there has been an increase in participation by German researchers from science and industry in successful projects and that this means an increase in the flow of funds back to Germany, this cannot, nonetheless, offset the immense material and non-material costs of successful and unsuccessful project applications in the long run.

The Scientific Commission thus urges the German Government to use all its influence with the European Commission to ensure that the funding instruments in the 7<sup>th</sup> RTD Framework Programme be implemented flexibly and that the decision processes be further developed according to guaranteed quality criteria. If the 7<sup>th</sup> RTD Framework Programme is carried out under similar conditions as the 6th RTD Programme, or under even more restrictive conditions, there is a risk that the EU will fall short of its targets in the field of technological development. This would certainly deter more researchers from science and industry from participating, who would otherwise be able to make positive contributions towards these targets.