

COMMISSION OF THE EUROPEAN COMMUNITIES

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COMMUNICATION FROM THE COMMISSION TO THE COUNCIL

THE RESEARCHER'S EUROPE

Review of the Plan to Stimulate European Cooperation
and Scientific and Technical Interchange 1985-1988 :
Guidelines

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COMMUNICATION BY THE COMMISSION TO THE COUNCIL

PREAMBLE

In presenting the Guidelines for the new Community Framework Programme of Research and Technological Development for 1987-1991 (COM (86) 129 final of 17 March 1986), the Commission has stressed the importance which it attaches to the themes of :

- industrial competitiveness and, through it, improvement in the employment situation;
- the quality of life;
- the realisation of a Researchers' Europe.

Numerous initiatives have already been taken by means of Community research and technological development programmes in order to strengthen industrial competitiveness. It seems essential to pursue these efforts without delay; this has resulted in the preparation of three of the following four communications enclosed, which indicate the initiatives that the Commission intends to take with regard to :

- the launching of the second phase of the ESPRIT programme
- the revision of the BRITE programme
- the revision of the Biotechnology programme.

The last one is equally relevant to efforts to improve the quality of life of citizens of the Community.

The fourth communication enclosed gives more details of how the Commission views the revision of the Stimulation programme on exchanges of researchers; in this case it demonstrates the intention to support wholeheartedly the efforts being made to achieve a true Researchers' Europe.

The presentation of these four communications aims at assuring to provide the necessary impetus for the actions already undertaken on these priority themes; these four future programmes provide a good example of the priorities set by the Commission.

It is further self-evident that, in the spirit of the "Single European Act", these four communications prejudice neither the result of the debate going on in the Council and the Parliament on the orientations of the Framework Programme nor the formal corresponding proposal which the Commission will present in July 1986.

Furthermore, these four documents do not prejudice the corresponding draft decisions which will be presented later on to the Council and to the Parliament.

I. Introduction.

The European Community has a scientific and technical potential which is both immense and of high quality. However its efficacy is too often held back by a number of constraints :

- The barriers between different forms of research (basic, applied, research with directly industrial objectives, etc)
- The barriers between S/T disciplines
- The fragmentation of European research which thus derives very little benefit from the European dimension (in fact if activities on a purely national scale are merely juxtaposed, this often leads to a waste of energy and resources.)

In order to break down these barriers, the damaging effects of which are unanimously acknowledged by the Member States to intensify the mobility of teams and ideas and thus to stimulate the efficacy of the European S/T system, the Community decided, following an experimental phase (1983-1984) which had a 7 MioECU budget, to implement a "Plan to stimulate Cooperation and interchange 1985-1988" covering the whole range of exact and natural sciences.

Adopted by the Council on 12 March 1985¹ this plan uses research grants, laboratory twinings and "operations contracts" to achieve a triple objective :

- to increase the mobility of researchers in the Community
- to encourage and develop transnational European scientific cooperation and, particularly, multidisciplinary cooperation
- to encourage the training and career development of young european researchers.

¹ Decision of 12 March 1985 OJ L83/13 dated 25.03.85.

The plan, adopted in 1985 to cover a Community of 10 Member States is now applicable in an enlarged Community, which with the introduction of Spain and Portugal, has experienced an increase in the number of researchers and the needs for Stimulation.

That is why, given the enlargement and the scale of the need to be met, the Commission now proposes that the "Stimulation Plan" be reinforced in 1987 and 1988 so that it may, without delay, attain the scale needed to achieve the objective which was fixed in 1985.

II. Implementation of the "Stimulation Plan 1985-1988".

The implementation of this plan, which has a budget of 60 MioECU over four years (the Commission original request was for 90 MioECU) is already considered to be a success both by the people responsible for national S/T policy and administration and in European scientific circles.

In fact, having taken steps to inform scientific circles the Commission has received around 13.000 "expressions of interest" and requests for information since the launch of the Stimulation Action.

In 1985 alone, 438 formal proposals were submitted to CODEST (the Committee for the European Development of Science and Technology) which helps the Commission to implement the plan. Getting on for 80 % of these proposals were felt to be "good" or "excellent", which represents 350 requests amounting to 92 MioECU.

On the basis of opinions expressed by CODEST the Commission selected 171 proposals including 461 teams in the 12 countries of the Community (for since 1985 proposals for collaboration arising from Spanish and Portugese laboratories have been considered, with any contracts being held until after 1 January 1986).

So, since the launch of the Stimulation Action, 764 teams of researchers in the Community have been associated in 235 joint projects arising from the Action and almost 30 S/T cooperation networks have been set up in a dozen scientific fields.

III The value of Community support

It is primarily on the basis of the foregoing observations that it is recognised today that the Stimulation Action meets a very great need by filling a gap which is damaging to the Community's S/T vitality and creativity.

All the surveys and evaluations which have been undertaken in respect of this action - the last review conference took place in Brussels on 5 and 6 May - confirm this view, whilst at the same time highlighting the quality of the research that it has made possible and of the initial results that have been obtained.

III 1. Examination of support methods and procedures.

An evaluation of methods was performed in 1984 in accordance with the Council's decision of 28 June 1983² and was submitted to the Council by the Commission with the proposal to launch the 1985-1988 plan (COM(84)719 final).

The conclusions of this evaluation were taken into account when preparing the "1985-1988 plan". They led to adaptations in the methods of support intended to improve the extent to which they meet the needs expressed by scientists themselves, and to a strengthening of the Commission's information campaigns in certain countries and circles.

Again, at the beginning of 1986 a survey of all contractors under the experimental phase 1983-1985 was carried out with a view to supplementing the material for assessment assembled by the Services of the Commission and hence to make it possible to evaluate the worth and effectiveness of the procedures and methods of intervention used.

Following the various examinations it was recognised that the system of evaluating requests for support, for making decisions and of administrative control were particularly well suited to the implementation of those methods of stimulation which were considered appropriate to animate and support national R&D activities in a cultural space at the scale of Europe.

It was also apparent that a framework for transnational cooperation such as the Stimulation Plan offers opportunities for the development of scientific and technical collaboration which are remarkably flexible and efficient and which therefore offer certain advantages vis-a-vis any bi-lateral agreement.

In line with the opinions and recommendations expressed the financial management system as such ought to facilitate the greatest possible speed and flexibility.

III 2. Examination of the results obtained in the framework of support given in 1983 and 1984.

Stimulation activities are intended to promote the "cross fertilisation" of national R&D activities.

So the results obtained must be seen in terms of "intensity of cooperation" and "scientific value" (the latter especially so far as "operations" are concerned).

To deal with the "intensity of cooperation" first it might be worth noting that 3.000 links between Community laboratories have been set up in 1983 and 1984 (cf. COM(84)719 final). It is also worth stressing that each cooperation gave rise, on average, to 3 "mutual" exchanges of scientists between partners and to various joint experiments and meetings.

Several dozen "scientific cooperation networks" were established in advanced and particularly multidisciplinary scientific and technical fields.

Turning to "scientific results", a study of the various scientific projects shows that these on average led to the publication of 13 scientific papers per project in international revues, and to many papers given to scientific conferences.

Again it should be noted that whilst the support given to projects in 1983 and 1984 has meant that much new fundamental knowledge has been acquired, it has also led to new products.

As examples of the scientific results which have been obtained one could cite :

- in the field of molecular materials, the development of polymers for electronics and optoelectronics, which have led to two major patents
- the development of catalysts which will make possible the elimination of toxic compounds in oil refining
- the development of special sensors for the control of complex systems in nuclear, chemical or petrochemical installations
- the biological synthesis of peptides and of insulin with pharmacological and therapeutic value.

In the framework of the operations contract launched in 1983 (EJOB, the European Joint Optical Bistability Project) which brought together seven contractors, two sub contractors and five associates, that is 14 laboratories from 6 Member States of the Community, it should be noted that in two years 60 exchange visits between partners have taken place and 100 articles or scientific communications have been published. The expert given the task of evaluating the results considers that the project is a "major success" which has led to "brilliant scientific results".

Thus a number of major results have been obtained for the first time in the world in connection with "optical transistors" digital circuits with optically bistable elements, an optical "adder" (using reflection and transmission) and optical switching for example. The way forward to all optical information processing is now open.

Finally, in a more general way it should be noted that the Stimulation Action has already helped with the training or specialisation of several hundred young researchers. It is notable that all Member States, whatever their level of scientific and technical development take part.

Again, so far as transnational "scientific networks" and the "mobility of researchers" is concerned, the Stimulation activity has opened up new possibilities which are now widely recognised and has acted as an example for initiatives taken in other fields such as education or research with industrial applications.

IV Review of the Stimulation Plan 1985-1988.

Given the need to reinforce the Community's technological foundations³ the conclusions of the European Councils of March, June and December 1985 as well as the European Parliament's resolutions dated 13 June and 9 July 1985, and in the light of the number of requests for stimulation support which have been made over the last few months, there is a need for two things :

- to reinforce and extend the current plan to take account particularly of the accession of Spain and Portugal to the Community as well as the need to involve industrial circles more effectively and especially to consider the requirements of small and medium enterprises (SMEs).
- to supplement the current Stimulation Plan when implementing the 1987-1991 Framework Programme so as to bring into being an overall implementation strategy, or a "Researcher's Europe".

It is with these in mind that the Commission intends to put forward a review of the Stimulation Plan based on the following guidelines.

IV 1 Confirming the initial objective

In the light of the preparatory work which preceded the 1985-1988 Plan, the Commission indicated that it would be appropriate for around 5% of Community researchers ultimately to be involved in cooperation and interchange set up through this joint action if it were to achieve its full scope.

At a first step, the Commission felt, a significant effect would be achieved were around 1% of European researchers to be involved in the Stimulation Plan 1985-1988⁴

This was costed out, as a first estimate, to imply a budget of around 90 MioECU for the Plan.

Given the request made and the effective needs which have been expressed by European Scientists the Commission is now in a position to confirm the soundness and the importance of the objective which was initially fixed for the 1985-1988 plan.

It is therefore important that the Stimulation Plan be provided with sufficient funds in order that around 1% of researchers in the "Europe of 12" (approx 4,200 "FTE" researchers) may have the opportunity to cooperate and/or go to work in a country other than their own, thanks to Community support.

³c.f. "Reinforcing the Community's technological base and the competitiveness of Community industry" (COM(85)84, final) and "Towards a European Technological Community" (COM(85)350, final).

⁴"Stimulating European Cooperation and Scientific and Technical Interchange - Plan 1985-1988" (COM(84)215 final).

IV 2. Adapting the support methods

The methods and mechanisms of support used up to now are acknowledged to have been appropriate and effective. So they will be retained. However the Commission intends to improve the management procedures involved so as to increase their flexibility and speed, particularly so far as the lower levels of Community support are concerned.

IV 3. Extending the Action to new scientific circles

The extension of the plan should be considered in various ways :

- At the geographical level : beyond the enlargement of the Community to include Spain and Portugal the "Europe of 12" can only gain benefit from opening itself up to non-Member States.

On 12 March 1985 the Council gave the Commission a mandate to negotiate association agreements with European non-Member States which wished to take part in the Stimulation Plan.

To date, declarations of interest have been made by Austria, Finland, Norway and Sweden.

- So far as the partners involved are concerned : the stimulation plan deals with all forms of research and involves all sorts of research bodies or teams, whether they be industrial or public sector.

Industrial research circles have given signs of a greater interest in the Stimulation Action since the end of the experimental phase.

However a greater information and sensitisation effort and possibly the amendment of the support methods should be considered, so that European scientific research cooperations involving industrial partners might be further encouraged. This would aim particularly at small and medium sized enterprises (SMEs), and could only have the effect of strengthening the possibilities for direct exploitation of the resulting research work, especially in the advanced technology sectors where major enterprises are as much involved as SMEs.

V Measures to promote a "Researchers" Europe

Apart from reviewing the Stimulation Plan along the lines indicated, the Commission feels that the establishment of a "Researchers" Europe calls for the employment of a range of framework measures.

- a) An extra-dimension should be added in order to make a contribution to solving the administrative and social problems linked to the mobility of researchers.

The problem of social security, pensions, work opportunities for spouses, educating children, reception in a foreign country and reintegration upon return to the country of origin can all be regarded as constraining factors which, only too frequently, diminish the capacity for mobility of European researchers.

On the basis of previous studies the Commission has undertaken work which aims both to identify and to put forward proposals in respect of the initiatives which are needed to overcome these difficulties.

At the same time, on the basis of work carried out since 1985 an information system upon specific opportunities for scientific collaboration and interchange is being set up. This should facilitate direct contacts between researchers and thus form a direct aid to their mobility.

These initiatives, which should be submitted to the Council before the end of the existing Stimulation Plan will form a range of accompanying measures to ensure that the Stimulation activities are fully effective and to set up the best conditions for the development of the Researcher's Europe.

- b) On the basis of examinations and evaluations which have been carried out in respect of the Stimulation Plan, the Commission feels that it would be equally necessary to take appropriate measures in order to :

- ensure that the major scientific installations in Europe are exploited to an optimal extent with the setting up of a "users Community" (Plan for Community support to large scale scientific installations of interest to the Community).

ensure that high-calibre researchers are supported and remain in (European science prizes and awards).

safeguard and encourage "career mobility" for qualified European researchers.

The full range of these measures will be proposed following adoption of the "Framework Programme for Community activities, 1987-1991".

VI Conclusions

In the light of the debates in the Council and the Parliament on the general guidelines of the Framework Programme of Technological Research and Development (1987-1991) and the terms of the formal Framework Programme proposal which it will have put forward, the Commission will establish and submit a draft Council decision relative to the revision of the Stimulation Action.