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# COMMISSION OF THE EUROPEAN COMMUNITIES

COM(84) 719 final

Brussels, 14 December 1984

Report by the Commission to the Council and  
the European Parliament

THE EXPERIMENTAL PHASE (1983-1984) OF THE  
ACTION TO STIMULATE THE EFFICACY OF THE EUROPEAN ECONOMIC COMMUNITY'S  
SCIENTIFIC AND TECHNICAL POTENTIAL

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COM(84) 719 final

THE EXPERIMENTAL PHASE (1983-1984)  
OF THE ACTION TO STIMULATE THE EFFICACY OF THE  
EUROPEAN ECONOMIC COMMUNITY'S SCIENTIFIC AND TECHNICAL POTENTIAL .

EVALUATION REPORT

SECTION ONE: INTRODUCTION

I.1 BACKGROUND TO THE EVALUATION

On 28 June 1983 the Council decided that a two year experimental phase of an action to stimulate the scientific & technical potential of the Community should be undertaken. In this way the Council gave concrete form to its recognition, a year earlier of the value such an action could have in breaking down the barriers which limit the effectiveness of Europe's RD & D by facilitating communication or cooperation between European scientists both within and between the academic and industrial sectors, and by promoting an increased flow of trained scientists between them.

The Council Decision called, in Article 4, for the Commission to arrange for an evaluation of the functioning of the support methods to be undertaken after the first year and for this to be sent to the Council and the Parliament.

The group requested by CODEST\* to prepare this assessment of the effectiveness of the experimental support methods was determined to bring a critical attitude to bear, in the belief that this would be the most constructive approach and in the light of its awareness that certain aspects of the action would be of particular interest to outside observers.

One such aspect must be the extent to which the first year of the action reflected the objective of flexibility and speed of response. In part this is related to the system of assessing and selecting projects, the setting up of which was one of the experimental aims of the action. The issue is covered at length in section three (selection) and five (timetable) and in the annexes. Overall it is felt that despite the clear dangers that a complex and burdensome system might be introduced it worked remarkably well with a minimum of administrative support. Indeed it added a most important specialist dimension in a number of advanced areas where no one advisory scientific Committee could be expected to contain members with detailed knowledge.

The rapidity of the selection process was widely acknowledged and the timetable speaks for itself.

Another aspect which was especially carefully examined was the methods of support used, and the areas of science to which priority was given. These are covered in Section four. On the whole the success of the experimental phase hinged on the overwhelming demand for 'twinning' contracts.

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\* The Committee for the European Development of Science & Technology

The methods used are open to some criticism however mainly because they were not sufficiently clearly distinguished one from the other in the material available to applicants. The Commission is recommended to pay attention to this question in implementing the 1985-1988 plan, and to drop the subsidy support method, since there are better ways of achieving the action's objectives. The Evaluation group was aware that there might seem to be an inconsistency between specifying seven priority areas and emphasising that these were non limitative. The evidence would appear to support CODEST's view that its responsibility was to provide a certain degree of steering towards clearly advanced areas without excluding the possibility of breakthroughs, which the Committee could not anticipate, in other areas.

The Evaluation group also examined the effectiveness of the initial exercise to spread information about the action, concluding that a remarkable penetration into the milieux concerned had been achieved. Nonetheless, analysis of proposals submitted indicates areas where more vigorous efforts might be made in future, notably with respect to industry. CODEST has always been anxious that Industry and aspects of applied research be involved with the Stimulation Action, which should not be seen as confined to Basic science. If a distinction needs to be made then the Evaluation Group would suggest that programmes such as ESPRIT or the proposed BRITE, which directly involve industry, reflect the need to promote 'Market Pull' research. On the other hand the Stimulation Action aims to promote research which will give a 'Science Push'. This is at least an equally valid area in which industry could be involved.

After studying certain questions related to the administration of the action the Evaluation group's conclusion is that the Stimulation Action is a most important and necessary mechanism for building up European Cooperation. This is demonstrated not only by the Commission's initial analysis but by the support received in terms of applications and by the affirmations of the need for science to be given an European dimension that have repeatedly been made by ministers, politicians, Members of Parliament and scientists themselves. As a means of satisfying these needs and expectations it is clear that the Stimulation Action is a healthy approach and from the methodological view a most promising one. But it is of the utmost importance that the impetus that has been gained should not be lost, that a significant number of researchers should be involved and that a measure of regularity and dependability in future years be acquired in order that sectors such as industry should be encouraged to participate.

1.2. CONTEXT

During the experimental phase of the Stimulation Action four methods of support designed to stimulate the efficacy of RD and D were tested: Twinings, Operations Contracts, Research grants and Subsidies (see Annex 1 setting out the full Council decision). These methods were applied to projects invited by the Commission in two calls for proposals (see Annex 5, the Timetab' ) which specified seven principal areas in which proposals could be considered, (although it was stressed that these areas were not exclusive). They were:  
 Pharmacobiology, Solid State Physics, Optics, Combustion, Photometry-Photocoustics, Climatology and Interface Phenomena.

The object of the evaluation, contained in this document, is to verify that the support methods being tested in the experimental phase are themselves effective in achieving the objectives of the Stimulation Action.

In order to provide the evaluation requested by the Council the Commission asked CODEST, which is made up of eminent and independent scientists from all the Member States, and part of whose function is to advise the Commission on the selection of projects for the Stimulation action, to nominate members of an evaluation panel. Three members of the Committee were nominated :

- Sir David Phillips, chairman of the National Advisory Board for the research Councils, in the United Kingdom
- Dr. Niels Busch, Director of the RISO National Laboratory in Denmark
- Mr. Bernhard Schmidt, Formerly Chairman of the Board of Dornier GMBH in Germany

The Evaluation report prepared by them on the basis of experience over the first year in which projects have been operating and on the data set out in annex 6 has been considered and adopted by the Committee for the European Development of Science and Technology.

## SECTION TWO: INFORMATION

### 2.1. BACKGROUND

Following the Council decision on 28 June 1983, calls for proposals were made in the normal way in the Official Journal C/182 of 8 July 1983 and again in C/29/5 of 4 February 1984 for the two parts of the experimental phase. In addition to this the Commission employed various other means of making the existence of possibilities for support under the action known in the appropriate scientific circles.

- official means: apart from the Official Journal, the information was published in the News Letter produced by Directorate General XIII (Information Market and Innovation), it was formally notified to Members of the Scientific and Technical Research Committee (CREST) and was taken up in press releases and information bulletins produced by the Commission's Press and Information bureaux in each of the Member States.

- direct means: commencing with a press conference in Brussels given by Vice-President Davignon and the Chairman and Vice-Chairmen of CODEST (Messrs Colombo, Curien and Prigogine), press releases and advertisements were prepared for use in the specialised scientific press (such as Nature, la Recherche, la Scientia, Die Umschau and New Scientist) as well as the non specialised press. In addition, in some of the Member States\* the material published by the Commission was taken up and disseminated directly to interested parties by the appropriate national administrations or by national scientific associations.

Certain of these also took the initiative in publicising the action by indirect means such as interviews.

\* United Kingdom, France, Italy, Denmark, Ireland, Greece.

- meetings: gatherings of scientists likely to be interested in the action were held following both the calls for proposals. In fact since it was apparent after the first part of the experimental phase that wider publicity in certain Member States (eg. Greece and Ireland) might be desirable a special effort was made to hold meetings and increase the level of awareness about the action.

## 2.2. COMMENTARY

The effectiveness of the publicity can be judged both by the number of requests for information received (more than 5000 altogether) and by the number of suitable proposals finally made (see Annex 6). This response was forthcoming in a rather limited time and in the context of what was always clearly stated to be an experimental phase.

Further analysis of the applications made, for example in comparison with the amount spent on civilian research by each Member State; reveals that some, such as Germany, appear to be underrepresented, as is the industrial sector overall. In the former case it could be suggested that there is for the moment less perceived need for collaboration (and this is borne out by the preliminary results of a current study, commissioned by CODEST and carried out by the European Science Foundation). However the recommendation which must arise from the observation is that an especially vigorous and effective campaign to publicise both the opportunities available, and the benefits of participating in the action should be undertaken, aimed at areas where any unevenness is apparent.

So far as industry itself is concerned the Evaluation group found that the number of firms likely to be involved in long lead time, or "Science Push" research of the sort which the action particularly aims to encourage is probably rather limited in any case.

- the level of funds available are probably not sufficiently great to change a company's attitude to the importance of undertaking the work. Here it is a question of persuading companies involved in both long lead time and short lead time research that there are long term benefits in taking an initiative, and participating in the action.

-another and perhaps even more fruitful direction might be to encourage academics to take the initiative in cooperating with, or offering collaborative projects with industry rather than vice versa. One of the obstacles cited in the justifications for the Stimulation Action is precisely that between University and Industry, and it could be overcome by boosting the flow of scientists and projects from the academic sector to the industrial.

- whilst industry possesses, and requires, a certain stability and continuity in its operations and its long range planning it must be said that the image of the competitive programmes often used as the basis for fund distribution by governments and by the Community is of short term enthusiasm and fairly rapid change. To win the confidence of industry programmes need to be seen to be stable, continuous and regular. (This is especially true in countries where legislation tends to give permanence to staff taken on for temporary projects). The Community's current budget problems in general, and the question mark over the scale of the main

phase of the Stimulation Plan in particular may well have caused industry to hold back, and might also be a damping factor so far as the Academic Sector is concerned. Here too stability in long term planning is sought.

### SECTION THREE: SELECTION

#### 3.1. BACKGROUND

In accordance with the procedure laid out in the annex to the Council Decision the selection of proposals was carried out by the Commission on the basis of opinions expressed by CODEST following a twofold examination:

- an examination of the quality and the value of each proposition by anonymous external scientific referees and by the Members of CODEST.
- a careful examination of proposals by the Commission with a view particularly to assessing their coherence with programmed activities.

Since the external referee system took some time to set up it was in fact only possible to make full use of it during the second part of the experimental phase. In the first part Members of CODEST relied upon their own expertise and made their recommendation to the Commission upon the 218 projects which had to be assessed with help from Commission staff.

In the second phase, as the network of external referees was established, 202 scientists were consulted. Taking account of opinions gained from other sources, each proposal where a scientific opinion was requested received an average of 1.8 assessments.

It should be noted that in those cases where the referees did not include a "specialist" in the field of a given project (this affected 10 of them) or where the referee was for various reasons slow to respond or felt he could not do so (which affected 48 proposals), CODEST had to base its judgement on the opinion of its own members alone. However it is interesting to note that in all cases where an external opinion was subsequently received it confirmed CODEST's judgement.

In all some 95% of those referees who agreed to help the Commission in this way responded with an opinion on the proposals (approximately two each) sent to them.

#### 3.2. COMMENTARY

The evaluation panel felt on the whole that the selection system worked satisfactorily and the response time achieved was exceptionally rapid. It is clear that a wider selection of referees and the greater use of computers in handling the documentation would contribute greatly to making the procedure operate more smoothly, and more time would always be useful.

whilst the effort and time involved were considerable in comparison with the amount actually disbursed in grants during the experimental phase it is generally considered important to undertake the selection of projects in this objective and systematic manner.

The group particularly wished to verify that the speed, the flexibility and above all the openness to unusual ideas which characterise the Stimulation Action were not compromised by extending the selection system. Clearly a system which uses a conventional mechanism, elaborate or



otherwise, of referees, runs the risk of never supporting anything other than evidently 'safe' projects, as well as becoming unwieldy. The existence of CODEST is important in this respect, as a group of independently minded scientists with a clear view of the aims of the action and the confidence sometimes to override referees views and inject an element of risk into selections. In the Evaluation group's view this is something that only major bodies such as the Community (or IBM, for example) can now do, and is the only way to ensure that new ideas can quickly be tested to see if they will become the basis for tomorrow's 'safe' programmes.

The Evaluation group was equally of the opinion that the involvement of the numbers of highly specialised scientists made necessary by the peer review system was a helpful element for the future in terms both of the action's reputation and the spread of information about it.

It was considered that the anonymity of the system, the involvement of CODEST and the geographical distribution of the specialists involved had been well handled in general and made a most important contribution to the overall fairness of the system.

It was suggested that in assessing the scientific value of the results obtained the same network of referees could be employed to assess the final reports, in the light of their original comments on the proposals. In many cases these comments had been most constructive, contributing in some cases to the ideas in the proposal. As the Action progresses the referees might well also be able to assist in suggesting partnerships and collaboration, as has already begun to happen.

The Evaluation group was conscious of the opportunity represented by the referee network and the number of applicants, in building up the data base of opportunities for collaboration which CODEST and the Commission wish to institute soon, and which seems to be universally supported as a principle. In fact the basis for such a network of information has already been laid by and during the experimental phase.

The referees could also be asked, in future, to help with the more problematical task of assessing the extent to which Europe's long term scientific and technical competitiveness and autonomy have been beneficially influenced by the Stimulation Action.

## SECTION FOUR: METHODOLOGY

### 4.1. BACKGROUND

Four methods of support were tested in the experimental phase, namely:

Twinning contracts where the aim is to help groups of researchers and/or engineers in various countries to get together in cases where they are working in parallel, or in areas which complement each other so that they can, together, develop a higher level of creativity or effectiveness. By thus combining in a form of "laboratory without walls" via the twinning system it is expected that the benefits of reaching 'critical mass' can be achieved without major reorganisation or relocation. Contracts cover the expenses of travelling and subsistence for research workers to meet, the expenses involved in joint experiments, expenses connected with the exchange of results and, where necessary, a contribution to the cost of making up shortages of human or material resources.

Operations contracts support similar types of expenditure but are more demanding of resources, the object being to support teams in different countries of the Community who agree to work together on a specific project having a practical objective, in an original or promising field, within a given time. This will often involve a combination of different forms of research: basic, applied or technological development (under the terms of the Council decision on the experimental phase only one such large scale operation was funded, in 1983).

Research grants aim to encourage and facilitate mobility, on the one hand among experienced researchers and on the other among talented young science graduates who might not otherwise get an opportunity to carry out research. Grants cover the expenses arising from the transfer of European scientists to a laboratory in another Member State (including travelling, subsistence etc..) or the costs of research undertaken by a young graduate or an experienced research worker already employed elsewhere joining a research team for a limited period (including salary and research costs). Subsidies are intended to go beyond traditional methods of developing communications links (exchange visits or conferences) by encouraging the multisectoral, multidisciplinary and multinational aspects of mobility. This could be by contributing to meetings on a 'European' scale for specialists from different scientific and technological background, to meetings on a subject of topical interest bringing together all those interested, from fundamental to applied research scientists, industrialists, engineers and academics, or by contributing to series of short term exchanges.

Out of 609 eligible applications received over the two years, 387 were for twinnings, 93 for research grants, 27 for operations and 102 for subsidies.

#### 4.2. COMMENTARY

Clearly twinnings are seen by the Scientific Community as they are by CODEST itself as a most cost effective way of promoting collaboration and building up a European Community of Science. This should not obscure the value of Operations (many excellent proposals were among those that had been turned down, and several of these were supported at a lower level in the form of twinnings). Should the stimulation plan go ahead at the level proposed it is clear that there will be many projects put forward of a calibre equivalent to the European Joint Optical Bistability project which was supported in 1983. In many fields this scale of multidisciplinary, transnational support will be necessary to make a significant follow up to important breakthroughs. The operation finally selected obviously called for a great many preliminary contacts, and this would usually be the case. The Evaluation group therefore envisages the possibility of granting twinning contracts as an early stage in the development of Operations Submissions.

Again, it is clear that research grants also meet a genuine need for a fellowship style of support, though here it was clear that many scientists found the terms of support both confusing and restrictive. This point has already been assimilated in the shape of the more flexible drafting of the methods in the proposed Stimulation Plan, viz:

"Research Grants make it possible to cover the costs involved in seconding researchers from one Community country to another, in bringing a young scientist into a team from a country other than his own, or in developing the specialisation of a young graduate scientist before he joins a research laboratory, whether in the university or industrial sector.

Depending on the type of researcher involved and the objective of the research grant, it may take various shapes:

- funding to enable a researcher to make short-stay visits (15 days to one month) to another country within the Community,
- funding making it possible to take on the costs involved in mobility (travel, accommodation, removal, etc.) in the research work and possibly in paying the salary of a researcher seconded to or assimilated in a research team from a country (within the EEC) other than his own, for a period of six months (minimum) to 3 years (maximum),
- funding to cover the costs associated with the mobility and research work of a young scientist employed by an industry, who goes to follow a lengthy training course (between one and 3 years) in a publicly owned laboratory in a different country (within the EEC); in this case the salary costs would be met by the industrial employer,
- flat rate sum allocated to a young graduate in another country (within the EEC) for a period of at least one year and at the most two in order to develop specialisation.

The system of Community research grants implies, and will come to be supported by a European network of exchange, reception and cooperation centres (CEACs) which will be set up over a period of time. By examining requests the Commission will get to know a range of research teams who wish to receive or exchange researchers. This core will be extended, to establish the European CEAC network, by including any body (institution, organisation, public or private sector laboratories) which declares itself interested in taking part in the Community action".

It should also be made clear that by emphasising young graduates in the wording of the text neither CODEST nor the Commission have any intention of excluding older scientists to whom secondments of this sort would be invaluable mid career training and whose maturity and experience would be of considerable utility to the host laboratory.

So far as subsidies were concerned, proposals tended to be angled towards support for conference attendance in areas or with purposes outside the scope of the action. It was for this reason, and not because of the unsatisfactory ratio of time spent assessing the projects to their ultimate value that the Committee voted that this method of support should not be pursued in 1985 onwards.

CODEST has discussed in the past, and it is worth raising here, the question of organising "GORDON" conferences on the American model whereby in depth discussions are held on specific advanced topics likely to be of future importance either scientifically or industrially and to which both high level experts and high level industrial researchers are invited. These detailed special conferences are an acknowledged success in the United States and would be a valuable aspect of future activity to stimulate the efficacy of European science.

The evaluation panel also noted that some most constructive ideas had been put forward in the context of subsidy applications. Notable among these, methodologically speaking, were proposals to enable scientists in countries where European collaboration had been slow to develop (for reasons of isolation) to travel with a view both to making themselves known and preparing larger scale future collaborations like twinnings.

It is believed that it should be possible to encourage this style of activity in the context of one of the other three methods, widened as they are in the proposed Stimulation plan.

The panel also turned its attention to differences in the popularity of the specified areas of science (see statistics in appendix 6). There is striking evidence of the popularity of pharmacobiology, which might be explained by the influence and encouragement of the now long established European Molecular Biology Organisation and its partnership schemes. Evidence of the strictness with which applications were assessed is provided by the fact that only 8.1% of pharmacobiology proposals (3.5% by value) were actually accepted as compared with 25% of solid state physics proposals (17.8% by value).

## **SECTION FIVE: TIMETABLE**

### **5.1. BACKGROUND**

The first call for proposals was made on 8 July 1983, with a closing date of 1 October. The selection procedure was ended by 7 November, with the final Commission decision following on 10 November. Between then and 28 December all contracts were prepared and the necessary resources committed from the 1983 budget.

The second call for proposals came on 4 February, with a closing date for submissions of 1 April. CODEST completed its deliberations and sent its recommendation to the Commission on 9 July and the final Commission decision was 18 July. It is expected that contracts will be prepared and the resources committed by the end of November. The longer process in 1984 is mainly due to the extra selection procedure introduced in the shape of the anonymous referee network.

### **5.2. COMMENTARY**

The rapidity of the first part in particular caused problems for institutions in countries where information about the action was relatively slow to be disseminated. Many applications showed signs of having been hastily assembled, though some were nonetheless of high scientific quality and were eventually selected. The panel felt that whilst a little more time at each stage would be convenient, the rapid response was most valuable in terms of the action's aims. It is also true that once scientists become aware of the action and that the timetable is both regular and dependable then the length of the deadlines would not be of such great importance. Projects could be prepared at any time prior to the deadline if it was always on approximately the same date each year. At the same time however the Evaluation group were concerned that there should be an apparatus whereby urgent Research Grant applications could be considered quickly, outside the established deadline system. It was with

Research Grants that the opportunities for collaboration most frequently depended on factors such as University terms or financial years. The Stimulation action ought to be flexible enough to accommodate this

CODEST has always been convinced that it has an important role to play in guiding the Stimulation Action, albeit not in any rigid manner. Thus it was that the seven areas of priority that were chosen were what seemed potentially particularly fruitful in terms of the aims of the action. The Evaluation group considers that this approach is vindicated by the level of interest shown in the areas suggested (more than 75% of proposals fell into the indicative categories). The fact that 25% fell outside these categories is evidence of a healthy tendency on the part of the scientific Community to come up with interesting proposals in different or in unanticipated areas, proof if any were needed that innovativeness cannot be planned. After all the most exciting new science is taking place in laboratories and not in Committees.

## **SECTION SIX: ADMINISTRATION**

### **6.1. BACKGROUND**

#### **6.1.1. Forms**

The forms used for applications were intended to provide the scientific information needed to make assessments as well as the administrative information needed for the establishment of contracts. The information required differed as between the methods of support.

The assessment forms issued to referees requested views on a range of issues - scientific quality, quality of personnel involved, value to the community and value of the project overall. Referees were asked to express their views in numerical form:

- 0: for no opinion,
- 1: for excellent,
- 2: above average,
- 3: average,
- 4: below average,
- 5: poor.

#### **6.1.2. Personnel**

Of the three staff (2A, 1C) which the Council decision allocated to the action, one secretary (IC) arrived in November 1983 whilst the two officials in category A arrived in February and April 1984. Thus the bulk of the implementation of the experimental phase and the preparation of the Stimulation plan 1985-1988 was undertaken by two officials in Division XII-A-2 in addition to their normal duties, with the assistance of a secretary.

#### **6.1.3. Resources**

The budget for the action (see Annex 4) underwent some redistribution as a result of an underspend in the staff and administrative budget lines (respectively 195,000 Ecus instead of 252,700 Ecus, and 210,000 instead of 260,000 Ecus). The difference was added to the amount available for contracts making 6,594,000 instead of 6,487,000.

#### 6.1.4. Contract Preparation

There were however delays subsequently caused by the sometimes slow administrative procedures in the applicant institutions. It was clear that in a twinning of, say three partners, all three contracts should be signed by the parties concerned before the signature of the Director General, giving effect to all three contracts at the same time. There were still certain contracts for which the signature of the applicant or their administration was awaited as late as June 1984, following CODEST's approval in October and completion of the contract documents in December 1983.

#### 6.1.5. Document Handling

So far as the Commission was concerned the proposals could have been dealt with more speedily and certain duplications avoided had the intended computerised system been available.

In fact, the particular requirements of the Stimulation Action went beyond the capabilities of the Directorate General's current equipment (both hardware and software). Therefore work is in hand to develop a suitable system to enable the Commission to handle several hundred applications at a time without having to involve more than a limited number of extra staff.

#### 6.2. COMMENTARY

The evaluation panel appreciated the intention behind the design of the forms and noted that it had in fact facilitated the preparation of the contracts. However there had been criticism of their complexity (though from by no means all of the applicants) which was probably related to the difficulty of grasping the exact distinctions between the various forms of support.

There was particular criticism from the panel and from certain referees that the application forms did not facilitate the task of making a scientific judgement, and perhaps prevented applicants from making their best case.

So far as delays in the contract procedure are concerned the evaluation group noted that in the first part of the experimental phase some 88 individual contracts relating to 34 projects were prepared by the contracts division in an exceptionally short time (see section 5 and Annex 5) and all were ready for credits to be committed by the end of 1983. This, following a deadline for applications of 1 October is rapid by any standards. It also seems that the 1984 contracts will be completed in a similarly short time, allowing for the extra period of evaluation by the external referees. For those delays that occurred at a national level some explanations can be made:

- in some countries there is a requirement that contracts be approved by the University's Administrative Council, or even by the Research Ministry.
- In certain cases there was reluctance for the contract to be made out under Belgian law -which is the rule for all Commission contracts.
- Requests were sometimes made by applicants for arrangements which were not in fact legally permissible in their countries.

In general however it would seem that it would have been difficult for the process to be quicker or more flexible, and that a sound and satisfactory start was made to the Stimulation Action.

ANNEXES TO THE FIRST STAGE EVALUATION REPORT

ANNEX 1 COUNCIL DECISION OF 29/6/83

ANNEX 2 COMMISSION DECISION OF 6/12/82

ANNEX 3 LIST OF CODEST MEMBERS 1/1/84

ANNEX 4 FINANCIAL SUMMARY

ANNEX 5 THE TIMETABLE

ANNEX 6 STATISTICS



ANNEX 1.

COUNCIL DECISION OF 29/6/1983

## COUNCIL DECISION

of 28 June 1983

adopting an experimental Community action to stimulate the efficacy of the European Economic Community's scientific and technical potential

(83/331/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament<sup>(1)</sup>,

Having regard to the opinion of the Economic and Social Committee<sup>(2)</sup>,

Whereas Article 2 of the Treaty assigns to the Community the task *inter alia* of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living; whereas the activity to be performed to this end by the Community is set out in Article 3 of the Treaty;

Whereas, by its resolution of 14 January 1974 on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology<sup>(3)</sup>, the Council entrusted the Commission with the task of defining projects of interest to the Community and selecting the appropriate ways and means for implementing these projects;

Whereas the overall Community strategy comprises the conception and implementation of a general framework programme for common scientific and technical activities;

Whereas, amongst the fundamental goals proposed by the Commission for the framework programme and favourably received by the Council of 8 March 1982, that of 'improving the Community's scientific and technical efficacy' calls for special modes of action;

Whereas on 30 June 1982 the Council recognized the value of a Community stimulation action to supplement existing national and international activity;

Whereas on 4 November 1982 the Council adopted a joint position with a view to a decision adopting a

Community action concerning the stimulation of the Community's scientific and technical potential, experimental phase 1983/84;

Whereas, accordingly, it is appropriate to adopt a Community experimental stimulation action which will make it possible to define explicitly the approaches for subsequent action, to be included in a general framework programme;

Whereas the Scientific and Technical Research Committee (CREST) has given an opinion on this matter,

HAS DECIDED AS FOLLOWS:

*Article 1*

A Community experimental action to stimulate the efficacy of the European Economic Community's scientific and technical potential (hereinafter referred to as 'experimental action'), as set out in the Annex, is hereby adopted for a two-year period commencing on 1 July 1983.

The experimental action shall consist of activities with the purpose of testing approaches to and methods of stimulation in the Community, basically within the seven fields defined in the Annex.

*Article 2*

The funds estimated as necessary for the execution of the experimental action should be 7 million ECU, including expenditure on a staff of three.

*Article 3*

The Commission shall be responsible for the implementation of the experimental action, by means of research allocations, grants to help laboratory twinning, development contracts, and grants to assist research teams, seminars and courses.

It shall be assisted by the Committee for the European Development of Science and Technology (Codest), set up by Decision 82/835/EEC<sup>(4)</sup>, and by referees.

<sup>(1)</sup> OJ No C 161, 20. 6. 1983, p. 174.

<sup>(2)</sup> OJ No C 90, 5. 4. 1983, p. 5.

<sup>(3)</sup> OJ No C 7, 29. 1. 1974, p. 2.

<sup>(4)</sup> OJ No L 350, 10. 12. 1982, p. 45.

*Article 4*

At the end of the first year of the period referred to in Article 1, the Commission shall undertake a methodological evaluation of the experimental action. It shall forward a report on this evaluation to the Council and to the European Parliament.

*Article 5*

The results of implementation of the experimental action shall be disseminated pursuant to Council

Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community (1).

Done at Luxembourg, 28 June 1983.

*For the Council*

*The President*

H. RIESENHUBER

(1) OJ No L 255, 20. 9. 1974, p. 1.

## ANNEX

**Experimental Community action to stimulate the efficacy of the European Economic Community's scientific and technical potential**

The experimental action will relate to activities of a multi- or interdisciplinary nature for which joint working at multinational level is necessary or preferable.

The plan of action is set out as follows:

1. Three kinds of activity are to be given priority support:
  - activities for which the joining up (whether mono- or pluridisciplinary) of research teams is beneficial or indispensable.

Monodisciplinary union would be an attempt to bring together teams working within the same discipline in different Member States. Such collaboration should, in certain cases, make it possible to attain the critical mass which is needed in order for the creativity of each team to take off.

Pluridisciplinary union would seek to link teams working within different disciplines, often located in different Member States.

Both types of union aim to exploit the richness of methods and results now dispersed throughout Europe.
  - activities enabling the promotion of high-quality teams which, because of the novel nature of their work, do not yet benefit from the support which their worth, and the potential value of their work, would seem to justify,
  - activities leading to a strengthening of the communication and diffusion of information within the scientific and technical system.

These activities concern, in the main, the following seven areas, which are to be the subject of discussions with the Codest Committee:

- *pharmacobiology*: application of new developments in cellular and molecular biology,
  - *solid-state physics*: structure phenomena and processes of fabricating composite materials,
  - *optics*: application of modern techniques of mathematical analyses to various problems in the field of optics,
  - *combustion*: approach to ignition phenomena (behaviour of material under combustion conditions),
  - *photometry/photoacoustics*: application to the field of non-destructive analysis,
  - *climatology*: transitory phenomena,
  - *interface phenomena*.
2. In the fields referred to in point 1 different kinds of illustrative stimulation activities are to be tried out: research allocations, laboratory twinning, researcher mobility and subsidies for research teams. On the other hand, a specific project of a pluridisciplinary nature will be started up, to enable joint working by teams in different Member States to bring it to successful conclusion.
  3. The choice of stimulation activities and the scientific and technical teams involved will be made as follows:
    - the Commission will inform the national scientific and technical communities of opportunities for Community action in the selected fields; it will await offers,
    - the selection of tenders will be made by the Commission which, with the assistance of Codest, will make use of a 'peer review' system to judge the scientific and technical merit of the activities proposed and the quality of the teams putting them forward. The intervention chosen will

be of a multinational nature (mobility of researchers from one Member State to another; teams made up of researchers from various Member States; projects carried out jointly by various teams in various Member States) and will involve activities of the type set out in point 1; the activities will be complementary to, and coherent with, Community scientific and technical activities carried out elsewhere.

4. A group of studies, consultations, surveys and seminars, carried out in collaboration with national scientific and technical communities will make it possible to analyze and evaluate the scientific and technical needs and opportunities with a view to specifying the content of the subsequent annual stimulation plans to be incorporated in the framework programme.

ANNEX 2

COMMISSION DECISION OF 6/12/1982

## COMMISSION DECISION

of 6 December 1982

on the creation of the Committee for the European Development of Science and Technology

(82/835/EEC)

## THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Whereas the implementation of a common strategy in the field of science and technology and the establishment of a general framework programme for the corresponding activities in these fields make it necessary that the Commission should be kept informed, on a permanent basis, of the scientific and technical needs and opportunities which exist within the Community;

Whereas science and technology within the Community will not be able to benefit from the best conditions for progress unless efforts to stimulate them at national and Community level are reinforced and unless full advantage is taken of the Community dimension;

Whereas, in order that this can be done, the Commission must possess the capacity to analyze and evaluate the potential of research and development in the Community, and to assess and estimate the worth of scientific and technical opportunities in the short, medium and long term;

Whereas such an analysis of the Community's scientific and technical potential and the identification of its various possibilities also call, if they are to be undertaken by consulting the competent national authorities, for close collaboration with the European scientific and technical community in the framework of a regular dialogue with highly qualified specialists in these fields,

HAS DECIDED AS FOLLOWS:

*Article 1*

A Committee for the European Development of Science and Technology, hereinafter referred to as 'the Committee', is hereby set up within the Commission.

*Article 2*

1. The Committee's basic task shall be to assist the Commission in the preparation and implementation

of its policy in regard to the stimulation of the Community's scientific and technical potential; in particular, it shall contribute to the systematic analysis of the Community's scientific and technical needs and opportunities; the Committee shall also assist the Commission in defining the common research and development strategy. It shall provide the Commission with elements for consideration and appraisal during the preparation of the overall framework programme for Community scientific and technical activities.

2. In order to perform the tasks set out in paragraph 1, the Committee shall:

- take part, at the Commission's request, in the qualitative analysis of the Community's scientific and technical potential, carried out by the Commission with the help of the consultative committees on research and development,
- conduct an exchange of information with the Commission on actions undertaken or to be undertaken at Community level, and, where applicable, on what further work should be undertaken,
- give opinions or make reports to the Commission in the framework of the common strategy for research and development, especially on the analysis of scientific and technical needs and opportunities within the Community, and the evaluation of requests for intervention made to the Commission with a view to carrying out Community activities to stimulate the scientific and technical potential of the Community.

3. The arrangements for disseminating the Committee's opinions and its reports shall be decided in agreement with the Commission.

*Article 3*

1. The Committee shall consist of 21 members.
2. It shall be made up of eminent persons of recognized standing in European scientific, technological and industrial circles, active in national research and development systems and conversant with national science and technology policies.
3. Committee members shall be appointed in a personal capacity by the Commission, which shall ensure that the necessary contacts are made with Member States for this purpose.

4. The Committee shall contain at least one member from each Member State, with a maximum of four.

5. A list of Committee members shall be published by the Commission in the *Official Journal of the European Communities*.

#### *Article 4*

The term of office for a Committee member shall be four years. Members of the Committee shall remain in office until such time as they are replaced or until their appointment is renewed.

Arrangements for renewing the Committee shall be established as part of its rules of procedure.

The functions which are exercised shall not be subject to remuneration; travel and living expenses relating to Committee meetings shall be covered by the Commission pursuant to the administrative provisions currently in force.

#### *Article 5*

The Committee shall elect a chairman from among its members. The chairman shall be elected by a two-thirds majority of members present, a minimum of 10 favourable votes being required.

Two vice-chairmen shall be elected, with the same requirements as to majority and under the same conditions. They shall deputize for the chairman in case of absence.

The chairman and vice-chairmen, with the assistance of two other Committee members elected under the same conditions, shall constitute the Committee's officers and be its permanent representatives to the Commission.

Their term of office shall be established as part of the Committee's rules of procedure.

The organization of the Committee's work and its secretarial arrangements shall be the responsibility of the Commission, working closely with the chairman.

#### *Article 6*

1. The Committee shall normally meet at the place where the Commission has its seat and upon being convened by the Commission. There shall be a minimum of four meetings per year.

2. Representatives of the Commission shall have the right to take part in meetings of the Committee and the working groups which it may set up among its members.

#### *Article 7*

The Committee shall adopt its own rules of procedure.

#### *Article 8*

Without prejudice to the provisions of Article 214 of the Treaty, members of the Committee are required not to disclose any information which comes to their attention through the work of the Committee or its working groups, where the Commission informs them that an opinion or a topic bears upon a question of a confidential nature.

In such cases, only members of the Committee and representatives of the Commission may take part in meetings.

#### *Article 9*

This Decision shall apply with effect from 6 December 1982.

Done at Brussels, 6 December 1982.

*For the Commission*

Étienne DAVIGNON

*Vice-President*



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ANNEX 3

LIST OF CODEST MEMBERS 1/1/1984

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- MEMBERS OF CODEST -

by function

at 1/1/1984

BUREAU :

DR. U. COLOMBO - Chairman -  
President of ENEA - Rome

Prof. I. PRIGOGINE - Vice-Chairman -  
Prof. at the Free University -Brussels

Mr. H. CURIEN - Vice-Chairman -  
President CNES -Paris

Sir David PHILLIPS  
Prof. at Oxford University  
Chairman of the Advisory Board for Research Councils

Dr. B. HESS  
Vice-President of the Max Planck Institute

MEMBERS IN ALPHABETICAL ORDER

Sir Geoffrey ALLEN  
Director of Research at Unilever-

Prof. A. BOEVER  
Prof. Honoraire Cours Universitaires -

Dr. H. BÖHM  
Director of Kernforschungszentrum Karlsruhe -

Dr. N.E. BUSCH  
Director General of RISO National Lab. - \*

Ing. U. BUSINARO  
Director of the FIAT delegation to Europe - :

Dr. E.F. de HAAN  
Former Director of Research & Development at PHILIPS -

Prof. Dr. H. de WAARD  
prof. at the University of Groningen  
President of FOM -

Prof. E.N. ECONOMOU  
Prof. at the University of Crète -

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Mr. C. FREJACQUES  
President of the C.N.R.S. -

Prof. J. LIONS  
Prof. College of France -

Dr. G. PAHL  
Vice-Chairman, Deutsche Forschungsgemeinschaft -

Prof. U. RATTI  
Prof. at the University of Rome -

Dr. P. RYAN  
Director of An Foras taluntais -

Dr. B. SCHMIDT  
Management of DORNIER GmbH -

Sir Peter SWINNERTON-DYER  
Prof. at Cambridge University  
Chairman of the University Grants Committee -

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ANNEX 4  
FINANCIAL SUMMARY

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Allocation of funds.

The planned allocation of the 7 million ECU granted for the experimental action was initially as follows :

Projects (stimulation contracts) :	6.487.300 ECU
Staff :	252.700 ECU
Administrative costs	260.000 ECU

(technical support, missions, meetings of CODEST, etc..).

The management costs (staff, administrative costs) were actually lower than expected and the allocation of the available funds should in fact be as follows (end 1984) :

Projects	6. 594.200 ECU
Staff	195.000 ECU
Administrative costs	210.000 ECU

ANNEX 5  
THE TIMETABLE

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Timetable

ACTION	First phase (1983)	Second phase (1984)
Call for proposals	8 July	4 February
Final date for submission	1 October	1 April
Completion of the evaluation of applications	7 November	9 July
Decision to grant support	10 November	18 July
Completion of preparation of contracts and commitment of expenditure	28 December	December (estimated)

**ANNEX 6**  
**STATISTICS**



APPLICATIONS RECEIVED 1983/84

NUMBER AND TOTAL AMOUNT BY FIELD AND METHOD OF SUPPORT

FIELD	Twinings		Research grants		Subsidies		Operations		Proposals (Total)	
	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost
Pharmacobiology	160	18,078,271	32	1,190,628	30	370,542	11	3,977,100	233	23,616,541
Solid State Physics	68	6,069,869	17	494,500	7	27,400	2	238,700	94	6,830,469
Optics	23	2,417,781	12	291,000	5	41,750	1	1,929,000	41	4,679,531
Combustion	18	3,862,068	2	134,400	8	143,840	5	872,200	33	5,012,508
Photometry/ Photoacoustics	8	786,011			1	28,800			9	814,811
Climatology	14	1,034,786	9	464,850	13	711,100			36	2,210,736
Interface Phenomena	48	4,787,537	7	315,700	10	142,000	4	488,800	69	5,734,037
Others	48	5,822,056	22	1,385,107	27	1,256,099	4	1,950,500	101	10,413,762
TOTAL	387	42,858,379	101	4,276,185	101	2,271,531	27	9,456,300	616	59,312,395

TRANSNATIONAL COLLABORATIVE LINKS REQUESTED IN APPLICATIONS  
UNDER THE STIMULATION ACTION

	B	D	DK	F	GR	IRL	I	NL	UK	Total Links	Proportion Greater or lesser than norm (*)
B		22	4	73	2	1	14	19	26	161	5.8
D			2	48	8	8	4	5	55	152	0.4
DK				5	4	1	4	1	19	40	1.4
F					16	7	29	18	56	252	1.0
GR						0	4	0	10	44	11.6
IRL							3	0	8	28	7.2
I								7	34	99	0.8
NL									22	72	1.0
UK										230	1.6

(\*) Norm calculated by dividing total links by total civil expenditure on R & D

APPLICATIONS ACCEPTED 1983/84  
NUMBER AND TOTAL AMOUNT BY FIELD AND METHOD OF SUPPORT

FIELD	Twinings		Research grants		Subsidies		Operations		Proposals (Total)	
	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number	Cost
Pharmacobiology	15	788.127	1	24.673	3	15.608			19	828.408
Solid State Physics	17	1.198.609	3	74.420	2	82.465			22	1.355.494
Optics	4	335.224					1	1.800.000	5	2.135.224
Combustion	3	169.996							3	169.996
Photometry/ Photoacoustics	3	247.007			1	3.316			4	250.323
Climatology	5	322.788.							5	322.788
Interface Phenomena	12	785.842			1	4.500			13	790.342
Others	5	511.614*							5	511.614
<b>TOTAL</b>	<b>64</b>	<b>4.359.207</b>	<b>4</b>	<b>99.093</b>	<b>7</b>	<b>105.889</b>	<b>1</b>	<b>1.800.000</b>	<b>76</b>	<b>6.364.189</b>

\* inclu "Muon"

EVALUATION OF PROPOSALS

The Referee System

1) Setting up a portfolio of referees

- . Experts contacted by the Commission 372
- . Experts who did not respond to the Commission's request 102
- . Experts who were unable to agree to evaluate proposals for support 55
- . Experts available 215

FIELD	NUMBER OF EXPERTS
Biology	103
Climatology	10
Combustion	14
Optics	10
Solid State Physics	30
Photometry-Photoacoustics	5
Interface Phenomena	24
Autres	19

2) Operation of the network of referees

- . Time taken to respond : 6 weeks average 2 1/2 months maximum
- . Response rate : around 95%
- . Proportion of comments made : 89%

3) Results of the scientific evaluation of proposals (ie over and above the examination undertaken by the Commission's own experts)

- . 37% of proposals received one opinion
- . 29% of proposals received two opinions
- . 15% of proposals received three opinions
- . 3.5% of proposals received four opinions
- . 1% of proposals received five opinions

The remaining 14.5% were evaluated by CODEST itself.