

A NEW PROPOSAL FROM THE EUROPEAN COMMISSION
FOR A COMPREHENSIVE COMMUNITY POLICY ON SCIENTIFIC
RESEARCH AND TECHNOLOGICAL DEVELOPMENT

- (a) Explicit recognition of the competence of the Community in all fields of scientific research and technological development.
- (b) Provision of the Community with the information and means to enable it to exercise its powers effectively.
- (c) The granting of an annual appropriation of approximately 120 million units of account (1 unit of account = about \$US 1) for the first three years, for allocation to the Community's research and development activities.
- (d) Establishment of a European Committee on Research and Development and a European Science Foundation.
- (e) Identification of new tasks for the Joint Research Centre, with the closure of three reactors, bringing the Centre's manpower down from its present level of 1965 to about 1600.

The foregoing are the leading points in an important memorandum from the Commission of the European Communities to the Council of Ministers of the Community entitled "Objectives and Instruments of a Common Policy on Scientific Research and Technological Development".

This bulletin is published by the Directorate General Press and Information of the Commission of the European Communities

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The information and articles published in this Bulletin concern European scientific cooperation and industrial development in Europe. Hence they are not simply confined to reports on the decisions or views of the Commission of the European Communities, but cover the whole field of questions discussed in the different circles concerned.

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The European Community must become more aware of the new needs emerging in the social and economic fields, and must grasp the opportunity presented by the enlargement of the Community to institute a genuine Community policy for scientific research and technological development. This is the gist of a resolution that the European Commission has asked the Council of Ministers of the Community to adopt in an important submission which it recently made to the latter body. (Extracts from the Resolution will be found in ANNEX 1).

The coordination and promotion of scientific research and technological development at Community level, should indeed be one of the highest priorities of the enlarged Community, so that its programmes will be more closely tailored to social and economic needs which have to be met.

Although the need for the gradual alignment of national R&D policies, and the institution of cooperation in areas where it is necessary, have for many years been recognized as desirable by the Community Member States and, more recently, by The Hague summit meeting, (see IRT No.36), no practical action has so far been taken at Community level to implement these declarations of intent. The Commission's wish is therefore that the competence of the Community in this sector should be clearly spelled out.

1. New Needs

A process of profound change is now apparent in all spheres - political, economic and social. In the context of the new balances of force and the new competitive relationships emerging in the world, the existence of a creative and

innovative European Community is more important than ever.

A gradual awakening to the inadequacies of technological development often modelled somewhat too uncritically on the approaches adopted by the United States and the USSR has recently caused social demands to be slanted towards R&D goals capable of better meeting the social needs shared by European countries (health, transport, telecommunications, electronics, etc.). This pressure of collective needs has caused European States to reformulate their R&D policies on the basis of options which are both more profitable - in the broad sense of the term - and more nearly universal (i.e., less narrowly national in their aims or possible repercussions), and therefore lend themselves to cooperation within the Community.

Furthermore, the multiplicity of possible avenues of research created by the explosive growth of scientific knowledge, and the limits on available national resources oblige the Community countries to make a systematic attempt to rationalize the use of their resources, to determine priorities at European level, and to accord especially favoured status to the collaborative implementation of large-scale new projects.

In future years the Community countries (in company with all industrialized nations) will thus have to meet a large number of demands:

- the growth of scientific and technical knowledge requires a particular type of support in order to ensure that it is keyed into the complex process of technical progress.

- social progress necessitates the expansion of research for humane or social ends (public health and medicine, industrial safety, safe transport, humane sciences, etc.), the optimization of our exploitation of natural resources, projects for the conservation and improvement of the environment, a substantial effort at town planning development, and the establishment of new infrastructures (energy generation, storage and distribution, telecommunications networks, new means of transport, data-handling/processing networks, centres for the rehabilitation of river basins and sea coasts, etc.);

- the development of advanced technologies for economic ends should be given special attention, and their application should be promoted in all sectors where they can make a major contribution. The Commission will shortly make concrete proposals regarding aeronautics, telecommunications and data processing;

- the need to bring progress under better control, which requires that scientific and technical development must henceforth go hand in hand with unflagging concern for its consequences for mankind and the physical conditions of life in the future, and appropriate steps to eliminate or prevent difficulties.

2. The need for the progressive institution of a Community R&D policy

In order to cope with these varied and substantial needs, it is plain that the Member Countries of the enlarged Community will find it to their advantage to pool their efforts in the R&D field, while learning the lessons of past experience.

Admittedly, as regards R&D within the Community, the latter cannot and must not provide or centralize everything. A common R&D policy must leave ample scope - predominantly so in some sectors - for the freedom of initiative of national public establishments, universities and firms. It must also be flexible and permit recourse to all forms and schemes of cooperation (restricted agreements, limited-participation agreements, concerted-action projects, projects conducted through large associations, joint projects, etc.).

This variety in the means and methods to be used makes coordination between the Community countries all the more necessary.

Acting in the light of forward studies and medium-range forecasts, the Community countries must identify, having regard to the relevant socio-economic needs, R&D goals for adoption at Community level, and must endeavour to bring about the gradual coordination of their national R&D policies geared to the general goals thus agreed upon. An attempt should be made to reconcile the rationalization of public expenditure and competition among industry with a fair distribution of activities throughout the enlarged Community, decided upon as part of an overall strategy. Lastly, the arrangement of an effective Community "common front" in external relations would enable the Member States to join in collaborative projects with non-member countries on the best possible terms.

It is thus apparent that, subject to a revision of the existing legal bases, and the establishment of appropriate institutions,

the Community constitutes an eminently suitable framework for the formulation and implementation of a common R&D policy, and later of an international policy for cooperation with non-member countries. The Community can, in particular, provide the necessary orchestration of national policies, common policies - either developed or contemplated - and common or Community R&D projects. Also, over a number of scientific or technical programmes, it can help to balance the contributions from and "returns" obtained by the countries involved.

It should therefore be recognized that the Community's competence extends to all fields of scientific research and technological development, and the Community should be given the necessary resources to implement the projects stemming from the major decisions, in the making of which the European Parliament should play a part.

3. The Community machinery needed

The Community should therefore provide itself as soon as possible with the machinery which it needs in order to shape the successive but interlinked decisions that will form the common R&D policy, as well as the organs and resources required to carry them into execution.

(a) European Research and Development Committee (ERDC)

The European Commission must have specialist advice and opinions in order to carry out its task. With this in view, the Commission must set up its own standing advisory

body. The European Research and Development Committee (ERDC) would be responsible for analysing the Community's technical capabilities and socio-economic needs and supplying the Commission with the interpretative and judgement-moulding data required for the formulation of its opinions and proposals on the subject of R&D. It would consist of about 20 persons appointed in a personal capacity and selected for their general abilities in the fields of R&D, after consultations with interested circles, and would be under the chairmanship of a Permanent Scientific Adviser to the European Commission, appointed by the latter body.

(b) A Consultative and Coordinating Committee made up of national senior officials

For the formulation of appropriate opinions, recommendations and proposed projects, the European Commission should maintain regular liaison with the national senior officials responsible for the determination and implementation of R&D policies. A Consultative and Coordinating Committee, consisting of the national senior officials and Commission representatives, should provide a forum for periodic reviews of national R&D plans, programmes and budgets in order to promote closer alignment of national policies and to provide the Commission with all the information which it needs in order to prepare its proposals.

(c) Council of Ministers responsible for Research and Development

In order that the Community's decision-making procedures in

the R&D field should be simplified and rationalized, it is the wish of the Commission that the Council of Ministers responsible for Research and Development should meet regularly, not only for the purpose of reaching decisions on specific projects, but also to express its views on the common goals and the priorities to be set in the matter of R&D. The replacement of the various committees, working parties, etc., responsible for shaping the Community's decisions, by this single body capable of examining all aspects - scientific, technical, financial and administrative, of proposals from the Commission, would provide the Council of Ministers with an overall view of R&D matters and enable it to reach its decisions with a full understanding of the many and varied points to be considered in deciding upon a common policy in this area.

(d) A European Science Foundation

The creation of a European Science Foundation, whose form would be settled in conjunction with scientific and governmental circles and which would have its own resources, appears desirable as a means of promoting European cooperation in basic research fields. The Foundation would be run and supervised by a council consisting, in particular, of the heads of the leading scientific institutions in the Member Countries, and would not take the place of existing establishments and associations, but rather support their projects and step up the effectiveness of coordination activities. In particular, it would facilitate the mobility of research workers, organize international gatherings as necessary, decide which

laboratories are most suited to become European centres of excellence, etc.

(e) The Joint Research Centre

The role of the Joint Research Centre needs to be completely rethought, and it must be given new tasks. It must place its skills and its scientific potential at the service of society in fields of importance to the Community and provide the necessary technical back-up for the Commission's activities.

The chief lines of the future programme of the Joint Research Centre will therefore be as follows:

a) in basic and long-term research:

- fundamental materials research (including transuranic elements and condensed-state physics);
- the technology of pulsed neutron sources;
- energy supply in the long term.

b) in the public-service field:

- environmental protection;
- information analysis;
- applied data processing;
- reactor safety;
- development of measuring methods, standards and reference substances.

- c) technical back-up for the Commission's activities.
- d) services performed (under contract) for third parties.

The Commission has been forced to conclude that it can no longer reasonably keep certain facilities at the Joint Research Centre (i.e., the HFR, ESSOR and ECO reactors) in operation. It would like the HFR and ESSOR reactors to be taken over by the Member States and, if that proves impossible, will be obliged to close them down.

Having regard to this programme, the manpower of the Joint Research Centre - on a scale matched to the size of the enlarged Community - would be cut from its present level of 1965 to about 1600 (plus a certain number of local employees).

In the opinion of the Commission its proposals must be dovetailed with a coherent set of simultaneous decisions to be taken by the Council, including the adoption of a multiannual research and teaching programme for the Joint Research Centre (comprising both nuclear and non-nuclear items), appropriate steps to provide other work for the redundant staff, and retraining on the best possible terms.

(f) European Research and Development Agency (ERDA)

In the medium term, the European Commission proposes the setting-up of a European Research and Development Agency, as an autonomous Community agency which would be charged with the duties of managing, conducting and supervising

common, Community and concerted research and development projects.

(g) A representative annual appropriation

At present the only operational instruments and funding in existence at Community level are confined to the nuclear and paranuclear sectors and to projects conducted by the Coal and Steel Community. In other sectors the very means of breaking new ground - resources and machinery - are lacking. The Commission therefore proposes that the Community should decide to allocate an initial annual appropriation averaging 120 million for a transitional period of three years from 1 January 1973; this would be equivalent to 2% of the present national public research and development budgets.

For 1973 the Commission proposes a programme totalling 90-97 million u.a.; its objectives are listed in ANNEX 2.

In particular, the European Commission proposes that especially urgent projects in two priority sectors should be begun in 1973:

- environment: a general proposal on this sector, put forward by the European Commission, is now under discussion among the Member States, and should lead to the implementation of a common policy on the environment (see IRT No. 138).

- materials: in this field, which determines the development of all sectors of industrial and technological operations, the Commission proposes the implementation of a scheme with effect from 1973. The specific programmes have still to be decided upon in conjunction with the experts from the Member States.

Lastly, the Commission is of the opinion that the introduction of Community industrial innovation and development contracts (which the Commission would like to see instituted in the near future) would provide a means of supporting medium-sized R&D projects. A public fund could supplement private sources of risk capital, which are still inadequate in the Community (the European Commission intends to formulate specific proposals on this subject, in conjunction with the European Investment Bank and other bodies concerned).

Extracts from the proposed Resolution of the Council and
Representatives of the Member States' Governments on the progressive
implementation of a common policy for scientific and technological
research and development in the Community

The Council of the European Communities and the Representatives of
the Governments of the Member States,

.....

Being aware of the new needs in the social and economic fields, and
of the environmental problems facing the Member States of the
Community,

Anxious to harness the advance of science and technology to general
progress throughout the Community,

Desirous of grasping the opportunity offered by the enlargement of
the Community and the attainment of an economic and monetary union
to intensify the coordination of their efforts in the field of
scientific research and technological development,

.....

- Agree to the progressive implementation of a common policy for
scientific research and technological development in order to
contribute, in particular, to the attainment of the objectives
set forth in Article 2 of the Treaty establishing the European
Economic Community.

.....

- To these ends, the Community

- (a) must be informed of all plans and programmes involving financial assistance from public funds which, owing to their nature or magnitude, are of importance to the Community, and, to these ends, shall make the necessary provisions to determine the criteria governing the supply of this information and ensure that it is completed in due time,
- (b) shall periodically compare and progressively coordinate the programmes of the Member States,
- (c) shall decide which research and development activities may be carried out at Community level, with or without joint financing,
- (d) shall promote basic research activities, whenever necessary,
- (e) shall conclude contracts for studies, scientific research and technological development,
- (f) shall use development and industrial innovation contracts as a tool of both the research policy and the industrial policy of the Community,
- (g) shall, where necessary, conduct projects of its own in the field of scientific research and technological development, in particular by the establishment, support or organization of public services of importance to the Community,

- (h) shall bring about the formation of joint undertakings,
- (i) shall undertake the alignment of regulations and procedures in the field of research and development and promote standardization,
- (j) shall secure the exchange of information on research and development between the Member States.

.....

- In order to ensure the implementation of the common research and development policy, as defined above, the Council, recognizing that the competence of the Community extends to all fields of scientific research and technological development, considers it necessary to provide the Community with the appropriate resources by implementing the (various) provisions of the EEC Treaty.

The Commission shall periodically submit to the Council forecasts, statements on priorities, and proposals relating to the common research and development policy. On the basis of these proposals the Council will periodically decide upon the objectives and programmes of the Community and the corresponding amount of resources, having regard to the fact that scientific and technical needs will absorb a growing share of the resources of the Community in the coming years.

- The Council considers it already advisable that the Commission
 - (a) should include non-nuclear projects in its proposals for the next multiannual programme for the Joint Research Centre;
 - (b) should put in hand research and development programmes in the environmental field, in the light of the needs stated in the proposals from the Commission regarding a general policy for the environment, and should draw up research and development programmes in the field of materials;
 - (c) should draw up - after consulting the scientific circles concerned - the statutes of a European Science Foundation;
 - (d) should put forward detailed proposals on industrial innovation contracts.

- The Council, in view of the fact that the programme for the Joint Research Centre (JRC) must be determined in the light of a general Community policy for research and development, hereby gives its approval:
 - (a) to the directives and guidelines proposed by the Commission as a means of bringing about the conversion and reorganization of the JRC;
 - (b) to the programme of environmental research and development;
 - (c) to the programme of research on materials.

- The Council takes note of the intention expressed by the Commission to bring about the formulation of its proposals (a) through setting up an advisory body, namely, a European Committee on Research and Development, and (b) in conjunction with the national senior officials responsible for research.

- In order to enable the Commission to manage the research and development projects entrusted to its supervision and to implement the projects mentioned in the previous paragraph, as well as industrial innovation and development contracts, the Council plans to make available to it for the next three years an average amount of 120 million u.a. annually from the Community budget.

According to a preliminary estimate the funding required for 1973 is approximately 95 million u.a.

ANNEX 2FUNDING REQUIREMENTS FOR 1973

PROJECT	Estimate in millions of u.a.
1. <u>JRC</u>	38-40
2. <u>Indirect actions</u> - Approved programmes (Biology, Fusion, completion of Dragon Programme, teaching and training) - Programmes still to be decided on - Extension of the Dragon Agreement	25-30
3. <u>European Science Foundation</u>	0.5
4. <u>Participation in European collaborative projects already approved or under study under the COST scheme (see IRT No. 120) or as part of the Six's PREST schemes (town planning, training in the data-processing field, monitoring of the seriously ill, public health and hygiene...)</u>	2.5-3.0
5. <u>New projects</u> - Environment - Materials	2.15 1.0
6. <u>Industrial development and innovation contracts</u>	20.0
7. <u>Studies and surveys</u>	1.0
	<u>90-97</u>