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** I

R E P O R T

of the Committee on Energy, Research and Technology

on the Commission proposal for a Council decision adopting a specific research and technological development programme in the field of environment (1990-1994)
(COM(90) 0158 final - C3-0161/90 - SYN 263)

Rapporteur: Mr Michel HERVE

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A Series: Reports - B Series: Motions for Resolutions, Oral Questions - C Series: Documents received from other Institutions (e.g. Consultations)



= Consultation procedure requiring a single reading



= Cooperation procedure (second reading) which requires the votes of a majority of the current Members of Parliament for rejection or amendment



= Cooperation procedure (first reading)



= Parliamentary assent which requires the votes of a majority of the current Members of Parliament

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By letter of 11 June 1990 the Council consulted the European Parliament, pursuant to Article 130q(2) of the EEC Treaty, on the Commission proposal for a Council decision adopting a specific research and technological development programme in the field of environment (1990-1994).

At the sitting of 15 June 1990 the President of Parliament announced that he had referred this proposal to the Committee on Energy, Research and Technology as the committee responsible and to the Committee on Budgets and the Committee on the Environment, Public Health and Consumer Protection for their opinions.

At its meeting of 22 May 1990 the Committee on Energy, Research and Technology had appointed Mr Hervé rapporteur.

At its meetings of 20 June 1990, 19 September 1990, 17 October 1990 and 6 November 1990 it considered the Commission proposal and draft report.

At the last meeting, it adopted the draft legislative resolution by 13 votes to 0, with 1 abstention.

The following took part in the vote: Sälzer, acting chairman; Lannoye and Adam, vice-chairmen; Hervé, rapporteur; Anger, Bettini, Breyer, Goedmakers (for Ford), Linkohr, Pompidou, Porrazzini, Sanz Fernandez, Seligman and Verwaerde.

The opinions of the Committee on Budgets and the Committee on the Environment, Public Health and Consumer Protection will be published separately.

The report was tabled on 7 November 1990.

The deadline for tabling amendments will appear on the draft agenda for the part-session at which the report is to be considered.

A

Commission proposal for a Council decision
adopting a specific research and technological
development programme in the field of environment
(1990-1994)

Commission text¹

Amendments

(Amendment No. 1)

After the third recital, new recital 3a

Whereas fundamental research must be specifically encouraged Community-wide in each of the strategic research sectors of the framework programme;

(Amendment No. 2)

After the third recital, new recital 3b

Whereas, in addition to the specific programme on human capital and mobility, training of researchers in each of the strategic research sectors of the framework programme must be ensured;

(Amendment No. 3)

After the third recital, new recital 3c

Whereas the social, human and environmental impact of the programme must be independently assessed, and technology and risk assessment be undertaken;

¹ For full text see COM(90) 0158 final - OJ No. C 174, 16.7.1990, p. 40

(Amendment No. 4)
Seventh recital

Whereas this programme must be implemented essentially by the selection of research and development projects to enable them to benefit from Community participation; whereas the Commission should encourage the submission of such projects by the usual means of publishing calls for proposals in the Official Journal; whereas a special procedure should also be devised so as to maintain a degree of flexibility enabling the Commission, in the face of the continuous evolution and gradual acceleration of technological progress, also to take into consideration spontaneous proposals consistent with the objectives of the programme;

Whereas this programme must be implemented essentially by the selection of research and development projects to enable them to benefit from Community participation; whereas the Commission should encourage the submission of such projects by the usual means of publishing calls for proposals in the Official Journal; whereas an exceptional procedure should also be devised to come into effect between calls for proposals so as to maintain a degree of flexibility enabling the Commission, in the face of the continuous evolution and gradual acceleration of technological progress, also to take into consideration spontaneous proposals consistent with the objectives of the programme;

(Amendment No. 5)
Tenth recital

Whereas, in accordance with Article 130g of the Treaty, the Community's activities aimed at strengthening the scientific and technological basis of European industry and encouraging it to become more competitive include promoting cooperation on research and technological development with third countries and international organizations; whereas such cooperation may prove particularly beneficial for the development of this programme;

Whereas, in accordance with Article 130g of the Treaty, the Community's activities aimed at strengthening the scientific and technological basis of European industry and encouraging it to become more competitive include promoting cooperation on research and technological development with third countries and international organizations; whereas such cooperation may prove particularly beneficial for the development of this programme and should involve countries at various levels of development;

Commission text

Amendments

(Amendment No. 6)

Article 1

A specific research and technological development programme for the European Economic Community in the field of environment, as defined in Annex I, is hereby adopted for a period of five years as from 1 January 1990.

A specific research and technological development programme for the European Economic Community in the field of environment, as defined in Annex I, is hereby adopted for the period from the date of publication of this decision in the Official Journal to 31 December 1994.

(Amendment No. 7)

Article 5(3)

3. The reports shall be drawn up having regard to the objectives set out in Annex I to this Decision and in accordance with Article 2(4) of Decision 90/221/Euratom, EEC.

3. The reports shall be drawn up having regard to the objectives set out in Annex I to this Decision and in accordance with Article 2(4) of Decision 90/221/Euratom, EEC and shall assess the coherence of the programme's measurable implementation with the six major concerns set out in Annex II of Council Decision 90/221/Euratom, EEC¹.

¹ OJ No. L 117, 8.5.1990

(Amendment No. 8)

Article 6

1. The Commission shall be responsible for the execution of the programme. It shall be assisted by an advisory committee, hereinafter referred to as 'the Committee', composed of representatives of the Member States and chaired by a representative of the Commission.

1. The Commission shall be responsible for the execution of the programme. It shall be assisted by a committee, hereinafter referred to as 'the Committee', composed, on the one hand, of representatives of the Member States, including scientific experts, and, on the other, of representatives designated by the European Parliament, and chaired by a representative of the Commission. The European Parliament shall be informed of the deliberations of the Committee in a comprehensive and timely manner.

Commission text

Amendments

2. The contracts concluded by the Commission shall govern the rights and obligations of each party, including the procedures for disseminating, protecting and exploiting the research results, in accordance with the arrangements adopted pursuant to the second paragraph of Article 130k of the Treaty.

2. The contracts concluded by the Commission shall govern the rights and obligations of each party, including the procedures for disseminating, protecting and exploiting the research results, in accordance with the arrangements adopted pursuant to the second paragraph of Article 130k of the Treaty, and, where appropriate, procedures for training and evaluation.

3. A work programme for each year shall be drawn and updated where necessary. It shall set out the detailed objectives and types of projects to be undertaken, and the financial arrangements to be made for them. The Commission shall make calls for proposals for projects on the basis of the annual work programmes.

3. A work programme shall be drawn up at the start of the programme and shall be regularly revised. It shall set out the detailed objectives and types of projects to be undertaken, and the financial arrangements to be made for them. The Commission shall make calls for proposals for projects on the basis of the annual work programmes.

(Amendment No. 9)
Article 7(4) (new)

4. If the Council has not acted within one month of submission of the proposal, the measures proposed shall be adopted by the Commission.

(Amendment No. 10)
Article 8

1. The procedure laid down in Article 7 shall apply to:

- the preparation and updating of the work programmes referred to in Article 6(3),
- evaluation of the projects referred to in point 2 of Annex III, as well as the estimated amount of the Community's financial contribution when these projects are submitted through the ordinary procedure referred to in point 4 of Annex III and the abovementioned amount is more than ECU 5 million,

1. The procedure laid down in Article 7 shall apply to:

- the preparation and updating of the work programmes referred to in Article 6(3),
- the contents of calls for proposals referred to in Annex III,
- the participation in any project by non-Community organizations and enterprises referred to in Article 10,

Commission text

- evaluation of all projects submitted through the exceptional procedure referred to in point 4 of Annex III, as well as the estimated amount of the Community's financial contribution,
- measures for evaluating the programme.

2. The Commission may consult the Committee on any matter falling within the scope of the programme.

3. The Commission shall inform the Committee with regard to:

- the progress of the programme,
- draft calls for proposals, referred to in Article 6(3),
- projects, referred to in point 2 of Annex III, submitted through the ordinary procedure, for which the Community contribution is less than ECU 5 million, and the results of their evaluation,
- accompanying measures, referred to in point 2 of Annex III,
- concerted actions, referred to in point 2 of Annex III.

Amendments

- any adaptation of the indicative breakdown of funds set out in Annex II,
- the measures to be undertaken to evaluate the programme and those projects submitted through the exceptional procedure,
- accompanying measures and arrangements for the dissemination, protection and exploitation of the results of the research, for encouraging fundamental research, training of researchers and technological assessment carried out under the programme,
- concerted actions referred to in point 2 of Annex III.

The Commission will notify the European Parliament of draft decisions which, in the exercise of the Commission's implementing powers, are forwarded to the Committee.

(Amendment No. 11)

Article 10

Where cooperation with third countries and international organizations aiming at achieving the objectives of this programme requires legal undertakings between the Community and the third parties concerned, the Commission shall be authorized to negotiate, in accordance with Article 130n of the Treaty, international agreements laying down the terms of such cooperation.

Where cooperation with third countries and international organizations aiming at achieving the objectives of this programme requires legal undertakings between the Community and the third parties concerned, the Commission shall be authorized to negotiate, in accordance with Article 130n of the Treaty, international agreements laying down the terms of such cooperation.

Priority will also be given to cooperation with regional groupings and European countries not members of the European Community and to the guidelines agreed between the Council and the European Parliament¹.

1 Drawn up during the conciliation procedure on the framework programme for Community activities in research and technological development 1990-1994

The negotiations for such international agreements may only be initiated with third countries who are already signatories of an agreement with the Community which explicitly cites research and technological development or scientific progress as one of the objectives of cooperation.

Decisions on the conclusion of such agreements shall be adopted in accordance with the procedure referred to in Article 130q(2) of the Treaty.

Decisions on the conclusion of such international agreements shall be adopted in accordance with the procedure referred to in Article 130q(2) of the Treaty.

Commission text

Amendments

(Amendment No. 12)
Annex I, third paragraph

The actions envisaged will enable large projects to be undertaken to complement and strengthen the activities of the ongoing environment research programmes, the aim being to respond rapidly to the scientific challenges which arise from global change and to provide continuity in the scientific support to the environmental policy of the Community.

The actions envisaged will enable large projects to be undertaken to complement and strengthen the activities of the ongoing environment research programmes, initiate new research capable of responding to the new environmental challenges and provide continuity in the scientific support to the environmental policy of the Community.

(Amendment No. 13)
Annex III, after the third paragraph, new paragraph 3a

Human life styles contribute to disruption of the various ecosystems. The acceleration of scientific, technological, economic and social development in the Community and throughout the world may put the biosphere and, consequently, mankind at risk.

Thus, Community research must be aimed at identification of the risks, the better to avert these trends and thus bring them under control. Community research is therefore a driving force in the evolution of our system. Consequently, the Community must make provision for multidisciplinary research capable of studying every aspect of the biosphere and its historical development. Such research must also study man's relationship with the natural environment and with his economic, social and cultural environment etc., as they all form an indivisible whole.

(Amendment No. 14)

Annex I, after the third paragraph, new paragraph 3b

Such action is in accordance with the principle of subsidiarity; in fact, environmental research, which is fundamentally integrative, will come to full fruition in an international setting. By its very nature, the Community offers an advantageous framework for development.

(Amendment No. 15)

Annex I, Area 1, first sentence

Anthropogenic climate change

Research will be carried out to understand, describe and forecast climatic change resulting from the enhanced greenhouse effect due to human activities, in order to provide the scientific basis for preventive or adaptive measures.

A major project will be launched on the development, testing and intercomparison of integrated high-resolution global change models coupling the atmosphere (including clouds), the ocean, the biosphere and the cryosphere, taking advantage of modern supercomputer and computer-linking techniques.

Research will be carried out to understand, describe and forecast climatic change brought about by human activities, in order to provide the scientific basis for preventive or adaptive measures.

A major project will be launched on the development, testing and intercomparison of integrated high-resolution global change models coupling the atmosphere (including clouds), the ocean, the biosphere and the cryosphere - and particularly exchanges between the ocean and the atmosphere - taking advantage of modern supercomputer and computer-linking techniques.

Commission text

Amendments

(Amendment No. 16)
Annex I, Area 1
Stratospheric ozone

Work will aim at understanding and forecasting processes which lead to the depletion of stratospheric ozone and the consequences of this depletion and the provision of the scientific basis for preventive measures.

New activities will include arctic campaigns in 1991/92 and 1992/93 to identify possible ozone depletion. In parallel, data collection from a network of ground measurement stations will be coordinated, complemented by measurements from mobile stations and by laboratory research on pertinent chemical reactions. These activities will be accompanied by the modelling of stratospheric processes, including the consequences of emission scenarios, and by the assessment of the ecological and health effects of increased UV-B radiation.

Work will aim at understanding the processes and causes lying at the root of the depletion of stratospheric ozone. To that end, use will be made of the most modern scientific research techniques, both of the theoretical/mathematical and of the experimental type. In view of the efforts already undertaken at international level, Community action will have to be conceived as marking a new departure from or as additional to the activities already completed or now under way. A special research effort will be devoted to assessment of the potential environmental effects resulting from depletion of the ozone layer.

New activities will include arctic campaigns in 1991/92 and 1992/93 to identify possible ozone depletion. In parallel, data collection from a network of ground measurement stations will be coordinated, complemented by measurements from mobile stations and by laboratory research on pertinent chemical and photochemical reactions. These activities will be accompanied by the modelling of stratospheric processes, including the consequences of emission scenarios, and by the assessment of the ecological and health effects of increased UV-B radiation.

(Amendment No. 17)

Annex I, Area 1

Tropospheric physics and chemistry

Research will be carried out to elucidate important physico-chemical processes in the troposphere as a basis for the definition of preventive measures. New approaches to the understanding of tropospheric ozone, OH and NO_y chemistry will include coordinated clean-air measurement campaigns as well as modelling work combining meteorological and chemical models. These activities will be extended to natural emissions such as terpenes and other hydrocarbons and sulphur and halogen containing compounds.

Research will be carried out to elucidate important physico-chemical processes in the troposphere as a basis for the definition of preventive measures. New approaches to the understanding of tropospheric ozone, OH, NO_y and HC (solid and gaseous phases) chemistry will include coordinated clean-air measurement campaigns as well as modelling work combining meteorological and chemical models. These activities will be extended to natural emissions such as terpenes and other hydrocarbons and sulphur and halogen containing compounds.

(Amendment No. 18)

Annex I, Area 1

Biogeochemical cycles

Work will aim at deepening the understanding of biogeochemical cycles and their disturbances by human activities and providing the scientific basis for preventive and remedial actions.

The material balance for chemical elements will be established in a network of inland catchment areas. The study of the sources and pathways of natural and anthropogenic compounds in the European estuarine/coastal environment will be extended from the Mediterranean to other coastal areas. Emphasis will be given to regional projects of global importance, where appropriate in close cooperation with the Marine Sciences and Technologies Programme.

Work will aim at deepening the understanding of biogeochemical cycles, including ocean-atmosphere exchanges in which CO₂ is an important factor, with a view to identifying the forms of disturbances caused by agents related to human activities, and the potential effects on the stability of the cycles.

The activity, which must serve to identify possible preventive and remedial actions, will be pursued initially in the form of research into the processes of diffusion and transformation of natural and anthropogenic substances in the European estuarine/coastal environment and will be extended from the Mediterranean to other coastal areas. This measure, whose nature will imply a need for close cooperation with the Marine Sciences and Technologies Programme, will focus chiefly on key topics with far-reaching environmental impact.

Commission text

Amendments

(Amendment No. 19)

Annex I, Area 2

Assessment of environmental quality and monitoring

Research will contribute to the development of advanced equipment and analytical methods for high performance environmental monitoring systems.

Research will aim at the development of both airborne and ground based methods and instruments for measuring atmospheric constituents and the design of advanced methods for the assessment of environmental quality. The analysis of emissions, of waste, of water and of liquid effluents will receive particular attention.

The development and testing of monitoring and alert systems for natural hazards such as seismic and volcanic phenomena, landslides, storms and floods, and forest fires will also be covered.

Research will contribute to the study and design of new methodologies to measure the quality of the environment. Priority will be given to devising more effective and complete environmental monitoring systems and to developing measuring methods and instruments.

The fields of research and study will cover possible means of monitoring and alerting to natural hazards (seismic and volcanic phenomena, landslides, degradation of the subsoil, atmospheric phenomena, floods, forest fires, etc.) as well as emissions, residues, water and liquid effluents, including the behaviour of pollutants in the subsoil down to underground water.

Commission text

Amendments

(Amendment No. 20)

Annex I, Area 2

Technologies for protecting and rehabilitating the environment

First paragraph

Work will be carried out to contribute to the development of technologies for protecting and rehabilitating the environment including all the main aspects of urban environment. Research concerned with the treatment and disposal of toxic waste and of liquid effluents and the recycling of urban and industrial wastes will be complemented by the development of low-emission and low-waste technologies for selected industrial sectors. Research aiming at the prevention of major industrial and transport accidents through a greater understanding of hazard phenomena will be widened to include the validation of methodologies of assessing risk and the development of low risk alternative technologies and sophisticated process control and detection systems.

Work will be carried out to contribute to the development of technologies for protecting and rehabilitating the environment including all the main aspects of urban environment, and rehabilitating soils. Research concerned with the treatment and chemical, physical or biological disposal of toxic waste and of liquid effluents and the recycling of urban and industrial wastes will be complemented by the development of low-emission and low-waste technologies for selected industrial sectors. Research aiming at the prevention of major industrial and transport accidents through a greater understanding of hazard phenomena will be widened to include the validation of methodologies of assessing risk and the development of low risk alternative technologies and sophisticated process control and detection systems.

(Amendment No. 21)

Annex I, Area 3, new paragraph before the introductory section

Economic and social change pose a major future threat to the environment. By putting science as a whole - the exact sciences and the human sciences - at the service of an interdisciplinary approach, research will help establish a lasting trend.

Commission text

Amendments

(Amendment No. 22)

Annex I, Area 3, introductory section

The general objective is to improve the understanding of the legal, economic, ethical and health aspects of environmental policy and management. Research will address critical areas of environmental social science and environmental economics research, ranging from basic development of methods and concepts and their application to environmental issues, to their incorporation into specific Community sectoral policies and environmental research programmes.

Thus the general objective is to improve knowledge and understanding of existing and potential interaction between man's natural environment, legal, social, economic, ethical and cultural environment and the development of this interaction over a period of time. Research will make use of the social and economic sciences and any other discipline capable of elucidating environmental problems and will range from basic development of methods and concepts and their application to environmental issues, to their incorporation into specific Community sectoral policies and environmental research programmes. Particular attention will be given to the integration of R & D carried out in the Member States and to the establishment of close cooperation with international programmes covering the same ground.

(Amendment No. 23)

Annex I, Area 3, second section

Socio-economic assessment of the changing environment

The objective is to develop the concepts of environmental social science and environmental economics and their application to environmental change. Account will be taken of the rapidly increasing scientific understanding of the human and natural environment. Particular attention will be given to the integration of R&D efforts in Member States and to the establishment of cooperative links with relevant international programmes.

Research into socio-economic factors for changes in the environment

The objective is to investigate, at a first stage, potential causes of change in man's environment in the changes in the economic, social and cultural systems, etc., then, at a second stage, to list ways in which the social and economic sciences and any other discipline might help in establishing a lasting trend and in decision-making in a situation of uncertainty.

Commission text

Topics to be covered include inter alia: incorporating environmental parameters into economic methodology; cost/risk/benefit analysis; sustainable development; scientific indicators of environmental quality; risk perception; environmental ethics; early warning of environmental change including demographic, population and technological change.

Amendments

Topics to be covered will include:

1. the environmental impact of demographic trends and historical aspects of soil use;
2. taking account of the relationship between economics and the environment in constructing models and scenarios, national accounting and the study of economic policy instruments; interaction between economics, energy and the environment; resource assessment and the linking of this programme with Community research into energy sources and their use;
3. social ecology (urban growth and town planning, research into social innovation);
4. political and natural science: the role of law, institutions and international state and local authorities; the importance of transferring concepts from the exact sciences to the human sciences (uncertainty and the unexpected);
5. ethics and the environment: public support for and involvement in sustainable development (awareness, behaviour, motivation); the role of the media and information;
6. education concerning the role of and changes connected with the development of science and technology; increased awareness of ecological problems;
7. consideration of North-South imbalances and consideration of the adoption of a growth model by the countries of Central and Eastern Europe;

Commission text

Amendments

(Amendment No. 24)

Annex I, Area 4, new paragraph before the first paragraph

A multidisciplinary approach is essential to deal with the complexities of the environmental problem, to bridge traditional scientific divisions, which form a barrier to an overall understanding of environmental problems.

(Amendment No. 25)

Area 4, first paragraph

The objective is to help solve broad problems of transnational interest through a systems approach and interdisciplinary research. Integrated projects will address regional issues or issues of immediate relevance to the Community policy. Examples are:

The objective is to help solve broad problems of transnational interest through a systems approach and interdisciplinary research. Integrated projects will address regional issues or issues of immediate relevance to the Community policy. A non-exhaustive list of priorities for this programme is given below:

(Amendment No. 26)

Annex I, Area 4, new paragraph after the last paragraph

The following topics shall also be included in the list of integrated research projects:

- genetic impoverishment in the old industrialized areas;
- deterioration of the Alpine environment;
- cross-frontier rivers.

(Amendment No. 27)

ANNEX II

Indicative breakdown of expenditures for the period 1990 to 1994

(%)

Area 1: Participation in global change programmes 35-45

Area 2: Technologies and engineering for the environment 20-25

Indicative breakdown of expenditures for the period 1990 to 1994

(%)

Area 1: Participation in global change programmes 35-45

Area 2: Technologies and engineering for the environment 20-25

Commission text

Area 3: Research on economic and social aspects of environmental issues 5-10

Area 4: Integrated research projects 25-35

The breakdown between different areas does not exclude the possibility that projects could cover several areas.

Amendments

Area 3: Research on economic and social aspects of environmental issues 10-15

Area 4: Integrated research projects 20-30

The breakdown between different areas does not exclude the possibility that projects could cover several areas.

1. An amount of ECU 41.4 million, equivalent to 10% of the total, shall be used for projects encouraging fundamental research; these projects should be clearly identified.

2. An amount of ECU 16.6 million, equivalent to 4% of the total, shall be devoted to projects encouraging the training of researchers in the fields covered by this specific programme.

3. The projects mentioned in paragraphs 1 and 2 shall be the subject of agreements concluded with the universities and research institutes organized in research networks.

4. An amount equivalent to 3-5% of the total amount deemed necessary, shall be used for technological and risk assessment, the results of which shall be communicated to Parliament with the evaluation reports.

Commission text

Amendments

(Amendment No. 28)

ANNEX III, point 2, new paragraph 4a after the fourth paragraph

In the field of training, emphasis will be put on an interdisciplinary approach. Owing to the lack of multidisciplinary researchers in Europe, the Community must encourage multidisciplinary environmental research training. Recognized researchers will train in one or more additional fields outside their own discipline, to broaden their approach to the environment.

(Amendment No. 29)

ANNEX III, point 2, new paragraph 4b after the fourth paragraph

Coordination within the programme will be the responsibility of an integrating group. Those taking part in the programme must be able to obtain rapid, regular information on other projects financed under the programme, to allow the cross-fertilization needed to confront the complexity and scale of ecological problems. A select group of thinkers and scientists with experience in the field of ecology, chosen by the Commission for their universally recognized abilities, will have the task of creating interfaces between Community research activities and putting meetings between those involved on a regular footing.

(Amendment No. 30)

ANNEX III, point 2, fifth subparagraph

The concerted actions are those defined in the Financial Regulation.

The concerted actions are those defined in Article 92 of the Financial Regulation.

Rates of Community participation will be in accordance with Annex IV of Council Decision 90/221/Euratom, EEC.

Commission text

Amendments

(Amendment No. 31)
ANNEX III, point 3

3. The participants in the projects must be natural or legal persons established in the Community, such as universities, research organizations and industrial firms, including small and medium-sized enterprises, or associations thereof, in particular European economic interest groupings (EEIGs).

Natural or legal persons established in countries which have concluded agreements with the Community foreseeing scientific and technical research, may, based on the criterion of mutual advantage, take part in the projects undertaken in the context of this programme. The contracting parties under such arrangements shall not benefit from Community funding. They shall contribute to the general administrative costs.

3. The participants in the projects must be natural or legal persons established in the Community, such as universities, research organizations and industrial firms, including small and medium-sized enterprises, or associations thereof, in particular European economic interest groupings (EEIGs).

The participants in the projects must make at least 50% of their research and development expenditure in the European Community.

Natural or legal persons established in countries which have concluded agreements with the Community foreseeing scientific and technical research, may, based on the criterion of mutual advantage, take part in the projects undertaken in the context of this programme. The contracting parties under such arrangements shall not benefit from Community funding under the framework programme. They shall contribute to the general administrative costs.

(Amendment No. 32)
ANNEX III, point 4

4. The choice of projects shall be carried out according to the following order of priority, the first method being the rule, the second the exception.

The participants in the projects shall be selected on the basis of the ordinary procedure of calls for proposals referred to in Article 6(3) and published in the Official Journal of the European Communities.

4. The choice of projects shall be carried out according to the following order of priority, the first method being the rule, the second the exception.

The participants in the projects shall be selected on the basis of the ordinary procedure of calls for proposals referred to in Article 6(4) and published in the Official Journal of the European Communities.

Commission text

Amendments

Where other criteria of scientific excellence are satisfied, and in accordance with the guidelines agreed between Council and the European Parliament, in the case of a number of project proposals of equal scientific value, preference shall be given:

(i) to project proposals whose implementation involves project participants in less-developed regions and/or regions in industrial decline as defined by Articles 8 and 9 of Council Regulation (EEC) No. 2052/88

(ii) to project proposals involving small and medium-sized enterprises or an association of such enterprises.

The Commission shall determine in each case whether the management of the programme, or parts thereof, can be undertaken by organizations or institutions outside the Commission, and it shall delegate the work accordingly.

The Commission may also accept proposals according to an exceptional procedure and under the conditions mentioned below, when they make a particularly promising and significant contribution as regards the originality of the theme proposed, the novelty of the scientific and technical approach and the methodology of execution, also taking into account the particular nature of the proposers.

A favourable technical evaluation of such proposals shall not by itself be a sufficient justification for accepting a project; this exceptional procedure may only apply after verification that the nature of the project, as defined above, does not justify the use of the normal procedure for calls for proposals.

The Commission may also accept proposals according to an exceptional procedure and under the conditions mentioned below, when they make a particularly promising and significant contribution as regards the originality of the theme proposed, the novelty of the scientific and technical approach and the methodology of execution, also taking into account the particular nature of the proposers.

A favourable technical evaluation of such proposals shall not by itself be a sufficient justification for accepting a project; this exceptional procedure may only apply after verification that the nature of the project, as defined above, does not justify the use of the normal procedure for calls for proposals.

Commission text

The exceptional procedure must be completed before the ordinary procedure in such a way that the available amount for the Community's financial participation in projects retained by the ordinary procedure can be determined precisely. The closing date for the exceptional procedure shall be published each year in the Official Journal of the European Communities.

The amount of the financial participation of the Community for all the projects retained by the exceptional procedure will be decided each year, in relation to the projects selected according to particularly strict criteria of excellence. In any case this amount may not exceed 15%; it may be revised each year in the light of experience.

The Commission shall draw up a vademecum setting out all the rules applicable to this exceptional procedure in order to guarantee full transparency.

Amendments

The exceptional procedure shall commence after the first call for proposals and must be completed before the ordinary procedure in such a way that the available amount for the Community's financial participation in projects retained by the ordinary procedure can be determined precisely. The closing date for the exceptional procedure shall be published each year in the Official Journal of the European Communities.

The amount of the financial participation of the Community for all the projects retained by the exceptional procedure will be decided each year, in relation to the projects selected according to particularly strict criteria of excellence. In any case this amount may not exceed 10%; it may be revised each year in the light of experience.

The Commission shall draw up a vademecum setting out all the rules applicable to this exceptional procedure in order to guarantee full transparency.

(Amendment No. 33)
ANNEX III, point 4a (new)

No Member State may attribute to a national, regional, local, departmental or other governmental budget any Community funds allocated to organizations of that Member State in implementation of projects accepted under the terms of the project selection procedure described in paragraph 4 above.

DRAFT LEGISLATIVE RESOLUTION
(Cooperation procedure: first reading)

embodying the opinion of the European Parliament
on the Commission proposal for a Council decision
adopting a specific research and technological development programme
in the field of environment (1990-1994)

The European Parliament,

- having regard to the Commission proposal to the Council (COM(90) 0158 final - SYN 263)¹,
 - having been consulted by the Council pursuant to Article 130q(2) of the EEC Treaty (C3-0161/90),
 - having regard to the report of the Committee on Energy, Research and Technology and the opinions of the Committee on Budgets and the Committee on the Environment, Public Health and Consumer Protection (A3-0287/90),
 - having regard to the Commission position on the amendments adopted by Parliament,
1. Approves the Commission proposal subject to Parliament's amendments and in accordance with the vote thereon;
 2. Calls on the Commission to amend its proposal accordingly, pursuant to Article 149(3) of the EEC Treaty;
 3. Calls for the conciliation procedure to be opened if the Council should intend to depart from the text approved by Parliament;
 4. Asks to be consulted again should the Council intend to make substantial changes to the Commission proposal;
 5. Calls on the Council to incorporate Parliament's amendments in the common position that it adopts in accordance with Article 149(2)(a) of the EEC Treaty;
 6. Instructs its President to forward this opinion to the Council and Commission.

¹ OJ No. C 174, 16.7.1990, p. 40

EXPLANATORY STATEMENT

Introduction

1. Like all the specific programmes to implement the Third Framework Programme, the specific research and technological development programme in the field of Environment is outlined in very broad terms. We must now seek to fill in the details.

2. The authors are clearly reluctant to incorporate systematically into the proposal the most recent developments in ecological thought and science. As a result, the proposal merely marks time: it consolidates measures which have proved their worth and which must doubtless be continued, but fails to address the ecological problems of today and tomorrow.

I. COMPARATIVE ANALYSIS OF THE DEVELOPMENT OF ECOLOGY AND COMMUNITY RESEARCH

A. COMMUNITY POLICY: ALWAYS ONE STEP BEHIND

Community environmental research activities began in 1971. The changes in their objectives and underlying concepts have reflected the revolution in ecological thought over the last 20 years. However, Community policy has regularly lagged one step behind ecological scientific thought.

* Ecology emerged as a scientific discipline at the end of the 19th century and the concept of the ecosystem, the discipline's very heart, was born in 1935. Throughout the first half of the 20th century, ecological thought excluded risks, damage and imbalances.

In the late 1960s, an ecological consciousness appeared, prophesying that industrial growth would lead to an irreversible disaster. Then, in 1972, the report by the Club of Rome and the first UN World Environment Conference combined to give the problem of ecology a global dimension.

Since then, ecological science and ecological consciousness have moved closer together and an epistemological analysis has been conducted: research has examined the interrelationships between energy and the environment, the economy and the environment, health and the environment, agriculture and the environment, etc. Underlying this is an unchanging vision of the environment reduced to the myth of nature: the balance of nature has been broken and should be re-established.

The first Community research programme in the field of the environment was not implemented until 1973. Through its objectives and the principles underpinning it, this programme opened the way for a systematic and comprehensive survey of environmental damage and introduced research into interrelationships. This analytical approach was continued and developed in the four subsequent programmes (1976-80, 1981-85, 1986-90, 1989-92). However, in 1981, i.e. during the third programme, the joint activities covered only very closely-defined areas (analysis of the physical and chemical behaviour of atmospheric pollutants, analysis of organic micro-pollutants in water, processing and use of sewage sludge).

* The early 1980s saw a transition from traditional ecology to global ecological science, an interdisciplinary approach drawing on life and earth sciences in equal measure. It can be defined as the science of the biosphere, of which we are constituent parts. The biosphere is a self-regulating, dynamic system; our ways of life help to maintain and/or disrupt the living conditions in that system.

Since then, Community research has vacillated. It was initially very quick to use this innovative approach in specific areas. This is clearly illustrated by the indirect research activities under the Third Research Programme on the Environment (1981-85); the second section, which dealt exclusively with climatology, saw the introduction of the time factor into the analysis and the use of a multidisciplinary approach (reconstruction of former climates, climatic models and forecasts, influence of man on the climate, impact of climatic variations). Thereafter, however, the fourth and fifth programmes fought shy of extending this innovative approach to other areas.

B. ECOLOGICAL RESEARCH IN 1990

(a) Insights into global ecology

Research is deductive in its philosophy; it breaks subjects down, analyses their constituent parts in order to reduce the number of parameters involved (experiments reverse time by being repeatable). Conversely, in philosophical terms ecology is integrative, an open system which takes into account the irreversibility of time.

Global ecology therefore studies all the ecosystems integrated into an immense system called the biosphere. The Earth is seen as an open system, in which opposing forces are held in balance and which calls for a wide variety of measures coordinated over time. The biosphere regulates itself constantly by responding to events. Man forms one part of the biosphere and his activities are studied from the point of view of their impact on the system.

By its very nature, this global approach is interdisciplinary. It gives rise to fresh analyses in the spheres of economics (e.g. the 1987 Brundtland report to the UN) and social sciences. All human activities - technological, economic, social - are incorporated in the biosphere of the planet Earth. This leads scientists to reconsider phenomena and concepts such as demography, North-South relations, development models and growth encompassed by the metaconcept ecology.

This complex whole embraces scientific, economic and social (behavioural sciences) ecology. It involves adopting an individual stance, consideration by each individual of his or her own everyday behaviour (aerosols, waste, modes of transport, etc.) and the development of educational models capable of prompting such action.

(b) The various views of the role of ecological research

Ecology is neither a state of mind, nor an ethic of nature, nor a political movement, but rather a fully-fledged scientific discipline. It is regrettable that the Commission has refused to employ the term ecology or ecological science, preferring instead 'an environmental policy'. The latter is to

ecology what medicine is to health. Today, we must be on the lookout not for piecemeal treatments but for a means of restoring the planet to 'health'.

* There are two opposing views of the purpose of ecological science:

- For some, ecological research must identify the trends which pose risks to our environment and halt these trends, if not reverse them. This is ecology as a brake, as the fixative preserving the system.

- For the others, when a potentially hazardous trend emerges, ecological research must:

- firstly, identify, measure and calculate the risks involved;
- secondly, reduce and control them.

Ecology thus sets out to play an active role. It does not oppose innovation and change, but fosters them keeping pace with them and limiting the risk. Knowledge generates knowledge: the emergence of new knowledge may give rise to risks, but knowledge and control of these risks will prevent the evolutionary process from stalling.

This report resolutely takes this second view of ecology. Ecology must on no account become backward-looking, unchanging, opposed to progress, but must be a form of research which contributes to the evolution of our system.

II. FOR A NEW APPROACH TO COMMUNITY RESEARCH

A. THE TWIN AMBITIONS UNDERLYING A NEW COMMUNITY APPROACH

(a) A response to tomorrow's challenges

The period following the industrial revolution has been characterized by ever faster changes in society and by the growing inability of the system to adapt in a manner compatible with the interests of man. Tomorrow's environmental risks will stem not only from scientific innovation and technological upheaval but also from economic change (e.g. economic expansion in the developing countries, growth as an economic objective of the developed countries, the stimulation of the economy by speculation and, as we can see today, the transition from a centrally-planned economy to a market economy in the former Communist countries) and social change (e.g. changes in family structures, the increasing marginalization of entire population groups, the concentration of population in urban areas, changing means of communication, including the role of data-processing and the media, changes in power structures, the more widespread use of drugs, etc.).

In the light of these radical changes, research has a key role to play. Each new phenomenon which bursts on to the scene must be examined, measured, planned for. All scientific disciplines must be used to identify quickly risks to the human environment, whatever their source, and, therefore, control them more effectively.

(b) A specific contribution by the European Community

A multidisciplinary approach to research and international cooperation are intrinsically linked; experiments conducted hitherto have shown that the interrelationship is one of mutual need and mutual benefit.

However, two observations must be made:

. The scientific community, which is still deeply attached to the unidisciplinary approach, has so far launched precious few projects. The two best examples are UNESCO's MAB (Man and the Biosphere) Programme and the International Geosphere/Biosphere Programme (IGBO), also known as 'Global Change', launched by the International Council of Scientific Unions in 1986. These experiments owe much to the Americans.

. In addition, when scientists cross the disciplinary divide, political institutions do not follow. At the most recent conference on the environment held in May 1990 in Bergen, Norway, scientists reached agreement on priority research programmes. However, at their subsequent meeting the ministers of the 34 countries involved failed to initiate any practical measures.

Behind the environmental crisis one can now perceive an institutional crisis. Traditional government structures, particularly in Europe, are having difficulty in solving interrelated problems, some of which are vague and unpredictable. The European Community has a vital role to play, therefore. By its very nature, it provides the ideal framework for cooperation of this kind.

B. CRITIQUE OF THE COMMISSION PROPOSAL

(a) Objectives of the proposal

The Commission defines them as follows: 'The actions envisaged will enable large projects to be undertaken to complement and strengthen the activities of the ongoing environment research programmes, the aim being to respond rapidly to the scientific challenges which arise from global change and to provide continuity in the scientific support to the environmental policy of the Community' (rapporteur's underlining).

The Commission has clearly tried to set compromise objectives - a compromise between continuity and new programmes. Is this vacillation the root cause of the shortcomings in the text and its failure to address current and future problems in an appropriate manner?

(b) Substance of the proposal

The programme breaks down into four main areas of action:

* Area 1 covers the continuation of the EPOCH programme and participation in global change programmes. It embraces basic research into climatic change, the depletion of the ozone layer and ecosystem dynamics.

This is a vital area, and the general tenor of the proposal is good: it employs a global approach, both planetary and dynamic, which is commensurate with the complex nature of the area involved.

However, steps must be taken to ensure that Community research retains its specific characteristics. In view of the urgent nature of the problems being studied in this area, more and more national and international programmes are now being started. The Community programme must therefore seek to fit in with these programmes, to complement rather than compete with them, and, above all, hold to the objective of stimulating research which cannot be conducted in traditional research networks.

* Area 2 is the most conventional: it covers technological research into the protection and rehabilitation of the environment. The emphasis is on applied research.

This part of the proposal prompts two comments:

- As regards its methods and its objectives, this programme merely continues work which has been going on since the 1970s: the monitoring of changes and efforts to restore the status quo ante. Although much work remains to be done in this area, and these types of activities will still have a place until such time as global ecological research is introduced, we feel that today they should take up a much smaller proportion of Community resources. This raises, even more acutely, the question of whether Community measures are apposite.

- The details of the measures to be taken in this area are so vague that one may well ask whether the authors of the text are themselves convinced of the need for such research. Would it not be sufficient to support national initiatives?

* The tenor of the measures to be taken in Areas 3 and 4 is positive, but their substance is outlined in an incomplete and imprecise manner;

- Area 3 area finally opens up Community research to embrace economic and social science. In so doing, it responds directly to the calls made by the group set up to assess Community research in the field of the environment. It proposes to assess, at the same time, the socio-economic impact of environmental change and of environmental policies and research.

However, the reverse relationship, i.e. the study of the impact of socio-economic change on the environment, is barely touched on; the key areas of action are buried in the list of topics covered (e.g. sustainable growth, assessment of demographic and technological change) and there is no hint of a dynamic approach incorporating the time factor.

- As regards Area 4, the objective (to solve problems of transnational interest) and the methodology (systematic approach, interdisciplinary research) are resolutely modern.

Unfortunately, the list of projects which follows (technological risks, natural risks, desertification in the Mediterranean area) must be criticized. First of all, there can be no justification for drawing up a list of examples. Either the Commission regards the projects listed as having priority, in which case they belong in the list of projects eligible for Community funding, or they are not key projects, in which case why quote them in a highly restricted budgetary context.

This passage of the text brings together projects of varying importance whose objectives are unrelated, the only unifying link being the methodology employed. The dividing up of the Commission proposal in this manner can

perhaps only be explained by the reluctance of the authors to employ this methodology throughout the text.

C. PROPOSALS FOR A COMMUNITY ECOLOGICAL RESEARCH PROGRAMME

(a) Redefining the objectives and methodology of the programme

The introduction to Annex I must be redrafted in such a way as to

* set objectives commensurate with the current environmental problems defined above;

* describe the methodology chosen: use of ecological science via a multi-disciplinary approach.

(b) Adapting the substance of the programme

* Redrafting the text for Area 3

The scope of Area 3 (research on economic and social aspects of environmental issues) must be redefined. The two sub-sections can be combined, since they are two aspects of the same approach: the measurement of the socio-economic impact of environmental change (environmental change/environmental policy and research).

However, the inverse process, i.e. research into economic and social change likely to have an impact on our environment, must be developed and systematized. Initially, this implies Community research in the following areas:

- . Research into sustainable and viable growth models capable of embracing social, cultural and economic factors.
 - Environmental impact of demographic trends
 - incorporation of the relationship between economics and the environment into models and scenarios.
 - eco-energy research,
 - environment and national accounting,
 - research into social ecology: urban research, research into social innovation, research into the relationship between working conditions and health.
 - Political and natural science: the role of law, institutions and international, national and local authorities.
 - Research into public support for and involvement in sustainable development (awareness, behaviour).
 - Research and educational science: education concerning the role of and changes connected with the development of science and technology in our society, education and measures to increase public awareness concerning ecological problems.
 - Research into the role of the media and information.
 - Consideration of North-South imbalances and the use of Community research in that context.
 - Research into the environmental impact of political and institutional upheavals. Consideration of the adoption of the growth model by the countries of Central and Eastern Europe.
 - Research into resource evaluation. Linking of this programme with Community research into energy-saving procedures.

. Development of a multidisciplinary training programme for scientists with a view to meeting the current shortage of researchers.

* Strict definition of Area 4

If there is a place for Area 4, it must consist not of a series of examples, but rather of a restrictive list of integrated projects regarded as having priority.

In addition, only those projects employing a genuinely systemic approach and focusing on a sectoral or regional problem must be included in this area. There can be no question of financing projects falling within the scope of the other three areas. Of the 'examples' quoted by the Commission, only the third (desertification in the Mediterranean area) seems to be in its proper place. The natural risks are covered by Area 2 (monitoring and rehabilitation of the environment) and the technological risks fall within the scope of Area 3.

(c) Funding of a select group of integrative scientists and thinkers

Setting up select group of thinkers and scientists, with a common philosophy of ecology and universally recognized powers, to monitor the various programmes on ongoing basis rather than a posteriori, as is currently the case, would help to ensure cross-fertilization between these programmes. Its task would be to create interfaces and foster interaction between Community research activities.

(d) Redrafting and reallocation of the Community R&D budget in the area of the environment

Resources must be allocated in precise detail in each area. This applies particularly to Area 4: a precise budget must be earmarked for each integrated project. Any balance remaining for other potential projects must also be accounted for.

The continuity or lack of it with previous programmes must, as far as possible, be assessed in financial terms: the sums for the projects financed under STEP and EPOCH and which are to be extended under the present programme must be quoted.

The breakdown of expenditure must be adjusted in favour of Area 3, which should receive between 10 and 15% of the budget for this programme. The budget for Area 4 must be changed accordingly. It will only be possible to carry out this review once the content of Area 4 has been spelt out in detail and the sums for the various integrated projects assessed.

The funding for the group referred to above could be drawn from the budget for Area 4.

