# COMMISSION OF THE EUROPEAN COMMUNITIES

المعاد المتعاد المرجع والمعاد والم

٢

COM(90) 158 final - SYN 263 Brussels, 28 May 1990

Proposal for a COUNCIL DECISION

adopting a specific research and technological development programme in the field of Environment (1990-1994)

(presented by the Commission)

CONTENTS

- 1 -

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

ANNEX | Scientific and technical objectives and content

ANNEX II Indicative breakdown of expenditures

ANNEX III Rules for implementing the programme and activities for dissemination and exploitation of the results Page

2

20

11

19

Proposal for a Council Decision adopting a specific research and technological development programme in the field of environment (1990 to 1994)

COM(90) 158 final - SYN 263

(Submitted by the Commission on 3 May 1990)

#### (90/C 174/06)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 130q (2) thereof,

Having regard to the proposal from the Commission,

In cooperation with the European Parliament,

Having regard to the opinion of the Economic and Social Committee,

Whereas by Decision 90/221/Euratom, EEC(<sup>1</sup>), the Council adopted a third framework programme for Community activities in the field of research and technological development (1990 to 1994), specifying *inter alia* the activities to be pursued for developing the scientific knowledge and technical know-how needed by the Community, in particular to carry out its role relating to the environment according to Part Three, Title VII of the Treaty; whereas this decision should be taken in the light of the grounds set out in the preamble to that Decision;

Whereas Article 130k of the Treaty stipulates that the framework programme is to be implemented through specific programmes developed within each activity;

Whereas the Joint Research Centre shall contribute through its own programme to the implementation of the aforesaid activities;

Whereas an estimate should be made of the amount of Community financial resources needed to carry out this specific programme; whereas the definitive amounts will be fixed by the budgetary authority in line with the financial perspectives covering the period 1988 to 1992 included in the Interinstitutional Agreement of 29 June 1988 (<sup>2</sup>) and with any future financial perspectives covering the period 1993 to 1994;

(<sup>2</sup>) OJ No L 185, 15. 7. 1988, p. 33.

<sup>(&</sup>lt;sup>1</sup>) OJ No L 117, 8. 5. 1990, p. 28.

Whereas, pursuant to Article 4 of and Annex I to Decision 90/221/Euratom, EEC, the amount deemed necessary for the whole framework programme includes an amount of ECU 57 million for the centralized dissemination and exploitation of results, to be divided up in proportion to the amount envisaged for each activity; whereas in view of the importance of this specific programme within the 'Environment' action the estimate of the financial resources needed by this programme is to be reduced by ECU 2 600 000, which amount is to be allocated to the centralized activities, in order to comply with the second sentence of Article 130p (2) of the Treaty;

Whereas this programme must be implemented by the Commission; whereas, to help accomplish this, the Member States are bound, pursuant to Article 5 of the Treaty, to facilitate the achievement of its tasks, where necessary, notably within a committee;

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 of the European Communities; 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 the projects to be carried out under the programme must be selected with special attention to the principle of economic and social cohesion in the Community, the transnational nature of the projects and the support to be given to small and medium-sized enterprises;

Whereas it is only in the light of experience gathered in the course of this programme that the Commission will be able to propose and the Council to adopt supplementary programmes by having recourse to the means provided for in Articles 130l, 130m or 1300 of the Treaty, if they contribute to the achievement of the programme's objectives, in accordance with the option made available by Article 2 (2) of Decision 90/221/ Euratom, EEC;

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 it is necessary, as Annex II to Decision 90/221/Euratom, EEC, provides, to take protection of the environment and the quality of life into account by

directing research activities towards an understanding of the fundamental mechanisms of the environment, while contributing to the preparation of quality and safety standards;

Whereas the Scientific and Technical Research Committee (Crest) has been consulted,

HAS ADOPTED THIS DECISION:

#### 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.

#### Article 2

1. The Community funds estimated as necessary for the execution of the programme under this Decision amount to ECU 414 million. This amount includes ECU 260 million for the execution of the activities approved by the present Decision, and ECU 154 million for the activities which the JRC will contribute to the programme and which will be subject of a separate decision of the Council.

2. From the above sum of ECU 260 million, an amount of ECU 2 600 000 is drawn for the centralized action of dissemination and exploitation. The funds thus reduced to ECU 257 400 000 include staff cost, which may amount to a maximum of 4%.

3. An indicative allocation of funds is set out in Annex II.

4. Should the Council take a decision in implementation of Article 1 (4) of Decision 90/221/Euratom, EEC, this decision shall be adapted to take account of the abovementioned Decision.

5. The budgetary authority shall decide on the appropriations available for each financial year.

#### Article 3

Rules for the implementation of the programme are set out in Annex III.

#### Article 4

The rate of the Community financial contribution shall be laid down in accordance with Annex IV to Decision 90/221/Euratom, EEC. No C 174/42

a

i

#### Article 5

1. During 1992 the Commission shall review the programme and address a report on the results of the review to the Council and the European Parliament, together with proposals for any necessary changes.

2. At the end of the programme the Commission shall assess the results obtained. It shall address a report thereon to the Council and the European Parliament.

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.

#### 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.

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.

3. A work programme for each year shall be drawn up 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.

#### Article 7

1. In the cases referred to in Article 8 (1), the representative of the Commission shall submit to the Committee a draft of the measures to be taken. The Committee shall deliver its opinion on this within a time limit which the chairman may set in accordance with the urgency of the matter, if necessary by holding a vote.

2. The opinion shall be entered in the minutes; in addition, each Member State shall have the right to ask for its position to appear in the minutes.

3. The Commission shall take the fullest account of the opinion delivered by the Committee. It shall inform the Committee of the way in which it has taken account of the opinion. 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,
- 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.

#### Article 9

In implementing this programme, supplementary programmes within the meaning of Article 130l, participation within the meaning of Article 130m and joint undertakings or any other structures within the meaning of Article 1300 of the Treaty may also be decided on as the need arises.

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

This Decision is addressed to the Member States.

Article 11

#### ANNEX I

#### Scientific and technical objectives and content

This specific programme fully reflects the approach embodied in the third Framework Programme in terms of the scientific and technical goals and the underlying aims which it pursues.

Paragraphs 3A, 3B, 3D and 3E of Annex II to the Framework Programme form an integral part of the present specific programme.

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 following presents an analytical description of the content of the programme, based on and taking account of the above elements.

#### Area 1: Participation in global change programmes

The goal is to contribute to understanding the processes governing environmental change and to assess the impact of human activities. Community participation will be concentrated on problems which will have an impact on environment policy and in areas where the Community is best placed to ensure European coordination in the framework of large international programmes while taking account of national programmes.

#### Natural climatic change

The objective is to reconstruct and model the evolution of the climate system in the past in order to understand better how the system may evolve subject to forcing factors of human origin.

Taking advantage of deep ice cores to be recovered in the next years, research will aim at the reconstruction and modelling of the quaternary climatic cycles. In particular, the last climatic cycle should be accurately reconstructed, in order to understand and model the onset of the most recent glaciation.

#### 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 highresolution global change models coupling the atmosphere (including clouds), the ocean, the biosphere and the cryosphere, taking advantage of modern supercomputer and computer-linking techniques.

#### Climate change impacts

The aim is to forecast the physical and human impacts of the foreseen climate change in the European Community.

The emphasis will be on the quantitative assessment and modelling of the impacts of the foreseen climate change, especially the sea level rise and its consequences for European towns and low-lying coastal areas, and the impacts on European agriculture, water resources and other sectors of the European economy (tourism, land use, energy, transport, etc.).

#### 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 to 1992 and 1992 to 1993 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.

#### 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 NOy 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.

#### 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.

#### Ecosystem dynamics

The aim is to understand and forecast the interaction of global change and the dynamics of continental ecosystems and to provide a scientific basis for preventive and adaptive policies. The new element is the holistic approach to the investigation of important types of ecosystems such as wetlands and seminatural ecosystems. The global impact of exploitation and clearing of tropical forests and grassland and the loss of biological and genetic diversity will receive particular attention, in close coordination with the biotechnology programme.

#### Area 2: Technologies and engineering for the environment

The objective is to promote better environmental quality standards by encouraging technological innovation at the pre-competitive level. The two main lines of research in this field will be environmental monitoring, including remote sensing applications, and the development of techniques and systems to protect and rehabilitate the environment. Support to the activities of the future European environment agency will be an important consideration in this research area.

#### 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.

#### Technologies for protecting and rehabilitating the environment

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.

For the monuments and objects which are components of European cultural heritage, research will quantify the causes and mechanisms of deterioration; new methods of condition assessment will be developed, and the scientific basis for treatments and materials for conservation will be strengthened.

Activities in this area will be coordinated with the Eureka project Euro-Environ and research teams funded by the programme will participate in the Eureka project Eurocare.

#### Area 3: Research on economic and social aspects of environmental issues

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.

## Socioeconomic 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.

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.

#### Socioeconomic impact of environmental policies and research

The objective is to incorporate environmental socioeconomic factors into Community policies and to provide a socioeconomic dimension for Community environmental R&D.

Work within this theme is intended to ensure that, in line with the provisions of the Single Act, environmental factors are sufficiently taken into account in Community sectoral policies and supporting R&D.

Furthermore, as scientific and socioeconomic parameters are closely interdependent in a number of research topics of the present programme, work under this theme will ensure that socioeconomic considerations and parameters are properly incorporated into relevant coordinated research projects.

Illustrative examples include: integrated waste recycling systems within the internal market; ecological consequences of demographic and population changes (e.g. Alps and other mountain regions); environmental impacts of tourism.

#### Area 4: Integrated research projects

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:

#### Natural risks

Work will aim at understanding the causes, mechanisms and consequences of hazardous environmental phenomena, and providing the scientific basis for disaster management (preparedness, prediction, alert, mitigation or prevention, recovery and redevelopment).

Integrated research in this area will provide a European contribution to the international decade for natural hazard reduction. It will cover telluric, meteorological and hydrogeological hazards, including research on forest fires, floods and slope instability and the phenomenology of extreme hazardous meteorological events.

No C 174/46

Research on telluric hazards (earthquakes and volcanic eruptions) will consist mainly of theoretical studies of telluric phenomena and of the behaviour of structures during these phenomena and will aim at the settingup of field measurement sites and of rapid intervention networks in selected active zones in the Community.

#### Technological risks

The aim is to understand the consequences of human activities, technologies and products on human health and on the environment as a basis for preventive Community policies and legislation.

Research in this area will cover the development and validation of systems for testing and assessment of chemicals for health and ecological effects. It will be complemented by studies of the effect of environmental pollution on human health. Furthermore, the risks from agricultural technologies and land-use practices to soil and groundwater quality will be investigated. This work will extend to regional aspects of ecosystem protection including the eutrophication of coastal seas (in liaison with the specific programme on marine science and technology), the protection and conservation of habitats, forest dieback and the acidification of water bodies.

#### Desertification in the Mediterranean area

Research will be carried out to assess the natural and human causes, the mechanisms and the impacts of the spread of desertification in the Mediterranean area. Research will deal with the history, causes (human and climatic) and consequences of desertification. Strategies to combat desertification will be developed and their application to selected test zones will be envisaged.

#### 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
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.

#### ANNEX III

#### Rules for implementing the programme and activities for dissemination and exploitation of the results

- 1. The Commission shall implement the programme on the basis of the scientific and technical content described in Annex I.
- 2. The rules for implementing the programme, referred to in Article 3, comprise research and technological development projects, accompanying measures and concerted actions.

(%)

The direct research activities carried out by the JRC will be the subject of a separate Council Decision.

The projects shall be the subject of shared-cost research and technological development contracts.

The accompanying measures consist of applying the means to ensure proper technical execution, management and evaluation of the programme, as well as adequate dissemination and accessibility of the results, and coordination, training and consciousness-raising of the participants in the programme.

The concerted actions are those defined in the Financial Regulation.

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.

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.

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 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 vade mecum setting out all the rules applicable to this exceptional procedure in order to guarantee full transparency.

- 5. The projects must provide for participation by at least two mutually independent partners established in different Member States.
- 6. The Commission may encourage the participants to form a European Economic Interest Grouping (EEIG) or make other arrangements for carrying out projects, such as those on a large scale, permitting decentralized management adapted to the specific requirements of the project.
- 7. The knowledge acquired during the course of the projects shall be disseminated on the one hand within the specific programme and on the other and by means of a centralized activity, pursuant to the Decision referred to in the third subparagraph of Article 4 of Decision 90/221/Euratom, EEC.

## FINANCIAL STATEMENT"

- BUDGET HEADING AND TITLE
   Part B of the general budget
   Subsection 6, Item 6211
   Specific programme of Community RTD activities in the field of the ENVIRONMENT 1990-1994.
- 2. LEGAL BASE Article 130 Q(2) of the Treaty.

(

్రీ

- OBJECTIVES AND DESCRIPTION See Annex I of the proposal.
- 4.FINANCIAL IMPLICATIONSAmounts deemed necessary in MioECU:Programme implementationCentralised action for disseminationand exploitation2.6
  - TOTAL 260.0

The indicative internal breakdown of the 257.4 MioECU for the programme implementation is given in Annex II of the proposal.

"excluding JRC activities (154 Mio ECU)

Ø

Indicative multiannual schedule (in MIO ECU):

	1990					TOTAL
Commitments			64.70			257.40
Payments		24	48	72	113.40	257.40

The definitive yearly amounts will be determined by the budgetary authority in accordance with the financial perspectives for the period 1990-1992 (annexed to the Interinstitutional Agreement of 29 June 1984) and with subsequent financial perspectives which may be adopted for 1993 and 1994.

## 5. STAFF AND ADMINISTRATIVE EXPENDITURE

In addition to the principal means of action which are contracts (annex III), the above amounts include programme-related staff and administrative expenditure estimated at no more than 15 MioECUS.

The expenditure on staff will not exceed 4% of the amount deemed necessary for the programme implementation. This implies a maximum of 40 statutory posts (A, B and/or C) at any given time during the life of the programme. The infrastructure costs related to statutory staff will be borne by Part A of the budget.

## 6. IMPLICATIONS FOR REVENUE

The contributions by third country contractors towards the cost of administration of the programme will be reused pursuant to articles 27.2 and 96 of the Financial Regulation<sup>3</sup>.

(

<u>,</u> 20

<sup>&</sup>lt;sup>2</sup> for the payment appropriations: 1994 and beyond

<sup>&</sup>lt;sup>3</sup> Financial Regulation of 21 December 1977, as last amended by Regulation 610/90 of March 1990

## 7. TYPES OF CONTROL

Control will be exercised by:

(

- the Programme Management Committee (scientific control)
- the services of the DG responsible for the execution of the programme, possibly assisted by independet experts

12

- the Commission's Financial Controller

In accordance with Article 2 of the Financial Regulation (3), the use of appropriations will be subject to analyses of cost-effectiveness and the realization of quantified objectives will be monitored.

External audit may be carried out by the Court of Auditors in accordance with the Treaty.

## STATEMENT OF IMPACT ON COMPETITIVENESS AND EMPLOYMENT

## 1. The main reason for introducing the measure

Implementation of the Environment part of the Third Framework Programme of Community activities in the field of research and development (1990-1994).

## 2. Features of the business in question

No special features are required; the business can be of any size or description relevant to and appropriate for the research activities of the programme and developments derived thereof.

## 3. Obligations imposed directly on business

The same obligations are imposed on all institutions participating in the programme including: conformity of the proposed research with the technical annex of the project, transnational cooperation, free site-access to Commission agents, participation in seminars and meeting of contractors organized by the Commission, and annual reports of activities and results.

## 4. <u>Indirect obligations likely to be imposed on business by national,</u> regional or local authorities

None are envisaged.

## 5. Special provisions in respect of SMEs

None are envisaged.

Â

## 6. Likely effects on:

ĺ

87

## a) The competitiveness of business

The programme will promote both long-term research aiming at the understanding of basic phenomena needed for the formulation of preventive and anticipating policies, as well as research and technical development of a more applied and short-term nature.

The impact on the competitiveness of industry in general, and of small business in particular, will be an indirect one in the first case and both a direct and indirect one in the second case.

While long-term research by its nature will be mostly carried out by universities and public research institutes, though industry is not excluded, industry will benefit from its results, which should help it to anticipate the trend in environmental policies and standards, to apprehend at an early stage and at their true value environmental problems and to adapt their industrial strategy accordingly. This can stimulate the development of new technologies as a source of industrial progress.

Short-term research and technological development will be part of the activities dealing with technologies and engineering for the environment and will be included in some of the large integrated projects. Activities in these areas are well suited for an active and direct participation of industry, especially of SME's which are strong in the development of instrumentation and measuring devices. Indirect benefits for industry will arise from the results of these more applied research projects such as development and validation of protocols for the assessment of health risks which should lead to more rapid and reliable testing procedures in the food, cosmetics and pharmaceutical industries.

## b) <u>Employment</u>

15

(

ł

As the research is precompetitive, and to a large extent long-term research, and is not specifically aimed at industry, the impact on employment is impossible to evaluate with any degree of confidence.

There is certainly a positive effect on the maintenance and recruitment of research staff directly involved in projects funded by the programme.

## 7. <u>Consultation of representative organisations</u>

The industrial Research and Development Advisory Committee has been consulted on the orientations of the programme. The proposal will be submitted to the Economic and Social Committee for opinion

COM(90) 158 final

# DOCUMENTS

1...

15 16

# EN

## Catalogue number : CB-CO-90-241-EN-C ISBN 92-77-60727-0

PRICE	*	1 - 30 pages: 3.50 ECU	per additional 10 pages: 1.25 ECU

Office for Official Publications of the European Communities

L-2985 Luxembourg