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O P I M I O M S

of the Committee on Budgets
Draftsman: Mr Christos PAPOUTSIS

of the Committee on the Environment, Public Health and Consumer Protection

Draftsman: Mr Paul LANNOYE

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

Draftsman: Mr Michel HERVE

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PE 143.231/fin./Ann.

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* = Consultation procedure requiring a single reading

**II

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

**I = Cooperation procedure (first reading)

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

OPINION

(Rule 120 of the Rules of Procedure)

of the Committee on Budgets for the Committee on Energy, Research and Technology

Draftsman: Mr Christos PAPOUTSIS

At its meeting of 21 September 1989 the Committee on Budgets appointed ${\tt Mr}$ Papoutsis, mdraftsman.

At its meeting of 7 November 1990 it considered the draft oinion and adopted the conclusions as a whole unanimously.

The following were present at the vote: von der Vring, chairman; Lamassoure, 1st vice-chairman; Cornelissen, 2nd vice-chairman; Papoutsis, rapporteur; Arias Cañete, Böge, Colajanni, Elles, Forte, Holzfuss, Kellett-Bowman, Langes, Lo Giudice, Miranda da Silva, Samland and Theato.

Preliminary observation

Since the legislative programmes relating to the specific programmes under the 1990-1994 framework programme - Decision 90/221/EEC/EURATOM - were submitted virtually simultaneously and contain identical financial provisions, they can be considered jointly and the decision can be taken on the package as a whole. This opinion relates to the specific programme in the environmental field (1990-1994).

Introduction

- 1. On 23 April 1990, the Council adopted Decision 90/221/EURATOM, EEC¹, concerning the framework programme of Community activities in the field of research and development (1990 to 1994). Article 1 of the decision provides for the carrying out of the following activities:
- enabling technologies:
 - information and communications technologies;
 - 2. industrial and materials technologies.
- management of natural resources:
 - environment;
 - 4. life sciences and technologies;
 - 5. energy.
- management of intellectual resources:
 - 6. human capital and mobility.

The amount deemed necessary for Community financial participation in the entire programme is 5700 million ECU.

2. On 11 June, 30 September and 22 October 1990, the Council consulted the European Parliament on fifteen specific programmes. The proposal on the centralized action was not submitted for consideration.

This virtually simultaneous presentation of the new proposals meets the wishes expressed by the Committee on Budgets (see PE 134.413/fin.). This situation can create the conditions necessary for to measure the effects of a series of legal instruments against the financial reality defined by the financial perspective and the budgets concerned.

Consideration of the specific proposals is subject to the rules governing the cooperation procedure.

3. During consideration of the framework proposal for the framework programme (1990-1994), and also throughout the conciliation procedure up to the adoption of the decision by the Council, the Committee on Budgets had put forward a number of observations.

¹ OJ No. L 117, 8.5.1990, p. 28

Its observations concerned, in particular, the financing of the new framework programme, the period which covered financing of both framework programmes (1987-1991 and 1991-1992) and the procedures for implementing the new framework programme, with particular reference to the question of committology.

The Commission proposals

- 4. The Commission's approach consists of presenting a harmonized text concerning the financial provisions for each specific activity together with annexes giving an indicative breakdown of the amount deemed necessary and the procedures for implementing each programme. The Commission also devotes an annex specific to each programme solely to the aims and the scientific and technical content.
- 5. As regards the amount estimated as necessary for each specific activity (Article 2), the Commission proposes a double levy:
- a single-rate levy of 1% on the amount estimated as necessary for each specific programme earmarked for the financing of the centralized dissemination and exploitation of the results;

and on the remainder,

- a variable-rate levy for staff costs. This second levy varies between 2% and 16% according to the specific activity.
- 6. As regards the 1% levy, Article 4 of the framework decision 90/221/EEC provides for an amount 'deemed necessary of 57 million ECU', which represents in fact the 1% of the amount deemed necessary for the framework programme as a whole. However, while this proposal has the merit at first sight of constituting the amount of 57 million ECU, it does not take account of a number of considerations:
- The total appropriations for the specific activities are not of the same amount, so the impact of the 1% in each of them will not necessarily be the same.
- It is not stipulated in the framework decision that each specific programme must contribute on the basis of a single rate to the financing of the centralized action. The framework decision merely states that the 57 million ECU are drawn 'proportionally' from each activity (see Annex 1, footnote 2).
- It is not stipulated that this levy must precede the levy for staff costs.
- The profile of the partners of each programme is different, and therefore the framework of the implementation of the projects may vary.
- The knowledge acquired on each programme is different, and the means of disseminating it may take various forms.

There is therefore no reason to assume that the single-rate levy meets the requirements of each programme.

7. On the other hand, the Commission has not yet submitted its proposal on the centralized action. Is it then conceivable to start adopting all the specific programmes without seeking to settle, for example, matters relating to intellectual property or industrial property?

On the basis of what guarantees will the partnership which will form around each programme ensure dissemination of the results? And how will the Community dimension of each programme be preserved in the absence of information on the dissemination of the results obtained by its implementation?

8. A second point to be raised concerns the percentage earmarked for staff costs.

The Commission proposes a variable-rate levy for this expenditure. On the basis of the financial statements accompanying the various proposals, the implementation of the framework programme (1990-94) will involve a total staff complement of 1019 persons, regardless of category.

This establishment plan for the framework programme (1990-94) will consist partly of staff to be redeployed from the programmes implemented under the framework programme (1987-91) and partly of newly-recruited staff.

9. Experience shows that the demand for staff is a function of the demand for commitment appropriations for each activity.

How, then, does the Commission intend:

- to coordinate demand for staff for each new specific activity in the light of the real staff requirements still presented by earlier activities which will in fact be acting as a reserve supply and, in addition, respect the rules of transparency in the management of the appropriations concerned?
- to inform the budgetary authority of the actual allocation of staff and the budgetary impact, when the implementation of the new activities does not rule out implementation of the projects under the exceptional procedure which may be justified on the scientific basis of several specific activities?

Does the Commission intend to perpetuate the phenomenon of osmosis already referred to in respect of the specific activities arising from the previous framework programme (1987-1991)? (See in this connection PE 143.199).

10. The implementation of these specific activities involves some innovations as regards management, and the Commission, aware of this new situation, has already deemed it necessary that a study be made of this subject.

At the same time, the Commission had promised to 'inform Parliament' of the findings of that study. That study, which would be very useful for the budgetary authority, has not yet been published. However, the Commission has agreed that the question of staff is one of the points, but not the only one, which would require correction and rationalization measures.

11. Another observation concerns the rules for implementing each specific activity set out in Annex III to each proposal.

The Commission proposes the introduction of an exceptional procedure to make the decision-making process concerning the choice of projects more flexible. This exceptional procedure may call on a sum which may in no case exceed 15% of the amount deemed necessary.

The introduction of this new procedure, which will have to co-exist with the ordinary procedure as well as with the continuation of the activities developed under the specific programmes arising from the framework programme (1987-1991), raises certain questions, namely:

- how does the Commission intend to maintain the partners' interest in the previous activities since there are still appropriations in the budget to be committed for the earlier activities?;
- how can the Commission ensure that there will be no abuse in using this exceptional procedure instead of the ordinary procedure?;
- how does the Commission intend to budgetize projects selected on the scientific basis of several specific activities?
- 12. The Commission is not sufficiently clear about how it intends to coordinate the timetable of tenders, selection of projects and conclusion of contracts in the context of the ordinary procedure with consideration of the proposals submitted in the context of the exceptional procedure. This situation may well create bottlenecks in the decision-making process as regards the choice of projects and their management. It is important to stress the growing volume of requests submitted to the Commission by the partners and, consequently, to consider whether the administrative deadlines governing the selection of projects do not hamper the optimum allocation of the appropriations approved in the budget. The Commission does refer in Annex III to the drawing up of a vade mecum, but to date, this vade mecum has not been forwarded to the budgetary authority.
- 13. While the experience acquired argues in favour of the introduction of innovative procedures, they will have a positive impact on Community research only if they preserve the cardinal objectives of that research and also ensure optimal allocation of the financial resources provided for.
- 14. The new framework programme is a year behind schedule as regards the amounts provided for in the financial perspective and, while part of the financial year 1991 will be devoted to adopting the various decisions, the Commission's firm determination to ensure the vital progression of one of the most important new policies (see PE 140.148) becomes an empty statement.
- 15. Another observation concerns committology. The fears expressed by the Committee on Budgets in its opinion (see PE 134.413/fin.) are confirmed. When a specific activity concerns the industrial sector, the committee involved is of type III. However, in the conciliation procedure for the adoption of the framework programme (1990-1994) and, in particular, in its letter to the President of Parliament (see PE 140.148), the Commission had stated perfectly clearly the merits of the type I committee (i.e. a purely consultative committee) which confers the greatest speed and efficiency on the decision-making process.

The question is whether that efficiency can be guaranteed, for example, in the case of the selection of projects under the exceptional procedure, which is proposed precisely in order to the strengthen the operational aspect of each specific activity in the case of activities involving a type III committee.

It may be pointed out that, in the recent decisions on provisional measures concerning the unification of Germany, the Council agreed to replace a type III by a type IIa committee.

- 16. The Commission gives no details concerning the choice to be made where a project subject to the exceptional procedure concerns two specific activities which are not covered by the same type of committee. In such a case, which of the two types of committee will be giving its opinion?
- 17. A final observation concerns the evaluation of the programmes. The research and technological development policy constitutes one of the objectives laid down in the Single Act.

The European Parliament has stressed on many occasions the need to develop this policy while drawing attention to the increased funding requirements. This position will be best strengthened on the basis of the results obtained, with particular regard to sound financial management and increased profitability of the funds allocated to this policy.

18. In its proposals (Article 5), the Commission raises the matter of the evaluation of the programme but nevertheless refrains from providing any additional information regarding the criteria to be taken into account for that evaluation.

It is important for the budgetary authority, particularly where a multiannual activity is involved, to have figures showing trends in the performance indicators interpreting analyses made on the basis of cost-effectiveness, and also on the basis of the indicators which measure the cost of non-research.

Experience shows that there is no pattern to the participation of the Member States in the various activities. A thorough analysis of the cost of non-research is vital because of the complementarity of this policy with other Community policies sometimes acting as infrastructure.

Conclusions

The Committee on Budgets therefore proposes that the proposal be adopted subject to the following observation:

It asks the Committee on Energy, Research and Technology to ascertain, with the Commission, whether measures have been taken on the basis of the funds available to ensure, at administrative level, a rational decision-making process as regards selection of projects and their management as well as on the provisions concerning the evaluation of all the specific programmes, in accordance with Article 5 of the framework decision 90/221/EURATOM, EEC.

The Committee on Budgets also requests the Committee on Energy, Research and Technology to take into consideration the following amendments:

Commission text

Amendments

Amendment No. 1 Fifth recital

Whereas, pursuant to Article 4 and Annex I of Decision 90/221/EURATOM, EEC, the amount deemed necessary for the whole framework programme includes an amount of 57 million ECU 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 2.6 million ECU, 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, pursuant to Article 4 and Annex I of Decision 90/221/EURATOM, EEC, the amount deemed necessary for the whole framework programme includes an amount deemed necessary of 57 million ECU for the centralized dissemination and exploitation of results which is to be the subject of a decision of the Council in cooperation with Parliament; whereas, in view of the importance of the specific programme within the 'Environment' action a financial contribution to the centralized activities is required; whereas this contribution is proportional to the financial capacity of the programme and corresponds to the effective demand for the results of research from the socio-economic operators in all the Member States;

Article 2

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

- 2. From the above sum of 260 million ECU, an amount of 216 million ECU is drawn for the centralized action of dissemination and exploitation. The funds thus reduced to 257.4 million ECU include staff cost, which may amount to a maximum of 4%.
- 2. The amount of 260 million ECU estimated as necessary shall include costs relating to staff and a contribution to the costs of the centralized action of dissemination and exploitation.
- 3. An indicative allocation of funds is set out in Annex II.
- 3. An indicative allocation of funds relating to the implementation of the actions covered by this programme is set out in Annex II. The procedures for the dissemination and exploitation of the results are set out in Annex III. The rules relating to staff are 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.
- 4. Delete
- 5. The budgetary authority shall decide on the appropriations available for each financial year.
- 5. Unchanged

Amendment No. 3

Annex II

After the heading 'Indicative breakdown of amounts', add the following new paragraph:

The establishment plan deemed necessary for the duration of the programme consists of 40 statutory posts (A, B and/or C). The Commission shall indicate each year in the preliminary draft budget the number of staff deemed necessary and the corresponding expenditure.

The budgetary authority shall decide on the appropriations.

Amendment No. 4

Annex III

Rules for Implementing the Programme and Activities for Dissemination and Exploitation of the Results

Paragraphs 1, 2 and 3 unchanged

4. The choice of projects ... 4. Unchanged

The participants in the projects ... Unchanged

The Commission may ... Unchanged

A favourable technical evaluation ... Unchanged

The exceptional procedure ... Unchanged

when it submits the preliminary draft budget the Commission shall inform the budgetary authorities whether the appropriations approved in the budget of the previous year have also financed projects retained by the exceptional procedure and the amounts allocated. Should these projects cover several programmes, it shall state the type of committee which assisted it.

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 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% of the annual budget appropriation.

The Commission shall draw up ...

Unchanged

It shall forward this vade mecum to Parliament at the latest before this Decision is adopted.

Paragraphs 5 and 6 unchanged.

- 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 hand by means of a centralized activity, pursuant to the decision referred to in the third paragraph of Article 4 in Decision 90/221/EURATOM, EEC.
- 7. The knowledge acquired during the course of the projects shall be disseminated with the specific programme and by means of, and in compliance with, the provisions governing the centralized action to be the subject of a decision taken by the Council in cooperation with Parliament pursuant to the third paragraph of Article 4 in Decision 90/221/EURATOM, EEC. The financial contribution of this programme amounts to ... ECU, in accordance with the financial provisions of Council Decision ... concerning centralized activities.

0 P I N I 0 N

(Rule 120 of the Rules of Procedure)

of the Committee on the Environment, Public Health and Consumer Protection

for the Committee on Energy, Research and Technology

Draftsman: Paul LANNOYE

On 29 June 1990, the Committee on the Environment, Public Health and Consumer Protection appointed Mr Paul Lannoye draftsman of the opinion.

The Committee considered the draft opinion at its meetings of 29/30 October 1990 and 8 November 1990.

At its last meeting the draft opinion was adopted by 13 votes for, none against and 5 abstentions.

The following took part in the vote: Mrs Schleicher, acting-chairman; Mr Lannoye, draftsman and for Mr Amendola; Mr Alavanos, Mrs Ceci, Mr Chanterie, Mrs Diez de Rivera Icaza, Mrs Green, Mr Hadjigeorgiou (for Mr Florenz), Mrs Jensen, Mrs Llorca Vilaplana, Mr Monnier-Besombes, Mr Partsch, Mrs Pollack, Mr Pronk (for Mrs Oomen-Ruijten), Mrs Veil, Mr Vernier, Mr Vohrer, Mrs Weber.

Introduction

This research programme is a specific programme within the Third Framework Programme of activities in the field of research and technological development (1990–1994), the overall structure of which was decided by the Council on 23 April 1990 (1).

It builds upon and expands the on-going (1989-1992) STEP (environmental protection) and EPOCH (climatology and natural hazards) research programmes. STEP and EPOCH have a combined budget of Ecu 115 million. The new environmental research programme will have a total budget of Ecu 414 million, of which Ecu 154 million are to be spent at the Joint Research Centre, and Ecu 2.6 million is allocated to the centralised dissemination and exploitation of results.

The contents of the proposed research programme cover four main areas, listed here with their sub-headings:

AREA 1 Participation in Global Change Programmes (35%-45% of budget)

- natural climatic change;
- anthropogenic climate change;
- climate change impacts;
- stratospheric ozone;
- tropospheric physics and chemistry;
- biogeochemical cycles;
- ecosystem dynamics.

AREA 2 <u>Technologies and Engineering for the Environment</u> (20%-25% of budget)

- assessment of environmental quality and monitoring;
- technologies for protecting and rehabilitating the environment.

AREA 3 Research on Economic and Social Aspects of Environmental Issues (5%-10% of budget)

- socio-economic assessment of the changing environment;
- socio-economic impact of environmental policies and research.

AREA 4 <u>Integrated Research Projects</u>

(25%-35% of budget)

- natural risks;
- technological risks;
- desertification in the Mediterranean area.

The budgetary division noted above is described by the Commission as "indicative".

⁽¹⁾ OJ No. L.117, Vol.33, 8.5.90, p. 28-43.

General Observations

The Committee on the Environment, Public Health and Consumer Protection welcomes the increased resources to be devoted to environmental research within the framework programme, although the amount still falls far short of the level of funding it would like to see here. The Committee also welcomes the broadening of the research programme, and is particularly pleased to note the inclusion of a section devoted explicitly to socio-economic research, a research area hitherto seriously neglected by DG XII and XIII of the Commission and the framework programme.

The Committee also notes that the external evaluations of the EC environmental research programmes have been generally favourable, although it supports the general conclusion, arrived at in a number of research programme evaluations, that the EC is better at producing results than it is at disseminating and using them. Feedback mechanisms for ensuring that relevant research findings and results are communicated to interested Members of the European Parliament could also be better developed.

In general, the most striking feature of this Commission proposal — a feature shared with all of the other specific programme proposals within the framework programme — is the remarkable lack of detail provided. The Commission is giving itself a very free hand, perhaps modestly constrained by its advisory committees, in drawing up the <u>actual detail</u> of the research topics to be included in the programme. The Committee on the Environment, Public Health and Consumer Protection notes that the degree of detail seems significantly less than in previous specific programmes, and finds this unacceptable. The Committee supposes that this perception is shared by the Council, but insists that adequate democratic control of EC research programmes is crucially dependent on the European Parliament being adequately informed as to the precise contents thereof.

With respect to the contents of this research proposal, or at least to those elements which are discernible in such a broadly worded document, the main overall observation the Committee wishes to make is that it finds the programme to be too reactive, and not sufficiently pro-active. Thus it seems to concentrate on "end-of-pipe" solutions to environmental problems, rather than on more creative up-stream alternatives, which might remove the problem altogether. This approach is even present in the socio-economic area: there is, perhaps, a tendency to analyse impacts on society, rather than examining the social and institutional contexts which produce the problems in the first place.

A second general observation is that there seems to be an over-reliance on the physical sciences at the expense of the life sciences. In particular, ecology deserves more support than it seems to be getting here. In this context, the Committee recalls that the Ecological Society of America has stressed the important role of local and regional conservation and natural history societies in acting as a repository of an unusual expertise: a detailed knowledge of specific ecosystems which is largely based on observation and experience. Modern biology has somewhat dissociated itself from this type of expertise, since it is often the province of 'amateur'

natural historians. Nonetheless, it is beginning to be recognised that such expertise and local field knowledge can often complement professional, laboratory based scientific knowledge. The Committee therefore asks the Commission to consider the best ways of preserving and developing this kind of local expertise in the EC, and considers it wholly appropriate that such support could come from an environmental research programme.

Turning now to the specific research areas within the proposal, the Committee offers the following observations:-

AREA 1 Participation in Global Change Programmes

It is not clear what the relationship is between this programme and the whole range of international and national research programmes covering the same topic. This is an obvious candidate area for the elimination of unnecessary duplication of research, and perhaps for a world-wide division of labour based on centres of excellence and expertise.

Moreover, as noted above, there would seem to be an over concentration on physico-chemical aspects of this problem as opposed to biological studies, especially with respect to possible synergistic effects in the biosphere.

The Committee would also like to see explicit attention given to the vast world-wide increase in electro-magnetic radiation, right across the electro-magnetic spectrum, traversing the atmosphere. This phenomenon, and its possible consequencies in terms of atmospheric conductivity, etc. has not received as much attention as it deserves.

Lastly, the Committee is puzzled by the observation that "the global impact of exploitation and clearing of tropical forests and grasslands and the loss of biological and genetic diversity will receive particular attention, in close coordination with the Biotechnology Programme" (1). What is the precise role of the Biotechnology Programme here?

AREA 2 Technologies and Engineering for the Environment

More attention should be devoted to the development and promotion of <u>preventive</u> policies rather than <u>ameliorative</u> policies, or to put it more simply, clean technologies rather than clean-up technologies.

Care should be taken with "the validation of methodologies of assessing risk", since quantitative risk assessment has been subjected to serious criticisms by the kind of social science research which will be supported in Area 3 and which has clearly demonstrated that public perceptions of risk are as much social assessments of institutional credibility and trust as assessments of technological probabilities.

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⁽¹⁾ COM(90) 158, p.14.

AREA 3 Research on Economic and Social Aspects of Environmental Issues

Whilst the inclusion of this section is to be welcomed, the Committee urges the Commission to take a very wide view of the type of research projects deemed appropriate here. Again there seems to be too much emphasis on the assessment of socio-economic impacts, rather than research into the institutional and social structures which produce the impacts, and whether alternative institutional structures might better serve environmental needs. Moreover, much more attention should be paid to the environmental consequences of social, cultural, and demographic change.

An over enthusiasm for quantitative social science should also be avoided. There is always a strong temptation, reinforced by analogy with the physical sciences, to attribute more significance to numbers than to qualitative social analysis, especially when seeking to justify policy choices. As mentioned above, quantitative risk assessment and cost benefit analysis have been particularly vulnerable to this tendency. There are no techniques which give acceptable valuations of the natural environment. All techniques including contingent valuation are open to serious objections. The intractable issues of uncertainty over the value of natural ecosystems and the stock of genetic capital are probably best dealt with by strict rules for conservation. Monetary valuation has little role to play in this process and, indeed, can serve to defect attention from the fundamental issues.

Appropriate topics for inclusion in a social science programme in environmental research should include the following:

- the underlying structures of expert and public definitions of environmental hazards;
- the variables affecting definitions of 'acceptable' or 'adequate' evidence in science in different policy areas such as air pollution, marine pollution, and so on;
- the relationship between scientific 'knowledge' and the uncertainties therein, broader social uncertainties, and political decisions;
- institutional and cultural dimensions of the analysis of risks, hazards, and pollution.

This is an indicative rather than exhaustive list, designed merely to indicate the kind of research required.

With respect to economic analysis, it is self-evident to this Committee that indicators of environmental quality should be built into assessments of GDP and GNP, and that the general area of environmental auditing will require a more sophisticated and developed research base than it currently posesses.

AREA 4 Integrated Research Projects

It is difficult to see the raison d'etre of this section. Since most environmental research <u>ought</u> to be interdisciplinary, there is a danger of fencing off interdisciplinary environmental research into Area 4 above,

leaving single discipline specialists to dominate the research profile in the other areas.

The Commission proposal is not explicit about what themes shall guide the selection of integrated research projects, although 'risk' and 'desertification' are mentioned. When it is hard to see an overall rationale for a research programme, one is tempted to assume that this is an attempt to extend the life of an on-going programme, the rationale for which was never clearly defined. Since such programmes typically are generated within large research institutions immune from the customer/contractor principle, one is further tempted to assume that this section may be largely the responsibility of the Joint Research Centre. Whether or not this is the case, the Commission should provide a much clearer rationale for this area, and should also ensure that interdisciplinary research characterises the whole research programme.

Mention of the JRC prompts another question. The Committee needs to be persuaded that the JRC is the best place to spend Ecu 154 million of this research programme. Everyone knows that the JRC, and especially its Ispra site, does not have a very enviable reputation in the international scientific community, although the Commission is once again promising that the latest round of structural changes has given a new lease of life to the institution. Were the customer/contractor principle ever to be seriously. applied by the Commission, the whole of the research budget, including that "allocated" to the JRC, would be subject to competitive tender from would-be contractors, including of course the JRC, for research contracts specified by "customers".

Lastly, a comment about the budget. The Commission has not explained why so much of the budget expenditure is deferred to 1993, and this should be explained. With respect to the budgetary division between research areas, the Committee would like to see the allocation for Area 3 increased to 10-15%, probably at the expense of Area 4.

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Commission Text

Amendments

(Amendment No. 1) 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 in terms of ecological development 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;

(Amendment No. 2) Eleventh recital

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 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, and the framing and implementation of integrated prevention strategies in all areas of human activity, while contributing to the preparation of quality and safety standards;

Commission Text

Amendments

(Amendment No. 3) Article 2(1)

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

(Amendment No. 4) Article 2(5)

- 5. The budgetary authority shall decide on the appropriations available for each financial year.
- 5. The budgetary authority shall decide on the appropriations available for each financial year, it being understood that the maximum outlay must be made in the initial years.

(Amendment No. 5) Article 6(3)

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

(Amendment No. 6) Article 8(3), introductory phrase

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

The Commission shall inform the Committee, the Council and Parliament with regard to:

(Amendment No. 7)
Annex I, paragraph 2a (new)

In the various areas of research envisaged, emphasis will primarily be placed on the systematic and interdisciplinary approach developed by ecological science. This will embrace the results of measures and research conducted by associations active in the sphere of the environment and with which collaborative projects must be envisaged.

(Amendment No. 8) Annex I, paragraph 3

The actions envisaged will enable large projects to be undertaken to complement and strengthen the activities of the on-going 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 on-going environment research programmes, the principal aim being to take the environment and the quality of life into account by directing research activities towards an understanding of the fundamental mechanisms of the environment and the framing and implementation of integrated prevention strategies in all areas of human activity and, in particular, to respond rapidly to the scientific challenges which arise from global change.

(Amendment No. 9)
Annex I, paragraph 5 (Area 1)

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.

The goal is to contribute to understanding the processes governing environmental change and to assess the impact of human activities. The knowledge of phenomena gained through the study of physical and chemical indicators will be supplemented to a considerable degree by the study of biological indicators, which have the advantage of providing an integrated response to all factors for change. 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 and avoiding competition with existing projects.

(Amendment No. 10)
Annex I, Area 1, subheading 6a (new)

Electromagnetic environment

Work will aim to assess the impact on the climate, ecosystems and living things, in particular man, of changes in the electromagnetic environment as a result of human activities involving low-frequency radiation (50-60 hz), Hertzian radiation (radio, television) and microwaves (radar, satellite links, microwave ovens).

(Amendment No. 11)
Annex I, Area 1, 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.

The aim is to understand and forecast the interaction of global change and the dynamics of continental ecosystems and to provide a scientific basis 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.

(Amendment No. 12)
Annex I, Area 2, first paragraph

The objective is to promote better environmental quality standards by encouraging technological innovations 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.

The objective is to promote better environmental quality standards by encouraging technological innovation at the pre-competitive level. The three main lines of research in this field will be environmental monitoring, including remote sensing applications, the enhancement of prevention through the design of clean technologies and clean products, 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.

(Amendment No. 13)

Annex I, Area 2, Technologies for protecting and rehabilitating the environment

Work will be carried out to contribute to a 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 contribute to a 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, particular account being taken of social and institutional factors; it will also be widened to include the devel-opment of low risk alternative technologies and sophisticated process control and detection systems.

(Amendment No. 14)
Annex I, Area 3, first paragraph

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 the application to environmental issues to their incorporation into specific EC sectoral policies and environmental research programmes.

The general objective is to improve the understanding of the legal, economic, ethical and health aspects of environmental policy and management. Research will first address the institutional and social structures which may give rise to socio-economic structures which have an adverse impact on the environment. It will then address critical areas of environmental social science and environmental economics research, ranging from basic development of methods and concepts and the application to environmental issues to their incorporation into specific EC sectoral policies and environmental research programmes.

(Amendment No. 15)

Annex I, Area 3, Social-economic assessment of the changing environment, second paragraph

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.

Topics to be covered include inter alia: Incorporating environmental parameters into economic methodology; assessment of proportion of GDP already devoted to the rehabilitation of the environment and meeting social costs; 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.

(Amendment No. 16) Annex II - Indicative breakdown of expenditures

Area 1	35 - 45	Area 1	35 - 45
Area 2	20 - 25	Area 2	20 - 25
Area 3	5 - 10	Area 3	<u> 15</u> - <u>20</u>
Area 4	25 - 35	Area 4	15 - 25