Commission of the European Communities

science and technology policy

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Volume 2

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science and technology policy

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with
a summary table from 1974 to 1983

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LEGAL NOTICE

SUMMARY TABLE

II

(Acts whose publication is not obligatory)

COMMISSION

COMMISSION DECISION

of 19 December 1980

amending Decision 78/636/EEC establishing an Advisory Committee on Industrial Research and Development and appointing the Committee's members and observers

(81/1/EEC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to the Act of Accession of Greece, and in particular Article 146 thereof,

Having regard to Commission Decision 78/636/EEC of 29 June 1978 establishing an Advisory Committee on Industrial Research and Development (1), and in particular Articles 3 and 5 thereof,

Whereas the composition of and the allocation of seats on the Committee should be changed in order to take into account the accession of Greece on 1 January 1981 ; whereas, pursuant to Article 5 of Decision 78/636/EEC, it is necessary to appoint the Committee's members and observers for a further two-year term of office ; whereas, however, the Greek representatives of the Union of Industries of the European Community (UNICE) will only be nominated at a later date,

HAS DECIDED AS FOLLOWS :

Article 1

Article 3 of Decision 78/636/EEC is hereby replaced by the following :

'Article 3

1. The Committee shall comprise 27 members.

2. The seats shall be allocated as follows :

17 seats to members of the Union of Industries of the European Community (UNICE) (1), two each for Belgium, France, the Federal Republic of Germany, Greece, Italy, the Netherlands and the United Kingdom and one each for Denmark, Ireland and Luxembourg ;

four seats to members of the European Centre for Public Enterprise (ECPE) (2) ;

three seats to members of the Federation of European Industrial Cooperative Research Organizations (FEICRO) (3) ;

three seats to members of the European Trade Union Confederation (ETUC) (4).

3. Eight persons belonging to the following organizations may attend the Committee's meetings as observers :

three observers from the European Research and Development Committee (CERD) set up by the Commission on 14 February 1973 ;

one observer from the European Industrial Research Management Association (EIRMA) (5) ;

one observer from the UNICE secretariat ;

one observer from the ECPE secretariat ;

one observer from the FEICRO secretariat ;

one observer from the ETUC secretariat.

(1) OJ No L 203, 27. 7. 1978, p. 36.

(1) Address : 6, rue de Loxum, 1000 Brussels.
(2) Address : 15, rue de la Charité, 1040 Brussels.
(3) Address : Palace Chambers, Bridge Street, London SW1A 2JY.
(4) Address : 37, rue Montagne aux Herbes Potagères, 1000 Brussels.
(5) Address : 38, Cours Albert 1er, 75008 Paris.'

Article 2

The persons listed in the Annex hereto are hereby appointed members or observers of the Advisory Committee on Industrial Research and Development.

Article 3

This Decision shall enter into force on 1 January 1981.

Done at Brussels, 19 December 1980.

For the Commission

Richard BURKE

Member of the Commission

ANNEX

ADVISORY COMMITTEE ON INDUSTRIAL RESEARCH AND DEVELOPMENT

Organization	Seats	Candidates for members
Union of Industries of the European Community (UNICE)	17	Baier Erwin (D) Brousse Albert (F) Brouwers Victor (B) Causse Jean-Pierre (F) Finlay-Maxwell David (UK) Funck Alfred (L) Hansen Hans-Erik (DK) John von Freyend Eckhardt (D) Lynch John (IRL) Mawson Alan (UK) Rossi Angelo (I) Spaas Jacques (B) Van Damme Marie-Antoinette (NL) Vitari Michele (I) Zuidhof Willem (NL) (1) (EL) (1) (EL)
European Centre for Public Enterprise (ECPE)	4	Dollond Steven (UK) Frigessi di Rattalma Guido (I) Gaymann Theodor (D) Soissons Jean (F)
Federation of European Industrial Cooperative Research Associations (FEICRO)	3	Berchem Rütger (D) Masi Oscar (I) The Earl of Shannon (UK)
European Trade Union Confederation (ETUC)	3	Albini Piero (I) Matthys Paul (B) Jung Volker (D)

(1) These members will be appointed at a later date.

Organization	Places	Candidates for observers
European Research and Development Committee (CERD)	3	Colombo Umberto Danzin André Hardiman T. P.
European Industrial Research Management Association (EIRMA)	1	Schulz Reinhard
Union of Industries of the European Community (UNICE)	1	Cloquet Daniel
European Centre for Public Enterprise (ECPE)	1	Lambert Lamberto
Federation of European Industrial Cooperative Research Organizations (FEICRO)	1	Miss Ellithorne Pamela
European Trade Union Confederation (ETUC)	1	Coldrick Peter

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 3 March 1981

adopting a sectoral research and development programme in the field of environment (environmental protection and climatology) — indirect and concerted actions — (1981 to 1985)

(81/213/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas Article 2 of the Treaty assigns to the Community the task *inter alia* of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas research in the field of environment contributes to the attainment of these objectives and has been identified as a sector of priority interest by the Council in its conclusions of 20 December 1979;

Whereas, in its resolution of 17 May 1977 (3), the Council approved the objectives and principles of a policy for the environment in the Community as well as a general description of the projects to be undertaken at Community level;

Whereas, therefore, the research projects dealt with by this Decision seem necessary to attain certain objectives of the Community within the framework of the common market;

Whereas, by its resolution of 14 January 1974 (4), the Council adopted an initial outline programme of the European Communities in the field of science and technology, and stressed that the whole range of available ways and means of action should be used;

Whereas the Community is responsible for the conclusion of agreements with third countries in the areas covered by this Decision; whereas it is advisable, as soon as this Decision is adopted, to open negotiations with the States concerned so that such agreements can be rapidly concluded;

(1) OJ No C 28, 9. 2. 1981, p. 60.
(2) OJ No C 353, 31. 12. 1980, p. 15.
(3) OJ No C 139, 13. 6. 1977, p. 1.
(4) OJ No C 7, 29. 1. 1974, p. 6.

Whereas the Council has adopted Community concerted actions in the fields of:

— treatment and use of sewage sludge, on 27 September 1977 (1),

— the analysis of organic micro-pollutants in water, on 9 October 1978 (2),

— the physico-chemical behaviour of atmospheric pollutants, on 9 October 1978 (3);

Whereas the Council has concluded Community-COST concertation agreements on concerted action projects in the fields of:

— treatment and use of sewage sludge, on 19 March 1979 (4),

— the analysis of organic micro-pollutants in water, on 18 December 1979 (5),

— the physico-chemical behaviour of atmospheric pollutants, on 18 December 1979 (6);

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Tables 1, 2 and 3 of point C of the Annex, and are prepared to integrate such research into a process of coordination at Community level until 31 December 1983;

Whereas a memorandum of understanding for the implementation of action COST 47 (Benthic Coastal Ecology) has been signed;

Whereas, on 18 December 1979 (7), the Council adopted a multiannual research programme of the European Economic Community in the field of climatology;

Whereas, on 13 March 1980 (8), the Council adopted a multiannual programme for the Joint Research Centre which includes research activities in the field of the environment;

Whereas, in its conclusions of 20 December 1979, the Council invited the Commission to submit proposals aimed at the rationalization of structures for the preparation, examination and implementation of Community research and development programmes; whereas a grouping of indirect and concerted actions in the field of the environment would constitute a first contribution towards meeting these objectives;

Whereas the Treaty does not provide the specific powers of action required for these ends;

Whereas the Committee of Scientific and Technological Research (Crest) has given its opinion on the Commission's proposal,

HAS DECIDED AS FOLLOWS:

Article 1

1. A programme of research and development of the European Economic Community in the field of the environment (environmental protection and climatology) is hereby adopted for a period of five years from 1 January 1981, as described in the Annex.

2. The programme includes indirect and concerted actions.

The indirect actions are carried out by means of contracts.

The concerted actions consist of the coordination at Community level of research activities which are part of research programmes of the Member States and, where applicable, of the Community.

Concerted actions 1, 2 and 4 under point A of the Annex will end on 31 December 1983 unless they are extended under the terms of Article 3.

Article 2

The appropriations necessary for the implementation of the programme, the amount of which shall be fixed at 43 000 000 ECU, including the means necessary for the coordination of concerted actions 1, 2 and 4 under point A of the Annex and for a complement of 16 staff, shall be entered in the budget of the European Communities.

The internal distribution of funds is shown under point B of the Annex.

(1) OJ No L 267, 19. 10. 1977, p. 35.
(2) OJ No L 311, 4. 11. 1978, p. 6.
(3) OJ No L 311, 4. 11. 1978, p. 10.
(4) OJ No L 72, 23. 3. 1979, p. 35.
(5) OJ No L 39, 15. 2. 1980, p. 24.
(6) OJ No L 39, 15. 2. 1980, p. 18.
(7) OJ No L 12, 17. 1. 1980, p. 24.
(8) OJ No L 72, 18. 3. 1980, p. 11.

In the light of experience gained during the implementation of the programme, and provided the opinion of Crest and of the committees referred to in Article 5 is secured beforehand, the Commission is authorized to transfer funds from one area to another within the same sub-programme, provided that such transfers do not result in an increase or a reduction of more than 10 % in the original appropriation for each area of research as envisaged.

Article 3

The programme shall be re-examined at the end of the third year; this re-examination may lead to a revision of the programme in the course of the fourth year following the appropriate procedures, and after the Committees referred to in Article 5 have been consulted. The European Parliament shall be informed of the results of the re-examination.

Article 4

The Commission shall be responsible for the execution of the programme with regard to the indirect actions and shall be responsible for the coordination with regard to the concerted actions.

It will decide, in the framework of the programme, on the detailed implementation, particularly concerning the breakdown of the work between indirect and concerted actions, and the launching of concerted and coordination actions, as described in the Annex.

Article 5

The Commission will be assisted in the tasks listed in Article 4 by the following Committees:

(a) the Advisory Committee on Programme Management in the field of Environment Protection;

(b) the Advisory Committee on Programme Management in the field of Climatology.

As far as the indirect actions are concerned, the terms of reference and composition of these Committees will be in accordance with the Council resolution of 18 July 1977 on advisory committees for research programme management [1].

For the concerted actions, the terms of reference of the Committee under (a) above are defined in point D of the Annex.

Article 6

With regard to indirect actions, the dissemination of the information arising from their implementation shall be in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [2].

Article 7

1. With regard to the concerted actions in accordance with a procedure to be laid down by the Commission, in agreement with the Committee referred to in Article 5 (a), the participating Member States and the Community shall regularly exchange all useful information concerning the execution of the research covered by such activities.

The participating Member States shall provide the Commission with all information relevant for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies which are not under their authority.

Any information shall be treated as confidential if so requested by the Member State which provides it.

2. At the completion of the programme, the Commission, in agreement with the Committee referred to in Article 5 (a), shall send to the Member States and the European Parliament a summary report on the implementation and results of the concerted actions.

It shall publish this report six months after the latter has been sent to the Member States, unless a Member State objects. In the latter case, the report shall be distributed, in agreement with the said Committee, only to those institutions and enterprises that request it and whose research or production activities justify access to the results of research arising from the concerted actions. The Commission shall make the necessary arrangements for the report to remain confidential and not to be divulged to third parties.

[1] OJ No C 192, 11. 8. 1977, p. 1.

[2] OJ No L 255, 20. 9. 1974, p. 1.

Article 8

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with third States, in particular those involved in European collaboration in the field of scientific and technical research (COST) with a view to associating them wholly or partly with this programme.

2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.

The agreements with third States participating in COST shall be negotiated in accordance with the conclusions of the Council of 18 July 1978 concerning European cooperation in the field of science and technology (COST) (1).

(1) OJ No C 100, 21. 4. 1979, p. 1.

Article 9

The following Council Decisions:

— Decision 78/888/EEC of 9 October 1978 adopting a concerted action of the European Economic Community in the field of the analysis of organic micropollutants in water,

— Decision 78/889/EEC of 9 October 1978 adopting a concerted action of the European Economic Community in the field of physicochemical behaviour of atmospheric pollutants,

— Decision 80/27/EEC of 18 December 1979 adopting a multiannual research programme of the European Economic Community in the field of climatology (indirect action 1980 to 1984),

are repealed with effect from 1 January 1981.

Done at Brussels, 3 March 1981.

For the Council

The President

G. M. V. van AARDENNE

ANNEX

A. SCIENTIFIC AND TECHNICAL CONTENT

SUB-PROGRAMME I: ENVIRONMENT PROTECTION

	Indirect action (contracts and coordination)	Concerted action
Research area 1: Sources, pathways and effects of pollutants		
1.1. Heavy metals	×	—
1.2. Organic micro-pollutants and new chemical products	×	(1) Analysis of organic micro-pollutants in water (COST 64b *bis*) until 31 December 1983). Research topics and distribution of work among Member States are shown in Table 1, point C.
1.3. Asbestos and other fibres	×	—
1.4. Air quality	×	(2) Physico-chemical behaviour of atmospheric pollutants (COST 61a *bis*) (until 31 December 1983). Research topics and distribution of work among Member States are shown in Table 2, point C.
1.5. Surface and underground freshwater quality	×	—
1.6. Thermal pollution	×	—
1.7. Marine environment quality	×	(3) Benthic coastal ecology (COST 47): 1. Sedimentary bottoms. 2. Rocky bottoms — intertidal. 3. Rocky bottoms — subtidal.
1.8. Noise pollution	×	—
Research area 2: Reduction and prevention of pollution and nuisances		
2.1. Sewage sludge	—	(4) Treatment and use of sewage sludge (COST 68 *bis*) (until 31 December 1983). Research topics and distribution among Member States are shown in Table 3, point C.
2.2. Pollution abatement technologies	×	—
2.3. Clean technologies	×	—
2.4. Ecological effects of solid waste disposal	×	—
2.5. Oil pollution cleaning techniques	×	×
2.6. Impact of new technologies	×	×

	Indirect action (contracts and coordination)	Concerted action
Research area 3: Protection, conservation and management of natural environments		
3.1. Ecosystems studies	×	—
3.2. Biogeochemical cycles	×	—
3.3. Ecosystems conservation	×	—
3.4. Bird protection	×	×
3.5. Reclamation of damaged ecosystems	×	—
Research area 4: Environment information management		
4.1. Data bank on environmental chemicals	×	—
4.2. Evaluation, storage and exploration of data	×	—
4.3. Ecological cartography	×	—
Research area 5: Complex interactive systems: man-environment interactions	×	×

SUB-PROGRAMME II: CLIMATOLOGY (indirect action)

Research area 1: Understanding climate

1.1. Reconstruction of past climates.

Exploration and analysis of:

(a) natural records;

(b) observational and other historical records.

1.2. Climate modelling and prediction.

Investigations to improve models which are capable of simulating climate, especially by including the slowly-varying components of the climatic system, and of assessing climate predictability on time and space scales that are of interest to the Community.

Research area 2: Man-climate interactions

2.1. Climate variability and European resources:

(a) impact on agricultural and water resources;

(b) climatic hazards evaluation;

(c) impact on energy requirements, use and production.

2.2. Man's influence on climate:

(a) chemical pollution of the atmosphere, with special emphasis on carbon dioxide accumulation;

(b) release of energy.

(2)

Service activities

3.1. Inter-disciplinary studies for the analysis, evaluation and application of the results of climatic research within the scope of research area 2.

3.2. Inventory, coordination and enrichment of European climatic data sets.

B. DISTRIBUTION OF FUNDS

(1981 to 1985)

SUB-PROGRAMME I: ENVIRONMENT PROTECTION: 33 000 000 ECU – indirect action,
1 000 000 ECU – concerted action.

Research area 1: 50 to 55 %, including 800 000 ECU for concerted action:
No 1 (COST 64b *bis*): 400 000 ECU.
No 2 (COST 61a *bis*): 400 000 ECU.
until 31 December 1983.

Research area 2: 20 to 25 %, including 200 000 ECU for concerted action No 4 (COST 68 *bis*) until 31 December 1983.

Research area 3: 15 to 20 %.

Research area 4: 5 to 10 %.

Research area 5: 1 to 5 %.

SUB-PROGRAMME II: CLIMATOLOGY: 8 000 000 ECU.

C. CONCERTED ACTION

TABLE 1

ANALYSIS OF ORGANIC MICRO-POLLUTANTS IN WATER

Contributions by the Member States and the Joint Research Centre (JRC) to the concerted project by research topics

Research topics	Division of research work								
	B	D	DK	F	I	IRL	NL	UK	JRC
1. Sampling and sample treatment:		×	×		×		×	×	×
— general development and evaluation of methods									
— methods for sampling sediments and indicator organisms									
2. Gas chromatographic analysis:	×	×	×	×	×	×	×	×	×
3. Coupling gas chromatographs and mass spectrometers	×		×	×		×	×		×
4. Other separation techniques:			×				×	×	×
— development of methods for liquid chromatography									
— improvement of equipment									
— other separation techniques									
5. Data collection and processing:	×	×	×	×			×	×	×
— hard copy spectrum collection									
— establishment of a spectrum library									
6. Establishment of inventories:	×	×	×	×	×	×	×	×	×
— inventory of pollutants									
— collection of data on conversion									

TABLE 2

PHYSICO-CHEMICAL BEHAVIOUR OF ATMOSPHERIC POLLUTANTS

Contributions by the Member States and the Joint Research Centre (JRC) to the concerted project by research topics

Research topics	Division of research work								
	B	D	DK	F	I	IRL	NL	UK	JRC
1. Studies on the conversion and transport of atmospheric pollutants:									
(a) laboratory studies		×		×	×	×	×	×	×
(b) field studies	×	×	×	×	×		×	×	×
(c) modelling		×			×		×		×
2. Studies on the elimination and absorption of atmospheric pollutants	×			×	×			×	

TABLE 3

TREATMENT AND USE OF SEWAGE SLUDGE

Contribution by the Member States, to the concerted project by research topics

Research topics	Division of research work							
	B Lux.	D	DK	F	I	IRL	NL	UK
1. Sludge stabilization and odour problems:								
— Definition and determination of 'degree of stability' and relation to odour nuisance			×	×				×
— Comparative evaluation of stabilization procedures		×	×		×			
2. Problems related to sludge dewatering:								
— Research on water binding forces							×	
— Development and standardization of methods for the assessment of dewatering properties	×	×		×	×			×
— Problems related to the use of flocculants		×		×				×
— Comparative evaluation of thickening and dewatering equipment					×		×	
3. Analytical problems related to sludge treatment and use:								
— Characterization of pathogens and evaluation of disinfection procedures	×	×	×					
— Characterization and determination of pollutants (heavy metals, persistent organic compounds) in sludge and development of standardized analytical methods	×			×				×
4. Environmental problems related to sludge use:								
— Special processing of sludge for agricultural use (e.g. composting) including the improvement of disinfection procedures and pollutant removal		×		×	×		×	
— Transfer of pollutants to plants and harmful effects on vegetation			×	×			×	×
— Effects of long range sludge application on soil quality and ground water	×	×		×		×		×
— Optimum land use of sludge, including sludge from dephosphatation plants		×		×			×	×

D. TERMS OF REFERENCE OF THE COMMITTEE REFERRED TO IN ARTICLE 5 (a)

1. For each concerted action, the Committee shall:

   1.1. contribute to the optimum execution of the programme by giving its opinion on all of its aspects;

   1.2. evaluate the results of the project and draw conclusions as to their application;

   1.3. be responsible for the exchange of information referred to in Article 7 (1);

   1.4. keep abreast of national research being done in the fields covered by the project, and more especially of scientific and technical developments likely to affect the execution of the project;

2. The Committee's reports and opinions shall be forwarded to the Commission and the Member States participating in the project. The Commission shall forward these opinions to the Crest.

COUNCIL DECISION

of 17 March 1981

adopting a programme for the European Atomic Energy Community and the European Economic Community in the field of special scientific and technical training, implemented by means of advanced training courses and grants

(81/217/Euratom, EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

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

Having regard to the proposal from the Commission, submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the resolution of the Council of the European Communities of 14 January 1974 on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology (3) advocates the progressive implementation of a new research and development policy;

Whereas the Treaty establishing the European Atomic Energy Community provides that the research programmes of the European Atomic Energy Community are to be supplemented by a programme in the field of scientific and technical training;

Whereas, in order to attain the objectives set out in Articles 2 and 3 of the Treaty establishing the European Economic Community, the Council has adopted research programmes in non-nuclear fields in accordance with the provisions of Article 235 of the Treaty;

Whereas a programme of scientific and technical training would appropriately supplement these programmes and is essential to the attainment of the objectives set out in the Treaties;

Whereas no provision is made in the Treaty establishing the European Economic Community for the specific powers required for these purposes;

Whereas the training of new scientific and technical staff and the development of qualified specialists in the areas covered by the research programmes adopted by the Council are essential requirements for the progressive implementation by the Community of a Community research and development policy;

Having regard to the opinions expressed by the Scientific and Technical Research Committee (Crest) and the Advisory Committee for Scientific and Technical Training respectively,

HAS DECIDED AS FOLLOWS:

Article 1

A programme of training as set out in Annex I is hereby adopted for a four-year period from 1 January 1981.

Article 2

The upper limit for expenditure commitments necessary for implementing the programme is fixed at 8 800 000 ECU, the ECU being as defined in the relevant Financial Regulations, and the maximum staff allocation is fixed at six employees.

(1) OJ No C 291, 10. 11. 1980, p. 57.
(2) OJ No C 300, 18. 11. 1980, p. 8.
(3) OJ No C 7, 29. 1. 1974, p. 2.

Article 3

The Commission shall be responsible for the implementation of this programme.

To assist it in this task, an Advisory Committee on Programme Management is hereby established. The terms of reference and membership of the Committee shall be as defined in the Council resolution of 18 July 1977 relating to Advisory Committees on Programme Management. The particular tasks of the Advisory Committee are specified in Annex II.

Done at Brussels, 17 March 1981.

For the Council

The President

D. F. van der MEI

ANNEX I

Content of the training programme

The programme in the field of scientific and technical training applies to those areas which are the subject of nuclear or non-nuclear Community research programmes. It comprises the following measures:

1. Award of grants for scientific work at various levels of training (post-graduate dissertations, PhD theses, post-doctorate research). The grants are awarded for research work which must be carried out in a Community country other than the applicant's country of origin or the country in which he normally works — exception being made for the establishments of the Joint Research Centre as a Community body. Science students, holders of higher education qualifications or doctorates in the various branches of science and engineers — including scientists and engineers working in industry — in principle from the Member States, are eligible for these grants.

2. Financing of advanced further training courses in areas of particular importance to the Community's research and development policy.

ANNEX II

Particular tasks of the Advisory Committee

1. Without prejudice to the Commission's responsibility in the implementation of the programme, it shall be the task of the Advisory Committee on Programme Management (Scientific and Technical Training) to contribute in its advisory capacity, as defined in the Council resolution of 18 July 1977, to the best possible implementation of the programme for which it is responsible and in particular to the:

   — allocation of appropriations among the various areas covered,

   — definition of the form which the training courses should take and how they should be run,

   — fixing of minimum requirements as regards the studies of those who apply for the grants,

   — balanced selection of candidates, fields and places of training.

2. If necessary the Committee shall, in fulfilling its terms of reference, call upon the services of specialist working parties or committees depending on the nature of the subject (particularly the Crest Sub-Committee on Training in Data-Processing).

COUNCIL DECISION

of 20 January 1981

amending Decision 78/167/EEC adopting a concerted project of the European Economic Community in the field of registration of congenital abnormalities (medical and public health research)

(81/21/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament [1],

Whereas by Decision 78/167/EEC [2] the Council adopted a concerted project of the European Economic Community in the field of registration of congenital abnormalities (medical and public health research);

Whereas, in view of the current stage reached in the work provided for under the concerted project, an extension of the said project by one year would enable the best advantage to be obtained from the national efforts being made; whereas Decision 78/167/EEC should therefore be amended,

HAS DECIDED AS FOLLOWS:

Sole Article

Decision 78/167/EEC shall be amended as follows:

(1) In the first paragraph of Article 1 the term 'a period of three years' shall be replaced by 'a period of four years';

(2) Annex I shall be replaced by the Annex to this Decision.

Done at Brussels, 20 January 1981.

For the Council

The President

Ch. A. van der KLAAUW

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[1] OJ No C 346, 31. 12. 1980, p. 95.
[2] OJ No L 52, 23. 2. 1978, p. 20.

ANNEX

'ANNEX I

RESEARCH PROGRAMME RELATING TO THE REGISTRATION OF CONGENITAL ABNORMALITIES

(concerted project)

The research will be carried out with the purpose of acquiring scientific and technical knowledge in this field, selected for its importance at Community level.

The research is expected to cover the following topics:

1. Registration of congenital malformations as well as of inherited biochemical and chromosome abnormalities in selected regions of the Community.

2. Registration of twins and multiple pregnancies in selected regions of the Community.

3. Relevant methodological studies in order to obtain an optimal coordination of both existing national registers and registration procedures.

The coordination will include the following regional registers of the Member States:

Belgium: Brugge and Hainaut
Denmark: Odense
France: Paris and Morlaix
Germany: West Berlin and Hessen
Greece: Evia
Ireland: Dublin and Galway
Italy: Tuscany, Rome and Emilia-Romagna
Luxembourg: Luxembourg
Netherlands: Groningen
United Kingdom: Belfast, Glasgow and Liverpool.

These countries will contribute research under the three topics mentioned above.'

AGREEMENT

between the European Economic Community and the Swiss Confederation extending the Agreement on a concerted action project in the field of registration of congenital abnormalities (medical and public health research)

THE EUROPEAN ECONOMIC COMMUNITY,

of the one part, and

THE SWISS CONFEDERATION,

of the other part,

Considering that, by its Decision of 13 February 1978, the Council of the European Communities adopted a Community concerted action project in the field of registration of congenital abnormalities (medical and public health research);

Considering that, an Agreement between the European Economic Community and the Hellenic Republic on the abovementioned concerted action project was signed on 14 December 1979;

Considering that, on 1 August 1980, the Swiss Confederation acceded to that Agreement in accordance with Article 6 (3) thereof;

Considering that, by its Decision of 20 January 1981, the Council of the European Communities extended until 31 December 1981 the Community concerted action project in the field of registration of congenital abnormalities (medical and public health research;

Considering that, bearing in mind the present state of the work provided for in the abovementioned Agreement, the extension of the duration of the latter by one year would enable the greatest benefit to be derived from the effort made;

Considering that, this extension will not give rise to any increase in financial commitments either of the Community or of the Swiss Confederation;

Considering that, the Agreement in question should therefore be extended until 31 December 1981,

HAVE AGREED AS FOLLOWS:

Article 1

The Agreement between the European Economic Community and the Swiss Confederation on a concerted action project in the field of registration of congenital abnormalities (medical and public health research) shall be extended until 31 December 1981.

Article 2

This Agreement, drawn up in a single original in the Danish, Dutch, English, French, German, Greek and Italian languages, each text being equally authentic, shall be deposited in the archives of the General Secretariat of the Council of the European Communities, which shall transmit a certified copy to each of the Contracting Parties.

CORRIGENDA

Corrigendum to Council Decision 81/213/EEC of 3 March 1981 adopting a sectoral research and development programme in the field of environment (environmental protection and climatology) — indirect and concerted actions — (1981 to 1985)

(Official Journal of the European Communities No L 101 of 11 April 1981)

Page 2, Article 2, first paragraph, second and third lines:

for: '... shall be fixed at 43 000 000 ECU ...'

read: '... shall be fixed at 42 000 000 ECU ...'

MEDIUM-TERM ORIENTATION FOR STEEL RESEARCH IN RELATION TO THE GENERAL OBJECTIVES FOR STEEL

(1981—1985)

(Under Article 55 2 (c) of the ECSC Treaty)

PREAMBLE

All enterprises, research institutes and individual persons wishing to engage in research within the meaning of Article 55 of the ECSC Treaty may make application to the Commission of the European Communities for the grant of financial assistance.

Such applications must relate to the fields of science and technology outlined below in these medium-term guidelines. Upon receipt, applications will undergo selection by the Commission, which will bear in mind the need to ensure that financial expenditure is concentrated upon research projects which best satisfy the criteria of this medium-term programme.

The procedures to be followed in applying for financial support, the terms and conditions of aid as well as the obligations relating to the dissemination of the results of the research are given in a communication published in the *Official Journal of the European Communities* No C 139 of 12 November 1974.

Application should be submitted before 1 September of each year in order to be effective in the following year.

Article 55 of the Treaty concerning the establishment of the European Coal and Steel Community specifies that the Commission of the European Communities shall promote technical and economic research relating to the production of steel and the advancement in its consumption. For this purpose the Commission is required to organize appropriate collaboration between existing research centres.

The policy adopted for this collaborative research is consistent with the General Objectives for Steel in which the Commission defines, periodically, the future demand for steel, the required productive capacity, the desirable modernization investment and the trends in raw material usage.

The total amount of financial assistance granted for technical research on steel since the programme commenced in 1955 is about 180 million European units of account which represents about 60 % of the total cost of the research undertaken.

The programme supported by the Community up to the present time has proved to be a successful means of stimulating and carrying out collaborative research and development on problems of common interest and in launching large and costly projects which could not be supported by individual companies alone.

The crisis now prevailing in the steel sector has called for an examination to be made of the future orientation of this effort to ensure that it meets the changing scientific, technological and economic requirements of the industry. The economic recession following the 1973/1974 oil crisis coupled with the changing pattern of iron and steel making in the world are basic causes of the current difficulties having revealed important structural weakness and a decline in international competitiveness.

It is evident that the recovery and the future financial viability of the steel industry in the Community will depend on its ability to enhance competitive performance through a programme of modernization and restructuring. Maintaining or improving a technologically competitive position will be an essential element in this strategy which will only be realized if the appropriate research and development work is undertaken. The aim will be to combat foreign competition on Community markets across the whole range of products and to concentrate more on specialized and sophisticated products, advanced in type and quality, in export trade.

To achieve these goals, ECSC steel research must make a substantial contribution to common research objectives with attention being devoted to the most relevant short-to-medium term needs as well as, in

selected areas, to directed longer term basic effort of practical relevance. Thus, the collaborative activity will generate scientific and technological information and 'know-how' that will continue to provide an important basis upon which companies can plan and pursue their own individual programmes of research and development to tackle problems of a more specific and a more commercial nature.

The medium-term orientation for the programme presented in the next section has been drawn-up in collaboration with experts from the producer and user sectors of the steel industry and from steel research establishments in the Community. They are also in accordance with the general objectives of the common policy in R and D decided by the Council in his meeting of 20 December 1979. The objectives of future steel research are:

— to reduce production, processing and fabrication costs (including energy conservation) and enhance productivity;

— to improve product quality in its various aspects;

— to improve the service performance of the product and broaden the range of steel utilization.

The criteria to be satisfied in the selection of applications for financial support by the ECSC are as follows:

— the interest to the steel industry of the Community,

— the main objectives of the programme (outlined above),

— the relevance of the research to short-to-medium term technological needs,

— the general objectives for steel defined periodically by the Commission under Article 46 of the ECSC Treaty.

The medium-term orientation of this technical research is outlined below for the two major sectors of the programme.

I. PRODUCTION AND PROCESSING

1. In the process-oriented sector, research will be directed at reducing costs, both operational and capital investment, and at achieving improved and more consistant quality steel; also attention will be devoted to the longer-term development of alternative production routes. This will require technological progress in connection with:

1.1. raw material and energy conservation, substitution and diversification,

1.2. further optimization and control of existing production operations; modernization of existing plant and equipment (to include enhanced availability, productivity and reduced maintenance),

1.3. improvement and extension of continuous processing,

1.4. development of new process technologies and production methods.

2. The areas where research and development will be needed include the following:

2.1. preparation and reduction of iron ores (agglomeration, blast furnace technology, direct reduction),

2.2. steel production (basic oxygen processes, electric arc furnace process, special production processes, theoretical studies),

2.3. secondary steelmaking (laddle metallurgy),

2.4. casting and solidification (notably continuous casting),

2.5. rolling mill technology and other deformation processes (hot and cold), product quality,

2.6. measurement and control techniques (development and adaptation of new methods of process control and automation for the inspection and assessment of quality as well as for the monitoring of industrial plant and equipment).

II. PROPERTIES AND UTILIZATION

1. The ability of the steel industry to satisfy the needs of the various branches of engineering will continue to be challenged since technology and economics will persistently call for improved standards of product reliability, durability and safety. Thus, research in the product-oriented sector will be concerned with the development of higher grade products of more consistent quality and with reducing costs in production and fabrication. In addition, more sophisticated and advanced products will be required for new market applications thereby stimulating the demand for steel. This will require progress in connection with:

1.1. the detailed scientific understanding of the properties of steel and their development in close liaison with progress in chemical, process and mechanical metallurgy,

1.2. the exploitation of steels to meet more demanding applications based upon an analysis of total engineering systems covering design and materials technology as well as economic and other factors,

1.3. the generation of engineering property data that will better predict performance in service, aid in design development and contribute to the formulation and harmonization of European specifications and codes of practise,

1.4. translation and exploitation of available basic understanding of the behaviour of steels e.g. structure-property relationships, into engineering practice.

2. The technical areas where research and development will be needed include the following:

2.1. structural, alloy and special steels (development, properties, conservation of rare alloying elements, fabrication, service performance),

2.2. joining and fabrication techniques and resulting properties (notably welding),

2.3. corrosion properties, surface protection and surface treatment,

2.4. strength, toughness and formability of steels,

2.5. fracture properties and fracture mechanisms (ductile, brittle, fatigue and high-temperature fracture, environmental effects, complex stresses, significance of flaws and design, scatter in properties)

2.6. utilization of steels in construction and in engineering (joining and fabrication, structural design, performance under service conditions; technical data for design, specifications and codes of practice),

2.7. quality inspection and assessment techniques for fabricated parts and structures (non-destructive testing methods).

COUNCIL DECISION

of 28 April 1981

amending Decision 78/264/Euratom adopting a programme of research and development for the European Atomic Energy Community on uranium exploration and extraction (indirect action)

(81/364/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal of the Commission submitted after consultation with the Scientific and Technical Commitee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas bv its Decision 78/264/Euratom (3), the Council adopted, for a period of three years with effect from 1 January 1978, a programme of research and development for the European Atomic Energy Community on uranium exploration and extraction;

Whereas, in its deliberations of 20 December 1979, the Council invited the Commission to concentrate Community research programmes on sectors of priority interest, including energy and raw materials, and to rationalize the structures for the preparation, adoption and implementation of these programmes;

Whereas the Council takes note of the intention of the Commission to submit in 1981 a proposal for a research programme in the sector of raw materials;

Whereas it is appropriate in the meantime to continue with the research activity already undertaken and to adapt it according to changing needs; whereas Decision 78/264/Euratom should be amended,

HAS DECIDED AS FOLLOWS:

Sole Article

Decision 78/264/Euratom shall be amended as follows:

1 Article 1 shall be replaced by the following:

'Article 1

A programme of research and development on uranium exploration and extraction as set out in the Annex shall be adopted for a period of five years from 1 January 1978.'

2. Article 2 shall be replaced by the following:

'Article 2

The upper limit of expenditure commitments necessary for the implementation of this programme shall be 5·4 million ECU and the maximum number of staff shall be three employees.'

3. The Annex shall be replaced by the Annex to this Decision.

Done at Luxembourg, 28 April 1981.

For the Council

The President

J. de KONING

(1) Opinion delivered on 10 April 1981 (not yet published in the Official Journal).
(2) OJ No C 348, 31. 12. 1980, p. 12.
(3) OJ No L 72, 14. 3. 1978, p. 12.

ANNEX

PROGRAMME CONTENT

1. RESEARCH AND DEVELOPMENT ON URANIUM EXPLORATION

1.1. **Discovery of uranium provinces — uranium geology and metallogeny**

— granitic areas

— acid volcanic rocks

— alkaline rocks

— sedimentary basins

1.2. **Exploration techniques**

— gamma spectrometry

— remote sensing

— geochemical prospecting techniques

— rock geochemistry

— biogeochemistry

— gas geochemistry

— lead isotope ratios

— indirect geophysical methods

— microtectonics

1.3. **Transportation and deposition of uranium**

— fluid inclusions

— transportation and deposition of uranium in the hydrogeochemical environment

— radioactive disequilibrium

1.4. **Bore-hole logging**

— direct measurement of uranium *in situ*

— other instruments for *in situ* measurements

2. RESEARCH AND DEVELOPMENT IN URANIUM EXTRACTION AND RECOVERY

2.1. Recovery of uranium from phosphoric acid liquors

2.2. Recovery of uranium from phosphatic rocks

2.3. Extraction of uranium from the waste of phosphate rock treatment

2.4. Recovery of uranium by dump, heap, or *in situ* leaching by chemical and/or bacterial means

2.5. High temperature, high pressure leaching

2.6. Extraction of uranium and other values from calcines and other low grade sources

2.7. Other technical aspects related to the uranium mining industry

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(3)

COUNCIL DECISION

of 19 May 1981

amending Decision 80/318/Euratom adopting a research and training programme (1979 to 1983) for the European Atomic Energy Community in the field of controlled thermonuclear fusion

(81/380/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission, submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament [1],

Having regard to the opinion of the Economic and Social Committee [2],

Whereas, by Decision 80/318/Euratom [3], the Council adopted a research and training programme (1979 to 1983) in the field of controlled thermonuclear fusion, in which it fixed the upper limit of expenditure commitments for the JET project at 145 million European units of account;

Whereas the most recent analyses have shown that because of changes in economic conditions this figure is no longer sufficient,

HAS DECIDED AS FOLLOWS:

Sole Article

In the second paragraph of Article 2, and in the first sentence of paragraph 6 of the Annex to Decision 80/318/Euratom, the amount of 145 million European units of account shall be replaced by that of 195 million ECU.

Done at Brussels, 19 May 1981.

For the Council

The President

D. F. van der MEI

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[1] Opinion delivered on 7 May 1981 (not yet published in the Official Journal).
[2] OJ No C 331, 17. 12. 1980, p. 4.
[3] OJ No L 72, 18. 3. 1980, p. 18.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 20 July 1981

adapting, consequent upon the accession of Greece, Decision 80/344/EEC adopting a second research programme in the field of medical and public health research, consisting of four multiannual concerted projects

(81/574/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Whereas by its Decision 80/344/EEC (2) the Council adopted a second research programme in the field of medical and public health research, consisting of four multiannual concerted projects;

Whereas such projects aim at coordinating at Community level the research work as set out in Annex I to Decision 80/344/EEC, forming part of the Member States' research programmes;

Whereas Greece intends to contribute to such research work; whereas it is therefore necessary to amplify Annex I to Decision 80/344/EEC to take account of this contribution,

HAS DECIDED AS FOLLOWS:

Article 1

Annex I to Decision 80/344/EEC is hereby amended as follows:

1. Section 1: The following text shall be inserted between the headings 'Germany' and 'France':

   'Greece: Ὑπηρεσία Ἐπιστημονικῆς Ἐρεύνης καί Τεχνολογίας, Ἀθήνα
   Συμβούλιον Ἰατρικῶν Ἐρευνῶν, Ἀθήνα'.

2. Sections II, III, IV and V: The last subparagraph of each Section shall be replaced by the following:

   'Belgium, Denmark, Germany, Greece, France, Ireland, Italy, the Netherlands and the United Kingdom will contribute research under the topics mentioned above.'

Article 2

The Decision shall take effect on 1 January 1981.

Done at Brussels, 20 July 1981.

For the Council

The President

P. WALKER

(1) OJ No C 144, 15. 6. 1981, p. 36.
(2) OJ No L 78, 25. 3. 1980, p. 24.

COUNCIL DECISION

of 27 July 1981

amending, as a result of Greek accession, Decision 78/902/EEC adopting joint research programmes and programmes for coordinating agricultural research

(81/596/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 43 thereof,

Having regard to the opinion of the European Parliament [1],

Whereas Council Decision 78/902/EEC of 30 October 1978 adopting joint research programmes and programmes for coordinating agricultural research [2] lays down the level of the Community's financial contribution to the implementation of the said programmes; whereas this amount should be adjusted on account of Greek accession,

HAS DECIDED AS FOLLOWS:

Article 1

The amount of 18 602 000 ECU specified in Article 1 of Decision 78/902/EEC shall be replaced by 19 702 000 ECU.

Article 2

This Decision shall enter into force on the day of its publication in the *Official Journal of the European Communities.*

It shall apply as from 1 January 1981.

Done at Brussels, 27 July 1981.

For the Council

The President

P. WALKER

[1] OJ No C 144, 15. 6. 1981, p. 32.
[2] OJ No L 316, 10. 11. 1978, p. 37.

COUNCIL DECISION

of 27 July 1981

adopting a third plan of action in the field of information and documentation (1981 to 1983)

(81/599/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas, under Article 2 of the Treaty, the Community shall have as one of its tasks that of promoting throughout the Community the harmonious development of economic activities and a continuous and balanced expansion;

Whereas, since the use of information is emerging as one of the prime factors in economic activity and in innovation, science, education and administration, it is important that current action with regard to scientific and technical information should be extended to cover the socio-economic sphere by encouraging and supporting both public and private initiatives of all kinds;

Whereas the Heads of State and of Government, meeting in Strasbourg on 21 and 22 June 1979, declared that the dynamic complex of information industries, based on the new electronic technologies, offered a major source of economic growth and social development;

Whereas concurrent development of the production and use of information in the Community must enable a reasonable balance between incoming and outgoing flows of information to be gradually attained, in particular between the Community and third countries, on a basis of reciprocity, which will, *inter alia,* ensure freedom of access by Community users to sources of information and data outside the Community;

Whereas it is primarily a matter for the Member States to create the basis for an efficient information service by means of support programmes and promotion activities; whereas such measures should be strengthened through specific Community action;

Whereas the need to strengthen and consolidate activities in the field of scientific and technical information and documentation (STID), already under way as part of the first two action plans, justifies the implementation of a third plan of action which is needed to help attain the abovementioned objectives of the Treaty; whereas it will be necessary, at the same time, to lay down guidelines for an appropriate form of coordination of action in this field at national and Community level;

Whereas the Treaty has not made provision for the specific powers which are required to attain these objectives;

Whereas the Scientific and Technical Information and Documentation Committee (STIDC) and the Scientific and Technical Research Committee (CREST) have both delivered their opinions on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

A third Community plan of action in the field of information and documentation as set out in the Annex is hereby adopted for a period of three years, with effect from 1 January 1981. The appropriations needed for implementing this plan of action, which shall be fixed at 15 million ECU, shall be entered in the general budget of the European Communities.

Article 2

The Commission shall ensure that the third plan of action is implemented and will be assisted by STIDC, the duties and method of operation of which, as defined in Annex II to Council Decision 78/887/EEC of 9 October 1978 adopting a second three-year plan of action in the field of scientific and technical information and documentation (4), shall be applied *mutatis mutandis* as necessary for the implementation of the third plan of action. The Committee and CREST shall be kept regularly informed by the Commission of the progress of the work in the field

(1) OJ No C 278, 28. 10. 1980, p. 4.
(2) OJ No C 144, 15. 6. 1981, p. 101.
(3) OJ No C 353, 31. 12. 1980, p. 29.
(4) OJ No L 311, 4. 11. 1978, p. 1.

in question and in associated fields. The Commission shall also submit a full annual report on the subject to the Council and the European Parliament.

Article 3

1. In accordance with Article 228 of the Treaty, the Community may conclude cooperation agreements with third countries participating in the European Conference of Postal and Telecommunications Administrations (CEPT).

2. The Commission shall be authorized to negotiate cooperation agreements under the conditions defined in Decision 78/887/EEC, and in particular those laid down in Article 3 and Annex II thereof.

Done at Brussels, 27 July 1981.

For the Council

The President

P. WALKER

ANNEX

THIRD PLAN OF ACTION IN THE FIELD OF INFORMATION AND DOCUMENTATION (1981 to 1983)

In order to build upon Euronet Diane and other achievements of the first two Plans of Action between 1975 and 1980 and to reinforce and complement national measures taken by the Member States, the third Plan of Action aims to:

1. consolidate and enhance Euronet and to extend and improve Diane services;

2. contribute to the creation of further high-quality information services in Europe to meet a wide variety of needs and to stimulate both public and commercial activities in this field;

3. support users and intermediaries and the development of the information market in the Member States of the Community;

4. encourage the application of new technologies and methodologies to information services.

The first two objectives have most priority at present; the remaining two are complementary and will consist mainly, for the period of the third Plan of Action, of monitoring and assessing developments, carrying out exploratory studies, coordinating national views and activities, identifying action which might be appropriate at Community level and defining projects to implement such action.

Significant efforts must be made under the third Plan of Action in the field of information and documentation to achieve all the objectives laid down by the Council in its resolution of 24 June 1971 and to help prepare the Community and its economy, industry, science, research and administration, to face the challenges of the 1980's.

The third Plan of Action comprises the following four principal components:

1. **Euronet as a public network by 1983**

The Euronet network, which has been in operation since November 1979, with a substantially larger capacity since mid-1980:

— will be managed until the end of 1983 by the national postal and telecommunications administrations under the supervision of the Commission, which will continue to co-finance any operating deficit. The means of accounting for the deficit must be re-negotiated on the basis of maintenance costs having due regard to the delay in bringing the network into service and the emergence of parallel national networks;

— must be extended, in particular to Greece and within all Member States, in order to respond quickly to the evolving demand for information and documentation. The responsibility for any necessary extensions should increasingly rest with the postal and telecommunications administrations and Community funds should not be used for regional extensions within Member States;

— should be interconnected with other networks in Europe, on the basis of the cooperation agreements stipulated in Article 3 of this Decision; connections with networks of non-European industrialized countries should be based on reciprocity and should incorporate guarantees of traffic in both directions, while respecting the basic principles of the Treaty and taking into account the interests of the Diane network; opportunity should be taken, whenever possible, to extend the services offered by this network to developing countries, including those party to the Lomé Convention;

— must continue to benefit from the active support of the launch team as long as necessary;

— will require measures, in particular by the postal and telecommunications administrations, to promote third party traffic in order to guarantee a better financial balance;

— must make a smooth and gradual transition to the status of a public network by the end of 1983, when it will become the sole managerial responsibility of the postal and telecommunications administrations. This change will require the extension of tariff agreements for a period long enough to protect the interests of the users and to help in promoting the services offered by the Diane hosts.

The amount allocated to this objective is 4 500 000 ECU.

2. **Accelerated development of high-quality services in Europe**

The further development of the supply of both private and public information for European users is a major target to be achieved under the third Plan of Action, in order to establish the conditions for the creation of further high-quality information services. Measures carried out in this field should :

— contribute to the creation of further high-quality services and cover existing gaps where this is of importance for the Community ;

— be in the interests of the Community and, where appropriate, contain elements which require European cooperation ;

— take account of national programmes and ensure Community support for activities in the Member States, where possible and appropriate.

The Commission, with the assistance of the STIDC, will define by 1 January 1982 the criteria, procedures and machinery for speeding up such development during the period of this plan of action (especially for the calls for proposals).

The amount allocated to this objective is 7 500 000 ECU (1).

3. **User support and market development**

As a complement to the priority activities provided for in points 1 and 2, a series of ancillary measures is to be undertaken at Community level to evaluate the present situation and to prepare future support policies and actions aimed at :

— stimulating a wider and more transparent market for European information services and, in particular, those of the Diane network, where increasing involvement by host computers, database producers and other interested parties is planned, with responsibility devolving increasingly upon them ;

— improving the information market in Europe on the basis of method analyses ;

— fostering the export of information products and of services from within the Community to other industrialized countries and to developing countries, including those party to the Lomé Convention, in particular through seminars, studies, workshops and other means,

— evaluating user needs and supporting them in an appropriate manner, in particular in the area of information and guidance services ;

— fostering efficient document delivery services, with due account for existing arrangements in Member States ;

— developing suitable multilingual tools in order to reduce the effect of language barriers for the users ;

— giving special consideration to the requirements of small- and medium-sized undertakings and encouraging the further development of intermediary and other services which would take care of the particular needs and constraints of such undertakings ;

— considering users' interests when European or international standards are defined or implemented.

The amount allocated to this objective is 2 000 000 ECU.

4. **New technologies and methodologies**

These must be selectively monitored and designed to improve quality, increase efficiency, lower cost, develop the competitiveness of information systems and services in Europe and broaden their scope. It is particularly important that such developments be introduced in an appropriate manner so as to enable information providers and users to share in the benefits of new technology. The third Plan of Action is not intended to develop new technologies but to promote

(1) Including a provisional amount of 5 500 000 ECU reserved for calls for proposals in connection with this objective.

their application and adaptation as rapidly and effectively as possible within the Community. Initially, this should be achieved through the :

— monitoring of evolving technologies and their applications ;

— establishment of a coordinated strategic approach to developments which have a potential impact on information and documentation ;

— execution of specific studies, for example in the fields of more user-orientated information-retrieval systems and electronic publishing ;

— identification and definition of actions which would be appropriate at Community level.

The amount allocated to this objective is 1 000 000 ECU.

Communication from the Commission on the support of Community projects in the hydrocarbons sector

(Council Regulation (EEC) No 3056/73 of 9 November 1973, Official Journal of the European Communities No L 312 of 13 November 1973, page 1)

INVITATION

1. Regulation (EEC) No 3056/73 on the support of Community projects in the hydrocarbons sector provides that the Community may grant financial support, in the form of a repayable subsidy, for the carrying out of technological development projects directly connected with prospecting, producing, storing or transporting hydrocarbons and which are likely to improve the security of the Community's energy supplies.

2. The Commission of the European Communities hereby invites interested parties to submit, not later than 30 November 1981, applications for support for Community projects to be considered during the 1982 financial year.

3. All applications for support must include:

   (a) detailed information on the project in question, including:

   — a summary of technical progress in the relevant field,

   — a description of the proposed technological development,

   — an indication of the principal stages of the project,

   — a description of each stage of the project and an indication of the cost in national currency,

   — the time table for the implementation of the project and a breakdown of costs involved by PERT (Programme Evaluation Review Technique) analysis or equivalent system,

   — an assessment of the nature and extent of the risks involved, in the project and its estimated profitability,

   — the benefits of the project as regards securing Community supplies of hydrocarbons and, in particular, the possibility of increasing the Community's hydrocarbons resources and/or utilizing them more quickly;

   (b) the legal status, financial situation, amount of the research and development budget and technical capabilities of the applicant(s) responsible for the project;

(c) the name, business name and nationality of any subcontractors and an indication of the part of the project to be entrusted to them;

(d) how the project is to be financed and the amount of support requested;

(e) information on financial support for the project arranged with Member States or expected from them;

(f) information on possible involvement by the European Investment Bank.

This information should be such as to enable the Commission to assess the value of the project, the advisability of proposing that it receive Community support and the amount of such support.

Applications which do not contain the information specified in (a) to (f) above cannot be accepted.

4. Each application must also be accompanied by a summary of no more than two pages of the information required under 3 (a).

5. Applications must be submitted to the Commission in two official Community languages with 25 copies in each of the two languages.

6. The original, duly signed by the applicant, and the other copies of the application must be sent by post or delivered to the following address:

Commission of the European Communities,
Directorate-General for Energy,
Community projects in the hydrocarbons sector,
200, rue de la Loi,
B-1049 Brussels.

The following will be treated as proof of dispatch or delivery:

— the postmark; or

— a dated and signed receipt issued by the secretariat of the Directorate-General for Energy.

Applications sent or delivered after 30 November 1981 cannot be accepted.

II

(Preparatory Acts)

COMMISSION

FOURTH ECSC MEDICAL RESEARCH PROGRAMME

Effects on the health on workers of physical and other occupational factors at the workplace

(Submitted by the Commission to the Council on 3 February 1981)

I. Introduction

In accordance with the provisions of Article 55 (2) of the ECSC Treaty on the promotion of research, further action is proposed in the field of occupational medicine.

The principles behind the work proposed by the Commission of the European Communities and the methods used to implement it are set out in the publication 'The High Authority's Policy for the Promotion of Studies and Research on Industrial Health, Medicine and Safety' (1).

This programme is concerned mainly with respiratory diseases. It has been drawn up in such a way that it replies to the wishes of the professions concerned. The Commission of the European Communities is aware that there exist other subjects in the field of occupational health that could have been included. Thus subjects such as cardiovascular disease and its effect on manpower in these industries, skin disease, and diseases of the vertebral-column are themes which are certainly worthy of closer consideration, and which could figure in a programme of action based on preparatory research included in this programme.

The new research programme is a follow-up work carried out during the past decade and although use is made of the scientific and practical information obtained, an essential feature is the broadening of its scope to cover, in ECSC undertakings, physical and other occupational factors at the workplace and problems associated with technological developments in production, processing and the use of products.

(a) *Basic research* into chronic respiratory diseases and their aetiopathogenesis has gradually been reduced over the years to leave more room for applied research. In the past, the emphasis has been on the aetiopathogenesis of types of pneumoconiosis, the cytocidal properties of silica and the effects of various qualities of dust; recently research workers have turned their attention to the microbiology of bronchial and pulmonary cells in an attempt to discover treatments and cures and to investigate efficient preventive measures in association with early detection techniques.

From now on basic research must concentrate on the development of preventive measures and detection techniques. This will involve biological and therapeutic research into the biological interactions in the mucous membranes of the respiratory tract, and the reactions and biological defence mechanisms of the individual.

(1) Office for Official Publications of the European Communities, Luxembourg, 1966.

(b) *Respiratory function tests* to establish individual respiratory capacity have been developed and diversified considerably over the past few years and this has made it possible to refine techniques already tested and develop new methods for the early detection of minor or incipient changes in respiratory function.

For the next few years a special effort must be made to standardize simple and reliable techniques for use by occupational physicians. Occupational physicians must be given tools which they can use on a large scale with maximum reliability in order to do the intensive prevention work required in the iron and steel industry and in coking plants and coal mines.

(c) For assessment of the extent of the various diseases encountered in the ECSC industries and identification of their causes, epidemiology has proved to be the essential scientific approach whereby medical knowledge can be advanced; it helps to pin-point the causes of diseases and identify the factors responsible for the strain and discomfort associated with specific tasks.

Epidemiological research, based on carefully defined criteria, must go hand in hand with both basic biological research and the study of the effects on the individual in his environment. The last two programmes have included important investigations of this kind into the frequency and aetiology of chronic bronchitis. In the next years, epidemiology will be extended to all nuisance factors in the ECSC industries and their individual effects, and which could lead to new perspectives; the epidemiology of disease and mortality in the ECSC industries will be developed and comparisons will be made with the statistical data available on populations exposed or not exposed to other specific risks.

(d) In this programme research is no longer restricted to the specific problems of the respiratory tract but covers the chemical pollutants and climatic factors of each sector of ECSC industrial activity.

In line with its social research policy, the Commission has made a point of including as far as possible the research topics suggested by producers, workers and government representatives; occupational physicians have also been involved in the preparation of the programme. The intention is therefore to study new topics directly connected with working conditions but future research projects will nevertheless be submitted to advisory committees for assessment to ensure that the programme is sufficiently homogeneous to guarantee maximum efficiency (1).

In order to avoid too much diversification of effort and to make the best use of the information obtained, the programme is based mainly on the most recent results of medical research. The new topics reflect technological developments and the working conditions associated with these and mean that research in the years to come will be broader in scope.

II. New guidelines and broadening of the scope of the programme

In the light of the most recent biological information, the scope of experimental and epidemiological research needs to be extended to all harmful agents in the working environment and individual sensitivity factors. These items must be investigated in much greater detail through epidemiological surveys taking into account not only identified and quantified agents but also the complex physical, chemical and climatic factors which can combine to produce effects which differ according to individual receptivity and reaction.

Special attention must be given to cancers and particularly to their early detection through research into the carcinogenicity of atmospheric pollutants in the ECSC industries taking all related pollutants and climatic factors into account.

(1) Research projects which are recognized as important for occupational medicine but are not consistent with the broad scope of this programme may be considered by the CEC either for subsidies under this programme, if funds are available, or they may be judged priority projects and awarded special grants, depending on the opinion of the advisory committees.

Extending this programme also means developing a system of information and training for all those who are responsible for preventive medicine and the detection of occupational diseases in coal mines, iron mines, coking plants and iron and steel works. The aim is to improve the methods used by occupational physicians and safety engineers for qualitative and quantitative assessment of harmful agents in these industrial branches. Investigation techniques developed in laboratories must be used for medical surveillance and early detection of any change in health, so that the reliability of the tests and methods already used in practice can be assessed and checked. Finally, one of the objectives of this programme is to establish the orientations for future research.

Where iron and steel works and coking plants are concerned, epidemiological, biological and functional research must take into account all operations which may have harmful effects on health and pay particular attention to the specific diseases found in blast furnaces, rolling mills and coking plants as a result of the climatic conditions and toxic substances peculiar to these workplaces. This means gearing research more specifically to the diseases which the occupational physician is likely find in the iron and steel works and coking plants. Chronic bronchitis, because it is so common, will still be a central theme but works must also be done on the identification of toxic and carcinogenic substances.

The study of chronic respiratory diseases in coal and iron miners is of prime importance in the ECSC industries. During this programme the many projects conducted during the past decade will be followed up methodically and carefully. Many problems remain to be solved and we still know very little about the causes of the often premature respiratory insufficiency from which miners suffer.

While respiratory function testing represents an important step, the gaps in our knowledge of lung disease caused by various types of dusts must also be made good through a coordinated study of agents and immunological effects; another important question is the radiological investigation of pneumoconiosis. Finally, an effort should be made to find out why young miners are losing interest in their work and determine the underlying causes of this psychological phenomenon and its connection with working conditions.

III. Consultations with advisory committees

The ECSC Consultative Committee will be consulted about this programme as stipulated in Article 55 (2) of the ECSC Treaty.

Like the other research programmes launched since 1957 by the European Coal and Steel Community, this draft programme drawn up for the Commission of the European Communities by the Health and Safety Directorate will be submitted initially to the advisory committees working on social research for an opinion.

The Producer's and Workers' Committee on Occupational Safety and Medicine and the Committee of Government Experts on Occupational Medicine and Rehabilitation and Human Factors and Ergonomics will be consulted and the final programme will be based on the opinions of these two committees.

The topics and priorities of the programme therefore reflect the concerns of the occupational milieux involved and the needs of workers in terms of health, preventive medicine and medical surveillance.

The object is a scientific and practical approach to the diseases associated with the specific environment of the ECSC industries as a result of the harmful substances inhaled and the effects of climatic conditions and the working environment; the scope must be restricted in this way to produce a coherent programme and a concerted effort to ensure maximum success.

Many topics associated with occupational medicine are of course worthy of the consideration the professional organizations would like them to have and there are still a large number of problems outstanding.

The scope of this programme is determined by the resources and administrative work which the Commission of the European Communities can provide for the promotion of research in this field at the moment but this does not mean that research which proves in the next five years to be urgent and appropriate in the opinion of the professional organizations and the Commission will not be considered, under an administrative procedure designed for the

purpose by the Commission of the European Communities.

The research must fulfil the needs of the workers and improve their physical and psychological working conditions. It must help to improve preventive medicine, early detection and treatment of occupational disease in coal mines, coking plants and iron and steel works.

IV. Coordination of work

Work will be coordinated, as on previous occasions, by the scientific committee set up for the duration of the programme by the departments of the Commission of the European Communities responsible for launching the programme and supervising it over the next five years.

In practical terms, the research is coordinated by the working parties set up at the beginning of the programme on the basis of the topics to be studied. These meet two to three times a year.

The members of the scientific committee for this programme are appointed by the departments of the Commission of the European Communities in consultation with the Producers and Workers and the Government Experts. Its members must be people experienced and qualified in the various sectors concerned in the programme.

V. Justification

The first research programme, on silicosis and pneumoconiosis in coalminers, resulted in a better knowledge of the pathogenesis, radiological aspects, complications and functional repercussions of these diseases. Functional spirography tests were standardized throughout the Member States of the Community.

The second programme focused on chronic bronchitis and emphysema, which may accompany pneumoconiosis or develop independently and the socio-economic significance of which is well known. Basic research was done into these problems. A standardized questionnaire was developed in the various Member States with a view to carrying out epidemiological surveys of these disorders.

The third programme, now coming to an end, focused both on pneumoconiosis and on chronic bronchitis and emphysema. As regards the latter diseases, the programme paid particular attention to the biological processes responsible for triggering them. Promising results were obtained concerning the value of certain new techniques which permit early detection and improved treatment of these diseases. The coal industry also launched a programme to rehabilitate bronchitis suffered in the initial stages of the disease. At the same time work on harmonizing and standardizing respiratory function tests at Community level was continued.

Progress was made on the study and epidemiological monitoring of pneumoconiosis. Studies were also carried out on the preventive effects of P 204 and aluminium salts.

At the various meetings of the three Working Parties — WP on Physiopathology and Rehabilitation, WP on Basic Research and WP on Epidemiology — which included representatives of the occupational physicians in the coal and steel industries in the various Community countries, it emerged that chronic respiratory diseases were still a major cause of morbidity, both among miners and among workers in coking plants and in the iron and steel industry. Priority importance must still be attached to studies aimed at establishing the links between these diseases and characteristic workplace nuisances, in particular exposure to dust, fumes and gases, along with the influence of other factors, such as temperature, humidity and air currents. These studies should provide the necessary data for social and political programmes to improve the environment and health of the labour force. The participants also acknowledge that other factors might be responsible for diseases in the two sectors in question. Thus, while research into respiratory diseases should be continued, the field of study should be extended to include other diseases of workers in steelworks, coking plants, coal mines and iron mines.

Research work of this kind calls for a multi-disciplinary approach, involving biology,

epidemiology and respiratory function analysis. This threefold approach is indispensable for the development of effective preventive measures and methods of treatment.

(a) *Studies relating to the health and working conditions of workers in coal mines and iron mines, in coking plants and in the iron and steel sector.*

1. In the case of these studies one should bear in mind the extent to which biological research in recent years has improved knowledge of defence mechanisms and of the ways in which individuals react to aerogenic aggressions.

   Animal experiments and the study of occupationally induced biological disorders in workers have provided detailed information on the following aspects; without a knowledge of which adequate preventive and therapeutic measures cannot be implemented:

   — the nature and the modes of action of the agents involved;

   — the growing importance of individual sensitivity factors in the production of these reactions.

2. Moreover epidemiology should make it possible to study, in these workers, the links between exposure to dust, fumes, gases and climatic factors on the one hand, and health on the other hand. This should enable the potential harmfulness of recently developed mining techniques to be determined, in particular with respect to chronic bronchitis, emphysema and cancer.

3. As regards research into respiratory function, the following points should be stressed:

   — new Community studies are necessary to evaluate techniques of early diagnosis of chronic bronchitis which can be applied at the workplace,

   — at the same time the Community should encourage better information and training for doctors and paramedical staff responsible for carrying out these tests,

   — finally, there is a need to study new and more sophisticated tests, which cannot be applied at the workplace, with a view to assessing disability and the results of treatment; these laboratory tests will also permit the assessment of simpler tests usable at the workplace.

(b) *Studies relating specifically to workers in the iron and steel sector and in coking plants*

1. The epidemiological approach would seem to be particularly important for these workers for three reasons:

   — this approach enables the relevance of chronic respiratory diseases to overall chronic disease in workers in these sectors to be determined;

   — this approach will also provide a better understanding of the health hazards associated with specific types of work in these industries, in particular the hazard of bronchopulmonary cancer; the main areas involved are welding operations, work involving exposure to iron dust at blast furnaces, to graphite dust during pig-iron desulphurization or to oil aerosols during cold-rolling, and operations carried out at high temperatures, etc.;

   — finally, epidemiological studies are particularly useful in studying potentially toxic substances, such as chrome or nickel in particular.

2. Biological and respiratory function studies should also be carried out in this field; these different techniques are indispensable for determining anatomical and functional disorders induced by the various factors referred to above.

(c) *Research relating specifically to coal and iron miners*

1. Little is yet known about the causes of the respiratory insufficiency — sometimes premature — which is associated with characteristic jobs in these sectors. These disabling disorders seem to be linked both to pneumoconiosis and to conventional chronic bronchitis, to bronchiolitis, or to other factors

— in particular vascular — yet to be specified. Studies in this field should draw simultaneously on epidemiological, biological and functional investigative techniques with a view to obtaining a clearer picture of the nature of these disorders, determining how they can be prevented and treated, and specifying the extent to which they should be taken into consideration for purposes of compensation.

2. In countries in which young people are again entering the mining sector one frequently hears the complaint that these young miners abandon their trade at an early age; as this situation may partly be due to the environmental and atmospheric conditions, one remedy might be found in improved evaluation of their working conditions, in conjunction with a study of respiratory function.

3. The recent development of pneumoconiosis in the EC Members States again raises certain pathogenic problems which were thought to have been solved, notably as regards the contribution of dust, silica and various co-factors, particularly of an immunological nature, to the production of these disorders. In particular, studies in this field should help to explain the causes of late pneumoconiosis, which seems to be becoming particularly frequent in certain areas of the Community. These studies draw on epidemiological and biological techniques. The reclassification of affected workers is also being considered.

4. Finally, the recent revision of the ILO international classification of radiographs of the pneumoconiosis has left a number of problems unsolved. In particular, there is a need to define model films whose purpose is to determine the limits between various categories of simple pneumoconiosis. This is a basic problem, the solution of which will facilitate comparison of the epidemiology of pneumoconiosis and thus contribute to its prevention in the different Community Member States.

VI. Implementation of the programme

The Committee of Scientific Experts advises the Commission, on a permanent basis, on the scientific aspects of the various research projects for which financial aid is requested.

To implement the programme, the CEC will, as on previous occasions, call upon research institutes in the member countries to help, after the Commission of the European Communities has pronounced on this memorandum.

As the topics of this programme cover more ground than those of previous years, a larger scientific committee instituted at the beginning of the new programme will be asked to help the Commission form opinions on scientific aspects of the research projects. After studying the projects, the Producers' and Workers' Committee and the Committee of Government Experts will be asked to give their opinions. These opinions determine whether or not financial aid is to be awarded according to the specific criteria of the ECSC industries.

During the work, working parties chaired by Commission representatives and assisted by the scientific committee will meet regularly and distribute the interim results to scientific and professional bodies, thus encouraging a continuous exchange of information between the research institutes and the circles concerned.

When the research programme has been completed, the scientific committee will help to arrange seminars and publish the results; the various research institutes which have received financial aid during the programme are required to make their research findings available to the Commission of the European Communities and the scientific committee so that these may be distributed with a view to practical application.

VII. Financing and duration of the programme

It is estimated that implementation of the fourth ECSC medical research programme on the Effects on the health of workers of physical and other occupational factors at the workplace will cost nine million ECU over five years. This is based on the following:

1. The programme proposed is both an extension of the preceding programme (for which five million ECU were awarded for four years) and an exploration of new topics as shown in this memorandum.
2. The scope of research into preventive medicine and the improvement of working conditions will go on developing in all the fields covered by the programme.
3. Research costs have increased considerably in recent years. This means that the research projects submitted to the Commission of the European Communities must be carefully selected.

A concerted effort must be made if practical objectives are to be achieved through coordinated and efficient development.

With this financial aid the research programme will cover, in addition to direct aid to the institutes, all administrative costs arising from:

— scientific coordination and cooperation,

— experts' and research workers' visits,

— publication and distribution of reports,

— bibliographical documentation, etc.

Furthermore, the institutes benefitting from financial aid contribute to the cost of the research by making their own research workers, scientific equipment and financial resources available to the Commission of the European Communities.

In view of all these factors, the budget for this research project amounts to a total of nine million ECU for five years. As in the past, Community aid represents only a portion of the funds necessary for the various research projects.

CONCLUSION

The Commission of the European Communities:

— in view of the need to encourage medical research dealing with the effects on the health of workers of physical and other occupational factors at the workplace in ECSC undertakings and to promote research projects to improve health and well-being in these undertakings,

— account being taken too of the favourable opinion and approval of the Producers' and Workers' Committee and the professional and government representatives,

— having regard to Article 55 of the Treaty instituting the European Coal and Steel Community,

— proposes an appropriation of nine million ECU over five years for the implementation of the fourth ECSC medical research programme on the effects on the health of workers of physical and other occupational factors at the workplace in ECSC undertakings.

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* *

Research institutes wishing to submit a project under the new ECSC medical research programme are requested to write to

The Commission of the European Communities,
Directorate-General for Employment,
Social Affairs and Education,
Directorate for Health and Safety,
Bâtiment Jean Monnet,
Boîte Postale 1907,
L-2920 Luxembourg-Kirchberg.

ANNEX

FOURTH ECSC MEDICAL RESEARCH PROGRAMME

Effects on the health of workers of physical and other occupational factors at the workplace

(a) *Studies relating to the health and working conditions of workers in coal mines and iron mines, in coking plants and in the iron and steel sector*

1. Research into the biological processes, including individual factors, responsible for the appearance and development of emphysema and chronic bronchitis in these workers. Application of this research to the prevention and treatment of these diseases.
2. Standardization and implementation of workplace tests conducted for the early diagnosis of chronic bronchitis and emphysema.
3. Evaluation of techniques and of the results of various preventive and therapeutic measures applied to persons suffering from respiratory diseases in their early stages.
4. Evaluation of the results of function tests at rest and during exercise with a view to determining working capacity, in particular the residual working capacity of workers with respiratory disorders, in the light of the physiological requirements of certain workplaces.
5. Preparatory research into cardiovascular disease and its effect on manpower, skin diseases and diseases of the vertebral column.

(b) *Studies relating specifically to workers in the iron and steel sector and in coking plants*

1. Epidemiological studies of the main causes of disease and death in the iron and steel industry and in coking plants and of how they correlate with working conditions (gases, fumes, temperature, humidity, air currents, etc.).
2. Study and prevention of the specific health risks, including the risk of bronchopulmonary cancer, associated with certain characteristic operations in the iron and steel industry and in coking plants, such as
   - — welding work,
   - — work involving exposure to iron dust at blast furnaces,
   - — work involving exposure to graphite dust during pig-iron desulphurization,
   - — work involving exposure to oil aerosols during cold-rolling,
   - — work involving exposure to high temperatures, etc.
3. Identification of the hazards associated with potentially harmful substances such as nickel, chromium and other substances used in alloys, with a view to determining whether existing threshold values for exposure involve a health risk.

(c) *Research relating specifically to coal and iron miners*

1. Study of the causes of respiratory insufficiency which is responsible for disability (sometimes premature) in characteristic jobs in those sectors. Prevention and treatment.
2. Epidemiological studies of the main causes of disease and death in coal miners and iron miners, and their relationship with working conditions (gases, fumes, temperature humidity, air currents etc.).
3. Study of the contribution of silica, other dusts, and exogenous and endogenous co-factors to the abnormally rapid appearance and development of simple pneumoconiosis and massive progressive pneumoconiosis. Prevention of such development. Reclassification of affected workers.
4. Validation, at Community level, of the ILO international classification of radiographs of the pneumoconiosis (revised in 1980) including a study of the value of model films illustrating the limits between the categories.

COUNCIL DECISION

of 15 December 1981

adopting a second research and development programme for the European Economic Community in the field of textiles and clothing (Indirect Action 1981 to 1983)

(81/1014/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas on 14 January 1974 the Council adopted a resolution on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology (3);

Whereas, pursuant to Article 2 of the Treaty, the Community has *inter alia* the task of promoting throughout the Community a harmonious development of economic activities and a continuous and balanced expansion;

Whereas the Council on 14 April 1975 adopted a programme of technological research in the textile sector (4) which has established a framework of cooperation within the textiles and clothing industry;

Whereas the programme which is the subject of this Decision has as its main objectives the improvement of the competitiveness of the Community textiles and clothing industry as well as of working and production conditions through the introduction of new methods, machinery or products and of energy-saving techniques;

Whereas, accordingly, the research programme which is the subject of this Decision is necessary to attain the aforementioned objectives of the Treaty;

Whereas the Commission in its communication to the Council of 17 July 1981 on the situation and prospects of the Community textiles and clothing industry, stressed the need for a special effort in the field of research and innovation within the textiles and clothing industry through the coordination of research at Community level and with the direct involvement of the industry itself;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion concerning the proposal from the Commission,

HAS DECIDED AS FOLLOWS:

Article 1

A research and development programme for the European Economic Community in the field of textiles and clothing, as set out in the Annex hereto, is hereby adopted for a period of three years from 1 November 1981.

The Commission shall each year send to the European Parliament and to the Council a communication stating the progress made in the research, the results achieved and the use of appropriations.

Article 2

The appropriations necessary for implementing the programme, which are fixed at 3·9 million ECU, shall be entered in the general budget of the European Communities.

Article 3

The Commission is responsible for the implementation of the programme. To assist it in this task, there shall be set up an advisory committee on management of the programme of research and development in the field of textiles and clothing whose terms of reference and composition shall be defined in accordance with the Council resolution of 18 July 1977 on advisory committees on research programme management (5).

Article 4

The information resulting from the execution of the programme shall be disseminated in accordance with Regulation (EEC) No 2380/74 (6).

Done at Brussels, 15 December 1981.

For the Council

The President

D. HOWELL

(1) OJ No C 147, 16. 6. 1980, p. 130.
(2) OJ No C 247, 1. 10. 1979, p. 17.
(3) OJ No C 7, 29. 1. 1974, p. 2.
(4) OJ No L 111, 30. 4. 1975, p. 34.
(5) OJ No C 192, 11. 8. 1977, p. 1.
(6) OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

The programme referred to in Article 1 covers the following four topics:

1. Garment physiology and construction.
2. Quality of knitted fabrics and knitted articles.
3. Application of new spinning technologies in the wool industry.
4. Upgrading of linen.

30. 12. 81 Official Journal of the European Communities No L 375/1

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 7 December 1981

adopting a multi-annual research and training programme for the European Economic Community in the field of biomolecular engineering (indirect action April 1982 to March 1986)

(81/1032/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas Article 2 of the Treaty assigns to the Community *inter alia* the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3), the Council stated that the whole range of available ways and means should be used as appropriate, including indirect action;

Whereas a Community research and training programme in the field of biomolecular engineering is necessary for the achievement of the abovementioned objectives and, particularly, for the development of new technologies leading to:

— the development of improved agricultural and bio-industrial products,

— the determination of more efficient and safer production methods,

— reduced energy consumption and improvements in the balance of payments;

Whereas it is necessary to undertake experiments for assessing possible biohazards associated with applications in agriculture and industry of biomolecular engineering and to organize courses in good microbiological practice;

Whereas training incentives are essential for the exploitation of biotechnology by agriculture and industry;

Whereas it is advisable to promote the mobility of personnel between the organizations collaborating in the implementation of this programme;

Whereas the Treaty has not provided the necessary specific powers;

Whereas account should be taken of the opinion of the Scientific and Technical Research Committee (CREST) on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

A biomolecular engineering research and training programme (hereinafter called 'the programme') for the

(1) OJ No C 327, 15. 12. 1980, p. 37.
(2) OJ No C 230, 8. 9. 1980, p. 11.
(3) OJ No C 7, 29. 1. 1974, p. 6.

European Economic Community is hereby adopted in the form set out in the Annex for a four-year period starting on 1 April 1982.

Article 2

The Commission shall be responsible for the implementation of this programme which shall be implemented in two stages. The first stage shall run from 1 April 1982 until the revision provided for in Article 5 and the second from this revision until 31 March 1986.

Article 3

The appropriations currently allocated for the execution of the already agreed programme, the amount of which is fixed at 8 million ECU, including expenditure on a staff of three, shall be entered in the budget of the European Communities.

The amount of the appropriations and the staff required to execute the programme shall be re-evaluated when the programme is revised as provided for in Article 5.

Article 4

In order to assist the Commission in implementing this programme, there is hereby established an Advisory Committee for the Management of the Research and Training Programme in the Field of Biomolecular Engineering, whose terms of reference conform to the Council resolution of 18 July 1977 (1).

Article 5

The programme shall be subject to revision during the second year in accordance with appropriate procedures after consultation with the Committee referred to in Article 4. The decision to revise the programme shall be taken not later than 31 March 1984.

Article 6

Information resulting from the implementation of the programme shall be disseminated in accordance with Regulation (EEC) No 2380/74 (2).

Done at Brussels, 7 December 1981.

For the Council

The President

CARRINGTON

(1) OJ No C 192, 11. 8. 1977, p. 1.
(2) OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

BIOMOLECULAR ENGINEERING PROGRAMME

1. **Development of new reactors using immobilized multienzyme systems including those requiring multiphase environment and cofactor regeneration**

   Special emphasis will be placed on the development of new procedures for the immobilization of:

   (a) single enzymes or combinations of enzymes able to synthesize fine chemicals of high added value with special reference to cofactor regeneration and stabilization of enzymes in non-aqueous or multiphase environment. Kinetic studies of the flow of matter in reactors using these new systems will also be promoted;

   (b) cells with particular reference to plant, yeast and mammalian cells;

   (c) subcellular organelles such as peroxisomes, chloroplasts, mitochondria, microsomes.

2. **Development of bioreactors for human detoxification**

   Development of new procedures using immobilized enzymes for the removal of toxic substances from the human body with special reference to the development of biocompatible enzyme supports (e.g. non-toxic, immunocompatible, thrombocompatible, biodegradable) and of carriers provided with special sensors and tropisms for targeting exogenous enzymes.

3. **The transfer of genes from diverse sources to the bacterium Escherichia coli, the yeast Saccharomyces cerevisiae and other suitable organisms**

   The orientation in this project will have special reference to:

   (a) the chemical construction of 'synthetic genes';

   (b) development of mutational tools (e.g. site specific mutagenesis);

   (c) overcoming the expression barriers for particular proteins;

   (d) modification to inhibit the degradation of enzymes in a foreign environment by such techniques as repression of proteolytic activity of the host cell or by tagging the desired protein to another which is excreted extracellularly;

   (e) post-translational modification, e.g. glycosylation;

   (f) the possibility of supporting the collection and storage (e.g. as mRNA or cloned in plasmids) for distribution to relevant laboratories in the Community of rare material such as tumours capable of synthesizing abnormally high quantities of specific hormones.

4. **Development of cloning systems**

   Although cloning of foreign genes in the bacterium *Escherichia coli* is now routinely performed in many laboratories, little has been achieved on the cloning and expression in other organisms which are likely to be of great importance to European industry and agriculture. The first step is the development of practically applicable vectors in a wide range of different viruses, bacteria, fungi, algae, plants and animals. The stability, regulation and expression of transferred genes will be studied within the framework of this project and of projects 3 and 5.

5. **Gene transfer in micro-organisms and in plants important to agriculture**

   (a) The development and improvement of methods for introducing, when considered necessary for agricultural purposes, foreign genetic information in micro-organisms and in plants which play an important role in European agriculture. All methods likely to allow the transfer of genes between species which normally do not exchange genetic information in nature are to be considered in this

subproject. Particular attention is to be given, however, to modern techniques, including somatic cell hybridization, the transfer of individual chromosomes and the development of cloning systems and their exploitation.

(b) Analysis and control of the stability, regulation and expression of transferred genes.

(c) Analysis and control of plant regeneration *in vitro*, i.e. the production of differentiated organisms from isolated cells cultured *in vitro*, a step which constitutes one of the first conditions for the success of any project based upon recombinant DNA technology or somatic hybridization for the improvement of cultivated plants.

6. **Improvement of methods for detecting contamination and for the assessment of possible risks associated with applications in agriculture and industry of biomolecular engineering**

(a) Improvement of methods for detecting contamination (including mutations and phage- or plasmid-modified variations of the process strain).

(b) Development of a procedure for assessing the risks which might result from the experimental or industrial use of micro-organisms and from large-scale applications of biomolecular engineering.

COUNCIL REGULATION (EEC) No 3744/81

of 7 December 1981

concerning Community projects in the field of microelectronic technology

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas microelectronic technology is essential to the development and competitiveness of Community industry as a whole at a time when the European economy must increasingly provide high added value goods and services; whereas, however, the scale and nature of the effort needed to match that of its competitors by 1985 require a Community approach which must include public financial support for collaborative research and development by industry; whereas the Council resolution of 11 September 1979 (3) invites the Commission to examine the possibilities and methods of coordinating national projects in this sector and to submit to the Council specific projects at Community level with a view to promoting microelectronic technology;

Whereas the aid granted should aim at furthering a balanced market and competition situation in Europe and take into consideration the principles expressed in the four-year programme for the development of informatics in the Community, and in particular principles of the ownership of and access to results of supported projects, with particular stress on the importance of an adequate dissemination of goods and other results of supported projects,

(1) OJ No C 144, 15. 6. 1981, p. 69.
(2) OJ No C 353, 31. 12. 1980, p. 4.
(3) OJ No C 231, 13. 9. 1979, p. 1.

HAS ADOPTED THIS REGULATION:

Article 1

In order to attain the Community objectives concerning microelectronic technology, coordination at Community level of the activities undertaken in the Member States in this domain and implementation of joint projects to supplement and reinforce these activities shall be carried out under the conditions set out in this Regulation.

For the purposes of granting national financial support to projects in the fields defined in Article 3, the Member States will in particular encourage projects the execution of which requires major participation on the part of organizations from two or more Community countries, other conditions being equal.

TITLE I

Information and consultation

Article 2

A system for information and consultation concerning initiatives aimed at promoting the diffusion and the development of microelectronic technology and its applications is hereby established between the Member States and the Commission.

Article 3

1. In order to ensure that the consultations provided for in this Regulation are effective, Member States shall, independently of their obligations under the rules of competition, supply the Commission without delay on their own initiative, or at the Commission's request, with all up-to-date relevant advance information of a scientific, economic and financial nature concerning any activities under their authority, both in progress on the date this Regulation enters into force and contemplated after that date, aimed at:

(a) the promotion of applied industrial research and development on equipment, processes, instru-

ments and techniques, both hardware and software, for use in the design, industrial manufacture and testing of advanced integrated circuits;

(b) the dissemination of basic knowledge and the training and education of management and staff specializing in the design, utilization and testing of advanced integrated circuits;

(c) the encouragement of the establishment within the Community of an industry capable of designing and producing the equipment, materials and techniques used in the manufacture of advanced integrated circuits.

They shall also supply the Commission with an appraisal of the result of all these activities.

Confidential company information concerning specific points shall not be covered by this Article.

2. The Commission will ensure that the information concerning the activities referred to in paragraph 1 above is communicated to the Member States.

3. The level of detail of information to be made available to the Commission confidentially, to government agencies of the Member States, or to the public, as well as procedures and measures for making that information available, shall be specified according to the procedure laid down in Article 8.

TITLE II

Joint projects

Article 4

1. The following key research and development projects, coming directly within sectors defined in Article 3 and regarded as having highest priority, shall benefit from Community support under the terms laid down in Article 5.

(I) step and repeat on wafer,

(II) electron beam for direct-writing on wafer,

(III) plasma etching and deposition,

(IV) test equipment,

(V) computer aided design (CAD) for very large scale integration circuitry (VLSI) in the domains of:

1. architecture;
2. language and data structure;
3. testing;
4. device modelling.

2. The technical specifications for the projects specified in paragraph 1 above are set out in the Annex.

3. The Commission shall update the technical specifications as may be required in accordance with the procedure laid down in Article 8.

4. From the beginning of the second year after the entry into force of this Regulation the list reproduced in paragraph 1 may be revised in accordance with the procedure laid down in Article 8 within the limits of the resources available. The Commission may also submit to the Council a proposal for the revision of the Regulation if that is necessary.

TITLE III

Financing procedures

Article 5

1. The European Communities shall provide financial support to the projects specified in Article 4 in the form of subsidies normally covering 30 % of the costs of their execution, but possibly as much as 50 % on the basis of a decision taken in accordance with the procedure laid down in Article 8.

2. The commitment appropriations for the financial support referred to in paragraph 1 above are 40 million ECU. This amount will be included in the budget of the European Communities for 1982.

3. Projects eligible for aid shall meet the following conditions:

— their purpose must be in line with the technical specifications set out in the Annex,

— the projects must be carried out within the Community.

Furthermore:

(a) for projects falling under I to IV of Article 4 (1):

— the applicants must be manufacturers or industrial users established in the Community,

— a sufficient number of sufficiently qualified industrial users not all established in the same Member State and not having financial links with the manufacturer or manufacturers

taking part in the same project must have provided evidence of their interest in participating in the project and in contributing their own resources thereto. This number shall be decided by the Commission, for each project, in accordance with the procedure laid down in Article 8;

(b) for projects falling under V of Article 4 (1):

— the applicants must be universities, research centres or firms established in the Community,

— a sufficient number of sufficiently qualified user firms not all established in the same Member State and not having financial links with each other must have provided evidence of their interest in participating in the project and in contributing their own resources thereto. This number shall be decided by the Commission, for each project, in accordance with the procedure laid down in Article 8.

In applying criteria (a) and (b) above, in cases where resources do not permit two or more otherwise eligible projects of the same nature to be supported, priority shall be given, all other conditions being equal, to the project involving organizations from the largest number of Member States.

4. Once the eligibility of the project has been established under the terms of paragraph 3 (a) or (b) above, all suitably qualified firms established in the Community may take part in the project and apply for the relevant financial support irrespective of their possible financial links with other participants in the same project.

5. Applications shall be addressed to the Commission by those concerned in response to calls for proposals published in the *Official Journal of the European Communities*. These applications shall show evidence that they are justified under the terms of paragraph 3 above and shall provide any other relevant information. The Commission may request any other documents and additional information required for appraisal of the application.

6. The Commission shall act on applications submitted to it within four months.

7. Without prejudice to the powers of the Court of Auditors pursuant to Article 206a (3) of the Treaty, the Commission may carry out investigations on the spot or inquiries into the operations financed, according to the conditions specified in the contracts regulating the financing of the projects.

TITLE IV

General provisions

Article 6

1. A Consultative Committee, hereinafter called 'the Committee', is hereby set up for projects promoting microelectronic technology. It shall consist of representatives of the Member States, who may be assisted by experts or advisers depending on the nature of the projects under consideration, with a Commission representative as chairman.

2. The proceedings of the Committee shall be confidential.

3. The Committee shall adopt its own rules of procedure.

4. Secretarial services for the Committee shall be provided by the Commission.

Article 7

The Commission may consult the Committee on any matter falling within the scope of this Regulation and must in particular consult it on:

— the level of detail of the information concerning national activities to be supplied confidentially to the Commission in accordance with Article 3,

— the level of detail of the information to be published or notified to the government agencies of Member States,

— the procedures for making the information collected available to the Member States,

— the updating of the technical specifications for projects potentially eligible for financial support,

— the minimum number of firms required to make a project eligible for financial support,

— the appraisal of applications and the granting of financial support.

Article 8

1. Where the procedure laid down in this Article is to be followed, the matter shall be referred to the Committee by its chairman, either on his own initiative or at the request of the representative of a Member State.

2. The Commission representative shall submit a draft of the measures to be taken. The Committee shall give its opinion on the draft Decision within two months. Its decisions shall be taken by a majority of 45 votes. Within the Committee the votes of the Member States shall be weighted in accordance with Article 148 (2) of the Treaty. The chairman shall not vote.

3. The Commission shall adopt the draft where it is in accordance with the opinion of the Committee. Where the draft Decision is not in accordance with that opinion or where no such opinion is issued, the Commission shall without delay make a proposal to the Council in the form of a draft Decision. The Council shall act by a qualified majority.

Article 9

Each year the Commission shall forward to the European Parliament and to the Council a report on the development of the activities in the Community falling within the scope of this Regulation.

Article 10

This Regulation shall enter into force on 1 January 1982.

It shall apply until 31 December 1985.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 7 December 1981

For the Council

The President

CARRINGTON

ANNEX

OUTLINE TECHNICAL SPECIFICATION OF PROJECTS AND ACTIVITIES FOR WHICH FINANCIAL SUPPORT IS BEING PROPOSED UNDER THE TERMS OF THE REGULATION

I. STEP AND REPEAT ON WAFER

Direct optical stepping technology

Direct optical stepping machines should be available in production with the characteristics listed below by the end of 1982:

— wafer size: up to six inches,

— die size: 1 cm^2,

— minimum line widths: 1·25 µm on the wafer (1·1 µm on the resist),

— automatic registration: 0·1 µm,

— throughput 50 × four-inch wafers per hour at 1 cm^2 field with insertion of five test patterns and auto-registration at each chip; addition of a reticle magazine.

Individual times should be given in the description of the equipment including the time to insert test patterns. Registration should be programmable (per individual exposure — per block — per wafer). Minimum allowable size of alignment marks should be given.

It is considered desirable that machines could be supplied in 1983 with an improved throughput of 50 × six-inch wafers per hour and improved resolution of 1·0 µm minimum line width on wafer.

II. ELECTRON BEAM FOR DIRECT-WRITING ON WAFER

Electron beam direct-writing equipment

E-beam machines capable of:

— wafer size: six inches,

— throughput: 15 to 20 layers per hour at 1 µm,

— die size: no limitation,

— minimum feature size: 0·5 µm,

— spot size: variable,

— registration accuracy: 0·1 µm.

This equipment should also be suitable for reticle and mask making. Prototype machines meeting all these requirements apart from speed must be available within 1983.

III. PLASMA ETCHING

A. **Minimum performances of the equipment**

— *Materials to be etched*

— SiO_2, doped and undoped.

— Si_3N_4.

— Polysilicon, doped and undoped.

— Silicides and polycides.

— Aluminium and aluminium alloys.

— Other metals for contacts and interconnections.

— Organic polymers for multilevel resists and multilevel metallization.

— *Structures to be etched in production*

— Pitch (line plus spacing): 3 µm.

— Minimum linewidth: 1 to 1·5 µm.

— Precision: + or — 10 % of linewidth for the critical structures.

— *Selectivity and anisotropy*

The selectivity has to be adequate and for each layer it should be possible to etch completely anisotropically.

— *Throughput*

The minimum throughput should be 50 wafers per hour for the slowest process. The slowest process will probably be the etching through 0·8 µm of thermal SiO_2 with a selectivity of 10 : 1 over Si and with a pitch of 3 µm. The etching of other layers (e.g. 0·4 µm undoped polysilicon over SiO_2) should be much faster.

B. **Design of the equipment**

We consider a parallel plate reactor with the following features:

— *Design concept*

Most important is the use of a modular design concept so that the equipment can be optimally adapted for each application.

— *Load lock*

Undesired species (e.g. water vapour) should be blocked from the reaction chamber and post-etching effects must be avoided. This can be reached with a vacuum lock containing the cassettes. Stripping of the photoresist in the unload-lock should be considered as an option.

— *Electrode and chamber construction*

— Individually driven thermostats for upper and lower electrode and for the reaction chamber. The range for temperature control is 15 to 100 °C standard and up to 150 °C as an option.

— Electrode distance adjustable between: 5 to 70 mm (batch oriented system),
5 to 70 mm (single wafer system).

— The electrode assembly must be suited for operation at high frequencies (until 27·12 MHz), e.g. avoid parasitic plasma anywhere in the reactor.

— Both parallel plasma etching (PE) and reactive ion etching (RIE) must be possible in the system (anode and cathode coupling).

— *Vacuum design*

— The region of interest is between 10 mTorr and 10 Torr.

— Adjustable pumping speed.

— Automatic and manual pressure control with simple switching between the two modes.

— Use of non-corrosive materials for seals (fittings, O-rings) and tubing.

— *Gas cabinet*

Flexible handling of one to three gasses with one to three mass flow controllers, preferentially extendable to five gases (number of gases is an option).

— *Controls*

— The following parameters must be controllable:
gasline(s) in use,
flowrate,
process time,
time to stabilize,
time to overetch,
RF power,
temperature of both electrodes,
voltage on electrode.

— The electrical signal from the sensors (pressure sensor, etc.) must be easily accessible (e.g. on a standard plug) for process monitoring.

— At least one window to look into the plasma and additional flange(s) to hook up some analytical tools for process monitoring should be available.

— *Automatic etching control system*

— A keyboard and necessary memory for the step by step command of the process or the maintenance sequence.

— A plug-in PROM, user programmed, for automatic etching.

— *Wafer handling*

Automatic wafer handling, cassette to cassette load and unload without wafer damage or contamination.

The system should handle three inch wafers of up to 150 mm diameter.

— *Maintenance and safety*

— Easy dismantling for cleaning and repair.

— Standardization of flanges, seals, plugs, etc., and spare parts.

IV. TESTING EQUIPMENT

European testers for integrated circuits should be developed with the following characteristics:

— of the integral analog/digital type,

— of modular design, in order to be adaptable to both development and production testing tasks,

— development in two phases, as far as the digital part is concerned. The first step should be a tester for clock-rates of 10 to 20 MHz, the second step aiming at 50 to 100 MHz. This stepwise development has the advantage that the technological know-how built up in the first phase can be used to tackle the problems that have to be faced in the second

development round. Moreover, the high speed test development can thus be adapted to the developing requirements of the European IC industry in the high speed bipolar circuits,

— testing of devices with an increasing number of pins (from 64 to 128),

— substantial parts of the test system have to be 'ECL-specific',

— testing of memory devices alone has been excluded, however 'on-the-chip' memories are becoming increasingly important and therefore their testing has to be covered,

— one single high level test language concept should be supplied for the different tester configurations.

V. CAD FOR VLSI

1. Architecture

The problems to be tackled are the disciplines of specification, simulation and testing at the architectural design phase and the architectural strategies like error management and structured logic. The following activities appear to be required:

— Improvement in knowledge of computer techniques by VLSI designers through:

(a) transfer of know-how from computer manufacturers;

(b) better integration of computer science and electronic engineering training in universities.

— Research on:

(a) linking of behavioural and structural design by development of suitable languages and simulators;

(b) synthesis of logic from RTL description;

(c) error management including fault-tolerant aspects of VLSI architecture;

(d) structured logic including minimization for PLAs (programable logic arrays) and automatic programming of PLAs and ROMs (read only memories);

(e) firmware generation and simulation aids;

(f) parallel processing machines for signal processing.

2. Language and data structure

2.1. *Design data management*

Conventional graphic IC design systems are based upon a bottom up representation of the circuit being designed. This is considered inadequate for coping with the problems of VLSI design, and instead, a specification of a file management or design management system must be formulated with respect to the following purposes:

(a) to aid the management of a large number of files representing alternative representations of many modules of a system;

(b) to protect the integrity of a design involving a team effort;

(c) to manage design modifications;

(d) to aid re-partitioning of a design;

(e) to manage the provision of design documentation.

Research projects must be initiated which will enhance the normal filing system or operating system to provide the above facilities. The smallest unit of data in a transaction will be a complete file, and so conventional data bases are not appropriate. The implementation must be carried out with portability in mind. A standard language must be used with well-defined interfaces to standard filing systems. This project should be a joint project between IC designers, CAD tool specialists, and computer scientists.

2.2. *User interface*

Some design activities are highly interactive and demand a guaranteed fast response from the computer while not demanding a very powerful computer. An example is design specification using graphical techniques. Such activities can be supported on a small computer dedicated to a single user. Other activities are not primarily interactive, but do require very powerful computing facilities. An example is simulation. Such activities need powerful time-shared systems.

It is important that the computers supporting these related activities should be intimately connected. Techniques for controlling tasks split between two or more computers, and for allowing flexible movement of data between these tasks, should be investigated. General principles applicable to a wide range of hardware should be established.

The present trend in hardware design specification is to use text based language descriptions which are convenient for expressing the hierarchical structure, modularity, and repetitivity which is inevitable with VLSI. However, designers still tend to think in terms of diagrams, and graphical aids will continue to be valuable in the design process. A project ought to be launched to investigate methods of combining textual and graphical representations allowing each to be converted automatically into the other, so that the most appropriate interface can be freely chosen at each part of the design process.

2.3. *Simulation*

Software tools for simulation, test and verification have to span the design spectrum from RTLs down to transistor level. Activity should be directed towards the development of a flexible multilevel structural description language for NMOS and CMOS VLSI. Automatic compiler generation into the syntax of presently used single level tools and, more importantly, directly into the data structure of mixed mode simulators needs investigation. Mixed mode simulation techniques need considerable attention in the area of data structures, algorithms, and models.

It is strongly recommended to pay special attention to VLSI network analysis rather than pure simulation in order to reduce design time and ensure design correctness. This is a completely new research domain which looks entirely feasible based on the data structures and algorithms of presently existing mixed mode simulators.

2.4. *Verification*

Instead of intensive verification of manually performed or interactive design steps, the goal should be to automate as much as possible (silicon compilation, standard cell technique, etc.) to make verification unnecessary. To find a solid basis for the use or creation of such tools, a study should be initiated which compares the different approaches as well as different handcrafted layouts to find objective criteria for the fundamental principles of efficiency in layout.

The hierarchical design of VLSI is obvious. The verification between the different levels of hierarchy is a problem but cannot be avoided. In spite of the hierarchy, the complexity and amount of data is enormous and with today's tools leads to uneconomic computer times. Therefore, further candidates for research and development are dedicated hardware modules (e.g. design rule checkers, pattern memory plus counters and shift registers, or hardware language processors which produce the appropriate data structures).

2.5. *Influence of new computer architectures*

On the basis of the assumption that:

— software is now expensive and should be optimized while hardware is cheaper and can be used more freely,

— in the past few years a lot of high performance parallel processors have been developed and implemented,

— the architecture of a machine should fit the problem it is to solve,

investigation in the following two areas is proposed:

(a) development of new parallel algorithms and new data structures in any CAD branch, to exploit and implement the maximum parallelism;

(b) study of new special pufpose hardware processor to be interfaced with currently existing computer systems to improve part of their performance by at least one order of magnitude.

3. **Testing: summary of recommendations**

The team on testing recommend organizing future work in accordance with three main areas and the related topics listed below.

Main area of activities

	Research	Specification and evaluation	Development
1. TEST DATA GENERATION			
— Functional level testing (methods and strategies)	*		
— Element level ATPG	*		
— ATPG for LSI cells, regular logic, etc.	*		
— Fault types and models	*		
— Fault simulation strategies	*		
— Modular ATPG system		*	*
— Language for MTPG		*	*
— Integrated ATDG system		*	*
2. DESIGN FOR TESTABILITY			
— Partitioning	*		
— RAM design for testability	*		
— Microprogrammed units	*		
— Design for testability general techniques	*		
— Hardware implemented self-testing	*		
— Software/firmware self-testing	*		
3. DATA ACQUISITION AND DATA MANAGEMANT			
— DADM system		*	*
— Program development tools		*	*

4. **Device modelling: summary of recommendations**

The present report on device modelling covers three main areas:

— numerical device simulation,
— analytical models,
— table models.

For each of them, the main recommendations are summarized below.

4.1. *Numerical device simulation*

The main target of this subproject is that of stimulating European research centres and laboratories to develop advanced device-simulation packages, and make them available to European IC manufacturers. This should allow reaching an independence with respect to American and Japanese counterparts. The need for such an activity stems from the fact that, due to the importance of two-, and even three-dimensional effects, numerical device simulation represents the only predictive tool which can practically be used for device design. It is therefore recommended that at least four simulation packages be developed, namely:

— 2-D MOSFET simulator,
— 2-D simulator for bipolar devices,
— 3-D MOSFET simulator,
— 3-D simulator for bipolar devices.

For each of them, detailed specifications have been defined concerning the physical phenomena to be incorporated in the program, the physical and geometrical device structure, and I/O graphical capabilities.

4.2. *Analytical models (MOSFETs only)*

An activity in this area is essential for two main reasons: from the one hand analytical models trading off accuracy and simplicity are mostly suited for circuit designers in CAD circuit simulation programs; on the other hand, the functional dependence of relevant electrical parameters on geometrical and physical device structure is most easily identified in analytical models, which can, therefore, provide some insight in the physical phenomena occuring within a device.

The following analytical models should be developed:

Surface channel MOSFETs	long channel, low voltage (level 1) long channel, high voltage (level 2) short channel, low voltage (level 3) short channel, high voltage (level 4)
Buried channel MOSFETs	long channel (level 1) short channel (level 2)

4.3. *Physical model*

Again, detailed specifications are provided for each of the above models. In addition to the development of the models, the problem of parameter identification should be tackled and solved, especially as far as charges (or capacitances) are concerned.

4.4. *Table models*

The need for table models has been recognized for timing simulation purposes. In such simulators, the capacitances are rather poorly handled, being assumed as constants; therefore, the activity in this area should aim at developing tables for both currents and capacitances. The most important problem to be solved is that of providing the scaling rules, while maintaining the computational simplicity which is needed in order to strongly reduce the CPU time, with respect to that needed with analytical models.

COMMISSION RECOMMENDATION

of 3 February 1982

on the storage and reprocessing of irradiated nuclear fuels

(82/74/Euratom)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 124 thereof,

Having regard to the Council resolution of 18 February 1980 on the reprocessing of irradiated nuclear fuels [1],

Having regard to the report of July 1981 of the *ad hoc* Advisory Committee on the Reprocessing of Irradiated Nuclear Fuels, as set up by Council Decision 80/237/Euratom [2],

Whereas reprocessing is increasingly coming to be seen as an essential element in medium and long-term nuclear policies, in that it makes it possible to achieve a reduction in natural uranium and enrichment requirements as a result of the recycling of uranium and plutonium in thermal and fast reactors, with the prospect of reduced dependence on outside supplies of uranium through fast-breeder technology;

Whereas, accordingly, steps should be taken to create the best possible conditions, from the point of view both of promoters and of users, for its industrial development in compliance with public-safety and environmental-protection objectives and the aim of ensuring that nuclear materials are not diverted to applications other than those stipulated by their users,

Hereby recommends that the Governments of the Member States, the competent national authorities and the promoters and users each take the measures necessary to:

— make decisions and implement them without delay so as to ensure that programmes for the construction of the capacity necessary for the interim storage of irradiated fuels are completed by the appropriate time;

— explore all possibilities conducive to the setting-up of reprocessing undertakings capable of bringing together the interests expressed by a number of Member States and of such a kind as to:

  — facilitate the creation of an economically viable capacity,

  — ensure that partner undertakings have access to reprocessing services on financial terms fixed by common accord,

  — comply with International Nuclear Fuel Cycle Evaluation conclusions according to which it is considered desirable that, as far as possible, reprocessing be developed in the context of multinational corporations, thus providing possible additional advantages as regards the application of safeguards,

  — encourage the creation of a genuine market in this sector,

  — facilitate some degree of work-sharing among the reprocessing plants in such a way, for instance, that small and medium-sized plants possessing sufficient flexibility would be used, as a matter of priority, for reprocessing fuels from experimental and research reactors;

— encourage industrial cooperation within the Community by adopting as open an attitude as possible to the question of technology transfers and exchanges of experience, notably in the field of plant safety.

Done at Brussels, 3 February 1982.

For the Commission

Karl-Heinz NARJES

Member of the Commission

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[1] OJ No C 51, 29. 2. 1980, p. 4.
[2] OJ No L 52, 26. 2. 1980, p. 9.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 25 May 1982

adopting a research and training programme (1982 to 1986) in the field of controlled thermonuclear fusion

(82/350/Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission submitted after consultation with the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas the energy problem is shared by all the Member States; whereas joint efforts to resolve this problem are likely to produce better results; whereas thermonuclear fusion is one possible solution to the energy problem in the longer term; whereas the rational use of all the different energy sources must be coordinated; whereas the Community must therefore continue to ensure optimum consistency in its efforts between Community activities in the various sectors of energy and energy research;

Whereas, in its Decision 80/318/Euratom (3), as amended by Decision 81/380/Euratom (4), the Council adopted a research and training programme (1979 to 1983) in the field of controlled thermonuclear fusion; whereas Article 3 of that Decision provides that the Commission will submit to the Council, not later than 1 July 1981, a review proposal designed to replace the 1979 to 1983 programme with a new five-year programme (1982 to 1986) with 1982 and 1983 constituting years common to both programmes; whereas Decision 80/318/Euratom should therefore be repealed;

Whereas, as a result of such repeal, 67 million ECU assigned to the preceding programme, exclusive of JET (Joint European Torus), and 35 million ECU assigned to the preceding programme for the JET project will remain available; whereas these amounts will be assigned to the new programme; whereas such a step must be taken into account in determining the upper limit for expenditure commitments necessary for the execution of the new programme;

Whereas, in view of the considerable efforts needed to reach the application stage of controlled thermonuclear fusion, which could be of benefit to the Community, particularly in the wider context of the security of its long-term energy supplies, the various stages of development of the work hitherto undertaken in this field should continue on a joint basis, attaching great importance to the strategy of concentrating effort on the Tokamak line and sizeable effort on two alternative lines in magnetic confinement, the reverse field pinch and stellarators, subject to a periodic reassessment of the reactor applicability of these lines compared with that of the Tokamak;

Whereas the scientific progress achieved in this field in recent years in the Community and the rest of the world illustrates the need, particularly for Tokamak systems, to construct larger and more complex devices and to concentrate in particular on the development of plasma heating techniques, attaching greater importance to experiments relating to ignition with compact

(1) OJ No C 87, 5. 4. 1982, p. 127.
(2) OJ No C 348, 31. 12. 1981, p. 5.
(3) OJ No L 72, 18. 3. 1980, p. 18.
(4) OJ No L 149, 6. 6. 1981, p. 32.

devices having a high magnetic field, if the feasibility thereof has been proved;

Whereas it is necessary to complete the construction of JET in its basic performance, to extend the device to its full performance and to operate and exploit it;

Whereas the time has come to start the definition of the large device constituting the next step after JET and to launch, with the collaboration of the Joint Research Centre, the technological developments required for its design and construction as well as those needed in the longer term for the fusion reactor;

Whereas the research proposed by the Commission constitutes an appropriate means of pursuing such action and it is, consequently, in the common interest to adopt a multiannual programme in the field of controlled thermonuclear fusion, the existence of which is moreover necessary to enable the Community to participate in international cooperation in this field;

Whereas it is important that the Community should continue to encourage the construction of certain equipment concerned with projects accorded priority status, the support of JET by the Associations and certain developments in the field of fusion technology, by granting a preferential rate of participation in the expenditure for such actions;

Whereas, furthermore, the mobility of staff between organizations cooperating in the execution of the programme should be promoted,

HAS DECIDED AS FOLLOWS:

Article 1

A research and training programme in the field of controlled thermonuclear fusion as defined in the Annex is hereby adopted for a five-year period as from 1 January 1982.

Article 2

The upper limit for expenditure commitments for the programme exclusive of JET shall be fixed at 301 million ECU, including an amount of 67 million ECU remaining from the previous programme. The maximum number of staff shall be progressively reduced from 113 to 105 over the period of the programme.

The upper limit for expenditure commitments for JET during the duration of the programme shall be fixed at 319 million ECU including an amount of 35 million ECU remaining from the previous programme. The number of temporary employees within the meaning of Article 2 (a) of the conditions of employment of other servants of the European Communities shall be progressively increased from 150 to a maximum of 165 over the first three years of the programme.

Article 3

The Commission shall submit to the Council, not later than 1 July 1984, a review proposal designed to replace the present programme with a five-year programme with effect from 1 January 1985.

Article 4

Decision 80/318/Euratom is hereby repealed with effect from 1 January 1982.

However, amounts which, pursuant to Decision 80/318/Euratom, are authorized under the relevant headings of the 1980, 1981 and 1982 budgets and which on 1 January 1982 have not yet been committed, or which, by that date, have been committed but not yet paid, may be used for the execution of the present programme.

Done at Brussels, 25 May 1982.

For the Council

The President

L. TINDEMANS

ANNEX

CONTROLLED THERMONUCLEAR FUSION

1. The subject matter of the programme to be executed shall be :

   (a) plasma physics in the sector concerned, in particular studies of a basic character relating to confinement with suitable devices and to methods for producing and heating plasma ;

   (b) research into the confinement, in closed configurations, of plasma of widely varying density and temperature ;

   (c) research into light-matter interactions and transport phenomena and the development of high-power lasers ;

   (d) the development and application to confinement devices of sufficiently powerful plasma heating methods ;

   (e) improvement of diagnostic methods ;

   (f) definition of the large device constituting the next step after JET and technological developments required for its design and construction as well as those needed in the longer term for the fusion reactor ;

   (g) completion of the construction of the JET device in its basic performance ; extension of JET to full performance ; operation and exploitation of JET.

   The work referred to in (b) must be pursued having regard to progress elsewhere in the world in order to establish a position for mutual technical exchanges whenever cooperation in a larger international framework takes place.

   The work referred to in (a), (b), (c), (d), (e) and (f) shall be carried out by means of association or limited duration contracts which are designed to yield the results necessary for the implementation of the programme and which take into consideration the work carried out by the Joint Research Centre, in particular in relation to the next step and technology referred to in (f).

   The implementation of the JET project referred to in (g) has been entrusted to the 'Joint European Torus (JET), Joint Undertaking', established by Decision 78/471/Euratom [1].

2. The programme set out in point 1 shall be part of a long-term cooperative project embracing all work carried out in the Member States in the field of controlled thermonuclear fusion. It is designed to lead in due course to the joint construction of prototypes with a view to their industrial production and marketing.

3. The appropriation of 301 million ECU fixed for the programme exclusive of JET can be broken down as follows :

   (a) about 43 % for the financing at a preferential rate of approximately 45 % of projects, as specified in paragraph 4 ;

   (b) about 2 % for certain industrial contracts within the activity of 'Next Step and Fusion Technology' financed at a rate of 100 %, as defined in paragraph 4 ;

   (c) about 6 % for the financing of administration costs and for expenditure intended to ensure the mobility of staff to enable them to work in organizations cooperating in the implementation of the programme ;

   (d) the amount not set aside for the operations and expenditure referred to in (a), (b) and (c), and any positive balance from the contributions of associated third countries under the programme exclusive of JET, shall be devoted to the financial participation by the Community in other expenditure incurred by the associations. This participation shall be at a uniform rate of about 25 %.

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[1] OJ No L 151, 7. 6. 1978, p. 10.

4. After a technical examination, the Consultative Committee of the Fusion Programme may accord priority status to projects belonging to one of the following areas:

(a) Tokamak systems and support for JET;

(b) other toroidal machines;

(c) heating and injection;

(d) Next Step and Fusion Technology.

After Commission may finance projects in areas (a), (b), (c) and (d) at a uniform preferential rate of about 45 %.

After consulting the Consultative Committee of the Fusion Programme, the Commission may support industrial contracts in area (d) at a rate of 100 %.

In return, all Associations shall have the right to take part in the experiments carried out with the equipment thus constructed.

5. The upper limit for expenditure commitments for the JET project is fixed at 319 million ECU. The amount in question is intended to finance the completion of the construction of the JET device in its basic performance, the extension of JET to full performance and the operation and exploitation of JET until the end of the year 1986, with a participation rate of 80 %. The Swedish and Swiss contributions to the JET project shall be deducted directly from the financing of that part of the overall budget laid down for the project which is to be borne by the Community budget.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 17 May 1982

adopting a research and development programme (1982 to 1985) in the raw materials sector

(82/402/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas Article 2 of the Treaty assigns to the Community the task *inter alia* of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas the Council resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3) stressed that the whole range of available means of action should be used as appropriate, including indirect action;

Whereas the Community depends to a great extent on third countries for its supply of raw materials, and it is thus in the Community's interest to increase its self-supply potential, and in particular to develop new technologies for its indigenous resources;

Whereas Community research action in the raw materials sector will contribute effectively to the achievement of the abovementioned objectives, particularly through the discovery and economic exploitation of internal resources, the improvement of waste recovery, recycling and re-use and the development of material substitution for a more efficient use of materials, as well as through the development of exportable techniques and technologies;

Whereas by Decision 79/968/EEC (4) the Council adopted a multiannual research and development programme for the European Communities in the field of the recycling of urban and industrial waste;

Whereas by Decision 78/264/Euratom (5), as amended by Decision 81/364/Euratom (6), the Council adopted, for a period of five years with effect from 1 January 1978, a programme of research and development for the European Atomic Energy Community on uranium exploration and extraction;

Whereas on 19 April 1977 the European Parliament adopted a resolution on the Community's raw materials supply;

Whereas in its deliberations of 20 December 1979 the Council invited the Commission to concentrate Community research programmes on sectors of priority interest, including energy and raw materials, and to rationalize the structures for the preparation, adoption and implementation of these programmes; whereas a grouping of indirect actions in the raw materials sector would constitute a contribution towards meeting these objectives;

Whereas the Treaty does not provide the specific powers necessary for this purpose;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the Commission proposal,

(1) OJ No C 11, 18. 1. 1982, p. 215.
(2) OJ No C 64, 15. 3. 1982, p. 6.
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No L 293, 20. 11. 1979, p. 19.
(5) OJ No L 72, 14. 3. 1978, p. 12.
(6) OJ No L 137, 23. 5. 1981, p. 44.

HAS DECIDED AS FOLLOWS:

Article 1

1. A programme of research and development for the European Economic Community in the raw materials sector is hereby adopted in the form set out in the Annex, for a four-year period starting on 1 January 1982.

2. The programme will be implemented by means of indirect actions and coordination actions.

Article 2

1. The appropriations needed to implement the programme, including expenditure relating to a staff of 19 employees, the amount of which is fixed at 54 million ECU, shall be entered in the general budget of the European Communities.

The distribution of this amount by sub-programme is shown in Section A of the Annex.

2. In the light of experience gained in the course of the execution of this programme and after having consulted the Scientific and Technical Research Committee (CREST) and the competent Advisory Committee on Programme Management, the Commission shall be authorized to transfer appropriations between the sub-programmes defined in Section A of the Annex, provided that such transfers do not result in an increase or a reduction of more than 10 % in the original allocation to each sub-programme.

Article 3

The Commission shall be responsible for the implementation of the programme and shall be assisted by advisory committees on programme management in the following fields, such committees being set up for this purpose and governed by the rules laid down in the Council resolution of 18 July 1977 on advisory committees on research programme management [1]:

(a) metals and mineral substances, recycling of non-ferrous metals;

(b) wood as a renewable raw material;

(c) substitution and ceramics (clay-based materials and technical ceramics).

Article 4

In the second year the Commission shall draw up an interim report on the results of the programme. A final review of the programme shall be made in the third year. In the light of this review the Commission may, through the appropriate procedures, present to the Council a proposal for a new four-year programme which would supersede the current programme at the end of the third year. A report on this review and on the possible revisions shall be drawn up for the European Parliament and the Council.

Article 5

The information resulting from the implementation of the indirect action programme defined in the Annex, in so far as it concerns raw materials covered by the Treaty, shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [2].

Article 6

1. In accordance with a procedure to be laid down by the Commission after having consulted the committee referred to in Article 3, the Member States taking part in coordination activities and the Commission shall regularly exchange all useful information concerning the execution of the research covered by such activities. The Member States shall provide the Commission with all information relevant for coordination purposes.

2. The Commission shall prepare annual progress reports on the basis of the information supplied, and shall forward them to the Member States and the European Parliament.

3. At the end of the coordination period the Commission, after having consulted the Committees referred to in Article 3, shall forward to the Member States and the European Parliament a comprehensive report on the execution and results of the coordination activities.

Article 7

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with third countries, in particular those involved in European collaboration in the field in Scientific and Technical Research (COST) with a view to associating them wholly or partly with this programme.

2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.

Done at Brussels, 17 May 1982.

For the Council

The President

P. de KEERSMAEKER

(1) OJ No C 192, 11. 8. 1977, p. 1.

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

ANNEX

RAW MATERIALS RESEARCH AND DEVELOPMENT PROGRAMME

A. The programme comprises the following sub-programmes:

I. Metals and mineral substances, including clay-based materials for the ceramics industry

II. Wood as a renewable raw material

III. Recycling of non-ferrous metals

IV. Substitution and materials technologies, including technical ceramics

I. METALS AND MINERAL SUBSTANCES, INCLUDING CLAY-BASED MATERIALS FOR THE CERAMICS INDUSTRY

An expenditure of 25 million ECU is allocated to this sub-programme.

It covers the following research areas:

	Indirect action	*Coordinated action*
1. Exploration		
1.1. Geology of ore deposits and of their host rocks	×	×
1.2. Geochemical methods	×	×
1.3. Geophysical methods	×	×
1.4. Remote sensing	×	×
1.5. Drilling techniques	×	×
1.6. Statistics and geostatistics applied to exploration data	×	×
2. Ore processing		
2.1. Complex lead, zinc and copper ores	×	×
2.2. Other complex and oxidized ores	×	×
2.3. Aluminium from low-grade sources	×	×
2.4. Chromium from low-grade sources	×	×
2.5. Phosphates	×	×
2.6. Slags and residues	×	×
2.7. Modelling and control in mineral processing	×	×
2.8. Improved mineralogical analysis	×	×
3. Mining technology		
3.1. Problems associated with depth	×	×
3.2. Marginally economic deposits	×	×
3.3. Geostatistics and modelling in mineral exploitation	×	×
4. Clay-based materials for the ceramics industry		
Research into raw materials properties in relation to fabrication faults and product quality	×	×

II. WOOD AS A RENEWABLE RAW MATERIAL

An expenditure of 12 million ECU is allocated to this sub-programme.
It covers the following research areas:

	Indirect action	*Coordinated action*
1. Wood production		
1.1. Selection and improvement of forest reproductive material	×	×
1.2. Improvement of growth (silviculture)		
1.2.1. Treatment of site and stands	×	×
1.2.2. Establishment and management of fibre plantation	×	×
1.2.3. Cultivation and management of trees outside the forest	×	×
1.3. Prevention of losses		
1.3.1. Protection against damage from biotic agents	×	×
1.3.2. Prevention of forest fires	×	×
1.3.3. Protection against damage from other abiotic causes	×	×
1.4. Forest inventory	—	×
2. Wood harvesting, storage and transport		
2.1. Harvesting of biomass	×	×
2.2. Processing and storage of chips for industrial use	×	×
2.3. Harvesting systems for on-ground extraction	—	×
2.4. Harvesting systems for off-ground extraction	—	×
2.5. Safety and health aspects	—	×
3. Wood as material		
3.1. Study of wood properties	×	×
3.2. Improvement of performance and protection against deterioration	×	×
3.3. Development of objective testing methodology	×	×
4. Wood processing without modification of its basic structure		
4.1. Development of manufacturing processes and products	×	×
4.2. Adhesives and joints	×	×
4.3. Constructional use of wood		
4.3.1. More efficient use and re-use of wood in temporary works	×	×
4.3.2. Greater economy in use through improved design	×	×
4.3.3. Load duration effects	×	×
5. Processing of wood and related organic materials into fibre products		
5.1. Process and product development in the pulp industry	×	×
5.2. Better use of recycled waste paper, cereal straw and other fibres	×	×
5.3. Improvement of paper and board manufacturing processes	×	×
6. Wood as a source of chemicals		
6.1. Development of processes to separate chemically the main components of materials containing ligno-cellulose substances	×	×
6.2. Utilization of lignin, hemicelluloses and cellulose	×	×
6.3. Recovery of by-products from chemical fibre processing	×	×

III. RECYCLING OF NON-FERROUS METALS

An expenditure of 6·5 million ECU is allocated to this sub-programme.
It covers the following research areas:

	Indirect action	*Coordinated action*
1. Collection and characterization of non-ferrous metals scraps and waste	—	×
2. Physical processing of non-ferrous metals scraps and waste		
2.1. Mechanical processes		
— Selective grinding and shredding	—	×
— Optimization of these techniques with respect to energy consumption	×	×
2.2. Physical processes		
— Advanced gravimetric processes using magnetic fluids	×	×
— Advanced methods of electronic separation	×	×
— Advanced processes using eddy currents	—	×
— Advanced dry gravimetric processes (fluidized beds)	—	×
— New flotation techniques	—	×
3. Metallurgical processing of non-ferrous scraps and waste		
3.1. Physical separation of charges for pyrometallurgical and hydrometallurgical processes		×
3.2. Hydrometallurgical processes		
3.2.1. Leaching	—	×
3.2.2. Purification of solutions and extraction of non-ferrous metals from solutions	×	×
3.2.3. Direct hydrometallurgical processing of sludges containing non-ferrous metals	×	×
3.3. High-temperature pyrometallurgical processes		
3.3.1. High-temperature pretreatment to separate metals from non-metallic components	—	×
3.3.2. Fusion processes	—	×
3.3.3. High-temperature processes based on the formation of a gaseous phase	—	×
3.4. Secondary metals refining — molten salt electrolysis	×	×
Technico-economic studies	office studies	

IV. SUBSTITUTION AND MATERIALS TECHNOLOGIES, INCLUDING TECHNICAL CERAMICS

An expenditure of 10·5 million ECU is allocated to this sub-programme.
It covers the following research areas:

	Indirect action	*Coordinated action*
1. Research on the substitution of materials used in the electric and electronics industry		
1.1. Electrical contact function	×	×
1.2. Electrical conductivity function	—	×
1.3. The magnetic function	×	×

	Indirect action	*Coordinated action*
2. Research into the substitution of materials used in surface treatment and coatings		
2.1. Packaging (tinplate)	×	×
2.2. Wear-resistant and corrosion-resistant coatings	×	×
2.3. Sensitive surfaces for photography	—	×
3. Research on substitution in cutting and machining tools		
3.1. Materials for cutting applications	×	×
3.2. Materials for non-cutting applications	×	×
3.3. Materials for wear resistance, facing and surface protection	×	×
4. Stainless steel and alloys		
4.1. Stainless steels and alloys	×	×
4.2. Improvement of high-speed steels	×	×
5. Other uses (soldering and brazing technologies, leather tanning)	×	×
6. Technical ceramics		
6.1. Powder processing technology	×	×
6.2. Improvement of the fabrication cycle for various ceramic materials	×	×

B. The programme also includes the following ongoing projects in the raw materials sector:

I. URANIUM EXPLORATION AND EXTRACTION (1)

An expenditure of 5·4 million ECU was allocated to this project for the period 1978 to 1982.

It covers the following research areas:

1. **Exploration**
   - 1.1. Discovery of uranium provinces — uranium geology and metallogeny
   - 1.2. Exploration techniques
   - 1.3. Transportation and deposition of uranium
   - 1.4. Bore-hole logging

2. **Research and development in uranium extraction and recovery**
   - 2.1. Recovery of uranium from phosphoric acid liquors
   - 2.2. Recovery of uranium from phosphatic rocks
   - 2.3. Extraction of uranium from the waste of phosphate rock treatment
   - 2.4. Recovery of uranium by dump, heap, bacterial or in-situ leaching
   - 2.5. High-temperature, high-pressure leaching
   - 2.6. Extraction of uranium and other values from calcines and low-grade sources
   - 2.7. Other technical aspects related to the uranium mining industry

(1) OJ No L 72, 14. 3. 1978, p. 12; OJ No L 137, 23. 5. 1981, p. 44.

II. RECYCLING OF URBAN AND INDUSTRIAL WASTE (1)

An expenditure of 9 million ECU was allocated to this project for the period November 1979 to October 1983.

It covers the following research areas:

1. **Sorting of household waste**
   - 1.1. Assessment of waste sorting projects
   - 1.2. Methods for sampling and analysis of household waste
   - 1.3. Evaluation of health hazards
   - 1.4. Technology for the sorting of bulk waste
   - 1.5. Materials recovery
   - 1.6. Energy recovery
   - 1.7. New collection and transport systems

2. **Thermal treatment of waste**
   - 2.1. Firing of waste-derived fuel
   - 2.2. Pyrolysis and gasification
   - 2.3. Recovery of metal and glass from residue

3. **Fermentation and hydrolysis**
   - 3.1. Anaerobic digestion
   - 3.2. Carbohydrate hydrolysis
   - 3.3. Composting

4. **Recovery of rubber waste**
   - 4.1. Retreading
   - 4.2. Size reduction
   - 4.3. Reclaiming and recycling of rubber powder
   - 4.4. Pyrolysis

(1) OJ No L 293, 20. 11. 1979, p. 19.

Corrigendum to Council Regulation (EEC) No 3744/81 of 7 December 1981 concerning Community projects in the field of microelectronic technology

(Official Journal of the European Communities No L 376 of 30 December 1981)

Page 38 :

The title of the above Regulation shall be replaced by the following :

'Council Regulation (EEC) No 3744/81 of 7 December 1981 concerning Community actions in the field of microelectronic technology'.

Footnote (2) shall be replaced by the following :

'(2) OJ No C 138, 9. 6. 1981, p. 26.'

COUNCIL REGULATION (EEC) No 2038/82

of 19 July 1982

amending Regulation (EEC) No 725/79 as regards the granting of financial support for demonstration projects in the field of energy saving

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to Council Regulation (EEC) No 1303/78 of 12 June 1978 on the granting of financial support for demonstration projects in the field of energy saving (1), and in particular Article 10 thereof,

Having regard to the proposal from the Commission (2),

Having regard to the opinion of the European Parliament (3),

Having regard to the opinion of the Economic and Social Committee (4),

Whereas, by its Regulation (EEC) No 725/79 (5), the Council fixed the maximum amount of aid to be made available pursuant to Regulation (EEC) No 1303/78 ;

Whereas it is appropriate to expedite the application of energy-saving technologies, processes and equipment,

HAS ADOPTED THIS REGULATION :

Article 1

The sole Article of Regulation (EEC) No 725/79 shall be replaced by the following :

'Sole Article

The amount estimated necessary to be granted pursuant to Regulation (EEC) No 1303/78 totals 81 million ECU for the whole of the four-year programme.'

Article 2

This Regulation shall enter into force on the third day following its publication in the *Official Journal of the European Communities.*

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 19 July 1982.

For the Council

The President

K. OLESEN

(1) OJ No L 158, 16. 6. 1978, p. 6.
(2) OJ No C 280, 30. 10. 1980, p. 5.
(3) OJ No C 125, 17. 5. 1982, p. 175.
(4) OJ No C 138, 9. 6. 1981, p. 1.
(5) OJ No L 93, 12. 4. 1979, p. 1.

COUNCIL REGULATION (EEC) No 2039/82

of 19 July 1982

amending Regulation (EEC) No 726/79 as regards the granting of financial support for projects to exploit alternative energy sources

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to Council Regulation (EEC) No 1302/78 of 12 June 1978 on the granting of financial support for projects to exploit alternative energy sources [1], and in particular Article 11 thereof,

Having regard to the proposal from the Commission [2],

Having regard to the opinion of the European Parliament [3],

Having regard to the opinion of the Economic and Social Committee [4],

Whereas, by its Regulation (EEC) No 726/79 [5], the Council fixed the maximum amount of aid to be made available pursuant to Regulation (EEC) No 1302/78 ;

Whereas it is appropriate to expedite the application of technologies for liquefaction and gasification of solid fuels and for geothermal energy,

HAS ADOPTED THIS REGULATION :

Article 1

The sole Article of Regulation (EEC) No 726/79 shall be replaced by the following :

'Sole Article

1. The amount estimated necessary to be granted pursuant to Regulation (EEC) No 1302/78 totals 124 million ECU for the whole of the five-year programme.

2. For the following sectors the aid shall be assessed as follows :

	million ECU
— liquefaction and gasification of solid fuels	69
— exploitation of geothermal fields	32·5
— exploitation of solar energy	22·5

The Commission may, within the limit of 124 million ECU, modify this apportionment by up to 10 % of any of the sectoral amounts. The Council, acting unanimously, may modify the apportionment by more than 10 % of any of the sectoral amounts.'

Article 2

This Regulation shall enter into force on the third day following its publication in the *Official Journal of the European Communities.*

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 19 July 1982.

For the Council

The President

K. OLESEN

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[1] OJ No L 158, 16. 6. 1978, p. 3.
[2] OJ No C 280, 30. 10. 1980, p. 6.
[3] OJ No C 125, 17. 5. 1982, p. 175.
[4] OJ No C 138, 9. 6. 1981, p. 1.
[5] OJ No L 93, 12. 4. 1979, p. 2.

ESTABLISHMENT OF A SECOND RESEARCH PROGRAMME

'Safety in mining'

I. INTRODUCTION

Article 55 of the European Coal and Steel Community Treaty deals with the promotion and financing of technical and economic research relating to the production and increased use of coal and steel and research on occupational safety in the coal and steel industries of the Community.

Since 1969 a total of 10 113 566 ECU has been allocated for safety research in coal and ironstone mining. Until 1976 projects were proposed and agreed in an individual manner without recourse to an overall programme but in that year, in response to the desires expressed by all relevant bodies of the mining industry, the Commission, on 21 December 1976, instituted a research programme 'Safety in mines' of five years' duration and involving 7 500 000 ECU of financial aid. This aid has now been allocated for implementing the programme.

In addition to this research directed specifically to safety in mining the Commission financially aids mining research through the 'Medium-term research aid programme for coal' under Directorate-General XVII, 'Energy', and the 'Programme on ergonomics for the steel and coal industries' under Directorate-General V, 'Employment and Social Affairs', both having a bearing on safety in mining. The Safety and Health Commission for the Mining and Other Extractive Industries is active in the safety field, mainly through exchanges of experience and information within the Community countries, and under its terms of reference can propose research into mine safety matters. Results of research pertinent to mine safety are notified to this body as they become available. The need to harmonize all these interests is critical and in the operation of any mining safety programme all the efforts made by the Commission and by pertinent bodies outside of the Commission must be considered and taken fully into account.

With the increasingly important part being played by coal in the world energy situation, the need for the Community to exploit this indigenous energy source to the maximum is paramount, necessitating a mining industry offering the safest working conditions possible.

Furthermore, the iron and steel industry has a very real interest in seeing occupational safety research

extended. Research of service to both industries is not ruled out under the proposed programme. The main aim of the programme ought not merely to be the prevention of group or even fatal accidents — a major concern in mining — but also to seek suitable methods of preventing other industrial accidents which constitute a clear majority statistically speaking.

The establishment of a second research programme 'Safety in mining' is considered necessary. The first programme, in spite of the limited finances available, has nonetheless achieved considerable impact on safety. To consolidate this impact and also to try to ensure that safety research keeps abreast of and even tries to anticipate the technological advances taking place, a further research programme is proposed, as a harmonious continuation of and with the same broad lines as the previous one. All relevant bodies within the mining industry of the Community have been consulted and all agree on the need for a second programme.

II. THE SAFETY PROGRAMME

1. General

The degree of mechanization has continued to increase, as has concentration of working with resulting increased unit tonnages. Bulkier, heavier, more powerful machines with greater capacities are being used for the winning of coal and driving roadways and for mineral transportation. More difficult thinner and thicker seams are being worked at greater depths below the surface than in previous years. Mining technology and operations now involve integrated systems and sub-systems of winning, support, transportation and control. The tempo of all operations has increased and with concentration of production and despite increases in productivity more men may be concentrated on a working unit, thus occasioning the greater possibility of incidents of a major nature, besides resulting in individuals and small groups working intensively in isolation, whose safety, and the safety of others who can be affected although remote from them, must be ensured. Aspects of monitoring, data transmission and presentation of information, remote and automatic control have made rapid strides with attendant benefits, although they have not solved all the problems and have brought new ones to light.

These changes have tended to alter the pattern and incidence of accidents and call for close attention and analysis, as do the suitability and compatability of emerging highly sophisticated integrated systems and sub-systems of winning, support, transport and control. The approach to safety needs to be equally sophisticated both in identifying hazards and providing solutions for their removal.

Past experience has pinpointed the need to give attention to both individual and collective incidents. This emphasis still holds good and both should continue to receive attention.

A particular facet of the first safety programme was that it was devoted exclusively to underground matters. This was intentional, but experience and the changing pattern of mining methods and accidents has pointed up the need to include the safety of surface activities and opencast mining operations. This is particularly so where the advent of increased production necessitates the provision of new and modernized surface layouts and plants at the same time as production continues, so compounding possible danger. Opencast mining is an expanding source of coal and iron ore and it is considered that the time is propitious to look more closely at, and if possible devote more research effort to, the particular safety problems inherent in this method of mineral winning.

2. The first programme

The first programme comprised some 80 projects selected following the usual consultations.

In many cases research has reached the stage where results have been achieved in development and prototypes but still needs more work to effect the transition to regular, safe, underground use. In many other cases research is still on-going.

The following illustrate briefly some of the research undertaken and progress made in the main fields.

(a) *Fires and underground combustion*

Much attention was devoted to the subject of mine fires and heatings, since these accidents continue to constitute a major hazard. Particular emphasis was laid on early detection and warning of their occurrence in adverse situations such as hidden fires.

Progress was made in the development of various types of detector coupled to data transmission and warning systems. The work done has tended to emphasize that a standard system is unlikely but rather several different systems are needed to cater for the different types of fires and the circumstances in which they occur.

Further work should be carried out on detectors, on selecting them and adapting them to mine conditions. Progress has, however, been made in eliminating false alarms occasioned by CO emanating from sources other than fires, for example from shotfiring operations or diesel-engined vehicle movements.

The optimum positioning of detectors for detection of small-scale fires in wide cross-section roadways has been studied and shows that the readings of the CO evolved indicates stratification in the roadway linked to variations in airspeed; the precise pattern of CO stratification needs to be determined.

Progress has been made towards more satisfactory fire-resistant greases. Many were subjected to fire resistance scrutiny, after which several were deemed satisfactory for engineering tests. From these, three have emerged and will be subjected to further operational trials.

No positive outcome has yet resulted from efforts to try to devise a small-scale test to determine the degree of fire resistance of conveyor belts.

(b) *Explosions*

The risk of explosions underground caused either by firedamp or by dust still remains a matter for real concern.

Frictional firedamp ignitions, their parameters and suppression were investigated and fresh knowledge was gained of them.

The possibility of suppressing these ignitions close to their source has been studied and methods and equipment have been developed to suppress ignitions of methane and coal dust with the firedamp detector and suppressor mounted on the coal winning machine. These have been successfully tested on some machines and in the experimental mine.

Attention was given to the development of triggered barriers for the automatic suppression of explosions. Various types have been tested based on different sensing principles but in general they use water as the suppressant. A limited number are at the final study stage or undergoing trials underground. In the latter two fields, various types need to be developed further and their specifications and operating efficiency under various likely conditions compared.

(c) *Rescue*

Research into rescue methods under the first programme was not on a wide scale, probably because considerable work had been done, prior to the programme, on the rescue of trapped miners.

One area receiving particular attention related to self-contained self-rescuers. The ones currently in general use are unsatisfactory in oxygen deficient atmospheres and attention is turning towards types able to overcome this shortcoming. Self-contained apparatus (chemical oxygen) is in everyday use in some Community mines (coal, potassium, uranium, bauxite). To this end practical underground response and storage tests were put in hand to ascertain the long-term reliability of such apparatus.

(d) *Surveillance, telemetry, remote control, automation and communication*

In this field a considerable amount of work was undertaken and much of it, inevitably, related to fire detection and presentation of information concerning fires. This resulted in considerable progress in mine air analysis and relevant information provision using computers and data transmission systems.

Following on the development of a television camera system for use in boreholes for rescue purposes, research was instigated on the development of a television system for the monitoring of shafts and large boreholes of greater depths.

Research has related to the use of radio and electromagnetic communication methods in underground rescue operations. This has shown that the use of low frequency direct propagation radio signals as a possible means of communicating through strata is not suitable for the longwall workings at the depths found in the coal mines of the Community. Methods of communication between rescue teams and base, using micro-waves, are being examined and developed.

Radio systems have been studied which detect persons entering an area made dangerous by the presence of operating machinery and stop the machinery in such circumstances.

(e) *Methods of working*

Under this heading a fairly wide range of topics was tackled. Attention was focussed on stricter control and protection from falls of ground in ironstone mines and from this emerged a prototype system giving warning of impending falls of ground which,

with further development, may be of use on a wider scale.

Research related to a remotely controlled system of coal loading in an endeavour to remove personnel from danger areas (falls of ground, dust, gas outbursts). The remote operation of machinery with television control was tested and followed up by industrial-scale development.

In the field of explosives work was done to try to determine the causes of incomplete detonation of explosives, which sometimes occurs when firing rounds of shots. Difficulty was experienced in developing a satisfactory method for measuring the pressures in shot-holes during shotfiring operations, but one was devised. Using this method the effects when shotfiring in rock has been assessed as regards the relationship between charge weights and distance between shot-holes without interference being caused. Further work will assess the relationship in other types of strata and when using various types of explosives.

Research is being carried out into the safe operation of conveyors. The aim is to develop a clutch/brake unit to reduce conveyor over-run on stopping. A prototype device designed to prevent inadvertent movement of power loader machines on level faces and steep gradients was developed.

(f) *Electricity*

This research covered the development of high-speed fault detection and circuit breaking devices together with wider ranging improvements of safety aspects in electrical networks and equipment.

A system has been developed for the rapid detection of small and large current faults. Used with rapidly tripping switchgear a cut-off time of 13 milli-seconds has been achieved with fault currents in excess of the motor starting currents. In addition the system will detect minor short circuits which were not detectable before, although in this case the time involved is greater. The system is being tried underground at a producing mine. Laboratory testing of switchgear circuits incorporating thyristors is being undertaken, as a result of which, it is hoped, the system operating time will be reduced to less than 10 milli-seconds.

(g) *Metallurgy*

Research looked particularly at winding systems with emphasis on the geometry of braking methods and safer control of winding operations, particularly as regards slipping and slack ropes. The brake geometry research was particularly revealing and as a result of the investigations and the findings applied, winding operations were considered to have been made considerably safer.

(h) *Accidents and accident information*

This field unfortunately attracted little attention and only two projects were undertaken. One concerned the reduction of accidents in locomotive and rope hauled transport systems operating on floor mounted rails. As a result several developments are installed underground, either fully tested or on trial.

Track mounted energy absorption units for stopping over-speeding vehicles have been tested and several are in use underground. Also developed and installed underground is an electronic overload protection device which cuts power at pre-determined loadings of the rope in a rope haulage system.

Trials are also underway to assess the suitability of rack and pinion drive systems for underground locomotives operating on steep gradients.

The second project is using computerized information to try to relate accidents to systems and working methods employed.

(i) *Noise*

Only one project was carried out under the first programme, dealing with noise exposure and control in roadways, headings and main-riding systems.

3. Contents of the second programme

The new programme is intended to continue and supplement the old one and provide the main headings under which research should be done.

The scope would be widened from the previous programme to include both surface matters and opencast mining in the coals and iron-ore industries. Besides this widening of scope it is considered that benefits would ensue from the addition of two major fields of research, 'Transport and handling' and 'Rockbursts and associated phenomena'. Both were included as topics in other fields in the old programme but experience and events indicate that these are worthy, in their own right, of consideration as main fields of research. Many accidents are associated with the use of plant and machinery, transportation and handling of materials. In addition, in order to try to improve the safety record of transport and handling and associated operations a separate field of research for this would be beneficial.

Rather than listing all possible projects, the programme is intended to define the main research fields and to sketch the broad schemes under which projects may be submitted. Under these could come the continuation and termination of research which showed promise under the first programme, research

to consolidate progress and gains already made, and new lines of research to keep pace with new developments and requirements in an attempt to achieve a safer working environment for those engaged in the winning of coal and iron-ore.

In the past the need for Community research in which a topic is undertaken jointly be several institutes was stressed. This has achieved limited response so far and once again it is stressed that this type of research shows considerable benefits and more of it must be undertaken.

It is proposed that a new programme entitled 'Safety in mining' is formulated under the following headings, under which main themes of research are indicated. The order of presentation is not intended to indicate an order of priority in either the fields or the themes of research.

(a) *Accidents and data on accidents — human factors and safety*

With increased mechanization and associated changes the distribution of accident locations and types has tended to change and the growing complexity of machinery, supports transport, methods, systems of operation and control have all contributed to the changes.

It is essential that the safety aspects of all systems should be evaluated and techniques developed for the assessment of safety aspects of systems operative right through from the design to the application stages.

The use of computers has improved coverage of the factors involved in the origin of accidents.

Research should include in particular the following themes:

Identification of potential hazards in existing techniques and systems and those being developed, with computer simulation practices being adopted to this end.

Analysis and presentation of data on accidents using all available investigation techniques, with the aim of developing the most significant and useful methods.

Work aimed at improving individual attitudes to safety and providing a new approach to accident prevention and training, with improved methods of communicating advice and instructions, whilst improving understanding of work situations and involving the workforce.

Attention to the safety aspects of automation and remote control methods.

A study of the specific requirements of operational safety during reconstruction work.

A study of the harmful effects of noise on safety.

Study of the effects of improved lighting on safety.

(b) *Fires and underground combustion*

The occurrence of spontaneous combustion and open fires has not yet been eliminated in mines. Continuing and constant efforts must be made towards minimizing the possible occurrence of fires and heatings, their early detection and warning should they occur, methods of combating them, both manual and automatic, and methods of dealing with the situation should direct control over an incident be lost.

To this end the following broad themes of research are pertinent:

Development of fireproof and fire-resistant apparatus, materials and fluids together with suitable fire resistance tests, and where necessary, tests for other hazards, such as toxicity with particular attention to new substances being used. Special attention should be paid to fire and explosion hazards associated with diesel vehicles, particularly their tyres.

Research into belt conveyors should be continued. Particular emphasis should be laid on the fire-resistant properties of high-capacity and power conveyors. Test method comparisons should also be continued. The aim is to discover test methods which can be applied to conveyors actually in use.

The continued development and trials of early detection and warning systems for fires and spontaneous heatings, ensuring compatibility for inclusion in general mine monitoring and information systems.

Development of suitable extinguishing methods for heatings and fires, the latter to cover both the fixed and mobile situation.

Research into underground welding techniques for metal components.

Development of systems for automatic or remote controlled construction of fire seals.

Research into spontaneous combustion and fires related to incidence and development according to

mine configurations and ventilation and corrective actions which can be determined using computers.

(c) *Explosions*

The increased use of pick and roller-cutter type machines for coal winning and roadway drivage increases the possibility of frictional sparking hazards, to which further attention must be given.

Substantial research work has been conducted on triggered explosion suppression barriers but further development to gain general underground acceptance is necessary.

Although increased mechanization has brought about a reduction in the use of explosives, research into improving explosives safety, particularly that of new types, must continue.

Consequently, research under the following themes should be pursued:

The development and testing of processes for eliminating ignition hazards caused by sparking, frictional heat and heated surfaces.

The perfecting and comparing of existing explosion arresting triggered barriers and the development of methods of arresting explosions close to their source to arrive at practical systems acceptable for use underground.

Basis research into gas and dust explosion processes. This research ought to cover a wide range of parameters, for example:

— type and strength of primary explosion,
— nature of the dust: its flammability in relation to its volatile and incombustible matter content,
— the presence of gas, leading to mixed explosions.

Experiments on mine explosions, covering parameters such as:

— length, cross-section and layout of roadways,
— air speed,
— varying types and locations of dust deposits.

The representativeness of a dust deposit (either settled or in suspension) as regards explosion propagation hazards.

Determination of the efficiency of stonedust monitoring methods.

Along the same lines, perfection of an instant flammability rating procedure for deposited dust.

Improvement and evaluation of the level of safety afforded by new explosives and shotfiring techniques.

This type of research should be coordinated with work covered by a research programme on occupational health in mines.

(d) *Rescue*

It is unlikely that the development of filter type self-rescuers can be taken further in practical terms and research should therefore be directed towards improving and inventing alternative forms of self-rescuers. There is a need for further research on the rescue of trapped miners and improvements to equipment and communication and warning systems in rescue work are considered necessary.

Research should be pursued as follows:

Improvement, design and development of alternative self-rescuers particularly high performance, lightweight, self-contained escape devices.

Further development and trials of breathing and cooling apparatus for rescue team members.

Development of improved methods of communication during rescue operations.

Further development of dual-purpose measurement and alarm apparatus for rescue teams, including a mobile underground laboratory.

Attention to the optimizing of first aid systems and the development of suitable methods for the transportation of injured persons, adaptable to and compatible with transport methods normally available.

Work should continue on improving detecting, contacting and rescue methods of trapped persons by methods operating from either the surface or underground and the development of suitable methods and equipment for rescue in the situation resulting from falls of ground.

(e) *Monitoring, telemetry, data presentation, remote control, automation and communication*

Rapid strides have been made of late in the use of computers with measuring instruments and data transmission systems for information on and control of mine atmospheres, and further progress can be expected as new techniques emerge. The advent of high production mines and high output coal faces and the introduction of remotely controlled equipment increases the need for monitoring and telemetry in operations at the coal face, in drivages and elsewhere. The safety of remotely controlled and automated operations should be studied to establish safe operating procedures. With increased isolation of working groups and individuals and in some cases, easy and ready means of communication are needed.

Themes for research should be as follows:

The design, development and installation of safe equipment and systems for monitoring and controlling the operations of equipment and machinery and means for ensuring their safety, including methods of ensuring the operational reliability of programmes governed by micro-processors.

Further development in the monitoring and control of winding equipment and operations.

Development of reliable safety systems for remote controlled and automated operations.

The development of safe systems of communication and methods of achieving the safety of electrical circuits used for remote and automatic control.

Study of message comprehension underground.

(f) *Transport and handling*

This section is made a field of research in its own right chiefly, as indicated, to focus attention on the rising accident trend in mine transport operations. In addition, with the increase in the number of high-output faces new problems have arisen for materials handling.

Equipment serving the transport needs of men and material is undergoing radical changes with heavier loads, higher speeds and more sophisticated vehicles becoming the order of the day. Heavier and more cumbersome equipment has to be transported and handled through shafts, roadways and faces.

These changes and the adverse accident trends need research directed at specific themes which should apply equally to shafts and inclined and horizontal roadways. The themes are:

The evaluation and testing of the safety aspects of all transport systems.

The development of new and automated systems to replace dangerous ones involving large numbers of men.

The study of the safety aspects in connection with the use of conveyor belts for man-riding purposes and problems posed by sequential control of conveyors.

The study of the problems raised by the transport and handling of heavy and bulky materials in shafts, roadways and faces and those associated with the increased use of transportation systems arising from the necessity to bring large quantities of material to the surface to effect necessary maintenance and repairs.

(g) *Electricity*

The methods of working now employed involve the use of far more electrical power, more powerful motors and higher voltages throughout the workings. This results in the need for continued research into material and equipment safety from the point of view of explosion and fire risks and also the general safety of high voltage circuits.

Research should be directed towards the following themes:

Continuation of work with the aim of successful practical applications of rapid tripping of electrical circuits in adverse situations.

The study of all aspects of static electricity, particularly in the context of the greater use of synthetic materials in the mining industry.

Improvement of electrical appartatus explosion protection methods, particularly for safety sensors (firedamp detector heads etc.).

Aspects of the safety of electrical operating and control systems with particular reference to mobile equipment, high voltages at the face and the design of cable connections.

The safe use and satisfactory testing of electrical networks and equipment, particularly reliability testing before equipment is used underground; the safe use of accumulators and the development of safe cableless systems of power supply. (This applies particularly to power supply to winning machines at the face via fixed conductors).

Study of methods for testing electrical apparatus using firedamp intrinsic safety measuring devices.

Protection against electric shock.

(h) *Materials technology*

The advent of more powerful machinery for winning and transportation and the consequent use of higher energy inputs increase the problems posed by higher working stresses, often in a hostile environment. There exists therefore the need to make use of the most suitable materials available and to develop techniques which will reveal the risks and possibility of machine and equipment failure in use. These developments used underground could well reduce the need for transportation of defective and replacement material with its attendant handling hazards, particularly in shafts and roadways.

Research should be directed to the following:

The development of simple, safe, non-destructive tests with direct readout of results.

Study of new materials suited to the particular circumstances obtaining in mines.

The evaluation of strain aging techniques aimed at identifying the moment when items of equipment should be withdrawn from service.

The application of 'fracture mechanics' to all materials and the development of suitable tests on new materials and on the deterioration of worn materials, with particular identification of safety levels for the latter.

(i) *Working methods*

Modern methods of mining use all forms of technology and permit not only extraction of seams of normal thickness but also the working of certain seams hitherto considered unworkable. The accelerating development of complex coal winning and roadway drivage systems and control needs closer scrutiny, as do the safety aspects of systems and sub-systems relating to machinery, equipment and methods. Modern methods give rise to particular problems of safety for persons beyond the immediate area of operation or control and these must be continuously borne in mind during such scrutiny.

In addition, this field should cover exploration of the potential of computer and situation techniques.

The following research topics could be proposed:

Safety aspects of the mechanized working of thick or thin, steeply inclined seams in relation to web depth, ground nature and to the mechanization of roadway advancement.

Roof control as regards the safety of support and stowing systems and the measures to counter falls of ground, particularly in disturbed or discordant areas of ground.

Development of warning devices and of automatic power cut-off systems to afford protection to persons from machinery, both static and mobile, and from conveyors.

Research related to the safe operation of hydraulic fluid and compressed air apparatus, particularly very high-pressure apparatus.

Improved techniques to afford suitable protection against the possibility of potential hazards external to the working encroaching into the workings.

Improving the safety aspects of lighting and visibility.

A study to develop a mineral winning strategy taking full account of all working interactions and the ventilation system layout.

Study of vibration reduction in the machinery used.

Study of ventilation and cooling-related safety factors in hot workings.

(j) *Rock outbursts, associated phenomena and instantaneous gas outbursts*

This is a newly designated field to emphasize the importance attached to it. In any project undertaken particular attention should be paid to work in this field being done elsewhere, both inside and outside the Community.

Work in this field would look at aspects of spontaneous strata movement phenomena associated with mining and the prediction and prevention of these. Measurement, monitoring and presentation of information should be studied and computer techniques should be developed to give advance warning of such events.

Prevention techniques will be developed for workings susceptible to instantaneous gas outbursts, as will rescue and workforce withdrawal methods specific to workings of this type.

(k) *Surface*

This is a new, separate field of research to direct attention to working methods at the surface of underground mines and also at opencast mining operations. As underground, operations are becoming increasingly technical, complex and more difficult to control and special attention should be paid to the safety aspects when new equipment, methods and systems are introduced.

The following are considered worthy of study:

The safer operation of mobile equipment.

The operation and control of beneficiation plants, with particular emphasis on automatic and computer control and on the hazards to safety which may arise.

Man-riding and the handling of materials and equipment.

Assessment of the stability of materials and structures and the development of test methods for identifying weaknesses.

The safety aspects of noise, lighting and communication.

Study of slope stability.

III. UNDERTAKING OF RESEARCH WORK

The research work under the programme would, in general, be undertaken by the mining research institutes in the countries of the Community. These institutes have, over many years, undertaken research into mine safety, carried out the work under the programme now terminating, and are fully capable of doing any work proposed by this safety programme. Research would be allocated to the institutes according to their particular facilities and general direction of research, so that the programme would be completed in the most efficient and beneficial manner.

IV. PROCEDURES

After a research programme proposed by the Commission has been approved by the Consultative Committee of the European Coal and Steel Community and has received the assent of the Council of the European Communities, the necessary executive and consultative procedures are adopted by the Commission to establish and ensure fulfilment of the programme.

Three advisory committees — the Research Committee, the Committee of Producers and Workers on Industrial Safety and Medicine and the Committee of Government Experts — offer pertinent advice to the executive when projects are being considered.

On acceptance of a research project by the Commission, it is controlled by a contract detailing all requirements, including submission of periodic and final technical reports. These are looked at by experts committees whose members have specialized knowledge which enables them to offer relevant advice on the progress and results of the research. The number of committees and number of members are kept to a satisfactory minimum.

This control system has worked well with previous research programmes and it is proposed that it be used for this safety programme.

V. RESULTS OF RESEARCH

It is essential that all details and results of research are made known to all interested bodies. By the procedure described above information on research is desseminated through the members of the committees of experts, members receiving, with minimum delay, all technical reports falling within the ambit of their particular committee. In this way information is made available to the mining industries in the member countries of the Community with minimum delay.

For wider dissemination, information on research being undertaken, results of research and patents arising are contained in abstracts published and distributed by the Commission. It will, however, continue actively to seek improved methods for the dissemination of the information constituted by the results of work included in this research programme. In addition, any person or body requiring fuller information may, on request, obtain complete reports on any aided research. Also, during the lifetime of a programme, a full report detailing projects, findings and other relevant information is published and distributed.

These methods, which have been developed and refined over the years, have proved satisfactory and it is proposed that similar methods be applied to this mines safety programme.

VI. FINANCIAL ASPECTS AND DURATION OF PROGRAMME

A programme of safety research, as with any research programme, should be of sufficient duration to allow tangible results to be achieved and as short as possible to enable the benefits arising from the results to be implemented practically with minimum delay.

Past experience has shown that in general a programme of five years' duration is satisfactory and this period is proposed for the programme, to become operative in 1982. In general, research projects included in the programme would be of two or three years' duration.

From experience, particularly that gained during the course of the first mine safety research programme financially aided by the Communiy, a reasonable estimate can be made of the financial aid required.

Financial aid from the Community can be a maximum of 75 % of the total costs of a research project, the beneficiary meeting the remainder. Over the years the cost of research has increased and in arriving at a factual costing the possibility of a continuation of this trend over the next few years must be borne in mind. Many of the institutes already possess the facilities needed for further research and to minimize cost it is imperative that the research work is correctly

distributed so as to maximize the use of existing facilities.

In addition to the direct aid costs, sufficient funds should be made available to finance programme running costs.

Such costs comprise those for the holding of related, necessary meetings, travelling and subsistence allowances for experts and research workers, the organization and operation of study or information seminars and the publishing and dissemination of the results of the research undertaken.

Considering all these aspects, total financial aid of 12 500 000 European units of account over a period of five years is considered necessary, to give a suitable programme which would contribute substantially towards increased safety in mines.

VII. CONCLUSIONS

The Commission of the European Communities,

— considering the need to promote safety in mines,

— taking account of the favourable opinions and full agreement of the professional, governmental and scientific advisory committees, and of the statements of intended research made by the specialized institutes and bodies consulted,

— having regard to Article 55 of the European Coal and Steel Community Treaty.

decides to assign 12 500 000 European units of account for the realization, over a period of five years commencing in 1982, of a research programme 'Safety in mining'.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 17 August 1982

adopting a sectoral research and development programme of the European Economic Community in the field of medical and public health research — concerted action — (1982 to 1986)

(82/616/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas, pursuant to Article 2 of the Treaty, the Community has been assigned *inter alia* the task of promoting throughout the Community the harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas, by Decision 78/167/EEC (4), as amended by Decision 81/21/EEC (5), and Decisions 78/168/EEC (6) and 78/169/EEC (7), the Council has adopted three concerted projects as a first programme in the field of medical and public health research;

Whereas by Decision 80/344/EEC (8) the Council adopted a second research programme in the field of medical and public health research, consisting of four multiannual concerted projects;

Whereas, in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (9), the Council stressed that an appropriate approach should be adopted towards the whole range of available ways and means, including concerted action, and that whenever it proves necessary or desirable that non-member States, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas, in its resolution of 14 January 1974 (10) relating in particular to the coordination of national policies in the field of science and technology, the Council entrusted the Community institutions with the task of gradually ensuring such coordination, aided by the Scientific and Technical Research Committee (CREST);

Whereas the sectoral research and development programme dealt with by this Decision appears necessary to attain in the course of the operation of the common market the objectives of the Community as regards the harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living, account being taken in particular of potential economic and industrial development within the fields covered by the research areas;

(1) OJ No C 291, 12. 11. 1981, p. 13.
(2) Opinion delivered on 9 July 1982 (not yet published in the Official Journal).
(3) OJ No C 64, 15. 3. 1982, p. 20.
(4) OJ No L 52, 23. 2. 1978, p. 20.
(5) OJ No L 43, 13. 2. 1981, p. 12.
(6) OJ No L 52, 23. 2. 1978, p. 24.
(7) OJ No L 52, 23. 2. 1978, p. 28.
(8) OJ No L 78, 25. 3. 1980, p. 24.
(9) OJ No C 7, 29. 1. 1974, p. 6.
(10) OJ No C 7, 29. 1. 1974, p. 2.

Whereas the Treaty does not provide the specific powers of action required for these ends;

Whereas the Member States intend, in accordance with the rules and procedures applicable to their national programmes, to carry out all or part of the research indicated in Annex I, and are prepared to integrate such research into a process of coordination at Community level until 31 December 1986;

Whereas the cost of the research indicated in Annex I, performed in the Member States, is estimated at 300 million ECU;

Whereas in its conclusions of 20 December 1979 the Council invited the Commission to submit proposals aimed at the rationalization of structures for the preparation, examination and implementation of Community research and development programmes; whereas a grouping together of concerted action projects in the field of medical and public health research would constitute a first contribution towards meeting these objectives;

Whereas the Community is empowered to conclude agreements with non-member States in the fields covered by this Decision; whereas it may prove advisable to associate the non-member States participating in European Cooperation in the field of Scientific and Technical Research (COST), wholly or partly with the programme covered by this Decision, in accordance with the conclusions approved by the Council on 18 July 1978 in connection with such cooperation; whereas, on the one hand, procedural conditions should be determined so as to lead to a rapid conclusion of such agreements and, on the other hand, negotiations should be opened with the non-member States, as soon as this Decision is adopted;

Whereas the Council has concluded such an agreement between the European Economic Community and the Swiss Confderation on concerted projects [1] [2];

Whereas CREST has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

A concerted research and development programme of the European Economic Community in the field of medical and public health research is hereby adopted for a period of five years commencing on 1 January 1982.

The programme shall consist in coordination at Community level, within the research areas described in Annex I, of those activities which form part of the research programmes of the Member States.

Article 2

The Commission shall be responsible for such coordination.

Article 3

The funds estimated as necessary for the Community contribution to the coordination should be 13·3 million ECU, including expenditure on a staff of nine.

The internal and indicative allocation of these funds and the timetable for the implementation of the measures are set out in Annex II.

Article 4

At the beginning of the third year the Commission shall submit to the Council an interim report on the results of the programme. On the basis of this report, the programme shall be evaluated before the end of the third year. This evaluation shall be carried out by experts not involved in the Committees referred to in Article 5 and who have themselves not received any appropriations under the research programme. A report on this evaluation shall be sent to the Council and to the European Parliament.

This evaluation may lead to the submission by the Commission, after the Committee referred to in Article 5 point (a) has been consulted, of a proposal for a revision of the programme in accordance with the appropriate procedures.

Article 5

To facilitate the execution of the programme:

(a) one General Concerted Action Committee, hereinafter referred to as 'the General Committee', and

(b) four Concerted Action Committees assisting the General Committee in its management tasks,

shall be established.

The terms of reference and the composition of these committees are defined in Annex III.

The Commission shall be assisted in its coordinating action by project leaders appointed by the Commission, after having consulted the General Committee.

Each committee shall draw up its own rules of procedure. Its secretariat shall be provided by the Commission.

Implementation and coordination of the national contributions to the programme shall be carried out by the national bodies in the list given for guidance in Annex IV.

[1] OJ No L 113, 25. 4. 1981, p. 44.
[2] OJ No L 83, 29. 3. 1982, p. 1.

Article 6

In accordance with a procedure to be laid down by the Commission after havng consulted the General Committee, the participating Member States and the Commission shall regularly exchange all useful information concerning the execution of the research covered by this Decision. The participating Member States shall provide the Commission with all information relevant for coordination purposes. They shall also endeavour to provide the Commission with information on similar research planned or carried out by bodies which are not under their authority. Any information shall be treated as confidential if so requested by the Member State which provides it.

On completion of the programme, the Commission, in agreement with the General Committee, shall send to the Member States and the European Parliament a summary report on the implementation and results of the programme, particularly so that the results obtained may be accessible as rapidly as possible to the enterprises, institutions and other parties concerned, especially in the social area.

Article 7

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with the non-member States participating in European Cooperation in the field of Scientific and Technical Research (COST) with a view to associating them wholly or partly with this programme.

2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.

Article 8

Decision 80/344/EEC is hereby repealed with effect from 1 January 1982.

However, the amounts which have been authorized in the corresponding items of the 1980, 1981 and 1982 budgets and which, on 1 January 1982, have not been committed or which have been committed but not yet settled, will be used in implementing this Decision over and above the amount referred to in Article 3.

Done at Brussels, 17 August 1982.

For the Council

The President

O. MØLLER

ANNEX I

SCIENTIFIC AND TECHNICAL CONTENT

(Concerted action programme)

The aim of this European collaboration in the sector of medical and public health research is to:

— increase the efficiency of relevant R and D efforts in the Member States through the mobilization of the available research potential of national programmes and through their gradual coordination at Community level,

— improve scientific and technical knowledge in the R and D areas selected for their importance by all the Member States, taking particular account of potential industrial and economic development in the areas concerned,

— provide for the continuation of the three concerted action projects of the first medical research programme (1978 to 1981), the integration of the four projects of the second programme (1980 to 1984) as well as for new projects of common interest.

SUB-PROGRAMME I: HEALTH PROBLEMS

Research area 1: Pre-, peri- and postnatal care

— Continuation of the project relating to criteria for perinatal monitoring (1), with emphasis on technological development and assessment of devices and procedures for non-invasive monitoring, and extension to prevention of mothers' distress and risk as well as of foetal loss.

— Improvement of techniques needed for automated chromosome analysis as well as for biochemical and genetical studies to increase possibilities of application.

— Screening of inborn metabolic diseases, including cystic fibrosis, hemoglobinopathies and hyperlipoproteinaemia, by standardization or improvement of existing methodologies and developing new ones, as well as studies on early detection and treatment.

— Continuation of the project relating to the registration of congenital abnormalities (2) with extension to improvement of intra-uterine diagnosis and studies on early foetal loss, death in early childhood and foetal growth disturbances.

— Examination of current practices regarding care delivery systems, and in particular the application of technical devices and procedures to perinatal medicine, including cost/effectiveness evaluations.

Research area 2: Ageing, disabilities and handicaps

— Continuation of the project relating to cellular ageing (3) with extension on its immunological sub-project to the understanding of arthritic diseases and of its sub-project concerning organs to studies of the brain and senile dementia.

— Continuation of the project relating to hearing impairment (1) and of the sub-project, on ageing of the crystalline lens, of the project mentioned in the first indent; development of adequate aids for visual and auditory sensorial impairment including biomaterial compatibility studies.

— Continuation of the project relating to the detection of tendency to thrombosis (1) with extension to population studies following development of suitable methodology.

— Evaluation of selected aids for the disabled, including the technological development thereof, and identification of specific needs.

— Examination of care pattern for the chronic patient with several functional disabilities and for the impaired elderly, including epidemiological aspects.

(1) For programme description see: OJ No L 78, 25. 3. 1980, p. 24.
(2) For programme description see: OJ No L 52, 23. 2. 1978, p. 20.
(3) For programme description see: OJ No L 52, 23. 2. 1978, p. 24.

Research area 3 : Breakdown in adaptation

— Evaluation, improvment, standardization and/or development of quantitative measurements of hormonal, psychological and sociological parameters involved in the adaptive process.

— Investigation of performance decrement in workers under various environmental conditions, using the abovementioned methodology.

— Comparative studies, through monitoring the relevant physiological variables, in selected groups suffering from cardiovascular symptoms, with particular reference to hypertension and ischaemic heart diseases.

— Comparative studies, through determination of the relevant psychobiological and psychosocial parameters, in selected groups suffering from gastro-intestinal diseases.

— Biological and epidemiological studies in workers on the effects of alcohol abuse and the mechanisms involved in the proneness to it, of tobacco or products associated with its consumption, as well as of the effects of potential opiate intake on the central nervous system and the general metabolism.

SUB-PROGRAMME II : HEALTH RESOURCES

Research area 1 : Health services research

— Assessment of the present state of the art of research on health services in the Member States following development of a common methodology for comparative evaluation, and elaboration, of joint projects.

— Development of health indicators and subsequent assessment of the health status of the working population in the Community.

— Studies of health risk factors, influence of the working environment on health, as well as the use of medical services, sick leave, accidents at work and drug consumption ; evaluation of relevant national activities and elaboration of a concerted approach towards prevention.

— Assessment of the feasibility, by considering, in particular, relevant technological progress, and of potential importance, of community care in the home and occupational environment, as compared with hospitalization.

Research area 2 : Health technology

— Continuation of the project relating to extracorporeal oxygenation [1] with extension to advanced technological developments for the replacement of further body functions, including research on biomaterials.

— Continuation of the project relating to common standards in quantitative electrocardiography [2] with extension to standardization and improvement of diagnostic criteria ; the same approach will be used for computerized analysis of other diagnostic functional parameters.

— *In vitro* and *in vivo* development of imaging techniques following pilot studies to define common multipurpose packages for application.

— Development of devices and procedures for ambulatory monitoring of physiological variables of major diagnostic importance to rehabilitation, therapeutic needs, drug use and occupational health.

— Clinical and technical evaluation of new medical devices and procedures, including cost/efficiency aspects, through coordination of existing facilities, for both comparative technical testing and user trials, considering in particular : ultrasonic tissue characterization, accelerated bone fracture healing, blood flow measurements, automated cell identification and medical telemetry.

[1] For programme description see : OJ No L 52, 23. 2. 1978, p. 28.
[2] For programme description see : OJ No L 78, 25. 3. 1980, p. 24.

Research area 3 : Human resources

— Methodological research on ways and means of providing industry as well as public and private institutes with highly qualified research scientists in need-areas such as toxicology, occupational health, advanced health technology, clinical investigation, health services management and epidemiology.

— Evaluation of present and future needs, comparison of national measures taken and identification of suitable upgrading facilities ; subsequently, development of coordinated procedures and assessment of their efficiency through test cases in toxicology and clinical investigation.

SUB-PROGRAMME III : PERSONAL ENVIRONMENT (Nutrition and pharmaceuticals)

Research area 1 : Nutrition

— Development and improvement of specific methologies for the study of food and the detection of individual predisposition to arterial hyptertension and digestive tract diseases ; biological and/or epidemiological studies on the prevalence of such diseases and on the environmental factors involved, as well as on preventive measures.

Research area 2 : Pharmaceuticals

— Controlled post-marketing clinical trials on a large scale through mobilization and coordination of existing facilities ; appropriate collection, storage and dissemination of information on the efficacy of some specific effects of selected old and new drugs.

— Development of a post-marketing drug surveillance project on a large scale through the coordination of existing facilities in the Member States ; collection, storage and early dissemination of information on adverse drug effects of low incidence or late occurence, including case control surveillance as well as record linkage drug surveillance.

ANNEX II

INDICATIVE INTERNAL DISTRIBUTION OF FUNDS
(1982 to 1986)

Sub-programme I:	48 %
Sub-programme II:	39 %
Sub-programme III:	13 %

TIMETABLE FOR IMPLEMENTATION OF THE PROJECTS

	Ia	Ib	II	III
SUB-PROGRAMME I: HEALTH PROBLEMS				
Area I.1. **Pre-, peri- and postnatal care**				
Project I.1.1. Perinatal monitoring	×			
I.1.2. Chromosome analysis				×
I.1.3. Inborn metabolic diseases			×	
I.1.4. Congenital abnormalities	×			
I.1.5. Care delivery systems				×
Area I.2. **Ageing, disabilities and handicaps**				
Project I.2.1. Cellular ageing and diseases	×			
I.2.2. Sensorial impairment	×			
I.2.3. Thrombosis and disabilities	×			
I.2.4. Aids to the disabled			×	
I.2.5. Care delivery systems		×		
Area I.3. **Breakdown in adaptation**				
Project I.3.1. Quantification of parameters		×		
I.3.2. Performance decrement			×	
I.3.3. Cardiovascular diseases			×	
I.3.4. Gastro-intestinal diseases			×	
I.3.5. Abuse of stimulants and drugs		×		
SUB-PROGRAMME II: HEALTH RESOURCES				
Area II.1. **Health services research**				
Project II.1.1. Coordination of health services research				×
II.1.2. Health status assessment				×
II.1.3. Research on prevention			×	
II.1.4. Community v. hospital care				×
Area II.2. **Health technology**				
Project II.2.1. Replacement of body functions and biomaterial research	×			
II.2.2. Quantitative functional assessment	×			
II.2.3. Imaging techniques			×	
II.2.4. Ambulatory monitoring		×		
II.2.5. Clinical and technical evaluation		×		
Area II.3. **Human resources**				
Project II.3.1. Upgrading in toxicology		×		
II.3.2. Upgrading in health service management				×
II.3.3. Upgrading in occupational health				×
II.3.4. Upgrading in advanced technology				×
II.3.5. Upgrading in epidemiology				×
II.3.6. Upgrading in clinical investigation		×		
SUB-PROGRAMME III: PERSONAL ENVIRONMENT (nutrition and pharmaceuticals)				
Area III.1. **Nutrition**				
Project III.1.1. Diet, hypertension and digestive tract diseases		×		
Area III.2. **Pharmaceuticals**				
Project III.2.1. Clinical trials				×
III.2.2. Drug surveillance				×

Categories

Ia: Continuation and new developments of concerted actions from the first and second programmes.

Ib: New concerted actions ready to start on 1 January 1983.

II: Concerted actions to start on 1 July 1983 with progressive attainment of full-scale operation.

III: No concerted action, but studies, seminars, workshops.

ANNEX III

TERMS OF REFERENCE AND COMPOSITION OF THE COMMITTEE

I. General Concerted Action Committee

1. The General Committee shall:
   - contribute to the best possible implementation of the programme by giving its opinion on all of its aspects,
   - endeavour to integrate those parts of national research activities covered by this programme into a process of coordination at Community level,
   - within the programme as defined in Annex I of this Decision, coordinate the activities, duration and possibly early termination of the projects forming the research areas of this programme, according to emerging needs or results of periodical evaluations,
   - indicate guidelines to the Concerted Action Committees,
   - advise the Commission on allocation of funds for coordination purposes, supporting centralized facilities, meeting urgent needs in critical areas, and undertaking exploratory activities in view of the preparation of future programmes.
2. The General Committee's reports and opinions shall be forwarded to the Commission and to the Member States participating in the programme. The Commission shall forward these opinions to CREST.
3. The General Committee shall be composed of representatives of the Member States responsible for science and technology in the field of medical and public health research and, in particular, for coordinating the national contributions to the programme.

II. Concerted Action Committee

1. Each committee shall:
   - assist the General Committee in its management tasks by ensuring the scientific and technical execution of all those projects allocated to it in accordance with its competence,
   - evaluate the results and draw conclusions as regards their application,
   - be responsible for the exchange of information referred to in the first subparagraph of Article 6,
   - keep abreast of national research being done in the field of the projects, and more especially of scientific and technical developments likely to affect their execution,
   - suggest guidelines to the project leaders.
2. The Committee's reports and opinions shall be forwarded to the General Committee and to the Commission.
3. The Committee shall be composed of experts nominated by the competent authorities of the Member States.
4. The project leaders shall attend the meetings of the Committee but shall not have the right to vote.

ANNEX IV

IMPLEMENTATION AND COORDINATION OF THE NATIONAL CONTRIBUTIONS TO THE PROGRAMME

The authorities of the participating Member States, listed below for guidance, will endeavour to ensure the implementation of the national contributions to the research areas of the three sub-programmes indicated in Annex I, as well as their coordination at national level :

Belgium :	FRSM — Fonds de la recherche scientifique médicale, Bruxelles FGWO — Fonds voor Geneeskundig Wetenschappelijk Onderzoek, Brussel
Denmark :	Statens lægevidenskabelige Forskningsråd, København
France :	INSERM — Institut national de la santé et de la recherche médicale, Paris
Federal Republic of Germany :	Bundesminister für Forschung und Technologie, Bonn Bundesminister für Jugend, Familie und Gesundheit, Bonn Bundesminister für Arbeit und Sozialordnung, Bonn
Greece :	Ὑπουργεῖο Ἔρευνας καί Τεχνολογίας, Ἀθήνα Συμβούλιο Ἰατρικῶν Ἐρευνῶν, Ἀθήνα
Ireland :	Medical Research Council of Ireland, Dublin Medico-Social Research Board, Dublin
Italy :	CNR — Consiglio nazionale della ricerca, Roma, and Istituto superiore di sanità, Roma
Luxembourg :	Ministère de la santé, Luxembourg
Netherlands :	— Hoofdgroep Gezondheidsonderzoek TNO, Den Haag — Stichting Medisch Wetenschappelijk Onderzoek FUNGO, Den Haag
United Kingdom :	MRC — Medical Research Council, London, and DHSS — Department of Health and Social Security, London

CORRIGENDA

Corrigendum to Commission Regulation (EEC) No 1063/82 of 5 May 1982 on transitional measures concerning the application of certain monetary compensatory amounts in the trade of certain Member States

(Official Journal of the European Communities No L 123 of 6 May 1982)

Page 31, Article 1, paragraph 4 reads as follows:

'4. Paragraphs 1 and 2 shall apply to exports in respect of which the customs formalities are completed before or on the dates specified in the Annex hereto.'

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 4 November 1982

on the adoption of a European Economic Community research and development programme for a machine translation system of advanced design

(82/752/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas, under Article 2 of the Treaty, one of the Community's main tasks is to promote throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an increase in stability;

Whereas the multilingual nature of the European Community is of high cultural value, but is also in practice an obstacle to closer ties between the peoples of the Community, to communications and to the development of the internal and external trade of the Community;

Whereas the benefits of teleinformatics and of communication and information networks cannot be fully reaped at Community level unless the language barrier is overcome;

Whereas the development of computational linguistics is likely to contribute to the overcoming of this barrier;

Whereas considerable research has already been carried out on this subject in the Member States;

Whereas this research, by its very nature, can only bear fruit provided that it is supported by a Community action which would *inter alia* have a catalytic effect on work already carried out;

Whereas such Community action can, in particular, consist in the creation of a European machine translation system of advanced design;

Whereas such a system would have numerous industrial applications and be of direct benefit to European industry and, in particular, to exporting industries;

Whereas the intellectual property rights in connection with the results of such research should be strictly defined;

Whereas the preliminary work already completed has demonstrated the technical feasibility of such a system;

Whereas a Community research and development programme on machine translation is therefore likely to make an effective contribution to the achievement of the above objectives of the Treaty;

Whereas since the specific powers of action required to adopt this Decision have not been proved for in the Treaty, it is necessary to invoke Article 235 thereof;

Whereas the Scientific and Technical Research Committee (Crest) has delivered an opinion on the Commission's proposal,

(1) OJ No C 328, 15. 12. 1981, p. 6.
(2) OJ No C 172, 13. 7. 1981, p. 45.
(3) OJ No C 138, 9. 6. 1981, p. 3.

HAS DECIDED AS FOLLOWS:

Article 1

A research and development programme for the creation of a machine translation system of advanced design is hereby adopted for a period of five and a half years commencing on the day on which this Decision is published in the *Official Journal of the European Communities*.

Under the terms of Annex I, the programme shall be divided into phases, each one concluding with a review which may involve a revision of some or all of the elements defined in the said Annex in accordance with the appropriate procedures.

Article 2

The funds estimated as necessary for the execution of the programme should be 16 million ECU, including expenditure on a staff of eight temporary agents.

Article 3

The Commission shall be responsible for the execution of the programme, in particular by means of research contracts. It shall be assisted by an Advisory Committee on Programme Management (ACPM), the membership and terms of reference of which, in accordance with the Council resolution of 18 July 1977 on advisory committees on research programme management (1), are set out in Annex II.

The Commission shall inform the Crest and the Committee for Information and Documentation in Science and Technology (CIDST) at regular intervals on the progress of the work. Furthermore, the Commission shall submit an annual report to the Council and to the European Parliament concerning the execution of the programme.

Article 4

In accordance with Article 228 of the Treaty, the Community may, from the second phase and under the conditions laid down in Annex I, conclude agreements with third countries in particular with those taking part in European cooperation in the field of scientific and technical research (COST), on their participation in the research programme which is the subject of this Decision.

The Commission is hereby authorized to negotiate such agreements after the ACPM and the Crest have been consulted.

Article 5

If the results of the programme are used industrially or commercially and/or lead to intellectual property rights and the subsequent award of licences, part of the contributions made by the Community shall be repaid.

The Commission shall negotiate and conclude the necessary contracts. For this purpose it shall draw up, after consulting the ACPM, a standard contract defining the rights and obligations of each party, including, where appropriate, conditions and procedures for possible royalty payments and for the repayment of part of the contributions made by the Community.

Done at Brussels, 4 November 1982.

For the Council

The President

B. HAARDER

(1) OJ No C 192, 11. 8. 1977, p. 1.

ANNEX I

1. OBJECTIVES

The objective of the programme is the creation of a machine translation system of advanced design (Eurotra) capable of dealing with all official languages of the Community.

On completion of the programme an operational system prototype should be available in a limited field and for limited categories of text, which would provide the basis for development on an industrial scale in the period following the current programme.

2. PROGRAMME OF WORK

The programme is divided into three phases :

(a) **Preparatory phase (two years, 2 million ECU)**

In this phase the following work would be carried out in parallel.

1. First :

— setting up of the ACPM,

— definition of the project and its organization and of the responsibilities of the participating countries and centres,

— definition of the methodology of the work,

— preparation of a detailed programme of linguistic work to be carried out by the participating centres, and of the sectors and categories of texts covered by the research,

— definition of the allocation of intellectual property rights and definition of the arrangements for disseminating the results of the work in accordance with the actual contribution of each participant,

— examination of the value to the Community of participation by third countries and, where appropriate, definition of the conditions for such participation.

2. Second :

— preparation of more detailed specifications of the linguistic models and strategies for the various components of the process (analysis, transfer, generation),

— preparation of detailed and binding specifications for the Eurotra basic software and the data-processing programmes capable of carrying out the various processes : analysis, transfer, generation, monitoring functions and text management,

— preparation of more detailed specifications for the lexical data base,

— preparation of the contracts of association including financial and other contributions to be made by the associated parties.

The Commission will ensure that the objectives of portability and compliance with international standards are correctly reflected in the specifications referred to in the first three indents above.

At the end of this phase the opinion of the ACPM must be obtained on the above specifications in order that the linguistic work can progress quickly and so that the widest possible invitation to tender for construction of the software can be issued as soon as possible (see point 2 (b) below).

(b) **Phase of basic and applied linguistic research (two years, 8·5 million ECU)**

On the successful completion of the first phase, and after consultation with the ACPM and Crest, the second phase will be divided into two parts :

1. *Basic linguistic research*

This part will consist of the following work (1) :

— the development of initial linguistic models for the analysis and generation of each of the official Community languages and for transfer between these languages. This work will be based on a corpus and vocabulary in a limited field, estimated at around 2 500 entries,

(1) Some of this work could continue in the following phase.

— preparation of the lexical data base, for the abovementioned vocabulary, which will serve both for the analysis and for the generation of each of the languages and for the transfer between these languages,

— a study of the linguistic strategies best suited to machine-execution of the various processes.

2. *Construction of the basic software for Eurotra*

This part comprises the following work :

— issuing of invitations to tender, the specifications for which will have been defined during the first phase,

— scrutiny by the Commission of the replies to the invitation to tender and selection, after consultation of the ACPM, of a body to construct the Eurotra basic software, within as short a time as possible,

— development of the basic software by the body selected, including :

— the high level language for describing the linguistic data and strategies,

— the high level language for interaction between the user and the system, which will make it possible to introduce the various modules into integrated systems corresponding to the different utilization options,

— the utility software for compiling the high-level languages, for tests and for management of the data bases.

This initial version of the software is intended to enable the development and machine-testing of the linguistic models defined by the participating centres when they are sufficiently advanced. Its development is consequently a prerequisite for validating the linguistic work under this programme.

The industrial development of the Eurotra system, including adaptation of the software to the performance and reliability requirements for producing translations under commercial conditions, will not be put in hand until this programme has been completed.

(c) **Phase of stabilization of the linguistic models and evaluation of results (18 months, 5·5 million ECU)**

After opinions have been received from the ACPM, Crest, CIDST and Cetil at the end of the second phase, i.e. when it is possible to carry out systematic testing of the initial linguistic models, comprising complete language pairs and consisting of analysis, transfer and generation, the objective of the work will be concentrated on the following aspects :

— adapting the linguistic models, in order to produce linguistic modules which are as reliable as possible. The modules will then be fit for pre-operational use,

— progressively extending the basis of the text corpus, the linguistic models and the vocabulary for a specific field, and on texts of increasing complexity,

— revising and progressively extending the lexical bases to cover the chosen field as exhaustively as possible (about 20 000 entries in all the languages),

— evaluating the technical and economic performance of the system,

— preparing a proposal for the development of an operational system on an industrial scale and proceeding to the stage of commercial exploitation.

ANNEX II

Terms of reference for an Advisory Committee on Programme Management for a machine translation system of advanced design (Eurotra)

1. Without prejudice to the Commission's responsibility in the implementation of the programme, it shall be the task of the Advisory Committee on Programme Management for a machine translation system of advanced design, hereinafter referred to as 'the Committee', to contribute, in its advisory capacity as defined by the Council resolution of 18 July 1977, to the best possible implementation of the programme for which it is responsible, and in particular to :

— the general organization of the programme, specifying in particular the main deadlines and the mechanisms envisaged for following the progress of the work,

— the preparation of contracts of association setting out the commitments of the institutions participating in the project at national level,

— the definition and solution of problems concerning intellectual property rights, connected with the different system components, and the definition of the procedures for disseminating the results of the work,

— the drawing up of binding specifications for the software to be jointly developed, to serve as a basis for the widest possible invitation to tender and for drawing up the list of undertakings and organizations to which the invitation to tender is to be sent,

— the clarification of user requirements, in particular in the field of information and documentation,

— the drawing up of detailed financing plans relating to the various fields of work and components of the system.

2. In carrying out these tasks the Committee may if necessary call on the services of independent experts.

3. In its advisory capacity the Committee's powers will cover the R & D aspects of the Community's plans of action for the improvement of the transfer of information between European languages in addition to the Eurotra programme. The Committee will also ensure the necessary cohesion between the R & D aspects of these plans, the Eurotra programme and the plans of action in the field of scientific and technical information and documentation. For this purpose, it will maintain close contact with the CIDST and the other committees set up under the auspices of the Community institutions with responsibility in the field of multilingualism.

4. In its advisory capacity the Committee will ensure the evaluation of the results of the programme and, in particular, the dissemination of the knowledge acquired to Community users in accordance with the third indent of paragraph 1.

5. The Community is also requested to give opinions on :

— the annual preparation of budgets and the allocation for appropriations accorded,

— any proposals for reviewing the programme and proposals for future research programmes within its field of competence,

— where appropriate, the conduct of negotiations with institutes in third countries with a view to their participation in the research programme,

— the multilingual aspects of the plans of action in the field of scientific and technical information and documentation.

6. The Committee shall submit to the Commission and to the Council a detailed report at the end of each phase of implementation of the programme. It shall also submit a final report which will be forwarded to the European Parliament.

II

(Acts whose publication is not obligatory)

COMMISSION

COMMISSION DECISION

of 2 June 1982

amending Decision 71/57/Euratom on the reorganization of the Joint Research Centre (JRC)

(82/755/Euratom)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 8 thereof,

Having regard to the Treaty establishing a single Council and a single Commission of the European Communities, and in particular Article 16 thereof,

Whereas on 13 January 1971 the Commission adopted Decision 71/57/Euratom [1], as last amended by Decision 75/241/Euratom [2];

Whereas on 15 July 1981 the Commission created a Directorate-General for Science, Research and Development, incorporating the Joint Research Centre, with the aim of launching a new research and development strategy;

Whereas the new structure of Commission departments responsible for science, research and development affects neither the operational budget of the JRC nor the flexibility which is essential if research work is to progress smoothly,

HAS DECIDED AS FOLLOWS:

Article 1

Decision 71/57/Euratom is hereby amended as follows:

(a) Article 1 is replaced by the following:

'*Article 1*

Within the Directorate-General for Science, Research and Development, the Joint Research Centre (JRC) shall consist of the Research establishments set up by the Commission to carry out the Community's research and training programmes, and of the necessary ancillary services.'

(b) Article 2 is replaced by the following:

'*Article 2*

The administrative organs of the JRC shall be:

— the Director-General, who shall also serve as Deputy Director-General of the Directorate-General for Science, Research and Development,

— the Governing Board,

— the Scientific Committee.'

(c) The first indent of the third paragraph of Article 3 is replaced by the following:

'— he shall prepare — in agreement with the Director-General for Science, Research and Development — and submit to the Commission the JRC's draft programmes, indicating the financial aspects thereof.'

[1] OJ No L 16, 20. 1. 1971, p. 14.
[2] OJ No L 98, 19. 4. 1975, p. 40.

(d) Article 4 is replaced by the following:

'*Article 4*

A Governing Board of the JRC is hereby set up to assist the members of the Commission responsible for research in the management of the JRC.

The Board shall consist of leading experts from Members States who are specialized in the management of major research laboratories and their scientific and technical programmes. It shall consist of a chairman and seven members, appointed by the Commission. They shall be appointed for a three-year term, renewable once for the same period.

The Governing Board of the JRC shall normally be convened six times a year. It shall advise the Director-General of the JRC on the following matters:

1. implementation of current research and development programmes and allocation of available resources;
2. formulation of proposals relating to new programmes and their funding;
3. the JRC's establishment plan and the recruitment of senior staff (A 1, A 2 and appointments of comparable importance);
4. major investments.

The Director-General of the JRC shall provide the secretariat of the Governing Board. He shall furnish the Board with all the information it requires for the performance of its task.

The chairman shall draw up the agenda for each meeting.'

(e) Article 6 is replaced by the following:

'*Article 6*

1. The Director-General of the JRC, having due regard to the general policy adopted by the Council and to the general guidelines issued by the Commission and the Directorate-General for Science, Research and Development, shall prepare the JRC's draft programmes on his own responsibility and in close consultation with the Directorate for Scientific and Technical Coordination, cooperation with non-member countries and COST.

2. The Governing Board of the JRC shall be consulted on these draft programmes.

3. The Commission shall examine the draft programme in the light of the general policy and budgetary situation of the Community. It shall adopt the proposals in accordance with the provisions of the Treaty and lay them before the Council.'

(f) In Article 7 (2), the following text is inserted after the word 'Commission':

'..., in agreement with the Director-General for Science, Research and Development,...'.

(g) In Article 8, the words 'General Advisory Committee' are replaced by the words 'Governing Board of the JRC'.

(h) Article 11 is repealed.

Article 2

This Decision shall take effect on 1 June 1982.

Done at Brussels, 2 June 1982.

For the Commission

The President

Gaston THORN

COMMISSION DECISION

of 6 December 1982

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

(82/835/EEC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

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

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

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

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

HAS DECIDED AS FOLLOWS:

Article 1

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

Article 2

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

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

— take part, at the Commission's request, in the qualitative analysis of the Community's scientific and technical potential, carried out by the Commission with the help of the consultative committees on research and development,

— conduct an exchange of information with the Commission on actions undertaken or to be undertaken at Community level, and, where applicable, on what further work should be undertaken,

— give opinions or make reports to the Commission in the framework of the common strategy for research and development, especially on the analysis of scientific and technical needs and opportunities within the Community, and the evaluation of requests for intervention made to the Commission with a view to carrying out Community activities to stimulate the scientific and technical potential of the Community.

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

Article 3

1. The Committee shall consist of 21 members.

2. It shall be made up of eminent persons of recognized standing in European scientific, technological and industrial circles, active in national research and development systems and conversant with national science and technology policies.

3. Committee members shall be appointed in a personal capacity by the Commission, which shall ensure that the necessary contacts are made with Member States for this purpose.

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

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

Article 4

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

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

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

Article 5

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

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

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

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

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

Article 6

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

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

Article 7

The Committee shall adopt its own rules of procedure.

Article 8

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

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

Article 9

This Decision shall apply with effect from 6 December 1982.

Done at Brussels, 6 December 1982.

For the Commission

Étienne DAVIGNON

Vice-President

COUNCIL DECISION

of 3 December 1982

adopting a programme of research and development in the field of science and technology for development (1983 to 1986)

(82/837/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas under Article 2 of the Treaty the Community has in particular the task of promoting a harmonious development of economic activities and a continuous and balanced expansion throughout the Community; whereas Article 3 of the Treaty provides that, for the purposes set out in Article 2, the activities of the Community shall include increased trade and the joint promotion of economic and social development in the developing countries;

Whereas the resolution adopted by the Council at its meeting of 18 November 1980 stresses the importance of developing research capacity geared in particular to food agriculture in the developing countries and of ensuring complementarity between the activities of research centres in the Community and the efforts undertaken in this area by developing countries;

Whereas there is an awareness among the developing countries of the role of science and technology in the process of economic and social development; whereas this awareness dominated the second United Nations Conference on Science and Technology (UNCSTD) discussions and profoundly influenced the final consensus, known as the 'Vienna Programme of Action' adopted by the General Assembly of the United Nations;

Whereas one of the major objectives of the Vienna Programme of Action consists in substantially increasing the research effort of the industrialized countries to find a solution to the scientific problems of primary interest to developing countries;

Whereas the research and development measures covered by this Decision relate to particularly grave and urgent problems, namely food and health, which are bound up with the most fundamental needs of the developing countries;

Whereas it is necessary to establish greater cooperation among scientists in the various Member States and the developing countries with a view to facilitating the complementarity of research and methodologies and ensuring easier access to the different networks of scientific relationships established by the Member States with their Third World partners;

Whereas it is important to facilitate the introduction of the scientific and technical dimension in the development projects supported by the Community;

Whereas the Council adopted on 14 January 1974 a resolution on an initial outline programme of the European Communities in the field of science and technology (3);

Whereas, in view of the object and the specificity of this programme, which is carried out in the interest of the developing countries and should be implemented in close cooperation with them, it is advisable to lay down special rules for the dissemination of the results of the programme;

Considering the opinion expressed by the Scientific and Technical Research Committee (CREST);

Whereas, since the specific powers of action required to adopt this Decision have not been provided for in the Treaty, it is necessary to invoke Article 235 thereof,

HAS DECIDED AS FOLLOWS:

Article 1

A programme of research and development to support and reinforce the scientific activities in the field of science and technology for development to help the developing countries, as set out in the Annex hereto, is hereby adopted for an initial period of four years commencing on 1 January 1983 with clearly defined priorities. It could be extended after thorough assessment, together with the financial arrangements.

(1) OJ No C 182, 19. 7. 1982, p. 80.
(2) OJ No C 77, 29. 3. 1982, p. 2.
(3) OJ No C 7, 29. 1. 1974, p. 6.

Under the programme competent bodies based in the Community or in the developing countries may submit their own proposals for research and development projects, supported by recommendations or requests from developing countries, including proposals for cofinancing of research activities undertaken by other competent international organizations.

Article 2

The funds estimated as necessary for the execution of the programme should be 40 million ECU including expenditure on a staff of nine.

The internal breakdown of funds is given for information purposes at points 1 and 2 of the Annex.

Article 3

The Commission shall be responsible for the execution of the programme. Two advisory committees on programme management (ACPM's) shall be set up, one for the sub-programme 'Tropical agriculture' and the other for the sub-programme 'Medicine, health and nutrition in the tropics'. The tasks and the composition of the committees are defined in the Council resolution of 18 July 1977 on advisory committees on programme management (1). Representatives of the Standing Committee on Agricultural Research, of the Committee on Medical Research and Public Health and of the Technical Centre for Agricultural and Rural Cooperation will participate in the work of these ACPM's. Representatives of the developing countries who are experts in the relevant research areas shall have the right to speak in both ACPM's and shall be involved in the practical implementation of the various aspects of the programme. In order to ensure optimum coordination between the Commission and the ACPM's, representatives of relevant international organizations may attend the meetings.

Article 4

In the course of the first year that the programme is in operation the Commission will, after obtaining the advice of the ACPM's, issue the calls for proposals necessary for the progressive implementation of the programme. In the course of the second year that the programme is in operation the Commission, with the help of competent independent specialists among whom will be an adequate number of specialists from developing countries, will evaluate the programme and may submit proposals for modifications accordingly.

Article 5

The dissemination of information applicable to the programme shall be subject to the following conditions:

1. The information and inventions, whether or not patentable, resulting from the execution of the programme, shall belong to the Community, on whose behalf the Commission shall ensure their protection;
2. Rules governing ownership, the obligations of the Community and, should the need arise, of the contractor, with regard to inventions, whether or not patentable, resulting from research or work done under contract, shall be defined case by case in the contracts;
3. The Commission shall communicate the information and inventions which it has the right to transmit to the Member States as well as to persons and undertakings which pursue, on the territory of a Member State or in a developing country, a research or a production activity justifying access to such information. The Commission must also communicate this information primarily to the developing countries, not only those with which the Community has concluded association or cooperation agreements, and to the non-associated developing countries which benefit from financial and technical aid from the Community, but to all developing countries which urgently require it and are in a position to use it; it may also make communication of this information subject to conditions which it shall lay down.

Done at Brussels, 3 December 1982.

For the Council

The President

Ch. CHRISTENSEN

(1) OJ No C 192, 11. 8. 1977, p. 1.

ANNEX

INDIRECT ACTION

Programme of research and development in the field of science and technology for development (1983 to 1986)

The programme incorporates the following sub-programmes:

1. TROPICAL AGRICULTURE

Commitments for an expenditure of 30 million ECU are envisaged for this sub-programme.

Sector A

Improvement of agricultural production

— Food and industrial crops
— Protein products of animal origin
— Forestry products

Sector B.

General areas of research and utilization of the environment

— Water resources and use
— Soil protection, stabilization and regeneration
— Crop protection

Sector C

Post-harvest techniques

— Product conservation
— Processing of products

Sector D

Training

2. MEDICINE, HEALTH AND NUTRITION IN THE TROPICS

Commitments for an expenditure of 10 million ECU are envisaged for this sub-programme.

Sector A

Medicine and health

— Transmissible diseases
— Mother and child care
— Genetics
— Environmental hygiene

Sector B

Nutrition

Sector C

Training

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 22 November 1982

adopting a concerted action project of the European Economic Community on the effect of processing on the physical properties of foodstuffs

(82/839/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (4), the Council emphasized that an appropriate approach should be adopted towards the whole range of available ways and means, including joint projects, and that whenever it proves desirable that third States, particularly European ones, should be associated in these projects, steps should be taken to make this possible;

Whereas in its resolution of 14 January 1974 relating in particular to the coordination of national policies in the field of science and technology (5), the Council entrusted the Community institutions with the task of ensuring, with the assistance of the Scientific and Technical Research Committee (CREST) the gradual coordination of national policies in the field of science and technology;

Whereas by Decision 78/177/EEC (6), the Council adopted a first concerted action project on the effect of processing on the physical properties of foodstuffs;

Whereas the abovementioned concerted action project has given extremely encouraging results;

Whereas the coordination of research work initiated under the abovementioned concerted action must be allowed to continue;

Whereas a second project in this field would make it possible to derive the maximum benefit from the effort that has been made;

Whereas the Member States intend, as part of the rules and procedures applicable to their national programmes, to carry out the research described in Annex I and are prepared to integrate it into a process of coordination at Community level over a period of four years;

Whereas the execution of the research work as described in Annex I calls for a financial outlay of some 15 million ECU in the Member States taking part therein;

Whereas on 18 July 1978 the Council agreed on certain procedural arrangements for cooperation under European Cooperation in the field of scientific and technical research (COST);

(1) OJ No C 93, 14. 4. 1982, p. 8.
(2) OJ No C 125, 17. 5. 1982, p. 169.
(3) OJ No C 64, 15. 3. 1982, p. 10.
(4) OJ No C 7, 29. 1. 1974, p. 6.
(5) OJ No C 7, 29. 1. 1974, p. 2.
(6) OJ No L 54, 25. 2. 1978, p. 25.

Whereas, since the specific powers of action required to adopt this Decision have not been provided for in the Treaty, it is necessary to invoke Article 235 thereof;

Whereas CREST has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement for a period of four years a concerted action project on the effect of processing on the physical properties of foodstuffs (hereinafter called 'the project').

The project shall consist in the coordination at Community level of the research work which is specified in Annex I and which shall form part of the research programmes of the Member States.

Article 2

The Commission shall be responsible for such coordination.

Article 3

The funds estimated as necessary for the Community contribution to the coordination should be 670 000 ECU, including expenditure on a staff of one.

Article 4

To facilitate the execution of the project a Concerted Action Committee on the Effect of Processing on the Physical Properties of Foodstuffs (hereinafter called 'the Committee') shall be established.

A project leader shall be appointed by the Commission in agreement with the Committee. He shall, in particular, assist the Commission in its task of coordination.

The terms of reference and composition of the Committee are laid down in Annex II.

The Committee shall draw up its own rules of procedure. Its secretariat shall be provided by the Commission.

Article 5

1. In accordance with a procedure to be laid down by the Commission in agreement with the Committee, the Member States participating shall regularly exchange all relevant information concerning the performance of the research covered by the project and forward to the Commission all information that may be useful for coordination purposes.

They shall in addition endeavour to provide the Commission with information relating to the research planned or performed by bodies which are not under their authority.

This information shall be treated as confidential if the Member State which communicates it so requests.

2. The Commission shall prepare annual progress reports on the basis of the information provided and shall send them to the Member States and the European Parliament.

3. At the end of the coordination period the Commission shall, in agreement with the Committee, send to the Member States and to the European Parliament a consolidated report on the performance and result of the project. The Commission shall publish such report not later than six months after it has been sent to the Member States, except where a Member State objects. In that event, the report shall be distributed upon request only to the institutions and undertakings whose research or production activities justify access to the results of the research carried out under the project. The Commission may make provision that the report remains confidential and is not disclosed to third parties.

Article 6

In accordance with Article 228 of the Treaty, the Community may conclude agreements with non-member States participating in COST with a view to concerting the Community project with the corresponding programmes of those States.

Article 7

This Decision shall take effect on the day of its publication in the *Official Journal of the European Communities.*

Done at Brussels, 22 November 1982.

For the Council

The President

U. ELLEMANN-JENSEN

ANNEX I

Contribution of the Member States to the project by research topic

Research topic	Active participation proposed by								
	Belgium	Federal Republic of Germany	Denmark	France	Italy	Ireland	Netherlands	United Kingdom	Greece
1. **Mechanical properties** (1):				×				×	×
(a) integral solids,	×	×	×	×		×	×		
e. g. density, porosity, stress, strain, fracture									
(b) particulates,		×					×		
e. g. powders, agglomerates									
2. **Diffusional properties** (1):	×	×	×		×			×	×
(a) diffusion of water and water vapour		×					×		
(b) diffusion of solutes, e. g. salt, sugars	×					×			
(c) diffusion of volatiles, e. g. aromas									
3. **Electrical and optical properties** (1):								×	
(a) dielectric properties		×				×			
(b) visible, ultraviolet, and infra-red	×								
4. Continuation of the collection of data (on rheology, sorption and thermal properties)	×	×	×	×	×	×	×	×	
5. Conclusion of research related to rheology, sorption and thermal properties	×	×	×	×	×	×	×	×	

(1) Related to the intention to define general standard methodology taking into account the possible influence of the different parameters.

ANNEX II

Terms of reference and composition of the Committee referred to in Article 4

1. The Committee shall:

1.1. contribute to the optimum execution of the project by giving its opinion on all aspects of its progress;

1.2. evaluate the results of the project and draw conclusions regarding their application;

1.3. be responsible for the exchange of information provided for in Article 5 (1);

1.4. keep abreast of national research work being done in the fields covered by the project, in particular by keeping abreast of scientific and technical developments likely to affect the execution of the project;

1.5. suggest guidelines to the project leader;

1.6. have the right to set up, in respect of each of the research topics defined in Annex I, a subcommittee to ensure that the programme is properly implemented.

2. The Committee's reports and opinions shall be communicated to the Commission and the Member States participating. The Commission shall forward these opinions to CREST and to the Standing Committee on Agricultural Research (SCAR).

3. The Committee shall consist of the persons responsible for coordinating the Member States' contributions to the project, a delegate from the Commission responsible for the latter's contribution and the project leader. Each member may be accompanied by experts.

COUNCIL DECISION

of 21 December 1982

on a preparatory phase for a Community research and development programme in the field of information technologies

(82/878/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas, by its resolution of 14 January 1974 (3), the Council invited the Commission to define projects of interest to the Community in the field of science and technology;

Whereas the need to develop scientific and technical research at Community level was stated by the Council on 9 November 1981 and the Heads of State or Government on 26 and 27 November 1981;

Whereas the overall Community strategy results from the creation and implementation of a general framework programme of common scientific and technical activities; whereas amongst the basic options proposed by the Commission for the framework programme the 'promotion of industrial competitiveness' calls for special support measures; whereas the development of the new information technologies is a special objective, especially as they must back up and enhance the efficiency of the Community's research and innovation capability, which are essential factors for European industrial competitiveness;

Whereas it is necessary to make an urgent start on a preparatory phase in order to prepare a full-scale programme of research and development in information technologies;

Whereas, since the specific powers of action required to adopt this Decision have not been provided for in the Treaty, it is necessary to invoke Article 235 thereof,

HAS DECIDED AS FOLLOWS:

Article 1

A Community research and development activity in the field of information technologies is hereby adopted for a maximum period of one year commencing not earlier than 1 January 1983.

This activity will be a preparatory phase for a Community research and development programme in this field.

Article 2

The activity is designed essentially to verify the approach to the establishment, in the field of information technologies, of precompetitive research and development cooperation at Community level concerted with national programmes.

The activity will take account of requirements regarding the development of standards to serve the interests of European industry in this field.

The activity will consist of 16 pilot projects as defined in the Annex hereto. The projects will be executed by means of shared cost contracts, normally on the basis of a minimum contribution of 50 % from contractors with the remainder being contributed by the Community. In some exceptional cases, it may be necessary to fall below the minimum contribution of 50 % from contractors but, in all cases, a substantial contribution from contractors will be required.

Article 3

The activity will be open, on an equal footing and under appropriate conditions, to participation by all undertakings, including small and medium-sized undertakings, universities and other bodies in all the Member States which are carrying out research and development activities in information technologies in the Community and which are interested in taking part. Each contract should have at least one industrial participant.

(1) Opinion delivered on 17 December 1982 (not yet published in the Official Journal).
(2) Opinion delivered on 25 November 1982 (not yet published in the Official Journal).
(3) OJ No C 7, 29. 1. 1974, p. 6.

Article 4

The Community funds estimated as necessary for the execution of the activity should be 11·5 million ECU.

Article 5

The Commission will institute an evaluation, by experts, of the experience obtained during the activity with special reference to the establishment of precompetitive research and development cooperation at Community level concerted with national programmes and will forward a report thereon to the Council at the end of the activity.

Done at Brussels, 21 December 1982.

For the Council

The President

O. MØLLER

ANNEX

The pilot projects include within the given areas the following specific research and development projects :

I. ADVANCED MICROELECTRONICS

— **Advanced interconnect for very large scale integration (VLSI)**

The development of a multi-layer metal interconnection technology that will enable one micron minimum feature size components to be interconnected at high density within the chip.

— **High level computer aided design for interactive layout and design**

The development of new high level computer aided design tools needed to solve the layout and connectivity problems inherent in VLSI circuit technology.

II. SOFTWARE TECHNOLOGY

— **Portable common tool environment**

A research and development project to investigate the problems of providing a common base for software development toolsets to be used to foster European cooperative research and development in software technology. The work should lead to a software tool environment and the definition of interfaces and standards.

— **Formal specification and systematic programme development**

A research and development project to identify a systematic approach to software development based on formal specifications and transformations of representations and to develop a coherent toolset supporting each phase of the software life cycle.

— **Software production and maintenance management systems (SPMMS)**

A research and development project to define and implement a complete consistent and efficient information management system for all the activities in the life cycle of software. Emphasis is on the organizational aspects of software development, on the product characteristics of software, and on the mutual dependencies between business and technical decisions.

III. ADVANCED INFORMATION PROCESSING

— **Advanced algorithms and architecture for signal processing**

To develop algorithmic structures, languages for expressing them and experimental prototypes for signal processing leading to a technology for the man machine interfaces that will be an essential part of future information systems and will enable input and output information to be spoken and visual.

— **Knowledge information management system**

A research and development project leading to the definition and construction of experimental prototypes of a first generation knowledge based system. These will serve as vehicles for the development of advanced knowledge processing technologies.

— **Interactive query system**

A research and development project concerning query language, inference techniques and query optimization leading to the technology needed for interactive query systems that will be significantly easier to use by non-dp experts.

IV. OFFICE AUTOMATION

— **Functional analysis of office requirements**

A methodical investigation leading to the classification of office activities by high level function. The classification will enable the functional specifications of new systems to be formulated and the technologies needed to implement the chosen functions to be developed.

— **Multi-media user interface at the office workstation**

A research and development project leading to the development of the technologies needed to handle in an integrated way multi-media communications and documents, carrying simultaneously text, picture and voice. Work is to include ergonomic considerations of new terminals that will be needed.

— **Local wideband communication system**

A research and development project to define and take to experimental prototype stage a local area wideband communications system embracing speech data, text, graphics and video, that can also form the basis for a European standard.

— **Office filing and retrieval of unstructured information**

A project defining office filing systems permitting (partially content addressable) retrieval of mixed mode information. This is expected to lead to the establishment of requirements and functional capabilities suitable for standardization proposals.

V. COMPUTER INTEGRATED MANUFACTURING (CIM)

— **Design rules for computer integrated manufacturing systems**

A methodical investigation into the design rules required for system integration of different subsystems of computer integrated manufacturing systems. The investigation is to include a detailed study of manufacturing system design for the automated factory covering such topics as operating rules, production control, productivity and economic factors.

— **Integrated micro-electronic sub-systems for plant automation**

A development project to design, develop, test and prove experimental prototypes of a single chip integrated three axis continuous path interpolator, a single chip integrated axis controller and a single chip integrated servo interface. The work is to be done for application to machine tool and robot control systems.

— **Process and production control based on real-time imaging systems and as a tool for cooperative research and development**

A research and development programme to define target applications involving $2\frac{1}{2}$ and 3D imaging, utilizing visual, tactile and thermal sensing and to implement the hardware and software development of an experimental prototype with which to demonstrate and study, complex, real-time, image driven, pattern directed control applications in actual or simulated production environments.

VI. INFORMATION EXCHANGE SYSTEM

A system for exchange of information and to link computing facilities to allow distributed software development.

COUNCIL DECISION

of 13 December 1982

adopting a concerted action project for the European Economic Community in the field of shore-based marine navigation aid systems

(82/887/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the draft from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas a concerted action project for Community research in the field of marine navigation aid systems may contribute to the reduction of the risk of accidents in coastal areas and ports, and, consequently, to the protection of human life and the safety of ships and their cargo, and the prevention of pollution on the shore and in coastal waters;

Whereas a research programme in the field of marine navigation aid systems was proposed in 1979 by the Finnish and French delegations within the framework of European cooperation in the field of scientific and technical research (COST); whereas the Scientific and Technical Research Committee (Crest) acknowledged the Community interest of the said programme on 8 April 1981;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (4) the Council emphasized that an appropriate approach should be adopted towards the whole range of available ways and means, including concerted action projects, and that, whenever it proved desirable, non-member States, particularly European ones, should be associated in those projects;

Whereas the Member States intend to implement, in accordance with the rules and procedures applicable to their national programmes, the research projects described in Annex I and are prepared to coordinate them at Community level for a period of three years;

Whereas international organizations are carrying out projects in this field; whereas account should be taken of such projects so as to preclude duplication of effort; whereas certain equipment and procedures should, if appropriate, be the subject of agreements within the framework of the competent organizations;

Whereas the implementation of this research requires a financial outlay of the order of 10 million ECU on the part of the Community and the Member States;

Considering the opinion delivered by Crest on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

The Community shall implement, over a period of three years from 1 January 1983, a concerted action research project in the field of shore-based marine navigation aid systems, hereinafter referred to as 'the project'.

The project shall consist of the coordination at Community level of the research defined in Annex I forming part of the research programmes of the Member States, taking into account the work being carried out in the field in question by international organizations and ensuring that the international character of marine navigation, and consequently of all the rules governing it, is borne in mind.

Article 2

The Commission shall be responsible for the co-ordination referred to in Article 1.

(1) OJ No C 256, 8. 10. 1981, p. 7.
(2) OJ No C 238, 13. 9. 1982, p. 111.
(3) OJ No C 348, 31. 12. 1981, p. 24.
(4) OJ No C 7, 29. 1. 1974, p. 6.

Article 3

The funds estimated as necessary for the Community contribution to the coordination should be 2·1 million ECU including expenditure on a staff of one.

Article 4

To help implement the project, a Concerted Action Committee for shore-based marine navigation aid systems hereinafter referred to as 'the committee', shall be set up.

A project leader shall be appointed by the Commission in agreement with the committee.

The terms of reference and composition of the committee are set out in Annex II hereto.

The committee shall adopt its own rules of procedure. The committee secretariat shall be provided by the Commission.

Article 5

1. In accordance with a procedure to be laid down by the Commission after consulting the committee, States participating in the project and the Community shall exchange all useful information concerning the implementation of research relating to the project on a regular basis. Participating Member States shall supply the Commission with all the information needed for coordination purposes. They shall also endeavour to supply the Commission with information on research on the subject which is either planned or has been carried out by bodies for which they are not responsible. Such information shall be treated as confidential if the Member State supplying it so requests.

2. The Commission shall establish annual progress reports on the basis of the information supplied and shall forward them to the Member States and to the European Parliament.

3. At the end of the coordination period, the Commission, after consulting the committee, shall forward to the Member States and to the European Parliament a general report on the implementation and results of the project. It shall publish this report six months after it has been forwarded to the Member States unless one of the Member States objects. In the latter event the report shall be distributed, on request, only to those institutions and undertakings whose research or production activities justify access to the results of the research carried out under this project. The Commission may provide for the report to remain confidential and not to be disclosed to third parties.

Article 6

In accordance with Article 228 of the Treaty the Community may conclude an agreement with third States, and in particular with those participating in COST, with a view to ensuring coordination between the Community's project and the corresponding programmes in those States.

Done at Brussels, 13 December 1982.

For the Council

The President

U. ELLEMANN-JENSEN

ANNEX I

Project content

1. A study of requirements for precise navigation and ship manoeuvring in confined areas under various hydro-meteorological conditions.

2. A study to develop factors and criteria that can serve as a common determinant for marine traffic problem definition. As a second stage application of these factors and criteria to European waters.

3. An inventory of existing shore-based marine traffic systems in Western Europe, stating:
   - — geographical coverage,
   - — type of service provided,
   - — rules governing operation of the service,
   - — traffic intensity in the area,
   - — types of traffic in the area.

4. A study of vessel identification methods, for use both in the control of traffic by the monitoring stations and in ship-to-ship communications.

Indicative breakdown of research

Research topics	Breakdown of research								
	B	D	DK	F	GR	I	IRL	NL	UK
1. Movement of ships in confined areas	×			×		×		×	×
2. (a) Criteria for standard identification of problem areas for marine traffic	×			×		×		×	×
(b) Identification of problem areas for marine navigation	×			×	×	×		×	×
3. Inventory of shore-based marine traffic systems in Western Europe				×	×	×		×	×
4. Identification of ships						×	×	×	×
5. Specifications and standards for pinpointing and precise tracking of ships under way				×		×	×	×	×
6. Shore-to-ship communication methods						×		×	×
7. Harmonization of the procedures of marine traffic services				×		×		×	×

5. A study of methods to enable the monitoring stations to pinpoint and track a vessel with accuracy.

6. Methods of shore-to-ship and ship-to-ship communication and data exchange systems between monitoring stations and ships.

7. A study of the harmonization of the procedures of traffic, information and guidance services for shipping in Western Europe.

Among the international organizations with most competence in this area which have been or are working on the above research topics are the following:

— International Maritime Organization (IMO),

— International Association of Lighthouse Authorities (IALA),

— International Association of Ports and Harbours (IAPH).

This list is not exhaustive.

ANNEX II

Terms of reference and composition of the Concerted Action Committee for shore-based marine navigation aid systems

1. The committee shall:

   1.1. contribute to the optimum implementation of the project by giving its opinion on all aspects of its progress;

   1.2. evaluate the results of the project and draw conclusions as to their application;

   1.3. be responsible for the exchange of information referred to in Article 5 (1);

   1.4. keep track of national research work carried out in the fields covered by the project, in particular by keeping itself informed about scientific and technical developments which might have an influence on its implementation;

   1.5. take care to avoid duplicating studies and research work being carried out by the competent international organizations, taking account of the international framework in which certain provisions should, where necessary, be adopted;

   1.6. provide guidelines for the project leader;

   1.7. assist the Commission in the selection of contractors and the allocation of the corresponding appropriations.

2. The committee's reports and opinions shall be forwarded to the Commission and the Member States taking part in the project. The Commission shall forward these opinions to Crest.

3. The committee shall be composed of the persons responsible for coordinating the national research activities included in the project, a delegate from the Commission and the project leader. Each member may be accompanied by experts. Wherever it deems it is useful, the committee may invite observers from the relevant international organizations (see Annex I).

COUNCIL DECISION

of 21 December 1982

adopting a research and development programme for the European Economic Community in the field of applied metrology and reference materials (Community Bureau of Reference — BCR) (1983 to 1987)

(83/19/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas Article 2 of the Treaty assigns to the Community the task of promoting, throughout its territory, a harmonious development of economic activities, a continuous balanced expansion and an accelerated raising of the standard of living; whereas the objectives of the Community's activities for these purposes are set out in Article 3 of the Treaty; whereas, more specifically, paragraphs (a) and (h) of Article 3 state that the activities of the Community shall include the elimination, as between Member States, of quantitative restrictions on the import and export of goods, and of all other measures having equivalent effect, together with the approximation of the laws of the Member States to the extent required for the proper functioning of the common market;

Whereas the activities provided for by this Decision appear to be necessary in order to achieve these objectives;

Whereas the discrepancies between the results of measurements in different countries give rise to difficulties in commercial transactions;

Whereas research projects covered by this Decision are intended to reduce some of the discrepancies and improve the quality of measurements throughout the Community and will, as a result, help the competitiveness of Community products, on both the internal and the external market;

Whereas in its resolution of 14 January 1974 on an initial outline programme of the European Communities in the field of science and technology (3), the Council emphasized that an appropriate approach should be adopted towards the whole range of available ways and means, including indirect action;

Whereas the Scientific and Technical Research Committee (CREST) has delivered an opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

A research and development programme for the European Economic Community in the field of applied metrology and reference materials, as defined in the Annex, is hereby adopted for a period of five years with effect from 1 January 1983.

Article 2

The funds estimated as necessary for the execution of the programme should be 25 million ECU including expenditure on a staff of 16.

Article 3

The Commission shall be responsible for the implementation of the programme. It shall be assisted in this task by the Advisory Committee on Programme Management set up by the Council resolution of 19 November 1973, the terms of reference of which are set out in the Council resolution of 18 July 1977 (4).

Article 4

At the beginning of the third year the Commission shall submit to the Council an interim report on the results of the programme. On the basis of this report, the programme shall be evaluated before the end of the third year. This evaluation shall be carried out by experts not involved in the Committee referred to in Article 3 and who have themselves not received any appropriations under the research programme. A report on this evaluation shall be sent to the Council and to the European Parliament.

This evaluation may lead to the submission by the Commission, after the Committee referred to in Article 3 has been consulted, of a proposal for a revision of the programme in accordance with the appropriate procedures.

(1) OJ No C 334, 20. 12. 1982, p. 29.
(2) OJ No C 346, 31. 12. 1982, p. 4.
(3) OJ No C 7, 29. 1. 1974, p. 6.
(4) OJ No L 192, 11. 8. 1977, p. 1.

Article 5

The information resulting from the implementation of the programme shall be disseminated in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [1].

Done at Brussels, 21 December 1982.

For the Council

The President

O. MØLLER

[1] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

Applied metrology and reference materials — Community Bureau of Reference

The objective of the programme is to improve the agreement of measurement and analysis results in fields which are of economic importance to the Community and of relevance to the objectives of the Treaty. The projects will also result in establishing calibration means (transfer standards and reference materials) to ensure the consistency, once achieved, can be maintained. The work could also lead to the definition of methods whereby accurate measurement can be obtained.

The programme includes two closely related parts:

Applied metrology

This part covers measurements of physical quantities and physical properties traceable to fundamental quantities.

The activities will include:

— execution of measurement programmes on a cooperative basis (intercomparisons),

— improvement of the methods of measurement and of their accuracy,

— improvement of the instruments necessary for accurate measurements, and in particular of transfer standards.

Reference materials

This part of the programme concerns chemical analyses as well as physical and technological measurements which could result in establishing reference materials.

The activities will include:

— execution of measurement programmes on a cooperative basis (intercomparisons),

— establishment of reference materials on a cooperative basis and the certification of these materials at Community level,

— conservation and dissemination of the reference materials established as a result of the programme.

Experimental work will be carried out under contract.

COMMISSION DECISION

of 25 March 1983

amending Decision 78/636/EEC establishing an Advisory Committee on Industrial Research and Development

(83/137/EEC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Whereas by Decision 78/636/EEC (1), as amended by Decision 81/1/EEC (2), the Commission created an Advisory Committee on Industrial Research and Development; whereas, it is appropriate to limit the Committee's term of office to one year, given that the structures and procedures adopted with regard to science, research and development are under review; whereas the provisions concerning the Committee's eight observer seats should be amended and the members and observers of the Committee be appointed for a one-year term of office; whereas, however, the observers of the Committee for European Development of Science and Technology (CODEST) will only be nominated at a later date,

HAS DECIDED AS FOLLOWS:

Article 1

Decision 78/636/EEC is hereby amended as follows:

1. Article 3 (3) is replaced by the following:

'3. Eight persons belonging to the following organizations may attend the Committee's meetings as observers:

three observers from the Committee for the European Development of Science and Technology (CODEST), set up by the Commission on 6 December 1982,

one observer from the European Industrial Research Management Association EIRMA,

one observer from the UNICE secretariat,

one observer from the ECPE secretariat,

one observer from the FEICRO secretariat,

one observer from the ETUC secretariat.'

2. Article 5 is replaced by the following:

'*Article 5*

The term of office of a Committee member and of an observer shall be one year. It shall be renewable.

After expiry of the one-year period, Committee members and observers shall remain in office until they have been replaced or their term has been renewed.

The appointment of a member or observer shall be terminated before the end of the one-year period if such a member or observer resigns, ceases to belong to the organization he represents, or dies. The appointment of a member or observer may also be terminated if the organization which proposed him as a candidate requests that he be replaced.

He shall be replaced for the remainder of his term in accordance with the procedure set out in Article 4.

His duties shall not entitle him to remuneration.'

Article 2

The candidates listed in the Annex are hereby appointed members or observers of the Advisory Committee on Industrial Research and Development.

Article 3

This Decision shall apply with effect from 1 January 1983.

Done at Brussels, 25 March 1983.

For the Commission

Étienne DAVIGNON

Vice-President

(1) OJ No L 203, 27. 7. 1978, p. 36.
(2) OJ No L 10, 10. 1. 1981, p. 18.

ANNEX

ADVISORY COMMITTEE ON INDUSTRIAL RESEARCH AND DEVELOPMENT

Organization	Seats	Candidates for members	
Union of Industries of the European Community (UNICE)	17	Argyros Stelios	(GR)
		Bracke William	(B)
		Brouwers Victor	(B)
		Cantacuzène Jean	(F)
		de Montgolfier Philippe	(F)
		Finlay-Maxwell David	(UK)
		Georgopoulos Alkis	(GR)
		Hansen Hans-Erik	(DK)
		Kreklau Carsten	(D)
		Lynch John	(IRL)
		Mawson Alan	(UK)
		Ording Burchard	(D)
		Rossi Angelo	(I)
		Schummer Arthur	(L)
		Slot Douwe	(NL)
		van Damme-van Weele M.A.	(NL)
		Vitari Michele	(I)
European Centre for Public Enterprise (ECPE)	4	Balazard Jacques	(F)
		Dollond Steven	(UK)
		Frigessi di Rattalma Guido	(I)
		Theenhaus Rolf	(D)
Federation of European Industrial Cooperative Research Associations (FEICRO)	3	Berchem Rütger	(D)
		Masi Oscar	(I)
		The Earl of Shannon	(UK)
European Trade Union Confederation (ETUC)	3	(1)	(I)
		Brindeau Charles	(F)
		Svanholt Karen-Lisbeth	(DK)

(1) This member will be appointed at a later date.

Organization	Seats	Candidates for observers
Committee for the European Development of Science and Technology (CODEST)	3	(1)
European Industrial Research Management Association (EIRMA)	1	Schulz Reinhard
Union of Industries of the European Community (UNICE)	1	Cloquet Daniël
European Centre for Public Enterprise (ECPE)	1	Lambert Lamberto
Federation of European Industrial Cooperative Research Organizations (FEICRO)	1	Ellithorne Pamela
European Trade Union Confederation (ETUC)	1	Coldrick Peter

(1) These observers will be appointed at a later date.

COUNCIL DECISION

of 28 June 1983

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

(83/331/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

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

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

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

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

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

Whereas on 4 November 1982 the Council adopted a joint position with a view to a decision adopting a Community action concerning the stimulation of the Community's scientific and technical potential, experimental phase 1983/84;

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

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

HAS DECIDED AS FOLLOWS:

Article 1

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

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

Article 2

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

Article 3

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

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

(1) OJ No C 161, 20. 6. 1983, p. 174.
(2) OJ No C 90, 5. 4. 1983, p. 5.
(3) OJ No C 7, 29. 1. 1974, p. 2.
(4) OJ No L 350, 10. 12. 1982, p. 45.

Article 4

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

Article 5

The results of implementation of the experimental action shall be disseminated pursuant to Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [1].

Done at Luxembourg, 28 June 1983.

For the Council

The President

H. RIESENHUBER

[1] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX

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

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

The plan of action is set out as follows:

1. Three kinds of activity are to be given priority support:

   — activities for which the joining up (whether mono- or pluridisciplinary) of research teams is beneficial or indispensable.

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

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

   Both types of union aim to exploit the richness of methods and results now dispersed throughout Europe,

   — activities enabling the promotion of high-quality teams which, because of the novel nature of their work, do not yet benefit from the support which their worth, and the potential value of their work, would seem to justify,

   — activities leading to a strengthening of the communication and diffusion of information within the scientific and technical system.

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

   — *pharmacobiology:* application of new developments in cellular and molecular biology,

   — *solid-state physics:* structure phenomena and processes of fabricating composite materials,

   — *optics:* application of modern techniques of mathematical analyses to various problems in the field of optics,

   — *combustion:* approach to ignition phenomena (behaviour of material under combustion conditions),

   — *photometry/photoacoustics:* application to the field of non-destructive analysis,

   — *climatology:* transitory phenomena,

   — *interface phenomena.*

2. In the fields referred to in point 1 different kinds of illustrative stimulation activities are to be tried out: research allocations, laboratory twinning, researcher mobility and subsidies for research teams. On the other hand, a specific project of a pluridisciplinary nature will be started up, to enable joint working by teams in different Member States to bring it to successful conclusion.

3. The choice of stimulation activities and the scientific and technical teams involved will be made as follows:

   — the Commission will inform the national scientific and technical communities of opportunities for Community action in the selected fields; it will await offers,

   — the selection of tenders will be made by the Commission which, with the assistance of Codest, will make use of a 'peer review' system to judge the scientific and technical merit of the activities proposed and the quality of the teams putting them forward. The intervention chosen will

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

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

COUNCIL DECISION

of 28 June 1983

amending Decision 82/402/EEC adopting a research and development programme (1982 to 1985) in the raw materials sector

(83/332/EEC, Euratom)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Whereas, by Decision 82/402/EEC (2), the Council adopted, for a period of four years with effect from 1 January 1982, a research and development programme in the raw materials sector;

Whereas, by Decision 78/264/Euratom (3), as amended by Decision 81/364/Euratom (4), the Council adopted, for a period of five years with effect from 1 January 1978, a programme of research and development for the Euratom Atomic Energy Community on uranium exploration and extraction; whereas, in order to carry out research projects in this field after the date of completion of this programme, these research projects should be incorporated in the programme for the raw materials sector and in particular in the sub-programme on 'Metals and mineral substances, including clay-based materials for the ceramics industry';

Whereas the Scientific and Technical Research Committee (Crest) has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Sole Article

Decision 82/402/EEC is hereby amended as follows:

1. The following is inserted as the second citation:
   'Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,'.
2. Article 2 (1) is replaced by the following text:
   '1. The funds estimated as necessary for the execution of the programme should be 54 million ECU, including expenditure on a staff of 19.
   The indicative distribution of this amount by sub-programme is shown in Section A of the Annex.'
3. Part A (I) (1) of the Annex is amended as follows with effect from 1 January 1983:
   (a) Point 1.3 is replaced by the following:
   '1.3. Geophysical methods, including radiometry;
   (b) The following point is added:
   '1.7. Measuring techniques relating to uranium and its decay products'.
4. Part B (I) of the Annex is deleted.

Done at Luxembourg, 28 June 1983.

For the Council

The President

H. RIESENHUBER

(1) OJ No C 161, 20. 6. 1983, p. 178.
(2) OJ No L 174, 21. 6. 1982, p. 23.
(3) OJ No L 72, 14. 3. 1978, p. 12.
(4) OJ No L 137, 23. 5. 1981, p. 44.

I

(Information)

COUNCIL

COUNCIL RESOLUTION

of 25 July 1983

on framework programmes for Community research, development and demonstration activities and a first framework programme 1984 to 1987

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

Having regard to the Council resolution of 14 January 1974 on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology (1),

Having regard to proposals from the Commission in its communications to the Council dated 22 December 1982 and 20 May 1983 (2) on the framework programme 1984 to 1987,

Having regard to the opinion of the European Parliament (3),

Having regard to the opinion of the Economic and Social Committee (4),

Having regard to the opinion of the Scientific and Technical Research Committee (Crest),

Whereas Article 2 of the Treaty establishing the European Economic Community assigns to the Community the task, among others, of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas it is important to promote balanced scientific and technical development within the Community;

Whereas research, development and demonstration activities (R, D and D) must be accompanied by adequate dissemination of the knowledge acquired by means of these activities and by effective use of the results obtained;

Whereas, at its meetings on 9 November 1981 and 8 March and 30 June 1982, the Council affirmed the need to systemize and optimize Community action in the field of research, development and demonstration, having recognized that the strategic coherence of the Community's activities would be enhanced and the preparation and adoption of decisions in the aforementioned field would be greatly facilitated by the adoption and regular review by the Community institutions of a framework programme containing broad indications for the medium-term development of scientific and technical objectives;

Whereas, at its meeting on 8 February 1983, the Council expressed a large measure of agreement on the need to increase Community expenditure on research and development and on the proportionally larger share which should be allotted to it in the Community's overall budget, subject to further clarification of the budgetary implications;

Whereas, on 18 June 1983, the European Council adopted the Declaration concerning the development of policies and new Community action, budgetary discipline, own resources and particular problems of certain Member States;

Whereas the Commission's proposal concerning a first framework programme 1984 to 1987 seems likely to promote such a development of Community research, development and demonstration policy;

Whereas the Treaty establishing the European Community does not provide the specific powers of action required for the adoption of this resolution,

(1) OJ No C 7, 29. 1. 1974, p. 2.

(2) OJ No C 169, 29. 6. 1983, p. 11.

(3) Opinion delivered on 10 June 1983 (not yet published in the Official Journal).

(4) Opinion delivered on 1 June 1983 (not yet published in the Official Journal).

HEREBY ADOPTS THIS RESOLUTION:

Article 1

The development of a common strategy in the field of science and technology shall take place on the terms laid down in this resolution and in accordance with the Communities' other strategies and policies.

Article 2

The common strategy in the field of science and technology shall be defined in framework programmes setting out the scientific and technical objectives to be pursued at Community level together with selection criteria for Community action, relative priorities and financial indications.

These framework programmes shall be drawn up by the Commission in consultation with the Member States.

On the basis of the framework programmes, the Commission shall prepare proposals for specific research, development and demonstration activities which meet the objectives referred to in the first paragraph.

Article 3

The Council hereby approves the principle of framework programmes for periods of four years which will be reviewed at least every two years and revised if necessary.

On the basis of proposals submitted to this end by the Commission and after receiving the opinion of the European Parliament, the Council shall:

— approve the framework programmes,

— adopt, in accordance with the framework programmes approved and with the procedures instituted by the Treaties, specific decisions on the R, D and D activities of the Communities.

Article 4

The Council hereby approves the scientific and technical objectives for the period 1984 to 1987 and the selection criteria set out in Annexes I and II respectively.

The Council hereby confirms its agreement on the need to increase Community spending on R, D and D. While bearing in mind the need to frame Community policies, but awaiting the outcome of the general discussion on the Communities' resources and policies, for the time being the Council takes note of the financial indications relating to the objectives to be attained in the period 1984 to 1987 (Annex III). These indications are to serve as a guide for Commission planning and the adoption by the Council of specific R, D and D activities during that period.

These objectives and criteria, on the one hand, and these financial indications, which still have to be defined, on the other, shall constitute the elements on which implementation of the 1984 to 1987 framework programme will be based.

The planning and adoption of programmes will of course take account of financial constraints.

Article 5

In 1985 at the latest, the 1984 to 1987 framework programme will be reviewed on the basis of a Commission proposal and conclusions drawn from the experience gained from this first framework programme, with a view to evaluating its effectiveness and improving its underlying approach.

This review may result in revision of the first framework programme.

ANNEX I

Scientific and technical objectives

(1984 to 1987)

1. Promoting agricultural competitiveness:

   — developing agricultural productivity and improving products:

      — agriculture,

      — fisheries.

2. Promoting industrial competitiveness:
   - — removing and reducing barriers,
   - — new techniques and products for the traditional industries,
   - — new technologies.
3. Improving the management of raw materials.
4. Improving the management of energy resources:
   - — developing nuclear fission energy,
   - — controlled thermonuclear fusion,
   - — developing renewable energy sources,
   - — rational use of energy.
5. Stepping up development aid.
6. Improving living and working conditions:
   - — improving safety and protecting health,
   - — protecting the environment.
7. Improving the effectiveness of the Community's scientific and technical potential:

   horizontal action.

ANNEX II

Selection criteria

In general, when selecting Community activities on the basis of the scientific and technical objectives adopted, special attention should be given after assessment of their scientific and technical values to activities which contribute to the definition or implementation of Community policies.

In these fields, Community action can be justified where it presents advantages (added value) in the short, medium or long term from the point of view of efficiency and financing or from the scientific and technical point of view as compared with national activities (public or private).

More specifically, Community action can be justified in the following cases:

- — research on a very large scale for which the individual Member States could not, or could only with difficulty, provide the necessary finance and personnel,
- — research, the joint execution of which would offer obvious financial benefits, even after taking account of the extra costs inherent in all international cooperation,
- — research which, because of the complementary nature of work being done nationally in part of a given field, enables significant results to be obtained in the Community as a whole for the case of problems whose solution requires research on a large scale, particularly geographical,
- — research which helps to strengthen the cohesion of the common market and to unify the European scientific and technical area and research leading, where the need is felt, to the establishment of uniform standards.

ANNEX III

Financial indications by objectives
(1984 to 1987)

	(million ECU (1))	*(%)*
1. Promoting agricultural competitiveness:	130	3,5
— developing agricultural productivity and improving products:		
— agriculture	115	
— fisheries	15	
2. Promoting industrial competitiveness:	1 060	28,2
— removing and reducing barriers	30	
— new techniques and products for the traditional industries	350	
— new technologies	680	
3. Improving the management of raw materials	80	2,1
4. Improving the management of energy resources:	1 770	47,2
— developing nuclear fission energy	460	
— controlled thermonuclear fusion	480	
— developing renewable energy sources	310	
— rational use of energy	520	
5. Stepping up development aid	150	4,0
6. Improving living and working conditions:	385	10,3
— improving safety and protecting health	190	
— protecting the environment	195	
7. Improving the effectiveness of the Community's scientific and technical potential:	85	2,3 (2)
horizontal action	90	2,4
	3 750	100,0

(1) At 1982 constant values.
(2) Corresponds to 5 % by the end of the period.

I

(Information)

COUNCIL

COUNCIL RESOLUTION

of 28 June 1983

on a Community plan of action relating to the evaluation of Community research and development programmes

THE COUNCIL OF THE EUROPEAN COMMUNITIES

Having regard to the Treaties establishing the European Communities,

Having regard to the communication from the Commission containing a Community plan of action relating to the evaluation of Community research and development programmes,

Having regard to the opinion of the Scientific and Technical Research Committee,

Whereas the Council has stressed that the aim of Community research should be to produce results capable of contributing to the economic, social and other objectives of the Community and its Member States and has requested the Commission to prepare specific proposals for a system for evaluating the results of common R & D programmes;

Whereas the Commission has addressed to the Council a communication on the 'Exploitation and evaluation of research results'; whereas the Scientific and Technical Research Committee has approved the general guidelines on evaluation put forward by the Commission in that communication;

Whereas the evaluation methods and procedures which the Commission intends to apply in the plan of action have been successfully tested during an experimental phase; whereas the Commission's evaluation approach has been supported by evaluation experts and users of evaluation results at various levels within the Community institutions and within the Member States;

Whereas evaluation is an integral part of the continuing process of R & D policy and programme formulation, execution and revision;

Whereas evaluation constitutes a key element in the implementation of the framework programme for the Community's scientific and technical activities, which will contain a specific reference to it;

Whereas evaluation can effectively contribute to ensuring that timely decisions are taken on the establishment of R & D priorities, the choice of research areas and allocation of resources in order to meet the needs of new scientific and technological developments;

Whereas it is necessary to strengthen existing evaluation methods, and in particular the evaluation of the results of Community research programmes, in order more effectively to contribute to the R & D decision-making process;

Whereas it is necessary to stimulate activity within the Community in the field of evaluation in order to develop methods which can satisfactorily contribute to the achievement of the evaluation objectives;

Agrees with the importance attached by the Commission to the evaluation process,

Takes note with appreciation of the three year plan of action proposed by the Commission for the evaluation of Community R & D programmes which is attached to this resolution, and recognizes in particular the validity of the methodological approach the Commission intends to follow,

Notes the administrative, planning and budgetary provisions, associated with the plan of action, as envisaged by the Commission,

Invites the Commission to pursue its activities as proposed in this field and, if necessary, to make a further communication to the Council, in the light of the experience acquired.

Community plan of action relating to the evaluation of Community research and development programmes

The evaluation of Community research and development programmes

PLAN OF ACTION

The evaluation activities included in this plan of action will play a key role in the context of the framework programme which the Commission proposed in its communication to the Council in December 1982 on 'Proposals for a European scientific and technical strategy — Framework programme 1984 to 1987'. The plan of action covers a phase of three years starting in January 1983. At the end of this phase the Commission will review the results of its actions in this field and on the basis of this review will, if necessary, make a further communication to Council on the implementation of a fully operational evaluation system, taking into account also developments in the framework programme.

This phase will enable the Commission to apply the results of its previous experimental period on a broader and more systematic basis. The evaluation methods used during the first test cases will be progressively applied to Community research and development (R & D) programmes at the appropriate time.

At the same time the Commission will further refine methodological and procedural aspects on the basis of more research in the field of evaluation and from the experience acquired through additional applications of the method.

The plan of action covers the following activities:

1. Continued strengthening of existing internal evaluation methods carried out during the implementation of R & D programmes in order to control effectively work progress and to adapt to changing needs, priorities and developments. The Advisory Committees on Programme Management (ACPMs) play a key role in this continuing internal evaluation, as does an effective monitoring and reporting system. ACPMs should provide the Commission with their evaluation of the results of the R & D programmes on a systematic basis, prior to any decision concerning programme-revision or extension.

2. The retrospective assessment of the results of Community R & D programmes carried out by external independent groups of experts.

2.1. The evaluation method is based on the principle of the assessment *ex-post* of the programmes, performed, programme by programme, by external groups of independent experts.

To a certain extent also some *ex-ante* evaluation aspects are included since the evaluation panels are expected to provide, on the basis of the retrospective assessment, recommendations for the future orientations of the programmes.

The evaluation method must be adapted to the nature and implementation procedures of the programme being evaluated and will therefore remain flexible.

A distinction should be made between the different methods of implementation used for the research:

(a) For cost-sharing programmes (indirect actions) the 'peer-evaluation method' will be applied. The objectives, which will vary to take into account the nature of the programme and the needs of the users, will, in general, cover the following aspects:
- — determination of the practical contribution of the results of the programme to progress of R & D in the appropriate field within the Community, to Community objectives and to the socio-economic development of the Community in general,
- — evaluation of the effectiveness of the management and of the resources utilized,
- — recommendations on ways of exploiting research results and on the future orientation of the programme.

(b) For the programmes of the Joint Research Centre (JRC), the evaluation method which the Commission intends to apply will consist of two levels.

The first level encompasses the relevance and impact of the research results of the JRC, programme by programme, within a global strategy where the direct, indirect and other forms of actions are simultaneously used to reach a given target, i.e. within the framework of action programmes.

The first level covers the following aspects:

— determination of the practical contribution of the results of the programme to progress of R & D in the appropriate field within the Community, to Community objectives and to the socio-economic development of the Community in general;

— recommendations on ways of exploiting research results and on the future orientation of the programme.

The second level deals with the problems of proper management practices: this second level of evaluation uses a number of permanent control bodies which are 'built-in' in JRC and Commission structures: Advisory Committees, *ad hoc* expert groups, and, at overall level, the Governing Board, as well as the various control commissions of the Commission, of the European Parliament, etc.

Whenever a difficulty is identified, the Commission takes advantage of specific contributions such as technical or financial audits performed by specialized bodies or companies of consultants upon specific request.

(c) For concerted actions, including COST actions, the lighter 'Hearing' method will be applied to take into account the more limited size, in terms of Community input, and scope of these types of research actions. The evaluation objectives will cover the following aspects:

— assessment of the value and impact of concerted actions and of the benefits derived from the concertation,

— assessment of the effectiveness of the management and coordination of the actions,

— recommendations on the future orientation of the programme.

(d) Combined evaluations

Where it is felt that Community activities in a particular research area covered by different methods of implementation require simultaneous evaluation, the peer-evaluation method will be used. This procedure will be necessary in particular once the 'action programmes' concept is implemented.

2.2. The evaluation panels should be relatively small to permit informal working procedures, numbering generally six to nine members, with appropriate member composition to include the necessary blend of competence.

Each panel will be free, within general guidelines, to establish its own specific evaluation methods and criteria.

The evaluations will take place approximately mid-way through each four-or five-year programme taking into account the results of the previous programme and the partial results of the current programme.

The results of the evaluations should be rapidly published and widely distributed. The reports will be submitted to the European Parliament, the Council, the Economic and Social Committee, the ECSC Consultative Committee, the Court of Auditors and other advisory bodies (CREST, ACPM, COMAC, etc.). Reports will also be distributed to other interested organizations, institutions and governmental bodies within Member States, including, in particular, potential users of research results in the industrial or other sectors.

Systematic feedback on the evaluations will be encouraged in order to ensure that programmes are meeting the real needs of the users. This will be done *inter alia* through oral presentations and discussions with users on the results of the evaluation and the organization of seminars on the impact and utility of current evaluation methods and procedures.

3. The Commission will carry out studies on certain evaluation aspects and encourage research in this field within the Community. In order to provide the panels with the most effective tools to carry out their tasks, the Commission will contract out specific studies in order to develop or improve certain methodological aspects. Given the relatively undeveloped state of the art in this field, this constitutes an important continuing task not only for the success of the Commission's own evaluations but for their application in other organizations and institutions in Member States. The Commission will widely distribute the results of its research.

4. The Commission will encourage the exchange of information in this field within the Community through the organization of workshops and seminars and by progressively establishing an informal Community evaluation network. The Commission will endeavour to keep abreast of national and international developments in this

field. It intends to encourage the exchange of information on evaluation covering both its own experiences and those of other organizations and institutions in Member States. As part of the establishment of a network of experts in this field (national and international), it will organize periodic workshops and seminars on specific topics (e.g. assessment of the long-term benefits of research results or technology assessment methods), the results of which will be published.

Administration, planning and budget

In order to effectively carry out this plan of action and to ensure the necessary detachment from continuing programme-management activities, the Commission is maintaining and will be reinforcing a unit, independent *vis-à-vis* the R & D programmes, responsible for evaluation activities. The Commission intends to keep its administrative structure as light as possible in order to reflect the flexible and adaptable nature of the proposed evaluation strategy.

Over the next three years it is planned to perform approximately seven or eight evaluations per year and organize two seminars and a conference.

To carry out its plan of action the Commission envisages utilizing appropriations entered in the general budget of the European Communities under Chapter 72 — General and preparatory projects in the field of scientific and technological research (Article 721).

At the end of the three-year phase, the Commission will, if necessary, make a further communication taking into account the results of this phase and the requirements for the subsequent fully operational phase.

No L 293/20 Official Journal of the European Communities 25. 10. 83

COUNCIL DECISION

of 17 October 1983

adopting a research programme of the European Economic Community on forecasting and assessment in science and technology (FAST) 1983-1987

(83/519/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas Article 2 of the Treaty assigns to the Community the task *inter alia* of promoting throughout the Community a harmonious development of economic activities, and a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas the mobilization of science and technology constitutes one of the possible mechanisms for stimulating a resumption of growth in the Member States;

Whereas, by its resolution of 14 January 1974 on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology (4), the Council entrusted to the Commission the task of defining actions of Community interest and of selecting the ways and means appropriate to the implementation of these actions;

Whereas research and development activities (R & D), integrated in an overall concept of social and economic policies, have become and of the essential strategic means for realizing the long-term objectives of the Member States and of the Community;

Whereas one of the instruments for the regular revision of the programme framework for Community R & D and the adjustment of its priorities in response to current and foreseeable developments is the analysis of possible long-term scientific, technological and socio-economic changes;

Whereas, by its Decision 78/668/EEC (5), the Council approved a research programme of the European Economic Community on forecasting and assessment in science and technology, designed to test, over a four-year period, the usefulness of such an activity for the selection of broad long-term directions for Community R & D; whereas this programme ends on 16 August 1983;

Whereas the results of the aforesaid programme, known as FAST, have demonstrated the inherent usefulness and particular need in these difficult times of reflective study on long-term scientific, technological and socio-economic developments in the Member States as a basis for the definition of long-term objectives and action priorities, particularly in science and technology;

Whereas the effective utilization at Community level of the results of significant forecasting and assessment activities in science and technology carried out in the Member States, by various new public and private research agencies among others, requires the reinforcement and multiplication of cooperative European networks;

Whereas the Treaty does not provide the specific powers of action required for the adoption of this Decision;

Whereas the Scientific and Technical Research Committee (CREST) has delivered its opinion on the Commission's proposal,

HAS DECIDED AS FOLLOWS:

Article 1

A second research programme of the European Economic Community on forecasting and assessment in science and technology, FAST, as defined in the Annex, is hereby adopted. The duration of the programme shall be from 17 August 1983 to 31 December 1987.

(1) OJ No C 89, 31. 3. 1983, p. 9.
(2) OJ No C 184, 11. 7. 1983, p. 147.
(3) OJ No C 211, 8. 8. 1983, p. 9.
(4) OJ No C 7, 29. 1. 1974, p. 2.
(5) OJ No L 225, 16. 8. 1978, p. 38.

Article 2

The funds estimated as necessary for the execution of the programme shall be 8,5 million ECU including expenditure on a staff of 12. In addition, Member States will be invited to second visiting fellows to the FAST unit up to 20 men/year for the whole duration of the programme under the conditions defined in the Annex.

Article 3

The Commission shall be responsible for the implementation of the programme. It shall be assisted in this task by an Advisory Committee on Programme Management to be set up by the Commission.

Article 4

The Commission shall inform the Council and the European Parliament by two interim reports (mid-1985 and at end of 1986) on the state of progress of the research activities.

The Commission shall arrange for the results of the programme to be evaluated by an independent group, and shall make a report to the Council and to the European Parliament at the end of the programme.

Article 5

The dissemination of information resulting from the execution of the programme shall be in conformity with Regulation (EEC) No 2380/74 (1).

Done at Luxembourg, 17 October 1983.

For the Council

The President

G. VARFIS

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

ANNEX

1. The main aim of the FAST research programme is the analysis of scientific and technological changes in order to highlight their long-term implications and consequences for the Community's R & D and other policies over the next five, seven and/or 10 years and to propose timely policy options.

2. The activity will concentrate on three main fields of investigation:

1. *New forms of 'growth' for Europe*
   1.1. Technology, employment and work
   1.2. Integrated development of renewable natural resources.
2. *New strategic industrial systems*
   2.1. Communication
   2.2. Food
3. *Transformation of service activities and technological change*

3. To achieve the aim defined in point 1, the programme has two principal tasks in the three areas envisaged in point 2:

(a) to highlight the prospects, problems and potential conflicts which may affect the long-term development of the Community, and hence to propose new long-term orientations for Community action, particularly in the field of science and technology;

(b) to make use of long-term research studies undertaken within the Member States.

4. The execution of these tasks will be mainly through the following modes of action:

— development of the activity of the programme on the basis of a network of some 10 national research units identified in cooperation with the Member States. The form and functioning of these networks will be defined with these units,

— association of Community centres or research teams with capability in the analysis of technological change with the execution of the scientific work of the programme,

— promotion of *ad hoc* networks for information and collaboration at Community level. These networks to be as flexible and informal as possible. The participation of representatives of industry, labour and associated movements is to be sought,

— secondment to the programme by Community and national institutions (governmental, academic or professional) of visiting fellows.

By 'visiting fellow' is meant a person who is seconded to the Commission of the European Communities to work as a member of the FAST unit for a limited period of time. A visiting fellow may be:

(i) a civil servant professionally involved with the analysis of long-term problems and prospects, particularly in the fields of science and technology;

(ii) a senior university researcher or professor of outstanding competence in a particular area of science and technology;

(iii) a junior researcher beginning his career or preparing his Ph. D or engaged in post-doctoral specialization.

In the cases referred to in (i) and (ii), Community rules adopted by the Commission on 19 January and 23 December 1976 as regards covering the costs associated with the secondment of national experts to the Commission services (category XI, item I, heading No 11.73 of the research programme budget) will be applied.

In the case referred to in (iii), special grants made available by the Commission to enable scientists and engineers at various levels of training to collaborate in the implementation of the different Community research programmes and to acquire specialist knowledge in the fields covered by these programmes will be granted.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 26 October 1983

adopting the second stage (January 1984/March 1986) of the multiannual research and training programme for the European Economic Community in the field of biomolecular engineering

(83/533/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas Article 2 of the Treaty assigns to the Community *inter alia* the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and an accelerated raising of the standard of living;

Whereas by Decision 81/1032/EEC (4), the Council adopted a multiannual research and training programme in the field of biomolecular engineering; whereas the programme is to be implemented in two stages, the first stage running from 1 April 1982 until the revision of the programme in 1983 and the second stage from this revision until 31 March 1986;

Whereas the Council decided that the amount of the appropriations and the staff required to execute the programme is to be re-evaluated when the programme is revised;

Whereas the implementation of the first stage of the programme through research and training contracts has clearly confirmed the need for an extension of the programme during the second stage;

Whereas the importance of research and training at Community level in the field of biomolecular engineering is fully recognized in the framework programme (1984 to 1987) prepared by the Commission;

Whereas account should be taken of the opinion of the Scientific and Technical Research Committee (Crest) on the Commission proposal;

Whereas account should be taken of the opinion of the Advisory Committee for the Management of the Biomolecular Engineering Programme,

HAS DECIDED AS FOLLOWS:

Article 1

The second stage of the multiannual research and training programme, for the European Economic Community in the field of biomolecular engineering, hereinafter called 'the programme', is hereby adopted in the form set out in the Annex for the period starting on 1 January 1984 and ending on 31 March 1986.

(1) OJ No C 180, 7. 7. 1983, p. 10.
(2) Opinion delivered on 14 October 1983 (not yet published in the Official Journal).
(3) Opinion delivered on 28 September 1983 (not yet published in the Official Journal).
(4) OJ No L 375, 30. 12. 1981, p. 1.

Article 2

The funds estimated as necessary for the execution of the second stage of the programme, which are to be added to those already allocated for the first stage, should be seven million ECU, including expenditure on an additional staff of two.

Done at Luxembourg, 26 October 1983.

For the Council

The President

G. MORAITIS

ANNEX

1. **Research actions**

1.1. Development of second generation bioreactors (multienzymatic, multiphase or requiring a co-factor) for detoxification and for industrial applications including agro-food applications. Research activities are also included in this sector focusing upon :

— the study of the physiology and the stability of cell populations, including genetically manipulated cells, in relation with whole cell immobilization,

— the analysis of enzyme inactivation and the preservation of activity in immobilized systems (particularly under non-physiological conditions characteristic of high salinity, non-aqueous, high temperature and extreme pH environments).

1.2. Improved production, by means of biomolecular engineering methods, of substances for :

— animal husbandry (particularly vaccines and hormones),

— agro-food industries.

1.3. Upgrading of plant products, particularly ligno-cellulose, by means of biomolecular engineering methods.

1.4. Improvement, by means of genetic engineering, of plants and micro-organisms which play an important role in agriculture. Research activities in this sector are to include :

— the characterization of the structure and the expression of microbial and plant genomes, including organelles of DNA and plasmid DNA,

— the study of the molecular mechanisms of interactions between plants and symbiotic micro-organisms and the improvement by genetic engineering of these symbiotic relations,

— the development of methods for the identification, transfer and expression of new genetic information in cultivated plant species,

— the control of regeneration and differentiation of plant cells and plant protoplasts into mature and fertile plants,

— the use of biomolecular engineering for the early detection of genetic or pathogenic changes in plants.

1.5. Development of methods for detecting contamination and for the assessment of possible risks associated with applications of biomolecular engineering in agriculture and industry.

The financial resources for the execution of research actions shall not be lower than 80 % of the total budget allocated to the second stage of the programme.

2. **Training**

2.1. Development of new reactors using immobilized multi-enzyme systems, including those requiring multi-phase environment and co-factor regeneration.

2.2. Development of bio-reactors for human detoxification.

2.3. The transfer of genes from diverse sources to the bacterium Escherichia coli, the yeast Saccharomyces cerevisiae and other suitable organisms.

2.4. Development of cloning systems.

2.5. Gene transfer in micro-organisms and in plants important ot agriculture.

2.6. Improvement of methods for detecting contamination and for the assessment of possible risks associated with applications of biomolecular engineering in agriculture and industry.

The financial resources for the execution of this training action shall not exceed 20 % of the total budget allocated to the second stage of the programme.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 12 December 1983

amending Decision 82/402/EEC adopting a research and development programme (1982 to 1985) in the raw materials sector

(83/634/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

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

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Whereas, by Decision 79/968/EEC (3), the Council adopted, for a period of four years with effect from 1 November 1979, a research and development programme for the European Economic Community in the field of the recycling of urban and industrial waste (secondary raw materials);

Whereas, by Decision 82/402/EEC (4), the Council adopted, for a period of four years with effect from 1 January 1982, a research and development programme in the raw materials sector which includes the programme for the recycling of urban and industrial waste already under way and due to end on 31 October 1983, set out in section B of the Annex thereto;

Whereas it is desirable that the programme for the recycling of urban and industrial waste be extended to 31 December 1985 in order to complete the research in progress; whereas for this purpose it should be merged with the sub-programme on the recycling of non-ferrous metals forming part of the programme in the raw materials sector;

Whereas the Scientific and Technical Research Committee (CREST) has given its opinion on the Commission proposal,

HAS DECIDED AS FOLLOWS:

Article 1

Decision 82/402/EEC is hereby amended as follows:

1. The following point (d) is added to Article 3:

   '(d) the "Urban and Industrial Waste Recycling" Advisory Committee on Programme Management, set up by Decision 79/968/EEC, shall remain active from 1 November 1983 to 31 December 1985 for research topics 4 to 7 of the "Recycling of non-ferrous metals and urban and industrial waste" sub-programme.'

2. In section A of the Annex:

   — the title of the sub-programme 'III. Recycling of non-ferrous metals', which appears at the beginning of that section, is replaced by 'III. Recycling of non-ferrous metals and urban and industrial waste',

   — the text of the sub-programme referred to above is replaced by that appearing in the Annex to this Decision.

(1) OJ No C 272, 11. 10. 1983, p. 5.
(2) OJ No C 342, 19. 12. 1983, p. 118.
(3) OJ No L 293, 20. 11. 1979, p. 19.
(4) OJ No L 174, 21. 6. 1982, p. 23.

3. Section B II of the Annex shall be deleted.

Article 2

The remaining appropriations for the programme on the 'Recycling of urban and industrial waste' shall be allocated to the continuation of work on research topics 4 to 7 of the 'Recycling of non-ferrous metals and urban and industrial waste' sub-programme.

Done at Brussels, 12 December 1983.

For the Council

The President

C. SIMITIS

ANNEX

'III. RECYCLING OF NON-FERROUS METALS AND URBAN AND INDUSTRIAL WASTE

An amount of 6 500 000 ECU is allocated to this sub-programme. It covers the following research areas:

	Indirect action	*Coordinated action*
1. **Collection and characterization of non-ferrous metals scrap and waste**	—	×
2. **Physical processing of non-ferrous metals scrap and waste**		
2.1. Mechanical processes		
— selective grinding and shredding	—	×
— optimization of these techniques with respect to energy consumption	×	×
2.2. Physical processes		
— advanced gravimetric processes using magnetic fluids	×	×
— advanced methods of electronic separation	×	×
— advanced processes using eddy currents	—	×
— advanced dry gravimetric processes (fluidized beds)	—	×
— new flotation techniques	—	×
3. **Metallurgical processing of non-ferrous scrap and waste**		
3.1. Physical separation of charges for pyrometallurgical and hydrometallurgical processes		×
3.2. Hydrometallurgical processes		
3.2.1. Leaching	—	×
3.2.2. Purification of solutions and extraction of non-ferrous metals from solutions	×	×
3.2.3. Direct hydrometallurgical processing of sludges containing non-ferrous metals	×	×
3.3. High-temperature pyrometallurgical processes		
3.3.1. High-temperature pre-treatment to separate metals from non-metallic components	—	×
3.3.2. Fusion processes	—	×
3.3.3. High-temperature processes based on the formation of a gaseous phase	—	×
3.4. Secondary metals refining — molten salt electrolysis	×	×
Technico-economic studies	office studies	
AS FROM 1 NOVEMBER 1983		
4. **Sorting of household waste**		
4.1. Assessment of waste sorting projects	—	×
4.2. Methods for sampling and analysis of household waste	—	×
4.3. Evaluation of health hazards	—	×
4.4. Technology for the sorting of bulk waste	×	×
4.5. Materials recovery		
— paper	×	×
— plastics	×	×
— non-ferrous metals	—	×
4.6. Energy recovery	×	×
4.7. New collection and transport systems	—	×

	Indirect action	*Coordinated action*
5. Thermal treatment of waste		
5.1. Firing of waste-derived fuel	(see topic 4.6)	
5.2. Pyrolysis and gasification	×	×
5.3. Recovery of metal and glass from residue	—	×
6. Fermentation and hydrolysis		
6.1. Anaerobic digestion	×	×
6.2. Carbohydrate hydrolysis	×	×
6.3. Composting	—	×
7. Recovery of rubber waste		
7.1. Retreading	—	×
7.2. Size reduction	—	×
7.3. Reclaiming and recycling of rubber powder	—	×
7.4. Pyrolysis	—	×

COUNCIL DECISION

of 12 December 1983

adopting joint research programmes and programmes for coordinating agricultural research

(83/641/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 43 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas Council Regulation (EEC) No 1728/74 of 27 June 1974 on the coordination of agricultural research (4) provides for coordination at Community level of national agricultural research activities, in order to contribute towards attaining the objectives of the common agricultural policy;

Whereas Article 5 of Regulation (EEC) No 1728/74 provides that the Council is to decide upon specific measures for the coordination of national research activities so as to allow rational organization of means employed, efficient use of results and the orientation of such work towards the aims of the common agricultural policy, as well as for implementation of joint projects designed to second or supplement work undertaken in the Member States in fields which are of particular importance to the Community;

Whereas one of the major problems facing agricultural research will be confining the rapidly escalating costs of agricultural inputs by *inter alia* developing new production, processing and conservation techniques aimed at direct and indirect savings in the utilization of traditional energy sources, and aiming at energy production within the agricultural sector itself;

Whereas efforts must continue to ensure the most rational pattern of utilization of the limited natural resources of land, water, climate and manpower engaged in agricultural production in the Community, with particular reference to resource evaluation, soil erosion and degradation, water control, and resource management systems;

Whereas numerous areas in the Community are lagging behind others in development, thus accentuating already sharp regional contrasts in economic growth, income and employment opportunities, especially as between the Mediterranean region and other disadvantaged areas and the more advanced parts of the Community; whereas research must play its part in finding solutions to these increasingly serious, structural problems of growing regional disparities;

Whereas concern to improve the quality of all food products is increasing and research is needed to elaborate and clarify some of the important problems involved, including not only important aspects of hygiene and residues but also the less tangible questions of consumer taste and preference for foods produced under intensive and extensive systems, as well as the marketing and trade problems associated with end product quality; whereas the over-supply situation in a number of food products justifies major research efforts to locate new outlets;

Whereas animal production, in particular meat production, is currently a sector of agriculture in the European Community which is in need of improvement, despite the already considerable national research efforts devoted to beef and veal, pigmeat and sheepmeat; whereas measures must be taken to remove as far as possible obstacles to productive efficiency, including, in particular, reproductive performance in all farm livestock, losses due to diseases, and human health hazards resulting from contact with animal products contaminated by animal pathogens infectious to man and from contact with other residues; whereas increasing attention must be focused on the adverse effects which some systems of animal husbandry might have on animal welfare;

Whereas future research in the major crops sector must be able to meet a twin challenge: that of the continuing need for advances in productive efficiency — without creating surpluses — through improvements in yields of the existing varieties, creation of new varieties (e.g. through the application of genetic engineering), improvement in tillage practices, and control of pest and plant diseases, and that of the

(1) OJ No C 27, 2. 2. 1983, p. 6.
(2) OJ No C 242, 12. 9. 1983, p. 124.
(3) OJ No C 211, 8. 8. 1983, p. 13.
(4) OJ No L 182, 5. 7. 1974, p. 1.

growing protein deficit at the European level, while production of certain existing surplus products could be usefully replaced by the cultivation of deficit crops and products with currently unexploited potential, such as grass and forage crops, protein and oil-seed crops and special purpose crops;

Whereas the framework programme for science and technlogy activities gives particular emphasis to the promotion of agricultural competitiveness and proposes to give greater priority to this area;

Whereas this Decision contains an initial series of research projects which are to be carried out within the framework of this general programme; whereas the Commission is to submit further proposals for projects which are important for the agricultural sector;

Whereas, in the framework of this Decision, the research programmes will evolve continuously; whereas an examination of their state of progress will be necessary after a period of two years in order to ensure the technical and budgetary adjustment to the needs and orientation of the common agricultural policy,

HAS DECIDED AS FOLLOWS:

Article 1

1. The common research programmes and the programmes to coordinate research concerning conservation and utilization of agricultural resources, structural problems and improvement of plant and animal productivity, as specified in the Annex, are hereby adopted.

2. The programmes shall run for five years from 1 January 1984.

3. The total resources estimated as necessary for the duration of the programme should be 30 000 000 ECU. The annual appropriations shall be fixed in accordance with the budgetary procedure.

4. On the basis of the first report referred to in Article 4, the Council will review the programmes, including their financial aspects, before 30 April 1986.

Article 2

Detailed rules for the application of this Decision concerning in particular the scientific priorities to be observed in the framework of common and coordinated programmes, the criteria for selecting the research centres and institutes invited to collaborate in implementing the scientific measures and in the guidance of programmes while they are being carried out shall be adopted in accordance with the procedure laid down in Article 8 of Regulation (EEC) No 1728/74.

The annual breakdown and financial management of the appropriations for the various programmes shall be decided in accordance with the same procedure.

Article 3

The Commission shall ensure implementation of the coordination programmes by organizing seminars, conferences, study visits, exchanges of research workers and scientific working meetings and by collecting, analyzing and publishing the results as well as by increasingly availing itself of outside high-level experts.

The Commission shall implement the common research programmes by concluding research contracts with research centres and institutes taking part in the specific measures.

The Commission may, by means of *ad hoc* contracts, finance measures for applying the results of the research in the field.

Article 4

1. Not later than 31 December 1985, the Commission shall submit to the European Parliament and to the Council a progress report as well as, where necessary, proposals in order to review the programmes as referred to in Article 1 (4).

2. After conclusion of the programmes, not later than 31 July 1989, the Commission shall report to the European Parliament and the Council on the results of the activities carried out under the programmes covered by this Decision and on the use of the funds allocated for these measures.

Done at Brussels, 12 December 1983.

For the Council

The President

C. SIMITIS

ANNEX

SPECIFIC MEASURES

1. UTILIZATION AND CONSERVATION OF AGRICULTURAL RESOURCES

1. Energy in agriculture

The programme will study economies which can be effected in the energy intensive sectors of agriculture. Also, it envisages the possibility of producing and exploiting biomass and agricultural by-products profitable for energy.

There are three parts :

(a) *Indirect economy of energy* (fertilizers and plant protection materials)

— Optimizing the use of fertilizers (mainly nitrogen), biological nitrogen fixation, organic fertilizers and photosynthesis.

— Integrated plant protection.

(b) *Direct economy of energy* (fuel and combustible use)

— Tillage practices, working methods and matching machines to the needs of the job.

— Making maximum use of energy, in particular solar energy, for protected (glasshouse) crops and for crop drying, etc.

(c) *Production of energy*

— The use of crops of economic and industrial interest to produce energy from biomass.

— More efficient use of crop by-products.

— The socio-economic effects of those crops on the common agricultural policy, and their implications for structures, markets and the environment.

2. Land and water use and management

Improved use and conservation of the natural resources of land and water within the Community are the objectives of this programme. Soil degradation, effects of management systems on fertility and the evaluation of land production potential will be considered in conjunction with their effects on energy balance, the environment and socio-economic implications.

There are four subdivisions :

(a) *Degradation and fertility*

— Soil erosion (in particular, the effect of reafforestation), loss of nutrients (leaching, oxidation and denitrification).

— Adverse factors such as soil compaction, poor soil structure, the misuse of agricultural machinery, methods and cropping systems, etc.

— Soil microbiological activity.

(b) *Control and management of water in agriculture*

Control of excesses, or deficits, of water, environmental and economic effects of modifications.

(c) *Management systems*

— Optimal utilization of land and water resources for the production of food and energy crops.

— Comparison of low-input farming systems with conventional intensive systems.

— Problems related to peri-urban agriculture.

(d) *Land suitability and resource evaluation*

— Production potential maps for the principal crops of the European Economic Community.

— Computerization of land-use data.

— Potential uses of remote sensing.

II. STRUCTURAL PROBLEMS

1. Mediterranean agriculture

The objective of the programme is to reduce the economic and social disparities that exist between the Mediterranean area and the more advanced parts of the Communities. It is hoped to improve its agriculture through advanced economic and technical developments similar to those in the northern parts.

The priorities which are specific to the Mediterranean region are as follows:

(a) To remedy deficiencies especially in the following sectors: stock farming in marginal zones (the use of forests as grazing land, to help prevent fires); forests for quick yields (poplar, Douglas fir, tobacco, nuts, plant protein (oil seeds), cereals, seed production, etc. Attention will also be given to solving problems of surplus production (e.g. wine) and encouraging production of medicinal, aromatic and other interesting crops.

(b) Attention will be focused on the technical developments needed for protected cropping, out-of-season crops, irrigation, improvement of calcareous soils, diseases of plants and animals, systems of production, and farm structures which allow the most effective use of the results.

Improving the techniques of production only will not solve existing problems in many cases. It will, therefore, be necessary in the programmes to associate research with demonstration and application of its results in the field.

2. Other less-favoured regions

Other Community regions may feature economic and social imbalances similar to those of the Mediterranean (French overseas departments, west of Ireland).

3. Agro-food

Improvement of the quality of agricultural products is the main aim of this programme, which is basically oriented towards human consumption. The methods of production and processing will be examined. While some qualitative aspects, like hygiene, residues, etc., are easy to define and measure, others (e.g. flavours) are more elusive and difficult to control.

There will be the following subdivisions:

(a) A study of the relationship between the production system and quality, with particular reference to a comparison between intensive and extensive methods. The impact of such practices as use of mineral fertilizers, organic farming, plant protection methods, etc., will be measured.

(b) *Specific problems of hygiene and control and elimination of residues affecting the market*

— The importance of hormones, antibiotics, pesticides, heavy metals.

— To develop methods for the objective evaluation of quality.

(c) Markets and marketing in relation to end-product quality and the preoccupations of consumers.

(d) New products and new techniques of utilization of agricultural products will be investigated.

III. IMPROVEMENT OF ANIMAL AND PLANT PRODUCTIVITY

1. Animal husbandry

The objective of the programme is to examine the actual constraints on efficiency of production such as losses through diseases (including possible new diseases), conditions of animal rearing (including transport and slaughter) and the rate of reproduction of all domestic animals.

There are three specific parts:

(a) *Animal health*

— Strategic research on important diseases, especially those which may hinder trade.

— Immune mechanisms and disease protection.

— Development and harmonization of diagnostic methods.

— Occurence and economics of disease control.

(b) *Animal welfare*

— Social and physical space requirements.
— Disturbed behaviour and stress.
— Transport of farm animals.
— Alternative production systems.

(c) *Livestock productivity and management*

— Study of the physiology of reproduction in cattle, pigs and sheep.
— Rumen function and feeding standards.
— Improvement of biological and economic efficiency.

2. **Plant productivity**

The aim of this programme is increased returns to the farmer, through improving his productivity by more rational use of inputs. The programme will devote particular attention to productions that are in short supply within the Community (e.g. plant protein for animal feed, etc.).

There are three subdivisions:

(a) Continued plant breeding for improved disease resistance, better quality products and stability of yields.
(b) Optimizing agronomic methods and techniques from the point of view of physiological needs of plants.
(c) The use of modern methods of biotechnology and tissue culture for crop plant propagation.

Particular attention will be given to forage crops, to crops deficit in the Community, crops of particular regional interest, and crops that can be used to produce alternative sources of energy, in line with the emphasis laid by the European Parliament on strengthening research in the field of plant proteins.

IV. COORDINATION OF RESEARCH

Over and above research currently coordinated at the Community level the programme will institute a register of all current agricultural research programmes in Member States, to be made available to cooperating bodies, in order that:

1. joint research programmes can be developed;
2. duplication can be avoided;
3. Member States may be able to discuss programmes in advance of commencement and draw up necessary priorities.

II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DECISION

of 22 December 1983

adopting a research programme to be implemented by the Joint Research Centre for the European Atomic Energy Community and for the European Economic Community (1984 to 1987)

(84/1/Euratom, EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular Article 7 thereof,

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

Having regard to the proposal from the Commission [1], presented after consultation, with regard to nuclear projects, of the Scientific and Technical Committee,

Having regard to the opinion of the European Parliament [2],

Having regard to the opinion of the Economic and Social Committee [3],

Whereas, in the context of the common policy relating to the field of science and technology, the multiannual research programme is one of the principal means whereby the European Atomic Energy Community can contribute to the safety and development of nuclear energy and to the acquisition and dissemination of information in the nuclear field;

Whereas Article 2 of the Treaty establishing the European Economic Community assigns to the Community *inter alia* the task of promoting throughout the Community a harmonious development of economic activities, a continuous and balanced expansion and increased stability; whereas the objectives of activities engaged in by the Community to this end are set out in Article 3 of the said Treaty;

Whereas the non-nuclear projects provided for by this Decision appear necessary for the attainment of these objectives;

Whereas on 14 January 1974 the Council adopted a resolution on the coordination of national policies and the definition of projects of interest to the Community in the field of science and technology [4];

Whereas the programme was drawn up in accordance with the Council resolution of 17 December 1970 concerning the procedures for adopting research and training programmes [5];

Whereas Article 3 of Council Decisions 77/488/EEC, Euratom [6] and 80/317/EEC, Euratom, [7] provides for a review of the programme during its third year;

Whereas it is of advantage to define and embody the common science and technology strategy in multiannual framework programmes setting out the complete range of scientific and technical activities being carried out or due to be carried out on the basis of the three Treaties; whereas this advantage was confirmed by the

[1] OJ No C 311, 16. 11. 1983, p. 5.
[2] OJ No C 307, 14. 11. 1983, p. 116.
[3] OJ No C 341, 19. 12. 1983, p. 9.
[4] OJ No C 7, 29. 1. 1974, p. 2.
[5] OJ No L 16, 20. 1. 1971, p. 13.
[6] OJ No L 200, 8. 8. 1977, p. 4.
[7] OJ No L 72, 18. 3. 1980, p. 11.

Council in its resolution of 25 July 1983 on framework programmes for Community research, development and demonstration activities; and a first framework programme 1984 to 1987 [1];

Whereas, during the period 1984 to 1987, the Joint Research Council (JRC) must continue to play a central role in the Community's research strategy and to carry out work of common interest by drawing on a level of resources which is the equivalent of the present level;

Whereas, more generally, the JRC programme as a whole must be in keeping with the conclusions of the Council of 10 March 1983,

HAS DECIDED AS FOLLOWS:

Article 1

The research programme, hereinafter referred to as 'the programme', set out in Annex A is hereby adopted for a period of four years, starting on 1 January 1984.

Article 2

The expenditure commitment estimated as necessary for the execution of the programme should be 700 million ECU, including expenditure on a staff of 2 260. An indicative breakdown of this amount, consisting of approximately 400 million ECU for expenditure on staff and 300 million ECU for other expenditure, is given in Annex B.

Article 3

Appropriations earmarked for expenditure on staff shall be updated annually, as part of the budgetary procedure, in accordance with Council decisions on salaries and wages. In the case of other expenditure, the JRC Board of Governors shall each year assess the programme's financial requirements and its report shall be forwarded to the Council in the context of the budgetary procedure. If, after the initial years of the programme, the Board of Governors concludes that certain aspects have made it impossible to continue the programme for the whole of its duration, or that the programme requires substantial amendment, the Commission shall refer the matter to the Council in the third year of the programme so that it can decide either to revise the programme or to initiate a new multiannual programme.

Article 4

Termination-of-service measures designed to permit the introduction of new skills and a reduction in the average age of staff will be implemented as soon as the Council has approved the relevant Regulation. Throughout the duration of the programme, the cost of implementing these measures shall be included in the estimated overall cost of the programme.

Article 5

During the third year, the programme will be the subject of a review which may lead to a Council decision on a further four-year programme in accordance with the appropriate procedure.

Article 6

Dissemination of the information resulting from implementation of the non-nuclear parts of the programme shall be carried out in accordance with Council Regulation (EEC) No 2380/74 of 17 September 1974 adopting provisions for the dissemination of information relating to research programmes for the European Economic Community [2].

Article 7

The Commission, assisted by the JRC Board of Governors, shall be responsible for carrying out the programme and, to this end, shall call upon the services of the Joint Research Centre.

Article 8

Before the next proposal for a multiannual programme, the Commission shall submit to the Council and to the European Parliament a critical analysis carried out by independent experts of the programmes launched by the Joint Research Centre.

This analysis shall contain a quantitative and qualitative assessment of the results of the research.

In addition, the Commission shall each year prepare a report for the Council and the European Parliament on the execution of the programme.

Done at Brussels, 22 December 1983.

For the Council

The President

C. VAITSOS

[1] OJ No C 208, 4. 8. 1983, p. 1.

[2] OJ No L 255, 20. 9. 1974, p. 1.

ANNEX A

RESEARCH PROGRAMME (1984 TO 1987) OF THE JOINT RESEARCH CENTRE

RESEARCH ACTION PROGRAMME — INDUSTRIAL TECHNOLOGIES

Nuclear measurements and reference materials

— Nuclear measurements
— Reference materials

High-temperature materials

— Research on steels and alloys
— Research on sub-assemblies
— Research on ceramics
— Data bank on high-temperature materials
— Information centre on high-temperature materials

RESEARCH ACTION PROGRAMME — FUSION

Fusion technology and safety

— Studies in respect of reactors
— Technology of the breeding blanket
— Study on structural materials
— Risk assessment
— Studies concerning a tritium-handling laboratory

RESEARCH ACTION PROGRAMME — FISSION

Reactor safety

— Reliability and risk assessment
— Integrity of components and systems for light-water reactors
— Study on abnormal behaviour in core-cooling systems in light-water reactors
— Study on severely damaged fuel
— Construction models relating to accidents in fast reactors
— Study on the properties of materials and on the behaviour of structures in fast reactors
— Evaluation of a vibrating table

Management of radioactive waste

— Waste management and the fuel cycle
— Safety factors connected with the storage of waste in continental geological formations
— Feasibility and safety of storing waste in deep ocean sediments

Safeguarding and management of fissile materials

— Methods and instruments for the determination of fissile materials and for containment and monitoring
— Processing, transmission and evaluation of safeguards data
— Integration of safeguards activities

Nuclear fuels and actinides research

— Limits to the use of nuclear fuels
— Behaviour of oxide fuels under transitory conditions and release of fission products in the event of severe damage
— Safety of the actinide cycle
— Research on actinides

RESEARCH ACTION PROGRAMME — NON-NUCLEAR ENERGY SOURCES

Techniques for solar energy tests

— Photovoltaic systems
— Heat conversion

Management of energy in dwellings

— Evaluation of hybrid systems
— Passive technologies
— Energy audit

RESEARCH ACTION PROGRAMME — ENVIRONMENT

Environmental protection

— Chemical products in the environment
— Quality of the environment
— Energy and the environment

Application of remote-sensing techniques

— agriculture and soil management
— protection of the marine environment
— natural disasters

Industrial hazards

— accident prevention
— accident management and control

ACTIVITIES OF SCIENTIFIC DEPARTMENTS

(Complementary programme)

Exploitation of the HFR reactor

Should the need arise: European research activities of particular significance (1)

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(1) Implementation of the conclusions reached by the Council on 10 March 1983 with regard to European research activities of particular significance will be the subject of proposals which the Commission will present in good time to enable the Council to take a decision before the end of the first six months of 1984.

ANNEX B

INDICATIVE BREAKDOWN OF RESOURCES

(Appropriations in millions of ECU)

Programmes	Commitment appropriations
Industrial technologies	
— Nuclear measurements and reference materials	64
— High-temperature materials	28
Total	92
Fusion	
Fusion technology and safety	46,5 (1)
Total	46,5
Fission	
— Reactor safety	192 (2)
— Management of radioactive waste	49
— Safeguarding and management of fissile materials	45
— Nuclear fuels and actinides research	66
Total	352
Non-nuclear energy sources	
— Techniques for solar energy tests	22
— Management of energy in dwellings	17
Total	39
Environment	
— Environmental protection	49
— Application of remote-sensing techniques	29
— Industrial hazards	21
Total	99
Activities of scientific departments	
Exploitation of the HFR (complementary programme)	59 (3)
Total	59
Specific appropriations provided for European research activities of particular significance	12,5 (4)
Total	12,5
Total programme (1984 to 1987)	700 (5)

(1) Including an indicative sum of 500 000 ECU for studies concerning a tritium-handling laboratory.

(2) Including an indicative sum of 2 500 000 ECU to continue studies concerning a large capacity vibration table.

(3) The Member States' financial contributions for this complementary programme are included in the 700 million ECU, the breakdown being as follows:

Operation of the HFR reactor:

— Germany 50 %,

— Netherlands 50 %.

(4) Allocation of this amount of 12 500 000 ECU will be determined by a future decision of the Council.

(5) Non-programmed research is carried out within the overall level of resources of 700 million ECU. When the annual resources made available to the JRC to implement the programme are adequate to permit exploratory research of this kind, the nature of which has not yet been identified, a sum not exceeding 5 % of the total specific scientific appropriations can be entered for this purpose in Chapter 100 of the budget of the relevant year.