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.