

EUROPEAN PARLIAMENT

# Working Documents

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DOCUMENT 1-744/81

REPORT

drawn up on behalf of the Committee on  
Energy and Research

on the proposal from the Commission of the  
European Communities to the Council (Doc. 1-411/81)  
for a decision adopting a research and development  
programme (1982-1985) in the raw materials sector

Rapporteur: Mr V.J. CROUX



By letter of 10 July 1981, the Council of the European Communities consulted the European Parliament on the proposal from the Commission of the European Communities for a Council decision adopting a research and development programme (1982-1985) in the raw materials sector.

The President of the European Parliament referred this proposal to the Committee on Energy and Research as the committee responsible and to the Committee on Budgets for its opinion.

On 25 June 1981, the Committee on Energy and Research appointed Mr L.V.J. CROUX rapporteur.

It considered the draft report at its meetings of 23 September 1981, 21 October 1981 and 10 November 1981. On 10 November 1981 the motion for a resolution and the explanatory statement were adopted unanimously.

Present: Mrs Walz, chairman; Mr Gallagher, first vice-chairman; Mr Normanton, second vice-chairman; Mr Croux, rapporteur; Mrs von Alemann (deputizing for Mr Galland), Mr Calvez (deputizing for Mr Pintat), Mr Fuchs, Mr Ghergo, Mr Linkohr, Mrs Lizin, Mr Moreland, Mr Muller-Hermann, Mr Pearce (deputizing for Mr Price), Mr Purvis, Mr Sassano, Mr Seligman and Mr Veronesi.

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The Committee on Energy and Research hereby submits to the European Parliament the following motion for a resolution, together with explanatory statement and the following amendments :

AMENDMENT No. 1

tabled by the Committee on Energy and Research

Proposal from the Commission (Doc. 1-411/81) for a Council decision adopting a research and development programme (1982-1985) in the raw materials sector.

Proposal for a decision

Article 2(2) to read as follows:

'In the light of experience gained in the course of the execution of this programme and after having consulted the competent Advisory Committees on Programme Management and the Committee on Energy and Research of the European Parliament, the Commission shall be authorized to transfer funds from one subprogramme to another provided that such fund transfers do not result in an increase or a reduction of more than 10% in the original allocation to each subprogramme as defined in the Annex.'

AMENDMENT No. 2

tabled by the Committee on Energy and Research

Proposal from the Commission (Doc. 1-411/81) for a Council decision adopting a research and development programme (1982-1985) in the raw materials sector.

Proposal for a decision

Article 3

Replace the text following 'on research programme management' by:

- 'a. Metals and mineral substances and the recycling thereof;
- b. Uranium exploration and extraction;
- c. Ceramics;
- d. Wood as a renewable raw material;
- e. Recycling of urban and industrial waste;
- f. Substitution.'

AMENDMENT No. 3

tabled by the Committee on Energy and Research

Proposal from the Commission (Doc. 1-411/81) for a Council decision adopting a research and development programme (1982-1085) in the raw materials sector

Proposal for a decision

Article 4 to read :

'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. The review shall be made by experts who do not belong to the Advisory Committee on Programme Management and have not themselves received any funds from the research programme. This review may lead to a Council decision 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 revision shall be drawn up for the European Parliament and the Council.'

AMENDMENT No. 4

tabled by the Committee on Energy and Research

Proposal from the Commission (Doc. 1-411/81) for a Council decision adopting a research and development programme (1982-1985) in the raw materials sector

Proposal for a decision

Article 6(3)

Delete the last sentence of the first subparagraph

'The Commission ..... a Member State objects.', and the whole of the second subparagraph.

MOTION FOR A RESOLUTION

embodying the opinion of the European Parliament on the proposal from the Commission of the European Communities for a Council decision adopting a research and development programme (1982-1985) in the raw materials sector,

The European Parliament,

- having regard to the proposal from the Commission of the European Communities to the Council<sup>1</sup>,
  - having been consulted by the Council pursuant to Article 235 of the EEC Treaty and Article 7 of the EAEC Treaty (Doc. 1-411/81),
  - having regard to the report of the Committee on Energy and Research and the opinion of the Committee on Budgets (Doc. 1-744/81),
  - referring to its previous resolutions on Community research and development policy and in particular those contained in the reports by Mr KRIEG (Doc. 71/76), Mr VERONESI (Doc. 346/77 and Doc. 409/77), Mr FUCHS (Doc. 464/77), Mr IBRÜGGER (Doc. 494/78), Mr HERMAN (Doc. 1-132/80) and Mr IPOLITO (Doc. 1-948/80), which underlined the need for a Community research and development policy,
  - whereas the Community depends to a great extent on third countries for its supplies of raw materials,
  - whereas research and development activities are essential for a Community supply policy,
  - whereas the proposed sectoral programme concerns one of the priority sectors on which the Council, during its deliberations of 20 December 1979, invited the Commission to concentrate Community research programmes,
1. Reaffirms the need for the Community to adopt a research and development policy and to make provision for the necessary funds for its implementation;
  2. Considers that the realization of the proposed research and development programme offers one means of reducing the Community's dependence on supplies from third countries, through research aimed at:
    - increasing the potential for self-sufficiency in renewable and non-renewable raw materials,

<sup>1</sup>O J No. C 170, 10.7.1981, p. 5

- assuring better utilization of raw materials,
- increased recycling and encouraging energy savings,
- replacing certain raw materials which are likely to become scarce by others which are more plentiful even though they may not initially be economically viable;

3. Expresses, in this regard, its particular support for the timber sector proposals, in that the Community is lamentably non-self sufficient in this area to the detriment of the trade balance and the timber processing industries such as paper;

4. Considers that research and development activities applied to renewable and non-renewable raw materials, recycling, substitution and materials technology can play an important role in encouraging innovation and industrial competitiveness, above all in the more vulnerable small and medium-sized undertakings which have fewer research facilities;

5. Stresses, therefore, the need to involve Community industry in the implementation of research and development activities to ensure that the results are more in tune with industrial requirements and can thus be applied rapidly and believes it essential that those industries which could gain particular benefit from the programme should be kept informed regularly on the progress of the research;

6. Reaffirms the need for increased pooling of national efforts and the need to eliminate duplication of work, and to step up the development of new technologies which could be applied by Community industry both within the Community and elsewhere;

7. Holds the view that research will help considerably to improve the environment through the recovery of raw materials and the use of by-products from other industries which would have to waste energy and resources disposing of them;

8. Hopes that provision will be made for involving third countries in the programme, particularly in the area of scientific and technical research (COST);

9. Recommends that the Commission should rationalize and simplify as far as possible the management of the proposed programme and should ensure that the research programmes are integrated and do not consist of ad hoc academic exercises;

10. Considers that the grouping of activities within the sectoral programme should assure greater consistency and transparency in the implementation of research and make it easier for the results to be disseminated and applied;

11. Approves the Commission's proposal for a Council decision, subject to incorporation by the Commission of the European Parliament's amendments pursuant to Article 149, second paragraph, of the EEC Treaty and Article 119, second paragraph, of the Euratom Treaty, and hopes that, having regard to the budgetary powers of the European Parliament, the Commission's proposal, thus amended, will be speedily adopted by the Council.

EXPLANATORY STATEMENTI. INTRODUCTION

1. The problem of supplies of raw materials has for a long time been the subject of concern in the Community. (European Parliament resolution of 9 November 1977 (Doc. 348/77) Rapporteur: Mr VERONESI)

2. The Community is very heavily dependent on foreign countries (between 75% and 100%) for its supplies of renewable and non-renewable raw materials.

The effects of this dependence on external sources are well known.

3. Between 1978 and 1979, faced with the prospect of an absolute or relative shortage of certain materials in the medium and long-term, the problem of the Community's vulnerability and also the balance of payments difficulties, the Commission implemented research and development programmes concerning raw materials, based on the work of the permanent CREST sub-committee responsible for this area.

These programmes recommended measures aimed at improved security of supplies, in particular with regard to exploration for and the processing of ores, mining technology and waste recycling.

4. The programmes have already yielded a number of results; mention may be made of the following in particular:

- the discovery of new evidence of tungsten in Great Britain and Greenland, and uranium deposits in France;
- identification of precisely defined areas in which exploration could be resumed, for antimony in Italy, lead-zinc ores in Ireland and molybdenum in Greenland;
- the development of new methods of geochemical and geophysical exploration;
- considerable progress in the processing of complex lead-zinc ores making it possible, for example, to extend the life of a mine in the Federal Republic;
- progress in the field of copper and uranium extraction from low-grade ores by means of in-situ leaching;
- significant progress in the extraction of aluminium from sources other than bauxite;
- progress in techniques for extracting metals from the residues and slag of the metallurgical industry.

Several applications for patents have been submitted.

5. Because of the need to continue and extend activities of this sort, the Commission submitted on 17 June 1981 (COM(81) 281 final) a new proposal for a Council decision adopting a sectoral programme for the period 1982-1985<sup>1</sup>, the implementation of which will cost an estimated 71 million ECU, to be used primarily for the direct financing of research contracts with a financial contribution being made also by industry, national research centres and university departments.

The number of staff required for the management of the programme is estimated at 23, 5 more than the number already employed for the various research programmes underway in the raw materials sector.

6. The new programme, in accordance with the Council's recommendation of 20 December 1979 that Community research and development activities should be concentrated on sectors of priority interest, follows up or extends existing programmes, in particular:

- primary raw materials (1978-1981);
- uranium exploration and extraction (1978-1982);
- recycling of paper and cardboard (1978-1981);
- recycling of urban and industrial waste (1979-1983).

It also includes new research and development activities in the areas of ceramics, production and utilization of wood, recycling of non-ferrous metals and substitution of materials.

7. The Commission considered that the different activities should be grouped together and that they should be extended to include in particular new subjects which had not been covered in the earlier programmes.

8. The programme as a whole is designed to extend over a four-year period and comprises seven subprogrammes dealing with:

Primary raw materials:

- Metals and mineral substances (subprogramme I)
- Uranium exploration and extraction (subprogramme II)
- Ceramics (subprogramme III)
- Wood as a renewable raw material (subprogramme IV)

Secondary raw materials:

- Recycling of urban and industrial waste (subprogramme V)
- Recycling of non-ferrous metal (subprogramme VI)
- Substitution (subprogramme VII).

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<sup>1</sup>OJ No. C 170, 10.7.1981, p. 5

9. Subprogramme III of the present programme covers in substance the contents of the proposal for a Council decision on the adoption of a programme of technological research in the field of clay minerals and technical ceramics (COM(79) 273 final of 15 June 1979 as amended by Doc. COM(80) 391 final of 14 July 1980). The Commission has therefore withdrawn the latter proposal.

10. The European Parliament has on several occasions delivered opinions on a series of proposed programmes: on primary raw materials, on uranium exploration and extraction, on recycling of paper and cardboard, and, subsequently, on the recycling of urban and industrial waste. The Committee on Energy and Research was very favourable in its assessment and the Council adopted the programme during the period 1978-1979.

## II. OBJECTIVES

11. The fundamental objective, which is of common interest to all the Member States, is to provide a better guarantee of supplies of raw materials through research aimed at:

- increasing the potential for self-sufficiency in renewable and non-renewable raw materials;
- assuring better utilization of raw materials,
- increased recycling and reutilization of waste;
- replacing raw materials which are likely to become scarce.

12. These new research and development activities are, moreover, entirely justified by the need to develop procedures for processing native resources and exploiting mines which were previously unprofitable.

13. In order to offset the disadvantages of this situation of dependence, the Commission has proposed new research and development activities aimed at diversifying the Community's sources of supply for various primary raw materials.

14. The purpose of these measures is to increase the possibilities of self-sufficiency by stepping up production of existing indigenous resources, to develop new techniques which could be applied by the Community mining industry both within the Community and elsewhere, and, lastly, to replace certain critical raw materials by other, more plentiful materials which are less expensive, less problematical from the point of view of supply, and, in particular, can be exploited in an economically viable manner.

15. These measures also encourage recycling by solving some of the remaining technical problems and by improving and changing methods of manufacturing certain products so as to reduce or eliminate the use of critical substances and to replace them by others. The essential objective of this programme of research and development is to strengthen the Community's position and to take effect at a number of different levels.

### III. SCIENTIFIC AND TECHNICAL CONTENT

16. This is a sectoral programme, which satisfies the demand for greater consistency in the Community's research activities.

The programme is presented as a single entity and comprises the following subprogrammes:

#### 17. Subprogramme I (Metals and mineral substances)

This subprogramme, which covers all the mineral raw materials necessary to the Community's industry (excluding iron, energy sources and building materials) provides for research into methods of exploration, processing of ores and mining technology.

It is the most important from the point of view of funds required. (30mECU). Its principal aim is to increase in the medium and long-term the Community's potential for self-sufficiency in various primary raw materials, particularly non-ferrous metals.

Research and development in this area is therefore intended to provide Community industry with new mining possibilities, both within the Community and elsewhere.

The subprogramme will also include the coastal area of the continental shelf, where important mineral resources are thought to exist, and it may be extended to third countries.

#### 18. Subprogramme II (Uranium)

The subprogramme now proposed by the Commission has already been considered in detail by the European Parliament.

It is in fact an extension of the first research and development programme adopted by the Council on 6 March 1978, on which the European Parliament delivered a favourable opinion on the basis of the report by Mr VERONESI (Doc. 409/77). The extension was the subject of another opinion based on a report by the European Parliament's Committee on Energy and Research (Doc. 1-949/80). The rapporteur, Mr IPPOLITO, also requested the Commission to draw up a new programme for inclusion in the general programme and we are considering this at the moment.

In fact, the Council decided on 25 April 1981 to extend the programme until the end of 1982, at which time the question of whether to include it in subprogramme I (Metals and mineral substances) would be re-examined.

#### 19. Subprogramme III (Ceramics)

This was a programme proposed individually by the Commission some time ago, on which the European Parliament drew up a report (rapporteur\$ Mr HERMAN, Doc. 1-132/80) and which was not approved by the Council.

The Commission has taken up the proposal again, amended it and included it as a subprogramme in the sectoral programme. However, the rapporteur considers that this subprogramme should be included under subprogramme I (Part I: Clay-based materials) and subprogramme VII (Part 2: Technical ceramics), since ceramics involves the use of important indigenous mineral raw materials and industrial ceramics can offer substitutes for materials which are likely to pose problems of supply.

The projects must be carried out jointly and, as far as possible, within the framework of existing collaboration between small and medium-sized undertakings, which account for almost the whole of this sector.

The methods and bases of traditional research are not sufficient to ensure the adaptation of the ceramics sector to the rapid development of modern technology.

Research carried out recently in some countries, on rapid firing for example, have shown this view to be justified.

Research will also make an important contribution to improving the manufacture of technical ceramics, the applications of which are becoming increasingly numerous and important, particularly in the electronics industry.

#### 20. Subprogramme IV (Wood as a renewable raw material)

Provision was made for important projects concerning the recycling of waste paper under an earlier research programme, which was the subject of a report by the European Parliament (Rapporteur: Mr FUCHS, Doc. 464/77).

This subprogramme is completely new. It deals both with the production and the use of wood as a building material, as a fibre and as a raw material for the chemical industry.

The reason for the programme is the fact that the European Community depends on external sources for more than half of its supplies of wood and products derived from wood. Consumption is continuing to increase more rapidly than supplies from own resources and the growth in demand will probably continue to accelerate in view of the fact that wood is not only an industrial raw material but also a means of energy production and conservation.

The proposed subprogramme is aimed at achieving the following specific objectives:

- increasing the physical and economic availability of wood and wood-based products;
- reducing the cost of forestry, wood harvesting and wood processing;
- promoting wood products;
- encouraging better use of wood and its residues.

21. Subprogramme V (Recycling of urban and industrial waste)

This programme, which was approved by the European Parliament in 1979 (report by Mr IBRÜGGER, Doc. 494/78) is to be continued until October 1983, at which time a decision may be taken on extending it or, possibly, merging it with subprogramme VI (Recycling of non-ferrous metals).

22. Subprogramme VI (Recycling of non-ferrous metals)

The Community's advanced level of industrialization, its economic development and its high standard of living result in the production of large quantities of metal scrap and residues which, if recycled, could help the industry to reduce its imports of primary metals, to achieve energy savings and to assure better protection of the environment.

In addition to aluminium, copper, lead, tin and zinc, other metals such as chromium, nickel, manganese, tungsten, molybdenum, cobalt, vanadium, tantalum, titanium, zirconium, niobium, silver and platinum should also be covered by the proposed subprogramme. The research concerns in particular the electronic, chemical, aerospace and nuclear industries.

From the point of view of energy consumption, the production of metals from waste generally permits considerable savings by comparison with production from primary ores.

23. Subprogramme VII (Substitution)

Research into possibilities for substitution is clearly only one aspect of a policy designed to make industry less vulnerable as regards supplies of raw materials.

The subprogramme is concerned with the substitution of metals which are likely to become scarce (silver, tungsten, tin, cobalt, chrome) and are used in various sectors of industry:

- (1) electric and electronics industry;
- (2) surface treatment and coatings;
- (3) cutting and machining tools;
- (4) stainless steel and alloys;
- (5) other uses (soldering and brazing technologies, leather tanning).

To these should be added, in the view of the rapporteur, research on materials technology such as the development of technical ceramics (subprogramme III).

The programme would thus encourage innovation and help to improve the competitiveness of Community industries.

#### IV. CONCLUSIONS

24. Having regard to all the observations made above, the rapporteur considers it important to emphasize the need to develop Community research in the raw materials sector.

25. The priority accorded by the research and development programme to the problem of supplies is justified by the dependence on external sources for the most important raw materials which are essential to all industrial activities. More judicious use of raw materials will not only provide a better guarantee of supplies from outside the Community, but also assure more rational use of the Community's own resources.

26. The position adopted by the Committee on Energy and Research on all the research activities (direct and indirect) already underway and on those which have already achieved appreciable results has always been favourable.

The activities provided for in the programme correspond to the three major lines of action already judged necessary: renewable and non-renewable primary raw materials, recycling and substitution.

27. This research work could lead to the discovery of new deposits of raw materials and could thereby help to reduce Europe's dependence with regard to supplies. The development of sophisticated exploration and mining techniques, even if they are costly, is of major long-term economic importance in view of the fact that the methods and bases of traditional research are not sufficient to assure adaptation to the rapid development of the industrial framework.

28. Furthermore, at a time when European investments in third countries are tending to come to a standstill, it is worth pointing out that many of these countries still have considerable potential in terms of unexploited surface and underground deposits and can therefore offer important opportunities for Community industry.

29. This research will also ensure that they are used and developed for the benefit of all the countries of the Common Market, giving the European Community the possibility of reaping the maximum benefit from the wealth of its substrata and of producing worthwhile innovations.

30. Community research work must also be carried out in the area of renewable resources, particularly wood, which accounts for a large part of the Community's trade balance deficit. The aim must be to increase indigenous production of wood and improve its quality and to develop all uses of wood as a building material, a source of fibre and a source of primary materials for the chemical industry.

31. Lastly, work must be carried out at Community level:

- to facilitate the recycling of industrial and urban waste of all types

by resolving the technical problems which still exist;

- to ensure better utilization of materials in the industrial manufacture of certain products and to replace certain raw materials by others which are more plentiful, less expensive and economically viable from the point of view of exploitation.

32. The rapporteur is in favour of action at Community level rather than at the level of the individual Member States for a number of reasons:

- firstly, a Community research and development programme could provide the basis for the development of a genuine Community supply policy;
- the Member States are all dependent on external supplies of the same materials;
- they possess similar low-grade resources (ores, slag and industrial residues) which could be exploited economically;
- they also have a certain number of problems in common because of their geology and their climate.

A Community programme would seem more economically sound for these reasons.

33. In addition, it would improve the effectiveness of the system if the Member States were to combine their efforts by making common use of the expertise acquired in the different countries in very technical matters.

34. A Community programme also has the advantage of permitting long-term research which industry is unable to finance. It can also offer solutions to the problem of developing economically under-developed regions and create employment in those regions. The Community programme will benefit small and medium-sized undertakings in areas where indigenous resources can be developed.

35. Lastly, through a Community programme it is possible to cooperate with third countries, particularly within the framework of COST, and the countries of the Lomé Convention in developing their mining resources.

36. The programmes underway have already yielded a series of very promising practical results, and a number of patents have been taken out. The new sectoral programme will make it possible to consolidate these initial results and to achieve further, more long-term aims while offering interesting prospects for research in a wider variety of fields.

The sectoral programme combines the short, the medium and the long-term and is aimed ultimately at industrial application. It is designed to involve industry in its implementation by means of research contracts and through the participation of industrial experts in the various consultative management bodies: advisory committees on programme management, steering committees and contact groups.

Industry will therefore be informed quickly of the results achieved.

37. The grouping of activities within the sectoral programme will ensure greater consistency and transparency in the implementation of research and the dissemination of results.

38. In conclusion, the programme proposed by the Commission takes up many of the general and specific points put forward previously as arguments in favour of Community research in the raw materials sector for the period 1982-1985 and merits a favourable opinion from the European Parliament.

