

---

EUROPEAN PARLIAMENT

Working Documents

1978 - 1979

---

11 December 1978

DOCUMENT 494/78

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. 349/78) for a decision adopting a multiannual research and development programme of the European Economic Community in the field of recycling of urban and industrial waste (secondary raw material) – indirect action (1979–1982)

Rapporteur: Mr L. IBRUGGER

121  
PE 54.923/fin.



By letter of 27 September 1978 the President of the Council of the European Communities requested the European Parliament, pursuant to Article 235 of the EEC Treaty, to deliver an opinion on the proposal from the Commission of the European Communities to the Council for a decision adopting a multiannual research and development programme of the European Economic Community in the field of recycling of urban and industrial waste (secondary raw materials) - indirect action (1979-1982).

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 18 September 1978 the Committee on Energy and Research appointed Mr L. IBRÜGGER rapporteur.

It considered this proposal at its meetings of 3 and 30 November 1978.

At its meeting of 30 November 1978 the committee unanimously adopted the motion for a resolution and the explanatory statement by 11 votes to nil.

Present: Mrs Walz, chairman; Mr Normanton and Mr Veronesi, vice-chairmen; Mr Ibrügger, rapporteur; Mr Brown, Mr De Clercq, Mr Edwards, Mr Fioret, Mr Krieg, Mr Mitchell and Mr Ripamonti.

The opinion of the Committee on Budgets is attached.



C O N T E N T S

	<u>Page</u>
A. MOTION FOR A RESOLUTION .....	5
B. EXPLANATORY STATEMENT .....	9
I. Introduction .....	9
II. Objective and content of the proposal .....	9
III. Comments on the Commission's proposal .....	10
Domestic waste .....	11
Industrial waste .....	13
Treatment of organic waste .....	13
General comments .....	14
IV. Implementing provisions .....	15
V. Conclusion .....	17
 Opinion of the Committee on Budgets .....	 18



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

MOTION FOR A RESOLUTION

embodying the opinion of the European Parliament on the proposal from the Commission of the European Communities to the Council for a decision adopting a multiannual research and development programme of the European Economic Community in the field of recycling of urban and industrial waste (secondary raw materials) - indirect action (1979-1982)

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 (Doc. 349/78);
  - having regard to the report of the Committee on Energy and Research and the opinion of the Committee on Budgets (Doc. 494/78);
1. Welcomes the objectives of the proposed research programme since, if it is successfully implemented, it may be possible to recover useful raw materials and thus conserve scarce natural resources;
  2. Welcomes the fact that by reducing the large quantities of waste produced in various social sectors it will be possible not only to increase the degree of self-sufficiency in raw materials but also to implement measures to protect the natural environment;
  3. Calls for due consideration to be given to the possibility of the widest possible coordination with other relevant research and development activities in the Community when implementing the programme;
  4. Calls on the Commission to investigate the possibility of cooperation with third countries conducting research in areas of relevance to the programme;

<sup>1</sup> OJ No. C 233, 3.10.1978, p. 2

5. Acknowledges the difficulty, at the present stage of research and development regarding recovery techniques and processes, of assessing whether a recovery industry would be economically feasible, but calls on the Commission to watch out for clearly negative economic factors;
6. Agrees that supply, conservation and environmental as well as economic aspects must be taken into consideration when assessing the appropriateness of the programme;
7. Approves the Commission's proposal subject to the following amendments, pursuant to the second paragraph of Article 149 of the EEC Treaty:



Council decision adopting a multiannual research and development programme of the European Economic Community in the field of recycling of urban and industrial waste (secondary raw materials) - indirect action (1979-1982)

Preamble unchanged

Recitals unchanged

Article 1 unchanged

Article 2

The upper limit for expenditure commitments necessary for the implementation of this programme is estimated at 13 million European units of account and the staff at 6, the unit of account being defined by the Financial Regulations in force.

Article 3

The Commission shall be responsible for the implementation of the research and development programme. To assist it in this task, an Advisory Committee on Programme Management for Research and Development in Urban and Industrial Waste Recycling (secondary raw materials) is hereby set up.

The terms of reference and the composition of this Committee shall be defined in accordance with the Council Resolution of 18 July 1977 on advisory committees on research programme management .

Article 4

During the third year the programme shall be reviewed; this review may result in a revision of the programme in accordance with the appropriate

Article 2

The upper limit for expenditure commitments necessary for the implementation of this programme is estimated at 13 million European units of account, as defined in Article 10 of the Financial Regulation of 21 December 1977, and the staff is estimated at 6. These figures are of an indicative nature only.

Article 3

The Commission shall be responsible for the implementation of the research and development programme. It shall be assisted in this task by an Advisory Committee on Programme Management for Research and Development in Urban and Industrial Waste Recycling (secondary raw materials), which shall also be the Advisory Committee on Programme Management for Research and Development in Paper and Board Recycling .

The terms of reference and the composition of this Committee shall be defined in accordance with the Council Resolution of 18 July 1977 on advisory committees on research programme management.

Article 4

Before the end of the second year the programme shall be reviewed; this review may result in a revision of the programme in accordance with the

(1) For complete text see OJ No. C 233, 3.10.1978, p. 2

procedures after the Advisory Committee on Programme Management has been consulted. The European Parliament shall be informed of the results of that review.

appropriate procedures after the Advisory Committee on Programme Management and the European Parliament have been consulted. The European Parliament shall be informed of the results of that review.

Article 4a (new)

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with other States involved in European Cooperation in the field of Scientific and Technical Research (COST) with a view to extending the coordination which is the subject of this decision to research undertaken in those States.
2. The Commission is hereby authorized to negotiate the agreements referred to in paragraph 1.

Article 5 unchanged

EXPLANATORY STATEMENTI. INTRODUCTION

1. The nine countries of the European Community are all among the richest in the world; they have attained a very high standard of living which has been encouraged by the process of industrialization but which has also meant a rate of consumption of natural resources at times bordering on ruthless exploitation. Regrettably, these resources are often used for the production of consumer goods that can scarcely be described as essential (large quantities of raw materials are also consumed to promote sales or create demand).

2. The oil crisis in particular made it clear to everyone that natural resources and raw materials, previously thought to be unlimited, had to be used sensibly and rationally. As a result, proposals were submitted for Community action in such areas as energy and the environment, where the effects of the consumption and processing of raw materials are particularly marked.

3. Specific research and development programmes in the fields of 'primary raw materials', 'uranium extraction' and 'paper and board recycling'<sup>1</sup> have recently been proposed and adopted. For the sake of completeness it should also be mentioned that the Council has already adopted a research programme on the treatment and use of sludge from purification plants, including industrial sludge. And now we have this proposal for a research programme in the field of recycling of urban and industrial waste (secondary raw materials).

II. OBJECTIVE AND CONTENT OF THE PROPOSAL

4. The research programme is a combination of concerted actions, i.e. the coordination of current national research programmes, supplemented by indirect action, i.e. research projects funded partly by the Community and partly by contractors in the Member States.

---

<sup>1</sup> See reports by VERONESI, Doc. 348/77  
VERONESI, Doc. 409/77  
FUCHS, Doc. 464/77

5. The aim of the research and development programme is to recover useful products from waste in order to:

- (a) conserve natural resources and energy by exploiting alternative sources of raw materials,
- (b) reduce the quantities of waste in order to protect the environment since unused waste is otherwise merely deposited in the countryside, with a consequent danger of groundwater pollution and harmful effects on the natural ecological balance, and
- (c) improve the possibilities of self-sufficiency (and thus reduce dependence on supplies from third countries. The Community's vulnerability as regards supplies has been demonstrated in the case of oil and uranium in recent years).

6. The programme, which is based on studies carried out by the CREST committee, covers the following research topics:

1. Recovery of materials and energy from household waste (separation at source, separation of bulk waste),
2. Recovery of materials and energy by thermal treatment of waste,
3. Recovery of rubber waste,
4. Fermentation and hydrolysis of organic agricultural, industrial and household waste.

7. It is unnecessary here to go into the more technical details of the research to be carried out in each of the four project areas, but it should be noted that all the projects are concerned with improving and increasing technological knowledge, especially as regards the initial stages of the treatment of waste in order to facilitate the processing and use of the various materials recovered and improve their quality.

### III. COMMENTS ON THE COMMISSION'S PROPOSAL

8. In view of the present large and increasing quantities of waste, the Committee on Energy and Research welcomes this highly commendable Commission proposal. It is estimated for instance that in 1976 the Community produced no less than 1,500 million tons of waste or 4.2 million tons a day, and that one person produces about 250 kg of domestic waste alone, and almost 300 kg of combined domestic, garden and bulky waste a year.

## Domestic waste

9. Domestic waste in particular deserves attention. While the research projects concerning the actual process of recovery are primarily a question of increased technological know-how that can be developed by scientific means, the treatment of household waste raises the specific problem of collection and sorting.

10. An analysis made (in Denmark)<sup>1</sup> of domestic waste shows that it consists of the following components:

- 4.5% glass
- 3.3% metal
- 8.2% clean paper/cardboard
- 17.6% used paper
- 5.2% plastic
- 37.2% kitchen waste
- 6.6% garden waste
- 16.7% other waste

This alone shows how complicated the separation and treatment processes involved are. In the case of waste separation especially, which normally has to be done by machine because separation at source is not particularly common, account must be taken not only of the various materials but also of their different weights and specific gravities.

11. As is well-known, the composition of waste varies not only from country to country but from one area of a country to another, and it is therefore obvious that not only must advanced separation and treatment techniques be developed, but the separation techniques developed must have as wide a field of application as possible throughout the Community before the Community grants financial aid.

12. Considerable experience has been gained in the Community with regard to the sorting of waste at source but, as a general rule, this experience is unsystematic and relates to widely differing conditions. All the experiments have been of brief duration and were often conducted on a voluntary basis (e.g. collections for charity). Little is known, therefore, of the way in which individual households would react to more permanent schemes, an essential requirement if a recovery industry is to be established in this field, or of how different methods of collection (standard of service provided) could affect sorting techniques. More research is needed in this field (in the form of a concerted action).

---

<sup>1</sup> 'Teknik og miljø' No. 1, 1976

13. It is astonishing, nevertheless, that the Commission's proposal is not more specific. The committee feels that it should at least include the following topics relating to sorting at source:

- the various factors influencing the quantity of waste collected,
- the correlation between the standard of service offered by the various collection schemes and the number of those willing to participate,
- the effects of changes in the standard of service provided on the quality of re-usable waste collected,
- possible ways of reducing the cost of collecting sorted waste at source.

14. It seems plain, furthermore, that the systems for collecting and sorting waste currently in use were not developed with a view to the recovery of waste. The research programme should therefore also be directed towards the development of appropriate collection and transport systems, including systems for use in multi-storey buildings. The majority of experiments have been carried out in areas made up of single-family dwellings which, after all, represent only a small proportion of the residential accommodation in urban areas.

The committee hopes that the Commission will bear these problems in mind as they may have a decisive influence on the quantity, quality and economics of domestic waste recovery.

15. Sorting at source and centralized sorting for a given area are, of course, two subject areas that clearly overlap. A great deal of the technology of the mechanical sorting is already available but is naturally still open to improvement. As stated above, one of the chief problems is sorting at source, but equally important is that of the composition of waste. This varies widely according to the different patterns of consumption and traditions in the various countries. It is common knowledge, for example, that organic waste makes up a far larger proportion of the waste in the southern countries of the Community than in the northern countries, while the opposite is the case with regard to paper, plastic and metal.

In conclusion, it needs to be added that the known technology concerns sorting techniques applied on a very small scale. It is difficult to comment on the economics of a recovery industry, before the sorting of waste, with subsequent treatment, is carried out on an industrial scale.

16. As regards the recovery of household waste, a not inconsiderable proportion of which consists of various paper materials, it should be borne in mind that the Council has just adopted a special research programme in the field of paper and board<sup>1</sup> which Parliament unreservedly approved. It also approves the intention of coordinating it with the programme now proposed. It should then be possible to use the budget resources allocated more rationally, so that one more of the essential processes, in this case separation, could be included.

#### Industrial waste

17. Although the research programme also claims to include industrial waste, it is plain that this is not the case. There could be several reasons for this. Industry itself has for several years been engaged in the recovery of waste and has obtained promising results in economic terms. For the same reason industry is presumably not interested in passing on its findings unless it can do so by selling know-how. As industrial waste is already being recycled, this particular objective of the programme has, to all intents and purposes, been fulfilled. It should be added that, as a general rule, industrial waste is simpler to treat than domestic waste as it occurs in larger and less heterogeneous quantities. While expensive, the necessary treatment techniques are therefore simpler to develop.

#### Treatment of organic waste

18. As regards the fermentation and hydrolysis of agricultural and organic industrial waste, the committee agrees with the usefulness of fermentation and hydrolysis in the case of industrial waste, but has some doubts as regards the need to recover materials from agricultural waste, since agricultural waste, especially animal waste, is already recycled as fertilizer for farm land.

19. The committee is naturally not unaware of the fact that waste in the form of unused straw is perhaps unjustifiably burnt when in theory considerable quantities of fuel could be recovered from it. In its view, the labour and transport costs of collecting large quantities of agricultural waste would alone be far too high to make it economically worthwhile. Agricultural waste would also seem to be unsuitable for centralized treatment in view of the transport problems and quantities involved.

---

<sup>1</sup> OJ No. L 107, 21.4.1978

### General comments

20. Despite the degree of pessimism voiced here by the committee it does concede that, in view of the very large quantities of agricultural waste that are produced, the future prospects for the recovery of this waste should be studied so that the conjectures made on this subject, both positive and negative, can be either confirmed or refuted. The collection and transport aspects alone should be sufficient justification for research into possible on-the-spot applications of recycled products, particularly energy, and into the kind of equipment for recovery and utilization which would in that case need to be developed.

21. One comment should be made on the way in which the Commission has presented the research programme. The Committee on Energy and Research is aware that much research is being carried out in the Member States in all the areas mentioned and it would therefore be advisable to coordinate it in order to avoid duplication of work and use the human and economic resources involved rationally. But the committee has not been given an account of the research or the stage it has reached such as that provided by the Commission in connection with the research programme in paper and board recycling, which the committee also welcomed.

22. One argument against the recovery of raw materials is that the quality is often so bad that it is difficult to find a market for the resulting products, or that they are too expensive compared with primary raw materials to be used in production.

23. The committee would have welcomed some estimates of the economic basis for a recovery industry and of the marketing possibilities. One essential requirement for research such as that now proposed is that the end products will also be used.

24. The following figures, for instance, stem from a programme for recovering secondary raw materials in Brunswick (Federal Republic of Germany)<sup>1</sup>.

In 1977 2,400 tons of waste glass were collected. The product sold after treatment at DM 53 a ton whereas the collection and transport costs had amounted to DM 50 a ton. In the first quarter of 1978 3,800 tons were collected. The cost ratio remained unchanged. Although from a recycling and environmental point of view the result is positive, the question is whether the project could survive economically if it were continued on a 'voluntary' basis. The processing industry in Brunswick is also faced with a surplus of recovered glass that is already depressing the market so that before long the recycling process will presumably be showing a deficit.

---

<sup>1</sup> 'Der Städtetag' 9/78



25. In the same town experiments and calculations are being made as regards the recovery of used rubber, ferrous and non-ferrous metals, paper, waste oil, and tin cans. It is expected that 80 tons of scrap tin will be collected, but that sales of the recovered products will cover only 50% of the collection and transport costs.

26. The committee realizes that better results would presumably be obtained with more advanced collection and treatment techniques, this also being one of the objectives of the research programme proposed. But the examples given indicate some basic problems that the committee would have liked to see discussed, including running costs.

27. It has to be conceded at the same time, however, that results obtained under this research programme can answer many of the questions that have been raised, including that of running costs, thus making it possible to establish a sounder basis for assessing the future prospects of a recovery industry. These prospects can be quantified as long as economic criteria are being applied, but sight should not be lost of the qualitative gains in ecological and environmental terms.

#### IV. IMPLEMENTING PROVISIONS

28. As is normal for indirect and concerted actions, the Commission is responsible for implementing the programme and is assisted by the Advisory Committee on Programme Management, which will provide assistance with this programme as well as the programme for paper and board recycling. The Committee on Energy and Research welcomes this coordination, but calls for the closest possible coordination of this programme with related subjects in the field of energy and the environment.

29. It is therefore proposed that the second sentence of the first paragraph of Article 3 of the proposal for a Council Decision should be amended to read as follows:

'It shall be assisted in this task by an Advisory Committee on Programme Management for Research and Development in Urban and Industrial Waste Recycling (secondary raw materials), which shall also be the Advisory Committee on Programme Management for Research and Development in Paper and Board Recycling'<sup>1</sup>.

30. Article 4 proposes that the programme should be reviewed during the third year. Since this is a four-year programme, the Committee on Energy and Research feels that the review would be carried out so late that revision would be practically impossible.

It is also hardly surprising that the committee cannot agree that Parliament should merely be informed of the result of the compulsory review. Parliament has always asked to be consulted when a programme decision is based on Article 235 of the EEC Treaty.

In view of the above, therefore, the Committee on Energy and Research proposes that Article 4 be worded as follows:

'At the end of the second year the programme shall be reviewed; this review may result in a revision of the programme in accordance with the appropriate procedures after the Advisory Committee on Programme Management and the European Parliament have been consulted. The European Parliament shall be informed of the results of that review.'

31. The committee is aware that the Commission departments responsible for the investigations preparatory to submission of the research programme included current research outside the Community - e.g. in Sweden, the USA and Spain - in its work. This is to be welcomed. The committee welcomes the extension of contacts with third countries, or at least the legislative possibility of cooperation as is the case with other programmes in the scientific and technological field. Justification of this is presumably unnecessary.

The committee therefore proposes a new Article 4a worded as follows:

1. In accordance with Article 228 of the Treaty, the Community may conclude agreements with other States involved in European Cooperation in the field of Scientific and Technical Research (COST) with a view to extending the coordination which is the subject of this decision to research undertaken in those States.

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

32. It will be remembered that at its recent budgetary part-session Parliament proposed and approved the entry of the appropriations needed for this programme in the 1979 financial year in Chapter 100 of the draft budget, since no Council decision existed. It will also be remembered that Parliament adopted an amendment that entailed a lower reduction of the appropriations proposed for this programme. Whereas the Commission had proposed

1,795,000 EUA in payment appropriations and 4,296,000 EUA in commitment appropriations for the 1979 financial year, Parliament adopted an amendment entering 1,644,800 EUA in payment appropriations and 4,144,800 EUA in commitment appropriations.

33. The Commission has estimated the expenditure needed to implement the programme to be 13 million EUA and the staff required to be six, including 4 grade A posts.

As usual, Parliament must point out that the financial implementing provisions can only be indicative for the financial year in question, since the final provisions are determined as part of the budgetary procedure, i.e. by the Council and Parliament.

It is therefore proposed that Article 2 be amended to read as follows: 'The upper limit of expenditure commitments necessary for the implementation of this programme is estimated to be 13 million EUAs, as defined in Article 10 of the Financial Regulation of 21 December 1977, and the staff is estimated at six. These figures are of an indicative nature only.'

#### V. CONCLUSION

34. As will be clear from the above, the Committee on Energy and Research can approve the research programme proposed by the Commission. It is the committee's view that the principle of recycling waste and the raw materials contained in it meets with general approval. Successful implementation of the programme would suit the action to the word since one basic requirement is that the secondary raw materials should be converted into a usable form.

35. It is to be welcomed that recycling helps to attain a variety of objectives such as the rational use of raw materials and energy, greater self-sufficiency, and protection of the environment. It is also gratifying to see that the programme accords well with the objectives set and adopted in the scientific, technological, environmental and energy policy areas.

OPINION OF THE COMMITTEE ON BUDGETS

Letter from the chairman of the Committee on Budgets to Mrs H. WALZ,  
chairman of the committee on Energy and Research

Brussels, 1 December 1978

Subject: Proposal for a Council decision adopting a multiannual research and development programme of the European Economic Community in the field of recycling of urban and industrial waste (secondary raw materials) - indirect action (1979-1982) (Doc. 349/78)

Dear Mrs Walz,

The Committee on Budgets examined the above proposal for a decision at its meeting of 29/30 November 1978.

The cost of this programme (13 million EUA of which 1,795,000 EUA has been imputed to the 1979 financial year) breaks down as follows for the four measures proposed:

- Sorting of household waste	:	40%
- Thermal treatment of waste	:	12.5%
- Fermentation/hydrolysis of agricultural and industrial waste	:	25%
- Recovery of materials from waste rubber	:	22.5%

Except for the appropriations for 1979 which will be approved during the current budgetary procedure, our committee felt able, in view of the financial statement and the modest cost of this programme, to deliver a favourable opinion.

There nevertheless remains the problem of the inclusion of estimated costs in the actual draft Council decision. In this connection the Committee on Budgets recently agreed on such occasions to adopt a uniform position vis-à-vis the Commission.

Article 2 of the proposal for a decision should accordingly be rephrased as follows: 'The upper limit for expenditure commitments necessary for the implementation of this programme is estimated at 13 million European units of account, as defined in Article 10 of the Financial Regulation of 21 December 1977, and the staff is estimated at 6. These figures are of an indicative nature only.'

The Committee on Energy and Research is therefore requested to take this view into account and incorporate the proposed amendment in its report.

.....

(sgd.) Martin Bangemann

Acting chairman

Present: Mr Bangemann, vice-chairman and acting chairman; Mr Croze, Mrs Dahlerup, Mr Dankert, Mr Hamilton, Mr Nielsen, Mr Radoux, Mr Schreiber, Mr Scott-Hopkins, Mr Shaw and Mr Würtz.

