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### **European Communities**

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#### REPORT

drawn up on behalf of the Committee on the Environment, Public Health and Consumer Protection

on the waste disposal industry and old waste dumps

Rapporteur: Mr F. ROELANTS DU VIVIER

WG (VS1) 6065E

PE 111.491/fin. Or. Fr. Pursuant to Rule 47 of the Rules of Procedure, the European Parliament referred the following motions for resolutions to the Committee on the Environment, Public Health and Consumer Protection as the committee responsible:

- on 10 March 1986, the motion for a resolution by Mrs Schleicher and others on the waste disposal industry and old waste dumps (Doc. B 2-1654/85);
- on 10 November 1986, the motion for a resolution by Mr Tridente on the danger of discharging waste on the outskirts of an environmental protection area (Doc. B 2-952/86); asked for an opinion: Committee on Regional Policy and Regional Planning.

At its meeting of 24 April 1986 the committee decided to draw up a report and appointed Mr Roelants du Vivier rapporteur.

The committee considered the draft report at its meeting of 26 February 1987. On 23 March 1987 it unanimously adopted the motion for a resolution as a whole.

The following took part in the vote: Mrs SCHLEICHER, acting chairman; Mr V. PEREIRA, vice-chairman; Mr ROELANTS DU VIVIER, rapporteur; Mr ALBER, Mr AVGERINOS (deputizing for Mr Bombard), Mrs BANOTTI, Mr BØGH (deputizing for Mrs Bloch von Blottnitz), Mr COLLINS, Mr DUARTE CENDAN, Mrs C. JACKSON, Mr LAMBRIAS (deputizing for Mr Gaibisso), Mr van der LEK (deputizing for Mrs Hammerich), Mrs LENTZ-CORNETTE, Mrs LLORCA VILAPLANA, Mr MERTENS, Mr MUNTINGH, Mr SHERLOCK, Mrs SQUARCIALUPI, Mr VERNIER and Mr VITTINGHOFF.

The report was tabled on 1 April 1987.

The Committee on Regional Policy and Regional Planning decided not to deliver an opinion.

The deadline for tabling amendments to this report will be indicated in the draft agenda for the part-session at which it will be debated.

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The Committee on the Environment, Public Health and Consumer Protection hereby submits to the European Parliament the following motion for a resolution together with explanatory statement:

A

#### MOTION FOR A RESOLUTION

on the waste disposal industry and old waste dumps

#### The European Parliament,

- having regard to the motion for a resolution by Mrs Schleicher and others
   on the waste disposal industry and old waste dumps (Doc. B 2-1654/85),
- having regard to the motion for a resolution by Mr Tridente on the danger of discharging waste on the outskirts of an environmental protection area (Doc. B 2-952/86),
- -- having regard to its previous resolutions on waste and in particular those of 16 March 1984<sup>1</sup> and 11 April 1984<sup>2</sup>,
- having regard to the report by the Committee on the Environment, Public Health and Consumer Protection (Doc. A 2-31/87),

#### REGARDING THE GENERAL OBJECTIVES OF COMMUNITY POLICY ON WASTE

- Calls initially for action to be taken on all its previous requests, and in particular those calling for:
  - (a) the creation, within the Commission, of an administrative unit which is responsible for waste alone and with a bigger staff complement than hitherto (the European Parliament has on several occasions created posts in the budget for the environment sector, but the Commission has not used them for matters concerning waste);
  - (b) the harmonization of systems of statistics on waste;
  - (c) clarification of the Community definition and nomenclature of dangerous waste;
  - (d) the development of a long-term Community strategy on waste management;
  - (e) the organization of campaigns to increase the awareness of the public, waste producers and workers in the industry;
  - (f) the improvement of safety procedures covering movements of dangerous waste, with particular regard to professional training and the information given to haulage firms and drivers;

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<sup>10</sup>J No. C 104, 16.4.1984, p.147

<sup>&</sup>lt;sup>2</sup>OJ No. C 127, 14.5.1984, p.67

- 2. Calls on the Commission, in addition, to put into effect all the measures it has set out in the action programmes on the environment, and in particular:
  - (a) programmes to promote the extended use of products and the recovery of secondary raw materials;
  - (b) recommendations for the policy on clean technologies;
- 3. Condemns the irresponsible attitude of some Member States regarding the observance of directives adopted on waste, and insists once again that the Commission play its full role in ensuring total compliance with these directives;
- 4. Calls on the Commission to submit proposals for the establishment of a corps of Community inspectors responsible for monitoring the strict application of European law on the environment;
- 5. Criticizes the Commission for its continued failure to fulfil adequately its function of supervising the incorporation into national law of and compliance with the Directives on waste and calls on it, in particular, to ensure forthwith that all Member States comply with their duty to provide information;
- 6. Calls on the Commission to supplement, at an early date, the measures it has taken with regard to the monitoring of international movements of waste by measures to harmonize the standards applicable to waste disposal facilities (dumps, incinerators) which exist in the various Member States;
- 7. Stresses particularly that the harmonization of standards applicable to waste disposal installations must also cover national regulations setting limit values for the discharge of pollutants into the soil and national regulations designed to protect groundwater;
- 8. Calls on the Commission to draw up a specific Community strategy on the management of 'small quantities of dangerous waste' emanating from households, research laboratories, small undertakings and the farming industry;
- 9. Calls on the Commission, as part of its coordinating function in the research sector, to produce a survey of its techniques and pilot projects regarding the treatment, sorting and recycling of waste;
- 10. Emphasizes that, as a matter of priority, European policy on waste prevention must progress from rhetoric to practical action, for example by the effective application of a European label for 'clean products';

- 11. Insists, again as a matter of priority, on the increased importance to be accorded at Community level to the provision of information on waste, beginning with the information which Member States must make available in accordance with the obligations laid down in existing directives;
- 12. Approves in particular, among the measures planned by the Commission in its Fourth Environment Action Programme:
  - the introduction of financial procedures implementing the polluter pays principle;

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- 13. Calls on the Commission to speed up work on new directives on:
  - (a) livestock effluents;
  - (b) batteries;
  - (c) solvants;
  - (d) waste plastic;

#### MEASURES TO BE TAKEN REGARDING OLD WASTE DUMPS

- 14. Draws attention to the extent and seriousness of the potential problems, in particular regarding the quality of groundwater, arising from a large number of old waste dumps more than 10 000 polluted sites to be cleaned up in the Community at an annual cost, over 15 years, of more than one billion ECU;
- 15. Points out that the United States has produced a response to this problem at Federal level which includes the establishment of technical standards and rules governing objective civil liability and a budget funded partly by a tax on chemical and petroleum products;
- 16. Points out that in the European Community only a few Member States have so far recognized the nature of the problem and taken certain measures as a result;
- 17. Points out that this disparity among national responses to the problem of contaminated sites is not only a cause of competitive distortions but has also led to many cases of contaminated soil being exported from one country to another;
- 18. Recalls that the concept of action at the most appropriate level is one of the principles of the Community's environment policy as contained in Art. 130R and that many of the potential problems of old waste dumps are best handled at national, regional or local level;
- 19. Calls, in the first instance, for the incorporation into the law and practice of all the Member States of the last part of Article 7 of Directive 78/319/EEC, which seeks to ensure that 'toxic and dangerous waste is recorded and identified in respect of each site where it is or has been deposited;
- 20. Calls on the Commission, on the basis of information provided under Article 7 of Directive 78/319/EEC, to draw up a list of all dangerous waste dumps in order to identify in particular problematical dumps situated near borders and to call on the Member States to make a survey of all disused industrial sites where dangerous substances were employed;
- 21. Calls on the Commission, as part of its coordinating function in the research sector, to produce a survey of techniques for cleaning up waste dumps and industrial sites and to ensure that Member States exchange information about existing techniques;
- 22. Regards the traditional procedures for establishing civil liability as inadequate to guarantee, in certain cases, the compensation of victims and the reparation of damage caused to the environment, and hence calls on the Commission to make proposals generalizing the objective liability of the producer of dangerous waste and establishing obligations on those involved in the management of dangerous waste to take out insurance or an equivalent financial guarantee;

- 23. Regards as equally essential the creation of public or private funds which would guarantee that a contaminated site would be cleaned up (and any victims compensated) in cases where there were no solvent or identifiable guilty party;
- 24. Calls on its Science and Technology Option Assessment Office (STOA) to draw up a report on how the 'Superfund' operates in the United States and on the possibility of establishing a similar mechanism in the European Community;
- 25. Urges that research and devalopment programmes at Community level should exploit the expertise of the Joint Research Centres and should cover:
  - the spread of pollutants emanating from old waste dumps in various types of soil and in water;
  - the refinement of risk-assessment models;
  - the development of emergency methods to combat pollution;
- 26. Calls on the Commission to release resources from the existing environmental funds for the coordination of research and development and the transfer of technical knowledge essential for the cleaning-up of particular contaminated sites;
- 27. Calls on the Commission once again to consider whether, in the future, the dumping of certain types of dangerous waste should not be prohibited and the recycling of such waste systematically encouraged, and in this connection, calls on the Commission to study the economic and environmental benefits of recycling certain dangerous wastes as opposed to other forms of disposal;
- 28. Instructs its President to forward this resolution to the Council and Commission of the European Communities.

#### 1. GENERAL OBJECTIVES OF COMMUNITY POLICY ON WASTE

## 1.1. BRIEF SUMMARY OF POLICY OBJECTIVES PRIOR TO 1984

#### 1.1.1. The rhetoric

Under the terms of the first three Community action programmes on the environment, adopted respectively in 1973, 1977 and 1982, the Commission was given a wide range of tasks:

#### (a) PREVENTION OF WASTE PRODUCTION

- study the possibilities of using substitute materials; (second programme)
- study the possibilities of taking action by drawing up specifications and/or standardization; (second programme)
- set up a programme promoting the extended use of products; (third programme)
- study the possibilities of introducing a system of 'environment' stickers to persuade consumers to buy certain products; (second programme)
- assess policies on 'clean technologies' and make recommendations in this field; (third programme)
- list those sectors principally affected by the development of clean technologies in Member States; (third programme)
- make knowledge of these technologies more widely available among Member States; (third programme)
- make proposals for research into clean technologies; (third programme)

#### (b) RECYCLING AND REUSE OF WASTE

- study ways of stabilizing the market in secondary raw materials and improving outlets for some of these materials; (second programme)
- publish regularly a list of available raw materials and secondary raw materials; (third programme)
- set up a programme promoting the recovery of secondary materials; (third programme)
- carry out a cost/benefit analysis of waste processing methods; (second programme)
- survey those sectors of research and technology which require support and coordination at Community level; (second programme)
- increase public awareness; (second programme)
- make better information available to firms (waste exchange;
   ECDIN data bank); (second programme)

#### (c) SAFE DISPOSAL OF WASTE

- lay down framework regulations; (first programme)
- propose a directive on livestock effluents; (second programme)
- study the problems posed by certain residues from primary industry, such as titanium dioxide waste and mining waste; (second programme)
- study the problems of monitoring the storage of toxic products, and the problems of civil liability and insurance posed by the processing of these products; (second programme)

#### 1.1.2. The action taken

The majority of the waste-related tasks given to the European Commission have still to be brought to a successful conclusion.

However, various studies and research programmes have been initiated and several directives drawn up.

Between 1974 and 1984, European policy on waste was essentially defined by the adoption of the five Directives set out in the following table:

DIRECTIVE	SUBJECT
- 75/439 of 16 June 1975 :	disposal of waste oils
- 75/442 of 15 July 1975 :	waste management (in general)
- 76/403 of 6 April 1976 :	the disposal of polychorinated biphenyls and polychlorinated terphenyls
- 78/176 of 20 February 1978:	waste from the titanium dioxide industry
- 78/319 of 20 March 1978 :	toxic and dangerous waste

Two items of Community legislation can be added to this list:

- the Decision of 21 April 1976 setting up a consultative body under the aggis of the Commission: the Waste Management Committee;
- Recommendation 81/1972 on the reuse of old paper and the use of recycled paper.

In implementation of the environmental action programmes, from 1974 onwards the Commission has also carried out a large number of qualitative and quantitative inventories of waste, and technical, economic and legal studies of the problems posed by the collection, transport, storage, recycling and final processing of waste.

As regards the adoption of common research programmes, several decisions are worthy of note:

DECISION	SUBJECT		
- 27 September 1977 :	concerted action in the field of the processing and use of sewage sludge		
- 17 April 1978 :	a multiannual research and development programme in the field of the recycling of paper and paperboard (programme extended in 1981 by a multiannual research programme on wood)		
- 12 November 1979 :	a multiannual research and development programme in the field of the recycling of urban and industrial waste.		

For the period 1979-1983 this last programme covered four areas of research: the segregation of household waste, the thermal processing of waste, the fermentation and hydrolysis of organic waste and, finally, the recovery of waste rubber. In 1982 it was incorporated into a wider-ranging multiannual programme (1982-1985) covering raw materials in general and including sub-programmes on 'the recycling of metals' and 'substitution'.

It should also be noted that as of 1982-1983 a specific budget heading was created covering clean technologies, paving the way for preliminary studies and the financing of pilot and demonstration projects.

#### 1.2. THE OBJECTIVES OF COMMUNITY POLICY SINCE 1984

#### 1.2.1. Comparative assessment

The adoption by the European Parliament in April 1984 of the 'Pruvot' Report marked an important turning point in Community policy on waste. This report, drawn up on the basis of the conclusions of the parliamentary committee of inquiry set up in the wake of the 'Seveso affair', sets out a series of new objectives for Community policy.

These most recent objectives (clarified by some accompanying resolutions by the European Parliament) are set out in the following table, alongside the action taken by the European Commission:

#### REQUESTS BY THE EUROPEAN PARLIAMENT : COMMISSION ACTION

#### RESPECT OF THE LAW

- adopted concerning waste<sup>1</sup> and above all the application in full of Directive 78/3191,2
- Ensure respect of the directives : Studies and legal proceedings against Belgium and Greece, but insufficient follow-up (as will emerge from the two tables below); what are particularly lacking are national background reports and a general report
- Specify financial sanctions<sup>1</sup> : - Nothing

#### SUPPLEMENTARY REGULATIONS

- Regulate cross-frontier movements<sup>1,2,3</sup>
- : Directives 84/631, 85/469, 86/279
- Clarify the definition and nomenclature of dangerous waste<sup>1,2</sup>
- : Studies (discussions still in progress in the Committee)
- Harmonize systems of statistics : Preparation of a data bank on waste<sup>2,4</sup>
  - (TOXWASTE)

#### REGULATIONS ON THE TRANSPORT OF DANGEROUS WASTE

- Draw up Community regulations in : Studies (proposals soon: this field to ensure, in particular, the approximation of standards regarding the identification of substances, risk warnings and emergency measures1,3,5
  - see fourth programme)
- Improve professional training and : the information\_given to transport firms<sup>3,4</sup>

#### LONG-TERM STRATEGY

 Propose a policy (a multiannual : - Strategy document still under programme) on waste before the end discussion in the Committee of 1984<sup>2</sup>,4

#### POLICY ON PREVENTION - RECYCLING

- Submit a second R & D programme : Programme under way on recycling<sup>4</sup>
- Specify the levels of investment : -? (Nothing) needed and possible financing methods<sup>4</sup>
- Carry out a study to limit the production of urban waste<sup>4</sup>
- Adopt a policy including
   a. the setting up of storage
   centres
   b. the setting up and development
   of waste exchanges 1,4
- Provide finance for recycling and: Regulation 1872/84 'Clean technologies' clean technologies'.

#### POLICY ON INFORMATION AND PUBLIC INVOLVEMENT

- Organize campaigns to increase: Nothing the awareness of the public, waste producers and workers in the industry<sup>4</sup>
- Encourage local and regional coordination initiatives<sup>4</sup>

#### INSTITUTIONAL MEASURES

- Create the necessary framework (independent service or administrative unit within the Commission) 1
- Staff still limited (in 1984) and not independent
- Conclusions of the Committee of Inquiry (set up by the European Parliament on 21 June 1983), 'Pruvot' report Doc. 1-109/84
- Resolution of 11 April 1984 on waste processing, OJ No. C 127/67 of 14.5.84
- Opinion of 8 June 1983 on the monitoring and control of crossfrontier movements of dangerous waste, OJ No. C 184/50 of 11.7.83
- Resolution of 16 March 1984 on waste ('Squarcialupi' report), OJ No. C 104/147 of 16.4.84
- Resolution of 13 September 1984 on the environment, and in particular the Mont-Louis accident, OJ No. C 274/36 of 15.10.84

#### 1.2.2. Basic objectives

In the wake of the Seveso affair, the problem of international movements of toxic waste has attracted particular attention.

A directive on the monitoring of cross-frontier movements of toxic waste was adopted on 6 December 1984. This Directive 84/631 was brought into line with technical advances by Commission Directive 85/469 of 22 July 1985 and supplemented by Directive 86/279.

Attention should also be drawn to the adoption of:

- Directive 85/187 on packaging for Liquid foodstuffs;
- Directive 86/278 on sewage sludge;
- Directive amending Directive 75/439 on waste oil.

Several other directives are still pending:

- proposal for a directive harmonizing national programmes to reduce discharges of titanium dioxide;
- proposal for a directive on the dumping of waste at sea.

With regard to clean technologies, in June 1984 the Council of Ministers gave its assent to a Community financial contribution, over a period of three years, and on the basis of calls for tenders, to projects displaying innovative and demonstrative qualities.

In the fourth action programme, the Commission proposes that European policy on waste management should continue to pursue the basic objectives set out in the second programme.

With regard to the prevention of waste, emphasis is placed on the development of the 'clean technologies' and 'clean products' programme.

As regards the recycling and reuse of waste, Community aid is planned involving:

- '- setting attainable objectives, as goals to be aimed at;
- the promotion of research and demonstration projects;
- encouraging the assessment of the costs and benefits of alternative waste management options;
- establishing financial mechanisms designed to implement the polluter pays principle;
- the use of economic instruments to encourage the segregation and recycling of certain wastes;
- developing programmes of information exchange and consumer information to encourage recycling of products.

As regards action on the safe disposal of waste, the Commission plans above all new directives on batteries, PCBs and solvents.

In addition, various proposals on the transport of dangerous materials have been announced by the Commission, along with a special communication on waste management.

#### 1.3 BACKGROUND INFORMATION ON THE DEVELOPMENT OF POLICY

#### 1.3.1. The infringement of directives

Compliance with directives adopted has become one of the most worrying issues.

The following table gives a summary of official proceedings against defaulting states:

ТО	DCEEDINGS AGAINST DEFAULTING STATES DIRECTIVES ON WASTE resent situation)	INIT	FIATED BY THE COMMISSION WITH REGARD
-	Directive 79/439 'waste oil'	:	Belgium brought before the Court of Justice
-	Directive 75/442 'waste'	:	Belgium brought before the Court of Justice
-	Directive 76/403 'PCB'	:	Belgium brought before the Court of Justice
-	Directives 78/176 and 82/883 'titanium dioxide'	:	Notice against Belgium
-	Directive 78/319 'toxic waste'	:	Belgium brought before the Court of Justice
-	Directive 84/631 'cross-frontier movements'	à #	Proceedings under consideration

However, the situation is in fact much worse than indicated by this table. If one examines the level of compliance with obligations laid down in these Directives, article by article, many cases emerge of violation of Community law regarding waste. In particular, with regard to Directive 78/319 on toxic waste (the directive specifically targeted by the 'Pruvot' report), many cases of default persist today, in our opinion, as the following table will show:

CASES OF DEFAULT ON SOME BASIC PROVISIONS OF DIRECTIVE 78/319 OF 20 MARCH 1978 ON TOXIC AND DANGEROUS WASTE

#### OBLIGATIONS LAID DOWN

#### COUNTRIES DEFAULTING

- Promote the prevention and recycling of waste
- Belgium, Ireland, United Kingdom
- Draw up and review plans for waste disposal
- Belgium, France, Italy, United Kingdom
- Adequate labelling for waste packaging
- ?
- Ensure that waste carries a. : Belgium, France specific identification form
- - in each storage site
  - List and identify types of waste : All Member States (except Holland, Germany, Denmark and perhaps France)
- Draw up a triannual report
- : All Member States

#### 1.3.2. The 'Seveso' effect

The odyssey of the drums from Seveso has brought to light an unacceptable phenomenon: international movements of waste free of all official monitoring, and for purposes which show little respect for the environment or indeed human health.

As a result the Commission took action with the support, it must be said, of the European Parliament.

However, the imposition of controls on cross-frontier movements of dangerous wastes has turned out to be an extremely complicated and delicate operation which has swallowed the majority of the resources of the Commission department involved.

In the future it might be advisable to abandon the cross-frontier criterion for the monitoring of movements.

Regulations must also be drawn up at Community level covering civil and financial liability, something which goes beyond the problem of cross-frontier movements.

#### 1.3.3. Prevention: still the poor relation

With regard to the prevention of waste, the European Community has laid many fine plans, in particular in the second environmental action programme of 1977.

However, relatively few concrete measures have resulted.

The financing of some projects involving clean technologies is certainly a significant measure: nevertheless, the sums involved are very modest and only a few of the projects directly involve waste reduction at source.

What is particularly striking is the absence of any Community measure involving the useful life of products or an environment label.

Measures to provide information and increase awareness, whether aimed at the public or professional groups involved - measures which should represent the basis of preventative action - have so far found virtually no place in European policy on waste as it has been applied.

#### 1.3.4. Inadequate harmonization

Beyond the simple monitoring of movements of waste, it is clear that standards applicable to waste disposal are of primary importance, both from the point of view of environmental protection and that of international competition (serious divergences in national standards unfortunately explain some international movements of waste).

In this connection, virtually no progress has been made so far regarding the approximation of standards: at present there would seem to be an urgent need for a directive laying down minimum standards for dumps containing dangerous waste and one setting common standards for the incineration of such types of waste.

As regards household waste incinerators (which number more than 500 in the Community and which are used to dispose of almost 30% of such waste), the following table gives some indications of current differences in the regulations covering them.

# EMISSION LIMITS FOR COMBUSTION GASES FROM LARGE WASTE INCINERATION PLANTS (mg/Nm3) 1

	France	FRG	Lombardy	Holland	Other countries
Dust	50	30	50	75	N
Carbon monoxide	-	100	-	300	0 N
Sulphur oxides	-	100	-	600	A
Hydrochloric acid	100	50	50	75	T I
Hydrofluoric acid	-	2	3	5	O N A
Mercury and cadmium	0.3	0.2	0.1	-	L
Arsenic	1	1	-	-	S T A
Specific heavy metals	5	5	-	-	N D A
					R D S

The calculation methods (but not the standards) sometimes differ from country to country. In particular, the French and German emission standards are set on the basis of different combustion conditions (respectively 7% CO2 in wet gas and 11% of oxygen in dry gas); as a result the 0.3 milligrams of mercury in France correspond to 0.16 in German terms, whereas the 0.2 milligrams of mercury in the FRG correspond to 0.4 in French terms.

#### 1.3.5. The need for management of small quantities of dangerous waste

Apart from the basic problem of the management of old waste dumps (a problem dealt with in Part II of this report), developments in the industry are leading more and more to the recognition at all levels of problems regarding the management of small quantities of dangerous waste.

In this connection an OECD report has just been published (Monographs on the Environment, No. 6, August 1986) which contains some interesting figures and recommendations.

	SMALL QUANTITIES OF	DANGERO	US WASTE (SQDW) IN THE EEC
from	households	× °	130 000 tonnes per year (90% of this being made up of only a dozen products, motor oil, batteries, paints, medicines, lacs, solvents, plant nutrients, shoe maintenance products, glues, cleaning products)
from	industry	;	500 000 to 1 000 000 tonnes per year (traceable to around fifteen sources such as dental and photographic laboratories, painting and printing workshops)
from	research laboratories	P a	? (much more SQDW per unit than any small businesses)
from	agriculture	3. 10	- 20 000 tonnes per year of residues from plant health products
			- 60 000 tonnes per year from the packaging of such products.

Apart from the desirability of closed loop collection systems for waste oils and batteries, the OECD report stresses the importance of an integrated policy for monitoring SQDW. Of course it is incumbent on national, regional or local authorities to take a large number of the measures needed, but some would seem to fall within the Community's sphere of responsibility such as:

- promoting the replacement of some products which generate SQDW;
- the suitable labelling of such products or, conversely, the development of an environment emblem for other products;
- producing educational material for various age groups on nature and the best possible use of dangerous products;
- Levying taxes on certain products in order to raise the funds needed for suitable collection and disposal collection;
- promoting research and development so as to reduce or even eliminate the dangerous elements in certain products;
- drawing up codes of practice regarding waste disposal on land.

#### SOME STATISTICS

Table 1 TONNES OF WASTE PRODUCED PER YEAR IN THE COMMUNITY 90 000 000 Household waste Industrial waste 160 000 000 (30 000 000) (including dangerous materials) Waste from extractive industries and power stations 400 000 000 Sewage sludge 230 000 000 Rubble 160 000 000 Waste oil 1 900 000 Agricultural waste 1 108 000 000 TOTAL 2 000 000 000

Table 2 ESTIMATE OF THE PRODUCTION OF WASTE BY CATEGORIES IN THE OECD-EUROPE ZONE (drawn up by H. Yakowitz)

Categories	Approximate percentage of total	Estimated quantities in tonnes per year
Waste solvents	6-7.5%	1 500 000
Waste oil	17-20%	4 100 000
Paint waste	4-5%	1 000 000
Waste containing mercury	0.4-0.6%	100-130 000
Waste from metal processing (including that containing cyanide)	3-4%	800 000
Waste containing phenol	0.4-0.5%	100-150 000
Waste from weedkillers	0.4-0.5%	100 000
Waste from acids	30-40%	7-8 500 000

#### 2. THE PROBLEM OF OLD WASTE DUMPS

#### 2.1. NATURE AND EXTENT OF THE PROBLEM

'Love Canal' in the small city of Niagara Falls has a sinister claim to fame. At the end of the 1970s the United States' authorities found in it around 20 000 tonnes of dumped chemical waste which had been at the root of many cases of cancer and child malformation. As a result, 2 500 people were forced to leave their homes and claims for compensation were filed for a total of more than 11 billion dollars.

In the wake of this affair the United States became aware of the need to manage their industrial past. At the end of 1985 the US Environmental Protection Agency (EPA) put at 21 512 the number of potentially dangerous dumps on the territory of the United States, of which 1 750 were in urgent need of repair.

In Europe, the warning signals were less spectacular (or perhaps received less publicity). Nevertheless, some cases did come to light, such as that of the Lekkerkerk dump in Holland, where 870 people were forced to leave their homes and where clean-up measures had to be taken at a cost of around 70 million dollars: a total of 150 000 tonnes of earth had to be moved owing to the presence of around 2 000 drums containing roughly 500 tonnes of waste. As a result some Member States - but not all - decided to make a systematic inventory of contaminated dumps. These inventories, which were sometimes extended to include disused industrial sites, produced worrying results.

In Denmark, an enquiry carried out in 1980-82 among local authorities found 3 115 sites thought to contain chemical waste. 501 sites (the majority of them dumps) have actually been listed as problem sites, 114 of them forcing urgent measures to be taken to safeguard the groundwater. A budget of 400 million Danish kroner (50 million ECU) has been set aside for cleaning up the sites over the period 1983-1993. However, in 1985, the number of sites listed had risen to 1 007.

In Holland, 4 300 potentially contaminated sites were listed in 1980. Today it is thought that around 5 000 sites exist, of which at least 2 000 require closer investigation, and 1 000 immediate clean-up measures. In total almost 4.5 million cubic metres of contaminated earth would have to be 'treated'.

The cost of cleaning up the contaminated sites was estimated in 1984 at 2.5 million florins (1 billion ECU) spread over a period of 16 years. This estimate was revised sharply upwards in 1986.

According to reports drawn up by the Lander authorities, there were around 50 000 waste dumps in the FRG at the beginning of the 1970s. Research carried out up to now suggests there are around 35 000 potentially contaminated sites (including 30 000 dumps). 5 400 sites would require treatment and 10 600 further investigation. The Federal Agency for Environmental Protection (Umweltbundesamt) recently estimated that the total expenditure needed to assess the risks and clean up old waste dumps already identified would be DM 7.6 billion (3.5 billion ECU), whilst expenditure on disused industrial sites would run to DM 9.2 billion (4.2 billion ECU).

In France an initial survey of old dumps containing dangerous waste carried out in 1978 identified 450 cases, of which 80 called for immediate action. Since then a further 60 serious cases have been identified.

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In England the Ministry of the Environment put at more than 10 000 hectares the area of soil contaminated (soil which, as a result of previous use, contains substances which pose a danger to planned future use).

In Belgium 8 363 waste dumps - including 148 sites containing chemical and/or infective waste - had been identified in 1982 in the Walloon part of the country alone.

The following table gives a brief outline of the situation:

# NUMBER OF PROBLEM SITES SO FAR IDENTIFIED DENMARK : 2 000 (including 1 000 old waste dumps) HOLLAND : 3 600 FRG : 5 400 (including 3 000 old waste dumps) FRANCE : 140 old waste dumps

The problem of old waste dumps appears particularly daunting from another point of view: industrial activity over the last 25 years has seen the production in the EEC of at least 300 million tonnes of dangerous waste, the majority of which has 'naturally' been dumped without special precautions.

#### 2.2. GOVERNMENT RESPONSES TO THE PROBLEM

In the United States the problem of old waste dumps is at the heart of special legislation passed in 1980: the law on liability, compensation and urgent measures (CERCLA). This legislation lays down in particular an objective liability to a maximum of 50 million dollars for damage caused to natural resources in the public domain by the dumping of waste. In addition, a guarantee fund for the combating of dangerous substances (Superfund) has been set up with an initial grant of 1.6 billion dollars to cover the next 5 years. This fund, which is designed to cover cases where no culprit has been identified or where that culprit cannot, or refuses to, clean up a site, draws around 86% of its resources from a tax on chemical and petroleum products. The level of the tax to be levied on crude oil has been set at 0.79 cents per barrel; the levels of the taxes planned for other products vary between 0.22 cents per tonne (potassium hydroxide) and 4.87 dollars per tonne (aromatic hydrocarbons). The average tax per tonne on the whole range of products is 3.39 dollars.

In the European Community only a few Member States have adopted a specific policy with regard to the problems of old waste dumps or contaminated sites in general. This report will concentrate on three countries: Denmark, Holland and Germany.

In 1983 Denmark passed specific legislation on sites contaminated by chemical waste. This legislation requires regional and local authorities to carry out inventories of sites. The budget allocations (for the period 1983-1993) and the division of responsibility have been organized as follows:

for central authorities (clean-up measures)
 for regional authorities (research)
 21 million ECU
 18.75 million ECU

- for local authorities (implementation and monitoring of control measures)

11.25 million ECU

In addition, over the period 1986-1989 the Danish Ministry of the Environment plans to spend 2.5 million ECU on research and development projects covering the contaminated sites, and 1 million ECU on a pilot clean-up project. It should be noted that the regional authorities are empowered to reclaim the cost of cleaning up a site from the firms responsible (even for acts committed prior to the 1976 law on chemical waste).

In 1980 Holland adopted highly systematic criteria for identifying and classifying contaminated sites. Recommendations on banned and restricted substances in soils were even drawn up (and are at present under review). A law introducing interim measures on soil pollution was adopted on 29 December 1982. This law provides for the financing of clean-up operations on polluted sites on the basis of a concept of shared liability between central government, the provinces, municipal authorities and some industries. In this connection the law makes it possible to tax sales of chemical products and mineral oils.

In any event, the authorities have the power to reclaim the cost of cleaning up sites from the industries responsible, on the basis of the polluter pays principle and the concept of negligence (30 suits before the courts and 150 in preparation).

In Germany the Lander authorities bear responsibility for identifying and dealing with contaminated sites. The policies pursued differ in detail but are all based on Federal legislation passed in 1972 which made it compulsory to provide information on old waste dumps. This legislation was strengthened in 1984 by the creation of a working party (LAGA) which was given the task of registering and assessing all abandoned sites, including disused industrial sites.

Until now the measures taken have principally been financed by the regional authorities. By way of an example the Minister of the Environment in North Rhine-Westphalia set aside a budget of DM 40 million (18 million ECU) in order to contribute 50% to the cost of investigating and treating sites. A fund (the Ruhr Land Fund) has also been set up to buy abandoned sites in order to reclaim and resell them, with a budget of DM 500 million (227 million ECU) spread over 10 years.

At Federal level DM 80 million (30 million ECU) was added to the budget for the period 1984-1988 in order to develop and apply new techniques for treating contaminated soils.

There are cases where the industry involved has itself taken responsibility for the reclamation of a site. However, serious problems have emerged regarding the application of the polluter pays principle, such as the bankruptcy of the firm responsible. As a result the Confederation of German Industry has proposed a special fund of DM 100 million (45 million ECU) to aid local authorities in the assessment of the risks associated with abandoned waste dumps. Some Federal and regional authorities now plan to set up a fund whose resources will come from a tax levied on certain chemical products, or from a tax levied on special types of waste on the basis of their volume and toxicity.

The following table summarizes in financial terms the action taken by some governments:

# CURRENT EXPENDITURE ON THE TREATMENT OF CONTAMINATED SITES (in ECU)

,	Annual expenditure	Expenditure per head of population	% of GNP
Denmark	5 000 000	1	0.01%
Holland	88 000 000	6.6	0.07%
North Rhine-Westphalia	48 000 000	2.5	0.03%
United Kingdom	222 000 000	4	0.05%
Nord Pas de Calais, Lorraine, Rhone-Alpes	13 000 000	1.2	0.02%

At international level the question of old waste dumps has occupied the attention of the OECD since 1980 and led to that organization holding a seminar. The various aspects of the policy to be pursued with regard to illegal dumps are still being considered by the Group on Waste Management Policies.

In addition, between 1981 and 1984 the NATO Committee on the Challenges of Modern Society carried out a pilot study into the management of contaminated soils. The United States has also proposed that its work should be extended to cover technologies used in cleaning up such sites.

#### 2.3.COMMUNITY PERSPECTIVES

#### 2.3.1. Present situation

The European Community first tackled the problem of old waste dumps in 1978. Article 7 of Directive 78/319/EEC of 20 March 1978 on toxic and dangerous waste stipulates: 'Member States shall take the necessary steps to ensure that such toxic and dangerous waste is recorded and identified in respect of each site where it is or has been deposited.' Almost 9 years after the adoption of this directive all the Member States should possess an inventory of old waste dumps and be able to make it available to the Commission (or risk being brought before the courts for default).

In 1984, in reply to a parliamentary question, the Commission stated that it did not plan to take any specific measures regarding old waste dumps (see annex).

Nevertheless, in 1986 it initiated a wide-ranging study of the legal and technical aspects of the problem. And its proposal for a fourth environmental action programme states: 'The question of the clean-up of sites where uncontrolled discharge of wastes has taken place in the past will be examined, as well as the possible intervention of Community funds, e.g. the Regional Development Fund'.

In fact, as time has gone on, the problem of old waste dumps has become extremely serious, important, complicated and expensive. The need for Community action was highlighted by the round table on the safety of dangerous wastes organized in Dublin by the European Foundation for the Improvement of Living and Working Conditions on 27-29 November 1985. The conclusions of the meeting include the following: the European Community should adopt a policy of identification, evaluation and treatment of contaminated sites. This is a problem of interest to the Community as a whole:

- (i) because it exists in all Member States;
- (ii) because the extent of the problem requires international cooperation in the search for solutions;
- (iii) because some Member States may not have the financial and technical capabilities needed to deal with it;
- (iv) because it involves one factor in economic competition (increased costs in those countries adopting a policy of cleaning up sites).

#### 2.3.2. Aspects of the problem

- (a) The policy for the management of old waste dumps (and disused industrial sites) involves consideration of the criteria for the identification of sites, the evaluation of risks and the selection of possible corrective measures.
  - All these criteria would benefit from being made more objective through harmonization at Community level.
- (b) As regards technical know-how, the discovery of 'new' methods of treating sites must have priority, together with the transfer of knowledge acquired in some Member States to the authorities (national, regional and local) in others.
  - The European Community should thus contribute to research and development in this field and, more particularly, assist certain countries (e.g. through ERDF resources).
- (c) The basic problem remains of mobilizing the necessary financial resources. The basis of the polluter pays principle is that if the parties legally responsible for the creation of an illegal waste dump are known and solvent, these parties are required to carry out the necessary reclamation. However, this principle does not resolve:
  - 1. the problems of establishing civil liability;
  - 2. cases where there is no solvent or identifiable responsible party;
  - the need to finance research and development and the monitoring of sites.

#### 1. PROCEDURES FOR ESTABLISHING CIVIL LIABILITY

Within the strict confines of the concept of negligence, it is almost unthinkable that the reparation of all the damage caused by an old waste dump should be imposed on specific persons. In particular, some of this damage may only occur very progressively and be almost unforeseeable. Some legislators and judges have (justifiably) resolved this problem by establishing civil liability in this matter on the basis of the theory of risk: strict liability or objective liability, or liability without negligence.

#### 2. CASES WHERE THERE IS NO SOLVENT OR IDENTIFIABLE RESPONSIBLE PARTY

Even in the case of liability without generalized negligence concerning old waste dumps, the full reparation of damage caused is in no way guaranteed.

First of all the defendant may be insolvent. Some measures, as yet undeveloped, do exist to counter this problem by ensuring that firms involved in the management of dangerous waste take out insurance or an equivalent financial guarantee.

Secondly, it may be impossible to identify a guilty party. In this latter case the guarantee of a significant level of reparation of damage is dependent on the existence of a public compensation fund (such as the Superfund).

## 3. FUNDS FOR RESEARCH AND DEVELOPMENT AND THE MONITORING AND MANAGEMENT OF SITES

In several Member States budgetary resources have already been allocated to the problem of old waste dumps or contaminated sites in general. However, the requirements for financing are immense. A study carried outthe part of the EEC's Fast Programme put the annual expenditure required for the management of contaminated sites in the Community (10 Member States) at some 1 355 million ECU, the equivalent of 5 ECU per head of population or 0.06% of these countries' GNP. (An OECD study estimates the annual cost of the management of old waste dumps in the United States at 10 to 12 dollars per head of population.)

Why then should not certain sums be levied on products which generate dangerous waste in order to cover the cost of its management? This solution has already been adopted in part by American legislators, is set to become law in Holland and is at present under discussion in the FRG. Its basic merit is that it encourages the prevention of waste and seeks to take account of social costs.

In any case it is important that this solution be analysed systematically at Community level (for, as can easily be imagined, its adoption in only one Member State would create competitive imbalances).

Having said that, it is not purely and simply a matter of importing the American concept of the Superfund to the EEC. For example, the drawing up of inventories of sites has long been the responsibility of Member States under Community law, and one which they have in part fulfilled. Conversely, however, the need for new technologies to treat contaminated soils is becoming ever more real in the EEC, which could perhaps offer a solution in the form of a Community fund financed by a tax on specific products.

(d) Above and beyond the need to manage of our industrial past, the problem of old waste dumps leads one to ask questions about the future: how far and under what conditions is it reasonable to continue to allow the dumping of dangerous waste?

In this respect it is significant that in the United States a regulation banning the dumping of waste is to come into force on 1 January 1987. Under the terms of this regulation, no batch of dangerous waste can be disposed of in a dump without special authorization obtained by the producer and the firm operating of the dump. This special authorization is only granted if the producer can show proof that no other solution is technologically or economically feasible.

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Table 1: COST OF CLEANING UP SITES

For two sites in Louisiana:

50 000 000 dollars (out-of-court settlement)

For Times Beach, contaminated

by dioxin:

235 000 000 dollars

For a site in Colorado:

1 900 000 000 dollars (reclaimed through the

courts)

For the Love Canal:

40 000 000 dollars

Average cost per tonne of waste:

- in the USA:

1 000 dollars

- in the FRG (based on 9 clean-up operations): more than 600 dollars

- at Lekkerkek:

more than 1 000 dollars

Table 2: ESTIMATE OF ANNUAL EXPENDITURE REQUIRED OVER
15 YEARS FOR THE DECONTAMINATION OF SITES
(according to ECOTEC)

	Total in millions of ECU	Average per head of population	% of GDP
United Kingdom	476	8 .	0.1%
Germany	377	7	0.07%
France	214	4	0.04%
Italy	134	3	0.06%
Holland	56	4	0.04%
Belgium	62	7	0.08%
Denmark	13	3	0.03%
Greece	11	1	0.04%
Luxembourg	3	7	0.07%
Ireland	10	3	0.06%
EEC (10)	1 356 000 000	5	0.06%

Table 3: COMPARISON OF COSTS FOR 10 KG OF PCB (according to Infra Consult)

Cost of monitored disposal + cost of decontamination of a site = total cost

0 + 500 000 florins = 500 000 Fl

500 florins + 0 = 500 Fl

ANNEX 3

MOTION FOR A RESOLUTION (Doc. B 2-1654/85) tabled by Mrs SCHLEICHER, Mrs LENTZ-CORNETTE, Mr ALBER, Mr MERTENS, Mr LAMBRIAS, Mrs BANOTTI, Mr STARITA, Mrs MAIJ-WEGGEN, Mr CHANTERIE and Mr KLEPSCH, pursuant to Rule 47 of the Rules of Procedure, on the management of waste and old waste dumps

#### The European Parliament,

- A. having regard to the report by the Committee of Inquiry into the Treatment of Toxic and Dangerous Substances by the European Community and its Member States and the European Parliament's own-initiative report on waste and dangerous refuse,
- B. having regard to the Commission's reply to the oral question (H-190/84) concerning old waste dumps, in which the Commission states that it has not taken any special measures and does not intend to,
- C. having regard to the fact that in those countries which have meanwhile begun to tackle this problem, it is apparent that these old waste dumps present a problem which has clearly been underestimated until now,
- D. whereas in the Federal Republic of Germany alone, according to recent information, there are some 35 000 dumps and industrial sites to be inspected,
- E. whereas, despite the fact that the threat to the environment posed by dangerous waste is now recognized, some Member States are still dealing with this problem in an utterly feckless and inadequate manner,
- F. having regard to the substantial costs incurred by all the Community countries which are seriously tackling the task of surveying and treating these sites.
- Requests its appropriate committee to draw up a report describing the
  measures which the Commission has meanwhile adopted, in particular in
  regard to financial resources and staff, on the basis of the European
  Partiament's demands in its report on 'the treatment of toxic and dangerous
  substances by the European Community and its Member States', in particular
  the dangerous wastes;
- 2. Calls on the Commission to extend the ecological survey now begun to produce a comprehensive survey of old refuse sites throughout Europe to include in particular all dumps run by local authorities, privately and by undertakings themselves as well as decommissioned plants once involved in the production of dangerous substances;
- 3. Calls on the Commission to decide on criteria on which to base proposals for measures to be taken by all the Member States in regard to surveillance, decontamination and reconditioning, in view of the various dangers presented by these dumps.

MOTION FOR A RESOLUTION (Doc. B 2-952/86) tabled by Mr TRIDENTE, pursuant to Rule 47 of the Rules of Procedure, on the danger of discharging waste on the outskirts of an environmental protection area

#### The European Parliament,

- A. having regard to the temporary authorization granted by the Region of Lombardy for the discharge of toxic and dangerous waste in Pizzale,
- B. whereas the dump is located on the border with the Commune of Lungavilla adjacent to the marshland park which has been formed in the old clay pits,
- C. whereas this marshland area has proved to be of great ecological wealth and interest (trout, catfish, carp, bass, perch, chub, eels),
- D. whereas the park would be separated from the disposal site only by the Luria stream, a narrow rainwater channel which, when full, would carry the toxic waste directly from the dump into the lake and turn it into a polluted pit,
- Requests, in view of its concern at the threat to this site, the town council in Pizzale and the Region of Lombardy not to issue any licence for the disposal of waste;
- 2. Instructs its President to forward this resolution to Pizzale town council, the Region of Lombardy, the Council and the Commission.