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(Information)

COUNCIL

DECLARATION OF THE COUNCIL OF THE EUROPEAN COMMUNITIES AND OF THE REPRESENTATIVES OF THE GOVERNMENTS OF THE MEMBER STATES MEETING IN THE COUNCIL

OF 22 NOVEMBER 1973

ON THE PROGRAMME OF ACTION OF THE EUROPEAN COMMUNITIES ON THE ENVIRONMENT

The Council of the European Communities and the Representatives of the Governments of the Member States meeting in the Council note that the projects to which this programme will give rise should in some cases be carried out at Community level, and in others be carried out by the Member States.

With regard to the projects to be carried out by the Member States, the latter will supervize their proper execution, it being understood that for these projects the Council will exercise the coordinating powers laid down in the Treaties.

With regard to the projects in the programme to be carried out by the Institutions of the European Communities,

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Coal and Steel Community;

Having regard to the Treaty establishing the European Economic Community;

Having regard to the Treaty establishing the European Atomic Energy Community;

Having regard to the Communication from the Commission on a Community Environmental Programme;

Having regard to the Opinion of the European Parliament;

Having regard to the Opinion of the Economic and Social Committee;

Whereas the Heads of State or of Government meeting in Paris at the Summit Conference on 19 and 20 October 1972 emphasized the importance of a Community Environmental Policy and to this end invited the Community Institutions to establish, before 31 July 1973, a programme of action accompanied by a precise timetable;

Whereas the Ministers of the Member States of the enlarged European Communities, responsible for the Protection of the Environment met in Bonn on 31 October 1972 in an effort to facilitate the implementation of the final declaration of the Heads of State or of Government; and whereas the conclusions reached by the Bonn Conference are summarized in the Communiqué it adopted;

Whereas the tasks of the European Communities are defined in the Treaties establishing the Communities;

Whereas in particular, in accordance with Article 2 of the Treaty, the task of the European Economic Community is to promote throughout the Community a harmonious development of economic activities and a continuous and balanced expansion, which cannot now be imagined in the absence of an

effective campaign to combat pollution and nuisances or of an improvement in the quality of life and the protection of the environment;

Whereas improvement in the quality of life and the protection of the natural environment are among the fundamental tasks of the Community; whereas it is therefore necessary to implement a Community environment policy;

Whereas the action contained in this programme must be implemented in accordance with the provisions of the Treaties —

approves the principles and objectives of a Community environment policy and the general description of the projects to be undertaken at Community level as defined in the programme annexed hereto;

approves the material content of the projects in this programme for the reduction of pollution and nuisances and the priorities established in this matter;

approves the specific guidelines of the projects in this programme for the improvement of the environment;

notes that the Commission, as far as it is concerned, will be responsible for the implementation of this programme in accordance with the procedure and timetables indicated therein and that the latter will subsequently put forward suitable proposals;

undertakes to decide on the proposals mentioned above within a period of nine months from the date of despatch thereof.

ANNEX

PROGRAMME OF ACTION OF THE EUROPEAN COMMUNITIES ON THE ENVIRONMENT

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PART I

OBJECTIVES AND PRINCIPLES OF A COMMUNITY ENVIRONMENT POLICY AND GENERAL DESCRIPTION OF THE ACTION TO BE TAKEN AT COMMUNITY LEVEL DURING THE NEXT TWO YEARS

INTRODUCTION

Among the other objectives set out in the preamble to the Treaty establishing the European Economic Community, the signatories affirmed as goals 'the constant improvement of the living and working conditions of their peoples' and 'the harmonious development of their economies'.

In Article 2 of the Treaty, the following are included in the statement of the task assigned to the Community: to promote throughout the Community a harmonious development of economic activities, a continuous and balanced expansion, an accelerated raising of the standard of living and closer relations between the States belonging to it.

When they met in Paris on 19 to 20 October 1972, the Heads of State or Government of the Member States declared that 'economic expansion is not an end in itself: its first aim should be to enable disparities in living conditions to be reduced. It must take place with the participation of all the social partners. It should result in an improvement in the quality of life as well as in standards of living. As befits the genius of Europe, particular attention will be given to intangible values and to protecting the environment so that progress may really be put at the service of mankind'.

This readiness to ensure that the Communities direct their activities towards the improvement not only of the standard of living but of living conditions and the quality of life is expressed still more precisely in point 8 of the final Declaration of the Paris Summit Conference: 'the Heads of State or of Government emphasised the importance of a Community environmental policy. To this end they invited the Community institutions to establish before 31 July 1973, a programme of action accompanied by a precise timetable'.

This programme of action has been established in response to this invitation. It also takes into account the results of the Conference of the Ministers responsible for environmental questions held in Bonn on 31 October 1972, together with the memoranda and documents forwarded by the Member States and the detailed comparison of the points of view of the Commission and the representatives of the Member States on the Commission's communication forwarded to the Council on 24 March 1972. It also takes into account the opinions expressed by the European Parliament, the Economic and Social Committee and the employers' and workers' organizations.

TITLE I

OBJECTIVES OF COMMUNITY ENVIRONMENT POLICY

The aim of a Community environment policy is to improve the setting and quality of life, and the surroundings and living conditions of the peoples of the Community. It must help to bring expansion into the service of man by procuring for him an environment providing the best conditions of life, and reconcile this expansion with the increasingly imperative need to preserve the natural environment.

It should:

— prevent, reduce and as far as possible eliminate pollution and nuisances,

— maintain a satisfactory ecological balance and ensure the protection of the biosphere,

— ensure the sound management of and avoid any exploitation of resources or of nature which cause significant damage to the ecological balance,

— guide development in accordance with quality requirements, especially by improving working conditions and the settings of life,

— ensure that more account is taken of environmental aspects in town planning and land use,

— seek common solutions to environment problems with States outside the Community, particularly in international organizations.

TITLE II

PRINCIPLES OF A COMMUNITY ENVIRONMENT POLICY

The Council endorses the general principles of a Community environment policy as worked out by the Ministers of the Environment at their meeting in Bonn on 31 October 1972.

These general principles which have been defined in the light of subsequent ideas and exchanges of views, are as follows:

1. The best environment policy consists in preventing the creation of pollution or nuisances at source, rather than subsequently trying to counteract their effects. To this end, technical progress must be conceived and devised so as to take into account the concern for protection of the environment and for the improvement of the quality of life at the lowest cost to the community. This environment policy can and must be compatible with economic and social development. This also applies to technical progress.

2. Effects on the environment should be taken into account at the earliest possible stage in all the technical planning and decision-making processes.

   The environment cannot be considered as external surroundings by which man is harassed and assailed; it must be considered as an essential factor in the organization and promotion of human progress. It is therefore necessary to evaluate the effects on the quality of life and on the natural environment of any measure that is adopted or contemplated at national or Community level and which is liable to affect these factors.

3. Any exploitation of natural resources or of a nature which causes significant damage to the ecological balance must be avoided.

   The natural environment has only limited resources; it can only absorb pollution and neutralize its harmful effects to a limited extent. It represents an asset which can be used, but not abused, and which should be manged in the best possible way.

4. The standard of scientific and technological knowledge in the Community should be improved with a view to taking effective action to conserve and improve the environment and to combat pollution and nuisances. Research in this field should therefore be encouraged.

5. The cost of preventing and eliminating nuisances must in principle be borne by the polluter. However, there may be certain exceptions and special arrangements, in particular for transitional periods, provided that they cause no significant distortion to international trade and investment. Without prejudice to the application of the provisions of the Treaties, this principle should be stated explicitly and the arrangements for its application including the exceptions thereto should be defined at Community level. Where exceptions are made, the need to progressively eliminate regional imbalances in the Community should also be taken into account.

6. In accordance with the Declaration of the United Nations conference on the human environment adopted in Stockholm, care should be taken to ensure that activities carried out in one state do not cause any degradation of the environment in another state.

7. The Community and its Member States must take into account in their environment policy the interests of the developing countries, and must in particular examine any repercussions of the measures contemplated under that policy on the economic development of such countries and on trade with them with a view to preventing or reducing any adverse consequences as far as possible.

8. The effectiveness of effort aimed at promoting global environmental research and policy will be increased by a clearly defined long-term concept of a European environmental policy.

   In the spirit of the Declaration of Heads of State or Government at Paris, the Community and the Member States must make their voices heard in the international organizations dealing with aspects of the environment and must make an original contribution in these organizations, with the authority which a common point of view confers on them.

   In accordance with the conclusions of the Stockholm Conference, regional cooperation, which is often best suited to solving problems must be intensified.

World cooperation should concentrate on the fields in which a universal effort is called for because of the nature of the environmental problems involved: it must be based on the specialized institutions of the United Nations which have already accomplished considerable work and the activities must continue and develop.

A global environmental policy is only possible on the basis of new, more efficient forms of international cooperation which take into account both world ecological correlations and the interdependence of the economies of the world.

9. The protection of the environment is a matter for all in the Community, who should therefore be made aware of its importance. The success of an environment policy presupposes that all categories of the population and all the social forces of the Community help to protect and improve the environment. This means that at all levels continuous and detailed educational activity should take place in order that the entire Community may become aware of the problem and assume its responsibilities in full towards the generations to come.

10. In each different category of pollution, it is necessary to establish the level of action (local, regional, national, Community, international) that befits the type of pollution and the geographical zone to be protected should be sought.

    Actions which are likely to be the most effective at Community level should be concentrated at that level; priorities should be determined with special care.

11. Major aspects of environmental policy in individual countries must no longer be planned and implemented in isolation. On the basis of a common long-term concept, national programmes in these fields should be coordinated and national policies should be harmonized within the Community. Such policies should have as their aim the improvement of the quality of life. Therefore, economic growth should not be viewed from purely quantitative aspects.

    Such coordination and harmonization should in particular make it possible to increase the efficiency of the action carried out at the various levels to protect and improve the environment in the Community, taking into account the regional differences existing in the Community and the requirements for the satisfactory operation of the common market.

    This Community environment policy is aimed, as far as possible, at the coordinated and harmonized progress of national policies without however hampering potential or actual progress at the national level. However, the latter should be carried out in such a way as does not jeopardize the satisfactory operation of the common market.

    Coordination and harmonization of this nature will be achieved in particular:

    — by the application of the appropriate provisions of the Treaties,

    — by the implementation of the action described in this programme,

    — by the implementation of the environment information procedure [1].

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[1] OJ No C 9, 15. 3. 1973, p. 1.

TITLE III

GENERAL DESCRIPTION OF THE PROJECTS TO BE UNDERTAKEN UNDER THE PROGRAMME OF ACTION OF THE COMMUNITIES ON THE ENVIRONMENT [1]

INTRODUCTION

The protection of the natural environment and the improvement of living conditions necessitate the implementation of actions of various kinds.

This involves on the one hand, the adoption of measures to reduce pollution and nuisances, and on the other, ensuring that the improvement of living conditions and ecological factors, which must now be considered as inseparable from the organization and promotion of human progress, be integrated in devising and implementing common policies.

For the Community and its Member States, this also involves carrying out certain projects within

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[1] Title III constitutes a summary which must therefore be interpreted in the light of and within the limits of the detailed description of the projects in the Second Part of the programme.

international organizations so as to avoid unnecessary duplication, cooperating with third countries and ensuring that the specific interests of the Community are taken into consideration by these organizations.

For these reasons the programme of action of the Communities on the environment includes three categories of action:

1. Action to reduce and prevent pollution and nuisances,

2. Action to improve the environment and the setting of life,

3. Community action or, where applicable, common action by the Member States in international organizations dealing with the environment.

Certain aspects of this will have to be developed later both in the context of environment policy and in the context of other sectoral policies (social affairs, agriculture, regional policy, industrial policy, energy policy, etc.).

Chapter 1

ACTION TO REDUCE POLLUTION AND NUISANCES

A. Specific measures to protect man and his environment against the pollution and nuisances which assail him, should be supported by an objective analysis of the facts and the results of studies which show up the various consequences, in particular in the ecological and the economic field, of the choice of any one of several possible measures.

Study of the problems raised in the fight against pollution reveals the existence of numerous gaps: gaps in scientific knowledge and methods of analysis and measurement, gaps in economic experience, especially as regards the cost of the damage caused by pollution and of the measures to counter this and, finally, gaps in statistical data.

A series of projects should therefore be undertaken at Community level in order to provide a common basis for the evaluation of data and a common framework of methods and references. Such work would enable the measures indicated in part B of this section to be carried out; it would also avoid costly duplications and the adoption by Member States of various measures liable to create economic or social distortions within the Community.

The following tasks will have to be undertaken:

1. The laying-down of scientific criteria [1] for the degree of harm of the principal forms of air and water pollution and for noise. This action must go hand in hand with the standardization or alignment of the methods and instruments used in measuring these pollutants and nuisances. In the laying-down of criteria priority will be given to the following pollutants: lead and lead compounds, organic halogen compounds, sulphur compounds and particles in suspension, nitrogen oxides, carbon monoxide, mercury, phenols and hydrocarbons.

2. The definition, on the basis of a common methodology, of parameters and the decision-taking process in connection with the laying-down of quality objectives.

3. The organization and promotion of exchanges of technical information between the regional and national pollution surveillance and monitoring networks. In due course this action will facilitate the implementation of a Community information system dealing with the data acquired by these networks and the inclusion of these in the world monitoring system envisaged by the UNO.

4. The adoption of a common method of estimating the cost of anti-pollution measures. During an initial stage an attempt will be made, in collaboration with the OECD, to establish methods of estimating the cost of air and water pollution, and the cost of countering pollution caused by certain industrial activities [2]. This work will be rounded off by an analysis of the economic instruments which can be used under an environmental policy allowing for the application of the principle of making the polluter pay, without prejudice to the rules of the common market.

   A study will also be made of the methods of estimating the cost to society of the damage to the environment with a particular view towards including these costs in a suitable form in national

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[1] For the definition of this and other terms contained in this Programme see Annex I.

[2] The means by which this cooperation will be effected will be defined at a future date.

accounting figures and in the determination of the Gross National Product.

Finally, a common method of classifying and describing anti-pollution activities will be developed.

B. Anti-pollution policy cannot, however, be limited to the type of action described in A. Its essential aim should be the adoption of measures by the Community and Member States for the protection of the environment by reconciling that objective with the satisfactory operation of the common market.

At Community level, the following action will have to be taken:

1. The standardization or harmonization of the methods and techniques for sampling, analysis and measurement of pollutants. Priority will be given to the standardization of measuring methods for oils and natural gases having known or probable carcinogenic effects, photochemical oxydants, asbestos and vanadium.

2. The preparation of a list of quality objectives determining the various requirements an environment must meet, bearing in mind its allotted purpose. Community action will also be oriented towards the search for long-term quality criteria with which the various parts of the Community environment will have to comply.

3. The determination of standards which, in certain cases, could be provisional, and which in the first instance will be concerned mainly with water pollutants.

4. The harmonization of the specifications of polluting products. In order to ensure effective protection of man and his surroundings, this harmonization, which is already being implemented in the elimination of technical barriers to trade, should be accompanied by studies on the noxious effects of pollutants contained in such products, the possibilities of changing their composition and, if necessary, their replacement by non-polluting or less polluting substitute products. Moreover, as far as is necessary common measures relating to the conditions of approval and inspection of the use of such products should be examined and implemented. Priority will be given to vehicles, noisy products and equipment, pneumatic drills, motor and other fuels and combustibles, cleaning and washing products.

5. Studies in individual industries on pollution caused by industrial activities and energy production, relating to the principal polluting industrial activities, carried out in cooperation with the competent authorities of the Member States and the industries concerned. These studies will permit the exact nature of the pollution problems to be established, the best technical and economic solutions to be found and if necessary, allow any aids to be standaridized and a study to be made of the possibility of harmonizing principles or sets of other measures as regards certain industrial sectors.

   In the first phase, work will be undertaken on the following industrial sectors; paper and pulp, iron and steel and titanium dioxide manufacturing.

6. With regard to the problems raised by toxic or persistent waste, it will be necessary to pool thought and experience in order to assess the technical and economic aspects of the various possible means of action for eliminating such waste and to determine on that basis the measures to be introduced at Community level e.g. harmonization of regulations, promoting of the development of new techniques [1], possible establishment of a system for pooling information, etc.

   Priority will be given to dangerous substances listed in Annex I to the Oslo Convention, and to waste oils.

7. To avoid distortion of trade and investment, and without prejudice to the application of Treaty provisions, the 'polluter pays' principle will need to be worked out and its terms of implementation, including the exceptions thereto, laid down at Community level.

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[1] The implementation of this type of action would involve taking a decision of principle at Community level regarding the grant of development aids. At the same time appropriate procedures should also be decided upon to allow participation, in individual cases by experts appointed by the Member States.

8. Finally the serious problems posed by the pollution of certain zones of common interest (marine pollution, pollution of the Rhine basin and certain frontier zones) will require the introduction of special measures and procedures in a suitable framework, taking into account the geographical characteristics of such zones.

Thus, as far as marine pollution is concerned, Community action will consist in particular of:

— harmonizing the rules for implementing international conventions insofar as is necessary for the proper operation of the common market and the execution of this programme,

— implementing projects to combat land-based marine pollution along the coastline of the Community (See Part II, Title I, Chapter 6 of this programme).

As regards the steps or the position to be taken during the work, Member States will endeavour to adop a common attitude within the international organizations and conferences concerned, without prejudice to Community actions in respect of subjects falling under its competence or without prejudice to joint action which Member States may take, in respect of all matters of particular interest to the common market, within the framework of international organizations of an economic character.

With regard to the protection of the Rhine against pollution, the Commission is taking part as an observer in the plenary sessions of the International Commission for the Protection of the Rhine against Pollution. Moreover, in recalling the suggestions it made in its second Communication to the Council on the environment, the Commission reserves the right to make suitable proposals by 31 March 1974, taking into account the studies already started and the results of work in hand within the International Commission for the Protection of the Rhine against Pollution following the Ministerial Conference at the Hague.

With regard to the protection of the environment in frontier zones, the Council recommends the Member States to establish consultation procedures for the conclusion of agreements on the protection of the environment in such zones.

9. Finally, common action on the environment implies that if compliance with Community or national regulations is to be effectively controlled, infringements against these regulations will be dealt with with severity. To this end, the Commission will continue with its work of comparison of national laws and their application in practice in order to create the conditions necessary for the approximation of laws which prove necessary, and exchanges of information on the actual controls and the measures taken by each Member State will also be organized so as to ensure proper observance of the rules relating to polluting installations and products.

C. The measures referred to in A and B will be backed up by the implementation of a common research programme and by planning the establishment of a European system of documentation for the processing and dissemination of information on protection of the environment beginning with information on anti-pollution techniques and technologies and with the effects of pollution on human health and the natural environment.

With regard to the research programme, work on the environment already features in both the JRC's multiannual programme and in the programme of so-called indirect research activities (1).

These research activities will have to be carried out, however, as a complement to the activities contained in this programme of action.

Chapter 2

IMPROVEMENT OF THE ENVIRONMENT

Qualitative improvement of living and working conditions is now a fundamental task of the European Communities.

An environment programme for the Community cannot, therefore, be limited to protecting the physical environment by combating pollution, but must also make an active contribution to improving the quality of life.

In the same way, as already indicated in the last subparagraph of the introduction to this title, the activities of the Communities in the different sectors

(1) OJ No L 153, 9. 6. 1973, p. 11 and OJ No L 189, 11. 7. 1973, p. 43.

in which they operate (agriculture policy, social policy, regional policy, industrial policy, energy policy, etc. . . .) must take account of concern for the protection and improvement of the environment.

Furthermore, such concern must be taken into consideration in the elaboration and implementation of these policies. The proposals for a programme worked out by the Commission in respect of these other policies will provide for the inclusion of the measures set out below and for carrying them through as far as is required by the specific objectives to be achieved; the effectiveness and cohesion of these activities will be increased by applying the abovementioned principles and by making use of the means established within the framework of this programme.

The programme of action of the Communities on the environment and the sectoral policies concerned must therefore include activities to improve the environment considered in its broadest sense. These actions will be concerned with the following themes:

— safeguarding the natural environment. The Commission has already submitted a draft Directive on mountain and hill farming and farming in certain poorer areas, which takes account of this concern. On 15 May 1973 the Council adopted a Resolution on farming in certain less-favoured areas (1). The Commission has also indicated that it intends to submit other proposals and to carry out certain studies;

— study of the problems raised by growing scarcity of water resources as a result of increasing consumption; study of environmental factors involved when ensuring supplies of raw materials and when utilising natural resources and study of the problems resulting from their increasing scarcity;

— the confrontation in the appropriate bodies in connection with the coordination of regional policies of ideas, experience and achievements concerning the environmental problems connected with urban development and the geographical distribution of human activities so as to enable a search to be made for a common approach to be sought in order to take account of environmental needs in regional development policies and in order to facilitate consultations on aspects of the environment in frontier zones,

— improvement of the working environment. Proposals on this subject will have to be prepared by the Commission in connection with and/or in the context of the drawing up of the social programme,

— creation of a European Foundation for the Improvement of Working and Living Conditions. The Commission will submit proposals on this subject before 31 December 1973, with particular reference to its operation and financing,

— promotion, at all levels, of activities to strengthen the awareness of environment problems among all categories of the population, and to educate them to accept their own responsibility towards the environment.

Chapter 3

COMMUNITY ACTION AND JOINT ACTION BY THE MEMBER STATES IN INTERNATIONAL ORGANIZATIONS

A large number of international bodies are currently concerned with various aspects of environment problems. The Community will follow the work of these organizations with interest, particularly since many of the measures proposed and the procedures being implemented are likely to have repercussions on the functioning of the common market, on the economic interests of the Community and its Member States, on international trade generally, and frequently fall within the competence of the Community.

The Community must continue the very active cooperation which it has established in this field with most of the international bodies, particularly the OECD, the Council of Europe and the United Nations Organization. This cooperation will facilitate the carrying out of common activities by the Member States within these bodies without prejudicing any action by the Community itself, within the framework of its own competences.

(1) OJ No C 33, 23. 5. 1973, p. 1.

TITLE IV

PRIORITIES AND TIMETABLE

The programme is limited, in the first phase, to action which should be undertaken as a matter of priority. As far as possible the projects should be completed within two years of the adoption of the programme, the last six months of this period being allocated to reviewing the results obtained in the preceding period and to preparing the programmes of work to be carried out in subsequent years.

This programme may be amended and, when and where necessary, supplemented by further action to take account of any new developments and in the light of experience.

Accordingly, the priorities referred to in each of the projects in the programme may be modified by the Council, on the initiative of the Commission, as the work and studies undertaken progress.

PART II

DETAILED DESCRIPTION OF THE ACTION TO BE UNDERTAKEN AT COMMUNITY LEVEL OVER THE NEXT TWO YEARS

TITLE I

MEASURES TO REDUCE POLLUTION AND NUISANCES

Chapter 1

OBJECTIVE EVALUATION OF THE RISKS TO HUMAN HEALTH AND TO THE ENVIRONMENT FROM POLLUTION

A. Reasons

Pollution will be combated all the more effectively by the possession of objective knowledge of its effects. With this knowledge, it will be possible, without having resort to arbitrary values, to set limits to the presence of pollutants in the environment and determine quality values for products in terms of standards designed to protect human health and the environment.

The fixing of these values requires a study and a critical and objective analysis to be made of the adverse or undesirable effects of the exposure of a target to pollution or nuisance in given circumstances. This study leads to the determination of criteria which are defined in Annex I.

This requires standardization or harmonization of the methods and instruments used to monitor the various pollutants either individually or in combination, so as to render comparable the data obtained from measurements of these pollutants and of their effects.

This action may also reveal gaps in knowledge of pollutants and their effects, as well as indicate certain research subjects to be undertaken in the Community.

B. Aims and content

To undertake as quickly as possible the following tasks in respect of each of the following pollutants:

— compilation of as complete a bibliography as possible on the effects of the pollutants under consideration and a critical analysis of this information,

— determination of criteria for certain pollutants,

— standardization or harmonization of the measuring methods and instruments, so as to render the results of pollution measurements in the Community comparable,

— ascertainment of gaps in knowledge of pollutants and their effects in order to select research subjects for inclusion, as appropriate, in the Community research and development programme.

The pollutants for priority investigation have been chosen on the grounds both of their toxicity and of the current state of knowledge of their significance in the health and ecological fields. These pollutants are as follows:

First category

Lead and lead compounds (1),

Organic halogen (1) and organic phosphorus compounds,

Hydrocarbons with known or probable carcinogenous effects (2);

Air

Sulphur compounds and suspended particles (1),

Nitrogen oxides (1),

Carbon monoxide (1),

Photochemical oxidants (2),

Asbestos (2),

Vanadium (2);

Noise pollution:

Determination of criteria for measuring noise level and of nuisance indices at various levels of intensity.

Water

Inorganic micropollutants and their metabolites (mercury (1), cadmium (1), chromium, copper, nickel, tin, zinc, arsenic, beryllium, cyanide),

Phenols (1),

Hydrocarbons (1).

Special attention will be paid to the necessity of harmonizing the determination of the pollution burden and, in particular, the quantity of organic substances in effluents by measuring the biochemical oxygen demand (BOD) and the chemical oxygen demand (COD) and, at a later stage the total organic mass and the colour.

(1) These pollutants will receive priority investigation.

(2) In the case of these pollutants, the work necessary for standardizing measuring methods will have to be started an soon as possible.

Second category

Air	Water
Fluorine	Dyes
Nickel	Vanadium, boron, antimony, cobalt, barium, thallium
Cadmium	
Chlorine and hydrochloric acid	Phosphates
Hydrogen sulphide	Other pesticides
Antimony	Organic solvents
Beryllium	Iron and free chlorine
Organic dusts	
Mercaptans	Substances having an unpleasant odour or taste
Nitrosamines	
Ammonia	Bleaching agents

The foregoing list of second-category pollutants is given as a guide. By 31 July 1974, the Commission will propose a definitive list of pollutants, hazards associated with which will need to be evaluated at a later stage. However, some exploratory work in the collection of information can be started in the initial stage.

C. Procedure

In carrying out this action, the Commission will take into account the work completed or being performed at national and international level, in particular in the WHO.

It will collect the existing information, seeking the opinions of consultants and organizing meetings of national experts.

D. Timetable

After studying and utilizing this information, the Commission will submit to the Council the results of its work together with suitable proposals as the work progresses and in any case by 31 December 1974.

Chapter 2

SETTING OF STANDARDS

A. Aim and content

Standards established in order to limit or prevent the exposure of targets can be one of the means of achieving or approaching quality objectives. The

standards are directly or indirectly addressed to the responsible individuals or bodies and set levels of pollution or nuisance which must not be exceeded in a medium, a target, a product, etc.

They may be established by means of laws, regulations or administrative provisions or by mutual agreement or voluntary acceptance (1)

Knowledge of the effects on health and the environment of exposure to pollutants and nuisances should enable the responsible authorities to draw up appropriate regulations.

The definition of criteria establishing the relationship between a given exposure and an observable effect on human health or the environment is an important element in the objective evaluation of the undesirable effects or dangers inherent in any given nuisance. This objective evaluation is a difficult and complex task which at present can only be carried out for a limited number of substances with the certainty necessary for the adoption of appropriate regulations. In the case of numerous pollutants further studies and research will be necessary.

Analysis of criteria permits in particular the identification of the levels of pollution or nuisance which have certain undesirable or harmful effects on man or which may detract from the quality of the environment and enables basic protection and no-effect levels to be defined.

With regard to human health, work of a scientific character described in this chapter may lead in practice to the setting of levels for pollutants or nuisances (2) which should not be exceeded in the target (man) on grounds of public health (3).

Where necessary, environmental quality standards will be laid down at Community level.

On the basis of knowledge acquired, environmental quality standards and product standards may be laid down.

For any particular conditions Member States may lay down stricter requirements in environmental quality standards, without prejudice to the application of the Treaties.

As a general rule, the abovementioned Community standards will be laid down in the light of both health and ecological requirements after the criteria and the quality objectives have been established at Community level.

In certain cases, however, urgent reasons based on the protection of human health or protection of the environment, may require that provisional common standards be laid down before criteria and quality objectives have already been established at Community level, where the relevant criteria already existing on an international or national level are considered to be adequate.

B. Procedure and timetable

The standards relating to the following pollutants:

— lead,

— mercury,

— cadmium,

— organic chlorine compounds,

— toxic chemical substances present in water intended for human consumption (due account to be taken of the form in which these substances appear in the products or in the environment) and,

— microorganisms harmful to health, present in water intended for human consumption

should, on a proposal from the Commission, be fixed for water as rapidly as possible and at the latest by 31 December 1974. The other standards should be fixed at the earliest possible date in the course of a later stage.

Maximum use will be made of the results already achieved at national and international level, particularly the work done by the WHO.

The standards will be revised, in accordance with a procedure to be defined, in the light of experience acquired and in the light of scientific progress.

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(1) See definition No 3.1 in Annex I.

(2) Nuisances include noise (which also covers vibrations and subsonic or supersonic waves).

(3) These levels correspond to the health protection standards laid down by the WHO

Chapter 3

SPECIFIC ACTIONS ON ENVIRONMENT POLLUTION

Section 1

EXCHANGE OF INFORMATION BETWEEN THE SURVEILLANCE AND MONITORING NETWORKS

A. Reasons

Transport of pollutants over long distances and the harmful effects of their accumulation and their combination necessitate surveillance of the state of environmental pollution at the regional, national and international levels.

This surveillance also makes it possible to check to what extent the measures adopted by the authorities are being observed in practice. Furthermore, it provides essential information for carrying out epidemiological surveys to provide a better understanding of the harmful effects of certain pollutants on human health and ecosystems.

The regional and national networks must be able to supply full and precise information which is comparable to that of the networks in other Community regions and States and it must also be possible to incorporate them, when necessary, in the surveillance networks planned at world level by the United Nations.

B. Aims and content

— To organize and develop technical exchanges between the regional and national pollution surveillances and monitoring networks and to adopt all appropriate measures to improve the efficiency, accuracy and comparative value of the devices already set up,

— To investigate, when appropriate, the desirability of setting up a system of exchanges of information on the data collected by the networks and in such cases to entrust to the Commission the analysis, for the purpose of interpretation on a Community basis, the data collected by the national networks,

— To facilitate the inclusion of the existing networks in the Community into the framework of the global monitoring system contemplated by the United Nations.

C. Procedure

The Commission will, for each type of surveillance and monitoring network (air, fresh water and sea-water), convene the experts of the competent national authorities to work out the detailed procedure for the organization of exchanges of information.

In the case of air surveillance and monitoring networks, priority should be given to the organization of exchanges of information on situations requiring rapid action, such as accumulations of smog layers. Account will also be taken of work undertaken in the OECD on transport of pollutants over long distances.

D. Timetable

The Commission will by 31 December 1974 put forward all the appropriate proposals prompted by the results of the work carried out with the aid of the experts.

Section 2

QUALITY OBJECTIVES

A. Reasons

Quality objectives represent the overall requirements which must be met at any given time — now or in the future — by a given environment or particular part thereof.

In drawing up quality objectives account must be taken of:

(a) a 'basic protection level' such that man or another target is not exposed to any unacceptable risk

(b) a 'no-effect level' such that no identifiable effect will be caused to the target.

In addition, proper account must be taken of the specific characteristics of the regions in question [1], possible effects on neighbouring regions and the objective pursued.

The requirements set by quality objectives relate basically to health, ecology and social life. The aim is:

1. To protect human health against pollution and nuisances. To ensure that health requirements are met, it is necessary to set maximum limits for the concentration of pollutants and nuisances in the

[1] A region may compromise the whole territory of a Member State

environment and in products in the light of human health criteria and taking account of the concepts of basic protection level and no-effect level.

2. To safeguard the natural environment, especially animal and plant life, against the numerous aggressions to which it is subject, and to preserve natural resources. To ensure that ecological requirements are met it may be necessary to take other needs into account which are based on criteria applicable to the species or the ecological systems in question. Here again the basic protection level and the zero-effect level must be taken into account.

3. to restore, preserve and improve the quality of human life (maintaining an agreeable, attractive and aesthetic environment etc.)

The social requirements constitute an additional factor supporting and making more rigourous the health and ecological requirements.

To sum up, each quality objective must be drawn up on the basis of health and ecological requirements with social requirements in mind.

Because of the difficulties in defining quality objectives and because of their importance, it is necessary to work out common methods for their definition and for adopting the requisite measures to ensure that the objectives are achieved and upheld.

B. **Aims and content**

It is the aim of the Community action:

— through the establishment of a common methodology, to define the parameters and decision-making procedures to be set up as part of the establishment of quality objectives,

— to establish in common the list of quality objectives determining the different requirements which an environment must meet, bearing in mind its allotted purpose [1]. The definition and the application of the quality objectives will have to be such as not to adversely affect any subsequent improvement in the quality of the environment, especially as a result of a change in its allotted purpose. For a given environment, the quality objectives are chosen and implemented at the appropriate geographical level,

— to investigate and to lay down satisfactory minimum long-term quality requirements which the various parts of the Community environment should satisfy. The Commission will submit proposals on the matter by 31 December 1975, together with a time-table.

In view of the difficulties of immediately establishing a general methodology for defining quality objectives, the initial work will be based on case studies and the results achieved by Member States in this sphere.

In the first phase the work will concern fresh surface waters and sea water.

Care should be taken to ensure that the quantity and quality of water resources available correspond to the various needs and requirements relating to health, ecology and economic activity.

A single watercourse, especially if it flows through two or more countries, must simultaneously satisfy numerous different needs in neighbouring areas. Apart from technical measures to reduce consumption, to increase re-cycling, to combat pollution and to increase water supplies, strict planning is necessary to ensure supplies of this unique asset, which cannot be replaced by any other natural or artificial substance. Sea water is threatened by increasing pollution from the land and from the high seas. It is also a resource whose biological equilibrium must be maintained, whose fish population must be protected, and whose aesthetic and recreational aspects must be preserved and improved.

Accordingly, the methodology to be used for the definition of quality objectives for water should aim to reconcile all the requirements listed below and to ensure an equitable allocation of water, in the necessary quantities and appropriate qualities, among present and future users.

The content of Community action will be:

1. Definition of the sets of reference parameters for the uses and functions of water: drinking, swimming, farming, pisciculture and industry, beverage industry, recreation, and aquatic life in general,

[1] The concept of the allotted purpose of an environment includes its uses and the part it plays ecologically.

2. The establishment of a common methodology for determining the quality objectives based on the sets of reference paramenters and expressed as pollutant concentrations or nuisance intensities, in that particular environment or part thereof;

3. The collection of information in order to work out a common method for deciding the measures necessary to achieve and maintain quality objectives now and in the future,

4. The collection of information in order to determine the most appropriate decision levels for defining the quality objectives for an environment, or part of an environment, bearing in mind both local conditions and requirements and the limits imposed by neighbouring regions or by other regions liable to be concerned.

In the implementation of this work, the following headings will be taken into consideration:

— physical, chemical and biological parameters defining the qualities required for the abovementioned uses of water,

— the nature and level of present and foreseeable pollution,

— the effectiveness of the treatment methods necessary and their cost,

— measuring methods for determining pollution trends in the environment in question,

— the actual or potential quantitative and qualitative factors for enabling the economic and social consequences of attainment of the quality objective to be evaluated.

Methods should be devised to determine the degree of control of discharges required to achieve the quality objective appropriate to the receiving water.

In the implementation of the work referred to under Point 3 detailed study will be given to all the possible methods, such as the fixing of charges and the setting of standards for discharges, according to various procedures for sharing pollution abatement between branches of industry or between new and existing plants. Priority will be given to the control of freshwater pollution by the substances listed in Annex I to the Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft, signed at Oslo on 15 February 1972 and Annex I of the Convention on the Dumping of Wastes at Sea, signed at London on 13 November 1972.

Fresh water

In order to use actual data for reference and evaluation purposes, and to provide a concrete basis for the work, the methods will be developed in the light of work already carried out by Member States on their own rivers or river-courses.

To this end the French Government will supply information on the scale of parameters for natural water for processing into drinking water; the United Kingdom Government will provide information on water used for agricultural irrigation purposes, stock-rearing and other purposes.

In connection with the methods for deciding the restrictions to be imposed on discharges in order to establish specified quality objectives for fresh water, the national experts have agreed to supply the information they possess on the following rivers:

United Kingdom:	River Trent
Belgium:	River Sambre
Italy:	River Tiber
France:	River Vilaine

Experts from the Federal Republic of Germany will supply information on typical rivers which have been studied for the purpose of defining the quality objectives in the Federal Republic.

Sea water

As regards sea water, the French, Italian and United Kingdom Governments will transmit the information at their disposal on sea water intended for bathing and on quality objectives for beaches. The United Kingdom Government will also supply information about pollution of beaches by oil.

C. **Procedure**

The work will be directed by the Commission in consultation with Working Parties of experts from the Member States,

The Commission will gather information from the Member States and make a preliminary analysis and digest of all the available information.

It will then transmit the information to a Working Party whose first task will be to study it in depth and to select areas for priority action. At the same time, the Working Party will consider the various ways of defining quality objectives, bearing in mind the optimum long-term objectives and provisional quality objectives which may be revised and adjusted according to requirements and possibilities, and to trends in the pollution of that particular environment.

D. **Timetable**

This work will be completed by 31 December 1974. The Commission will submit the results to the Council in an appropriate form as the work progresses.

E. **Atmospheric pollution, noise, protection of lakes and underground waters**

Methods for defining quality objectives for air, lakes, underground waters and for noise will be defined later.

Chapter 4

MEASURES RELATING TO CERTAIN PRODUCTS

A. **Reasons, aim and content**

The protection of man and his environment calls for special attention to be paid to products the use of which may lead to harmful consequences for man or the environment. Moreover, differences as between Member States in the assessment of such risks might possibly lead to the creation or the reintroduction of barriers to trade, which would be detrimental to the satisfactory operation of the common market.

Following the adoption by the Council in April 1969 of a general programme [1] for the elimination of technical barriers to trade in a number of industrial products and foodstuffs, supplemented by the Resolution of 21 May 1973 [2], it would be appropriate first and foremost to accelerate the harmonization of the specifications relating to the products listed in this programme which are liable to affect the environment. Such harmonization should make it possible to lay down Community standards for these products ensuring effective protection of man and the environment.

Such measures of harmonization must also, in the case of polluting products, be accompanied by:

1. Special investigations into the harmfulness of the polluting agents in these products,

2. Investigation and research into the possibilities of changing the composition, design or properties of these products with a view to reducing their harmfulness and, if necessary, to replace them by less or non-pollutant substitutes,

3. Investigation into the economic consequences of the proposed measures,

4. Possible measures dealing with the procedures for and supervizion of the utilization of these products.

B. **Timetable**

The operations involved will be carried out in the following order:

1. *Harmonization activities in implementation of the General Programme for the elimination of technical barriers to trade*

   The implementation of this programme, in so far as it concerns polluting products, can constitute an effective environmental policy instrument. Directives adopted under this programme must be regularly revised in order to adapt them to scientific and technical progress.

   1.1. The following work will be carried out in the first stage, before 31 December 1974:

      1.1.1. Adoption at a date enabling the Member States to implement before 1 October 1974 amendments to the Council Directives on:

      — the permissible sound level and the exhaust system of motor vehicles (OJ No L 42, 23.2.1970),

(1) OJ No C 76, 17. 6. 1969, p. 1.

(2) OJ No C 38, 5. 6. 1973, p. 1.

— measures to be taken against air pollution (1) by gases emitted by positive-ignition engines of motor vehicles (OJ No L 76, 6. 4. 1970);

1.1.2. Forwarding to the Council of proposals for directives on:

— the maximum amount of lead in fuel,

— the maximum amount of lead in crockery,

— the maximum sulphur content of domestic fuel-oils (2),

— the method of measuring the biodegradability of non-ionic surface active agents,

— the toxicity of detergents,

— the composition of materials containing PCB and used in electrical appliances,

— the composition of paints and varnishes (in particular restrictions on the use of certain substances, such as PCB),

— the permissible sound level for motor vehicles, construction site engines and pneumatic drills,

— organo-mercuric compounds;

1.1.3. Carrying out of studies on

— type-approval of dangerous substances and preparations (solvents, corrosive products, explosives, household products, pesticides),

— the chemical properties of packaging materials,

— the technological possibilities of reducing nuisances due to motor vehicles.

1.2. Stage two: 31 December 1974 and 31 December 1976:

1.2.1. Amendments to directives adopted and implementation of national measures before 1 October 1976 so as to take into consideration the latest scientific progress, with particular reference to;

— the permissible sound level for different vehicles and items of equipment,

— air pollution by exhaust gases from positive-ignition engines.

1.2.2. Forwarding to the Council of proposals for directives on:

— the permissible sound level for power saws and lawn-mowers,

— the method of measuring the biodegradability of surface-active agents,

— the type approval of dangerous substances;

— the chemical properties of packaging materials,

— pollution caused by motor vessels on inland waterways.

2. *Further action*

The following action will be implemented by the Commission as soon as possible and in any case not later than 31 December 1974:

2.1. investigations into the problems raised by the presence of particularly active pollutants (3) in:

— cleaning and conditioning agents,

— products for the treatment of plants and animals,

— products containing heavy metals,

— chemical reagents used in industry.

Such investigations will be concerned with the harmfulness, design and composition of these products, the technical possibilities of

(1) With regard to carbon monoxide and unburnt hydrocarbons, the only pollutants affected by this Directive, a first proposal may be transmitted shortly. For other pollutants, the Commission's proposals will be transmitted in the light of the results obtained in connection with the harmonization of measuring methods.

(2) This work should, particularly as regards fuel-oils, be carried out in the light of the work referred to in Chapter 5, Section 2 of this Title.

(3) Priority will be given to study of the substances referred to in Chapters 1 and 2 of this Title.

modifying their composition or of finding substitutes for them, the precautions to be taken in using them, etc. and the economic implications of the various measures under consideration.

In addition, the Commission will investigate the measures still required (1) to harmonize and strengthen control by the public authorities over certain substances or new synthetic products before they are marketed, particularly:

— the improvement and harmonization of quantitative analysis techniques,

— investigations into the long-term toxicity of these substances and the standardization of toxicity tests,

— compulsory submission of samples, accompanied by a description of the methods of quantitative analysis.

Such a study will have to consider various possibilities such as the utility of a European Office for the approval of new substances, a Coordinating Committee for coordinating national bodies in this field or any other suitable means with particular regard to pharmaceuticals and certain dangerous industrial products (2).

2.2. the organization of a joint long-term study of the economic and social implications of regulations and other measures aimed at improving the design of motor cars and traffic conditions in the environmental context to enable the Commission to present proposals where necessary (3).

2.3. where the problems have not been dealt with in Council directives on product specifications, the presentation of suitable proposals for measures to control the use of certain products (motor vehicles, noisy equipment, etc.) and other measures which may emerge from the above studies.

(1) For a number of years the Community has already been implementing rules on the approval of new substances and products in the field of food additives and additives to animal feedingstuffs.

(2) This study wil be based especially on the work done in this field in the Benelux (qua organization).

(3) Account will be taken of the results obtained by the OECD and the NATO Committee on the Challenges of Modern Society.

C. **Procedure**

1. The Commission will present proposals for directives to the Council in accordance with the timetable given.

2. The Commission will carry out the additional work referred to under point 2 of B in the light of results obtained at national and international level.

3. It will collect existing information, draw upon the advice of consultants as appropriate and organize meetings of national experts.

Chapter 5

ACTION SPECIFIC TO CERTAIN INDUSTRIAL SECTORS AND TO ENERGY PRODUCTION

Section 1

ACTION SPECIFIC TO CERTAIN INDUSTRIAL SECTORS

A. **Reasons and aims**

Protection of the environment requires that particular attention be paid to industrial activities in which the manufacturing processes entail the introduction of pollutants or nuisances into the environment. It is appropriate therefore:

— to endeavour to work out technical or other measures which could reduce, eliminate or prevent the pollutant emissions or nuisances stemming from each of the polluting industries (the worst polluting branches number about fifteen),

— to study ways and means of implementing these measures, particularly as regards their phasing, account being taken of existing circumstances, the state of the art and the economic, financial and social consequences of the measures planned,

— where necessary, to put in hand, at Community level, such measures as the execution of research and/or development work which is of general interest, awards of Community development

contracts (1), the conclusion of agreements on know-how, patents, licences, etc.

Without prejudice to the application of Articles 92 *et seq.* of the Treaty establishing the European Economic Community on aids granted by States subject to permanent review by the Commission, any such aid would be harmonized and likewise the possibility of harmonizing principles or schemes for other measures concerning the relation of specific industial sectors to the environment could also be examined (2).

B. Content

The work will be carried out in two stages. In the first stage, the Commission will continue the following studies for the paper and pulp industry (3), the iron and steel industry and the manufacture of titanium dioxide:

(a) studies on the exact nature of the pollution problems to be solved;

(b) studies on the techniques employed, including recycling techniques, on the existing technologies, which have been or are being developed, and on current research;

(c) a comparative and critical study of the measures already taken or considered in each Member State;

(d) a comparative study of the additonal measures that need to be taken by the Member States, in order to achieve, within several assumed time limits, a specified reduction of the various forms of pollution caused by the industry in question, bearing in mind the particular siting of the industry, the cost of the measures and their economic, financial, commercial and social consequences.

These initial studies will enable the Commission to draw up and, where appropriate, propose to the Council measures for these three industries along the lines indicated above. It will also enable the Commission to work out the methods to be used in the second stage, for studying pollution problems arising in the following sectors:

— the following branches of the chemical industry:

  — production of nitrate and phosphate fertilizers,

  — the petrochemical industry: basic products such as ethylene, propylene and benzine, major intermediary products such as phenol, glycerine and acetone.

— the leather industry, hide processing and tanning,

— the following branches of the food industry: canning, sugar refining, the potato-starch and corn-starch industries,

— the wool combing, washing and carding industry.

A study will also be made of the pollution problems caused by factory-farming and in particular by intensive stock-rearing.

In the third stage studies will be made of the other industrial sectors which come within the following broad industrial categories:

— chemical industry,

— food industry,

— metallurgical industry,

— textile industry.

C. Timetable

The first-stage studies will be started or pursued in order to highlight the methods to be followed and to yield proposals by the Commission at the latest by 31 December 1974.

In view of the advanced state of the studies on wood pulp, the Commission will submit proposals on this matter before 1 July 1974.

Work on the second stage will be started before this date with a view to achieving results and preparing proposals at the latest by 31 December 1975.

The list of industrial branches to be studied during the third stage will be submitted by the Commission to the Council at the latest by 31 December 1974 so as to permit the Council to decide on this list before 1 July 1975.

(1) The implementation of this type of action would involve taking a decision of principle at Community level regarding the grant of development aids. At the same time appropriate procedures should also be decided upon to allow participation, in individual cases by experts appointed by the Member States.

(2) The projects should not hinder the Community's or the Member States' efforts to fix quality objectives and standards.

(3) These studies will be conducted on the basis of the OECD's work in this field.

D. **Procedure**

1. The Commission, in consultation with the Member States, will prepare a study outline for each of the sectors under consideration.

2. On this basis, the Commission will carry out a preliminary study in consultation with qualified representatives of the relevant sectors of industry.

3. The Commission will transmit the results of its studies to the Council, accompanied, where appropriate, by proposals after consultation with national experts.

Section 2

ACTION RELATING TO ENERGY PRODUCTION

A. **Reasons**

The production of energy in almost all its forms is a source of various types of pollution and nuisances, in particular:

— atmospheric pollution caused by the combustion of fuels in fixed plant and refineries, domestic heating and internal combustion engines,

— water pollution caused by the discharge of cooling water and pollutants,

— thermal pollution of water and air by electricity generating stations.

It is therefore necessary to:

— examine the various forms of pollution and nuisances in question, their concentration in the areas in question, the damage they cause and their related costs,

— examine the methods at present in use to combat these forms of pollution and nuisance, their effectiveness, their cost and also the desirability of undertaking research with a view to improving these methods,

— study all appropriate measures to reduce the concentration of these forms of pollution and nuisance to an acceptable level, while taking into account the requirements of different regions,

— work out the cost of all these measures and relate it to that of the damage caused,

— define, in the form of options with their estimated costs, measures for reducing the intensity of these forms of pollution and nuisance to an acceptable level.

This work, and other work on estimates of costs of measures which do not concern the protection of the environment, will form the basis for the decisions to be taken on fuel policy.

B. **Aim and content**

Different tasks will be carried out in this field. These are set out below in the order of the priority attached to them, but not necessarily in the order of their implementation (1):

(a) studies on the various forms of pollution which threaten the environment, their concentration in the areas concerned in the various countries and regions, the evaluation of damage depending upon the various degrees of concentration, the cost of these kinds of damage and of their concentration;

(b) studies of the methods currently used by Member States and other countries to combat these forms of pollution and nuisance, their effectiveness and their cost;

(c) examination of the possibility of carrying out research to enable these methods to be improved;

(d) a comparative study of present methods and of the possibility of their improvement by the correlation of the reduction in the damage caused by pollution and nuisances with the expenditure involved in achieving this reduction; taking into account the degree of effectiveness anticipated if traditional fuel sources and fuel uses were modified, with due regard to the cost of such modification;

(e) examination of the undesirable consequences of disposing of cooling water from fixed installations, taking into account the state of the surrounding waters, and a study of the methods of combating these consequences;

(f) study of pollution by chemical products resulting from the processing of cooling water by electricity-generating stations and by water discharged from refineries.

In submitting the results of this work to the Council with a view to adapting the decisions taken in energy policy, it should be possible not only to point out the economic and technical results of the various measures which could be taken, but also to concentrate attention on the consequences that these measures might have on the siting of fixed plant; this

(1) These tasks would be carried out on the basis of the work done in this field by the OECD.

particularly concerns the siting of new power stations, refineries and plants for reprocessing nuclear fuels.

Problems resulting from the harmfulness and proliferation of wastes from energy production, especially radioactive wastes, and the processing or disposal of used oil will be dealt with in the studies mentioned in Chapter 7 of this title.

C. **Procedure and timetable**

A preliminary general report on the problems of pollution and nuisances relating to energy production and particularly on thermal pollution, SO_2 (in connection with particles in suspension) and NO_x will be drawn up, in so far as is possible, before 31 December 1973, for subsequent discussion with national experts.

In the light of these discussions, the Commission will make proposals to the Council as soon as possible, and at the latest by 31 July 1974.

Chapter 6

ACTION SPECIFIC TO CERTAIN AREAS OF COMMON INTEREST

Section 1

MARINE POLLUTION

A. **Reasons**

Of all the different forms of pollution, marine pollution constitutes now, and to an even greater extent in the long term, one of the most dangerous, because of the effects it has on the fundamental biological and ecological balances governing life on our planet. This danger is even greater on account of the level of pollution which has already been reached, the diversity of pollution sources and the difficulty of ensuring that any measures adopted are complied with.

The sea is an essential source of products and proteins, which are extremely valuable in a world which is becoming increasingly overpopulated. In addition, the sea plays a vital role in maintaining the natural ecological balance by supplying a large proportion of the oxygen upon which life depends. The sea and coastal areas are also of tremendous importance for recreation and leisure.

The pollution of the sea has already reached a high level. For example, a disturbing accumulation of pollutants can be detected in plankton, other living organisms and sediments, and even now there is evidence of a considerable danger of eutrophication in certain estuaries and coastal areas.

Marine pollution affects the whole Community, both because of the essential role played by the sea in the preservation and development of species and on account of the importance of sea transport for the harmonious economic development of the Community.

Marine pollution can be broken down into four main sources:

— sea transport and navigation,

— deliberate dumping of waste at sea,

— exploitation of marine and submarine resources, especially exploitation of the sea bed,

— discharge of effluents from land.

The prevention or reduction of the first three sources and, to a certain extent of the fourth also, make it necessary to adopt international conventions on a world or regional level. These present particularly difficult problems of supervision and control.

Measures for the abatement of land-based marine pollution are to a large extent linked with those against fresh water pollution and often require a similar approach.

These measures do, however, have some special characteristics resulting from the particular nature of the marine environment, the many different uses to which the coastline is put and the concentration of a large number of economic and social activities in small areas.

B. **Content**

1. *Introduction*

The nature of the projects to be undertaken by the Community and its Member States and the institutional frameworks within which these projects must be conceived, drawn up and implemented will therefore differ according to whether it is the first three sources of marine pollution of the last type, mentioned in A.

Community action will consist in particular in:

— the approximation of rules on the application of International Conventions, as far as necessary to the proper functioning of the common market and the implementation of this programme,

— the carrying out of projects to help combat land-based marine pollution along the coastline of the Community (provided for in Chapter 6 Section 1 B, point 3 of this Title).

Whether dealing with schemes or positions to be adopted in the course of a project, Member States will endeavour to adopt a joint position within the international organizations and conferences concerned without prejudice to Community projects on subjects falling within its competence or joint projects undertaken by Member States within international organizations of an economic character on matters of particular interest to the common market.

2. *Combating marine pollution from sources other than the land.*

For the first three sources of pollution mentioned above (sea transport; deliberate dumping of waste at sea; exploitation of marine resources) the Commission will make suitable proposals in due course.

The following are examples of types of action which might be envisaged:

2.1. Combating pollution resulting from sea transport and Navigation

2.1.1. Pollution due to dumping of hydrocarbons is already the subject of various agreements usually adopted under the auspices of the Intergovernmental Maritime Consultative Organization (IMCO). Particular examples of these are:

— the Convention for the Prevention of the Pollution of Seawater by Hydrocarbons, signed in 1954 and administered by the IMCO from 1959 and revised in 1962, 1969 and 1971,

— the 1969 International Convention relating to intervention on the high seas in cases of Oil Pollution Casualties and the 1969 International Convention on Civil Liability for Oil Pollution Damage,

— the 1971 International Convention on the Establishment of an International Fund for compensation for Oil Pollution Damage,

— the Bonn agreement of June 1969 on Cooperation in Dealing with Pollution of the North Sea by Oil,

— the agreement signed in 1969 setting out the list of noxious and dangerous substances transported by sea.

2.1.2. Marine pollution resulting from the transport by sea of harmful substances will be the subject of an agreement to be proposed in 1973 at the Inter-governmental conference on marine pollution organized by the IMCO. The aim of this conference will be to prepare international agreements aimed at the complete elimination, between 1975 and at the latest by 1980, of all deliberate pollution of seawater by hydrocarbons and other noxious substances and the reduction to a minimum of accidental discharges.

Many specialized international organizations, in particular the UN agencies (FAO, UNESCO, WHO, WMO, IAEA) are carrying out work in this field according to their various specialist activities.

Community action should obviously complement the measures taken by these specialist international agencies. However, Western Europe, because of its fragmented coastline and especially since it is the main crossroads for shipping, has a greater interest than any other area in the world in effective action being taken on a world scale against marine pollution and, more especially, against the dangers inherent in the transportation of oil, including the danger of serious coastal pollution resulting from accidents on the high seas.

Action by the Community or joint action by the Member States in international

organizations is the subject of Title III, Chapter 3 of the first part and Title III of the second part of this programme. This action should be backed up by the studies of improvements to be made in the context of international relations in order to protect the sea against pollution, and in particular by studying the structures and means to be provided for ensuring genuine compliance with international agreements concerning pollution resulting from sea transport. The setting up of an international body with powers of sanction and effective means of control will have to be studied.

2.2. Marine pollution resulting from deliberate dumping of waste

Two international agreements on this subject have been adopted: the Oslo Convention concerning the control of the deliberate discharge of particularly dangerous waste in the areas of the North-East Atlantic and the North Sea and their dependent seas and the London Convention concerning all the seas of the world. A third agreement affecting the Community, which covers the Western Mediterranean, is now in the course of preparation.

The application of these agreements will necessitate the implementation within the Community of legislation and rules which will have to be harmonized (1) so as to avoid creating distortions in trade and the distribution of investments. What will have to be aimed at in particular will be the application of a uniform system of licensing in the Community.

Finally, it will be necessary to harmonize the legislation and rules concerning the dumping of substances not included in the agreements and, if necessary, to put forward Community proposals amending the list of substances set out in the agreements.

(1) Such harmonization would be facilitated by the participation of the Commission in the work of the Commissions set up by these agreements with a view to ensuring their implementation.

2.3. Pollution resulting from exploitation of the sea bed

The prospects for the exploitation of the sea bed indicate a considerable development of activity; this development has already begun with the extraction of hydrocarbons, but is harder to predict: in the case of other mineral and fossil materials. For example, continental shelves and islands contain more than half the world's resources of hydrocarbons. Current technological developments entail such a demand for mineral resources (in particular titanium and manganese) that their extraction from the sea bed will soon be economic.

In view of the rapid growth of these activities it is doubtful whether the provisions now applying, particularly those relating to the exploitation of the sea bed, guarantee sufficient protection of the marine environment against the pollution likely to result from the various operations this exploitation involves. Additionally the International Conference on the Law of the Sea will study and attempt to make rules laying down the rights and above all the obligations of coastal States as regards waters and the sea bed outside their territorial waters.

The Commission has begun a comparative study of these provisions so as to examine the advisability of harmonizing and improving them and, if need be, of working out jointly preventive rules which could be proposed to the relevant international bodies.

3. *Measures for reducing land-based marine pollution*

This form of pollution results from direct discharges into the sea, from discharge via pipelines and from waste and pollutants carried by rivers.

As already pointed out above, the measures to be undertaken in this field are to a large extent related to those aimed at preventing the pollution of fresh water.

Therefore, the following action needs to be taken:

— assessment of the risks for the marine environment represented by the presence in various degrees of concentration of certain particularly dangerous pollutants (heavy metals and organic halogen compounds), selecting *inter alia* as targets certain species of

fish and plants selected as indicators, and standardization or harmonization of the methods for measuring these pollutants,

— establishment of common methods for defining quality objectives for seawater,

— definition of these objectives (1),

— study of the regulations (standards) or economic (tax) measures whereby the observance of these quality objectives may be ensured,

— setting of standards (2),

— establishment of a model for calculating the quantity of pollutants carried to the sea by rivers and by direct discharge from the coast.

The action indicated above will be supplemented by the following work which the Commission intends to undertake:

(a) compiling an inventory of and making a comparative critical study of provisions envisaged or laid down by laws, regulations, regulatory and administrative provisions concerning the control and restriction of the direct discharges of industrial and domestic effluent into the sea, with a view to harmonizing these provisions and if necessary preparing Community measures;

(b) study of the special problems posed by the handling of toxic substances on coastlines and the measures which can be taken in the event of accidents. This study will take into account the results of work carried out in other international organizations.

C. **Procedure**

The Commission will set up under its own authority a working party on the problems involved in the abatement of marine pollution.

This working party will be made up of representatives from the competent national authorities. Under the chairmanship of a representative of the Commission, it will assist the Commission in executing its programme and in preparing proposals.

(1) See definition No 2 in Annex I.

(2) Community action in this field will be carried out along the lines of Chapter 2 of this Title.

D. **Timetable**

Action will have to be taken as soon as possible to enable the Commission to present to the Council any proposals arising from it by 31 December 1974 at the latest.

Section 2

PROTECTION OF THE WATERS OF THE RHINE BASIN AGAINST POLLUTION

The growing pollution of the waters of the Rhine and its tributaries is giving increasing cause for concern to people who use them or live in the area. This concern has been expressed with particular emphasis in the European Parliament. In November 1970 the Parliament published a report by Mr Boersma containing information on the state of pollution in the Rhine and the measures taken and projects worked out by the riparian States of the Rhine and by international organizations.

On 16 December 1971 the Parliament unanimously adopted a resolution on the matter, which was forwarded to the Council and the Commission. In this resolution, the Parliament requested the Commission 'to take all the necessary measures to develop and coordinate the work of the riparian States for the protection of the Rhine'.

In a document attached to its second communication on the environment, dated 22 March 1972, the Commission presented a draft Council recommendation to the Member States signatories to the Berne Convention requesting the formulation of an emergency programme for cleansing the waters of the Rhine. In the same document, the Commission recommended the establishment of a European Agency for the Rhine Basin which would have the task of putting such a programme into operation, and drew the attention of the Member States to the advantages which could be derived from conferring on this Agency the status of a Joint Undertaking.

The Council notes that the decisions taken by the Ministerial Conference in The Hague included one to draw up a long-term programme and to review existing structures and working methods, as the Commission proposed in its draft recommendation transmitted in March 1972.

The Commission has also carried out a preliminary study of anti-pollution measures in the Rhine Basin to widen its knowledge of this problem and to arrive

at a better assessment of the measures which could be taken to improve the present state of ecological degradation in the Rhine. This study shows that there is a continuing marked increase in pollution and that the efforts made to control this pollution have proved inadequate.

The organic matter content accumulated considerably from 1959 to 1970 in the greater part of the river and, generally speaking, this pollution shows a substantial increase when the further downstream measurements are taken.

The oxygen content of the water, to a large extent dependent on the discharge of organic matter, is tending to decrease in certain parts of the river. It is at its lowest during the periods of low water and has serious effects on the aquatic life and on the natural purification capacity of the water.

The nitrate and phosphate contents have increased markedly since 1959; by their synergic action, these two substances encourage the growth of aquatic vegetation, with particularly harmful effects.

Study of the chloride content reveals increases in discharge, which lie at the root of serious problems as regards utilisation of the water, particularly for drinking water and water for agricultural purposes.

The sulphate content has also increased substantially over the years.

Content of metals like lead, copper, nickel and zinc does not give cause for alarm. However, the possibility of this accumulating in living organisms and sediments calls for particular attention in view of the long-term consequences of these phenomena.

Finally, the phenolic compounds contents is also on the increase and attention must be drawn to the presence in the Rhine waters of various toxic substances and hydrocarbons.

From this study it emerges that there is a need for action on a large scale to improve the quality of the waters of the Rhine and that special measures should be taken in the near future to control and limit the discharge of the most harmful or toxic pollutants.

Aware of this situation, the signatory States of the Berne Convention, which set up an International Commission for the Protection of the Rhine against Pollution, took part in a ministerial conference held at The Hague on 25 and 26 October 1972 on the initiative of the Dutch Government. The Commission was represented at this conference as an observer.

This Conference took a number of major decisions on pollution by salt, chemicals and heat, and on organization and working methods:

— Salt pollution: a dump is to be set up in Alsace to take 60 kg/s of chlorine ions. The site for this is to be selected by the French Government. The total cost of the dump should be shared between the Member States of the International Commission. Monitoring of the discharges of chlorine ions will be carried out on all effluent above a certain quantity, to be defined by the International Commission. The Commission will decide on the methods for carrying out this monitoring,

— Chemical pollution: the International Commission will have the task of drawing up lists of materials in respect of which discharge must be prohibited, limited or made subject to certain conditions, of carrying out a survey to ascertain their source, and of working out a programme of action in stages which will be submitted to the governments for approval after one year.

— Thermal pollution: all future power plants will be equipped with a closed-circuit cooling system or other systems of a similar nature. Power plants which are under construction (Fessenheim I and II, Philipsburg I and Biblis I) should not cause, in July and August, an increase in the Rhine temperature of more than 2° C above the natural temperature.

— Organization and working methods: ministerial conferences ought to be held whenever necessary and at least once a year. So as to ensure greater effectiveness in the measures to be taken against the pollution of the Rhine, the International Commission will have to present proposals aimed in particular at improving organization, prepare a long-term programme of work and examine the French proposals concerning the planned establishment of a federation of river basin agencies.

In addition, it is appropriate here to recall the work which has been carried out for several years by the Council of Europe with the objective of setting up a

'European Convention on the protection of fresh water against pollution'. This Convention provides in particular for the fixing of minimum standards for maintaining the quality of water and also for the setting up of international committees with specific powers as regards the protection of international water-courses and their estuaries.

The Council and the Commission intend to keep a close watch on the development of pollution in the Rhine. For this purpose the Commission will take part as an observer in the plenary sessions of the International Commission for the Protection of the Waters of the Rhine against Pollution.

The Commission referring again to the suggestions it made in its Second Memorandum to the Council, has reserved the right to make appropriate proposals in this important sector before 31 March 1974, taking account of studies already carried out and in the light of the results of those in progress within the International Commission for the Protection of the Rhine against Pollution.

Section 3

ACTION FOR THE PROTECTION OF THE ENVIRONMENT IN FRONTIER ZONES

The problems posed by pollution in frontier areas are in some respects similar to the pollution of the seas and sea shores.

In this case too the problem is one of preserving common resources which form part of a single geographical and economic area, but which are subject to regulations which are different and sometimes contradictory.

The joint determination of methods for defining quality objectives in these frontier areas will have to be supplemented by consultation between the Member States concerned in order to define and undertake common projects for the protection of the environment. This step is particularly necessary if the industries in these areas, where the natural and geographical conditions are generally speaking identical, are not to be subject to measures of constraint of varying degrees of severity and are not to be faced with different conditions of competition. These measures are also necessary to ensure the protection of Member States' frontier areas where pollution is low but which border on highly polluted areas of another State.

The Environment Ministers of the Member States of the Community who met in Bonn on 30 October 1972 listed among the measures to be taken under the European environment policy, that of consultation on environmental aspects in frontier areas.

Consultations on important measures to be taken in these fields should be added. These measures should be the subject of formal consultations among the Member States if one of them considers it necessary. The Commission intends to present appropriate proposals to the Council whenever it considers this necessary.

Chapter 7

ACTION CONCERNING WASTES AND RESIDUES

Section 1

INDUSTRIAL AND CONSUMER WASTES

A. **Reasons and aims**

The elimination of industrial and consumer wastes is proving increasingly difficult and costly and is posing complex problems for all the municipal authorities concerned.

A large number of these problems are purely local in nature and it is at this level that solutions must be found.

The most important problems for the Community is the elimination of wastes which, because of their toxicity, their non-degradability, their bulk, or for other reasons, require a solution extending beyond the regional framework and possibly even beyond national frontiers. Even if the harmful effects of the wastes do not extend beyond the immediate region, Community action may well become necessary if the elimination or re-use of the wastes are dependent on economic resources. If the solutions adopted give rise to differences in the production and distribution conditions of certain goods, these differences may have repercussions on the functioning of the common market and on international trade.

In view of the specific nature of these problems it is essential to pool ideas and experience in order to draw up a technical and economic balance sheet of the various means of action considered and their

effect on the proper functioning of the common market, and also to determine, on this basis, the action to be taken at Community or other levels.

B. Content

Work shall be carried out in several stages:

(a) drawing up of a qualitative and quantitative inventory of wastes or residues which are particularly harmful to the environment because of their toxicity, their non-degradability or their bulk, and the elimination of which might affect the production and distribution costs of products.

(b) study of the technical, economic and legal aspects of the problems posed by the collection, transport, storage, recycling or final treatment of the following wastes or residues, listed in order of priority (1). (Priority will be given to the study of the technical processes for eliminating or recycling these wastes)

— the substances listed in Annex I of the Oslo Convention (organic halogen compounds; organic silicon compounds; mercury, cadmium and their compounds; plastics and other persistent synthetic substances),

— waste oil and residues containing petroleum and tar, in particular residues containing lubricants,

— waste from the manufacture of titanium dioxide,

— bulky ferrous scrap in the general context of the scrap market (cars, discarded household electrical appliances, etc.),

— non-biodegradable packagings for consumer products,

— where appropriate, animal waste from slaughter-houses and breeding establishments.

(c) examination of the action to be taken at Community level with regard to the above wastes, e.g. (where appropriate):

— harmonization of regulations,

— exchange of technical information,

— promotion of the development of new technologies, especially by the awarding of development grants (2) and the setting up of pilot plants where several states or the whole Community are concerned,

— research work,

— the possible creation of a system for pooling information on wastes, with the task of supplying information on elimination or recycling techniques, firms specializing in the transportation, storage or treatment of wastes, available storage space, etc.,

— encouragement of the setting up of European treatment plants; where appropriate, the latter could be given Joint Undertakings status.

C. Procedure and timetable

The Commission, with the assistance of experts and consultants, will carry out the work referred to under (a) and (b) before 31 July 1974 and will submit to the Council the conclusions from this work, together with the proposals arising out of it, by 31 December 1974 at the latest. Priority will be given to the substances appearing in Annex I to the Oslo Convention.

Section 2

PARTICULAR CASE OF THE HANDLING AND STORAGE OF RADIOACTIVE WASTES

A. Reasons and aims

The development of nuclear energy to satisfy an increasing part of the electricity demand in the Community also has a negative aspect: the production of industrial radioactive waste in quantities that are proportional to the size of the electronuclear programme; several hundred billion curies of radioactive waste produced in the Community will have to be taken care of by the end of this century.

(1) This list of wastes and the order of priority may be amended or supplemented in the light of the results of the inventory mentioned in (a).

(2) The implementation of this type of action would involve taking a decision of principle at Community level regarding the grant of development aids. At the same time appropriate procedures should also be decided upon to allow participation, in individual cases, by experts appointed by the Member States.

The handling and storage of these wastes — in particular the wastes of high specific activity and long life produced in irradiated fuel reprocessing — present and will continue to present difficult problems for the countries of the Community with high population density. It is therefore essential to have effective solutions to these problems capable of guaranteeing the safety and protection of populations and the environment against the potential risks associated with the treatment, transport and the storage for centuries or for millennia of these radioactive substances.

A number of partial solutions are already under study in certain Member States; the efforts undertaken, however, vary somewhat in intensity. Nevertheless, numerous problems are becoming evident at the level of major regional units such as the Community or even at world level, as regards the industrial, economic and social aspects. These problems require solutions that will influence the development of nuclear energy through their economic impact and ensure equal protection of man and his environment independently of the technological solutions adopted according to the particular characteristics of the national territories.

In view of the specific nature of these problems it is essential to pool ideas and experience in order to draw up a technical and economic plan of action which can be envisaged initially on a short-term and then on a long-term basis, and of its effect on the harmonious development of nuclear energy, and also to determine, from this, the action to be taken at Community level.

Any project should take account of the activities of specialized organizations in this field, particularly the IAEA and the NEA, and avoid duplication of efforts.

B. Content

1. The drawing up of an inventory of existing amounts of the various kinds of radioactive wastes — estimated from nuclear energy programmes — and of the possibilities for storing these wastes.

2. The comparison of existing processes and processes under development for solidifying highly radioactive waste, in order to evaluate the properties of these substances which are determinant of the type of storage. On the basis of this evaluation, the selection of the measures to be carried out and the complementary research and development to be undertaken.

3. The comparison of the efforts made by Member States in respect of the study, the setting up and running of a number of experimental storage sites using different processes, and the examination of:

   (a) the methods and arrangements for intermediate storage and ultimate disposal of the solidified products which are feasible in Europe,

   (b) the problems of transporting solidified highly radioactive waste.

4. The definition of responsibility for stored materials both for temporary storage on production sites as well as for intermediate storage and ultimate disposal.

5. The selection of principles to govern the handling and storage of radioactive waste.

C. Procedure

The above operations will be carried out by the Commission with the assistance of national experts.

The Commission will submit proposals to the Council based on the results achieved.

D. Timetable

The work referred to in Items 1, 2 and 3 of B will be carried out before 31 December 1974. The work referred to in Items 4 and 5 of B will be implemented once the programme has been approved.

Chapter 8

ACTION TO ENSURE COMPLIANCE WITH THE LIMITS ESTABLISHED FOR THE PROTECTION OF THE ENVIRONMENT

The effectiveness of joint action on the environment, in particular the setting of common standards, would be weakened if the application of the Community measures in all the Member States were not adequately ensured. In addition, appreciable differences in the checks carried out and the measures taken by each Member State to ensure compliance with the limits established for the protection of the environment could give rise to distortions of competition which would be incompatible with the

functioning of the common market. Consequently, compliance with both Community and national regulations should be effectively guaranteed and supervized and any violations penalised with appropriate severity.

To this end, the Commission will continue its work on the comparison of national laws and their application in practice so as to create the prerequisites for such approximations of laws as may prove necessary, in accordance with the time-limits for implementing Community measures.

The Commission is aware that these measures for the approximation of laws will require a great deal of time and effort in view of the differences between the constitutional, legislative and legal systems of the various countries. It therefore considers, without prejudice to the procedures laid down in the Treaties establishing the Communities, that as and when national and Community provisions are drawn up, the following measures should be progressively implemented:

1. (a) Products: organization at Community level of exchanges of information on the checks made and the measures taken by each Member State to ensure compliance with the rules concerning the specifications for and use of polluting or other products which are liable to harm the environment.

   (b) Plant: organization at Community level of exchanges of information on the checks made and the measures taken by each Member State to ensure compliance with the rules concerning plant, with particular regard to plant situated in areas for which identical or similar quality objectives have been adopted.

   (c) Substances the release or dumping of which will be prohibited or restricted: harmonization of inspection methods, and especially of certification procedures, insofar as necessary for the proper functioning of the common market and the implementation of this programme.

2. Publication by the Commission, in the annual report on the state of the environment in the Community, of details supplied by each Member State on the measures taken to ensure compliance with the pollution and nuisance control regulations, existing case law, and information on the improvements made and the practical experiments carried out in this connection within the Community.

Chapter 9

ACTION TO BE TAKEN ON THE ECONOMIC ASPECTS OF ANTI-POLLUTION MEASURES

A. Reasons

The protection of the environment against pollution and its improvement by the taking into consideration of the quality of life in the decision-making machinery and production structures inevitably involves various kinds of expenditure (compliance with the measures of authorities, research and development costs, etc.).

It is essential that the authorities make accurate assessments of the size of this expenditure in order to have a clear idea of what the economic, financial and social repercussions of proposed decisions are likely to be, and to adapt accordingly the procedures for implementing these decisions.

Furthermore, this expenditure should be apportioned in such a way that it does not jeopardize free trade and competition.

Lastly, careful analysis should be made of the economic instruments which can be used in the context of an environment policy, their various functions, the advantages and drawbacks of using them, their relative effectiveness with regard to the objectives in view and their compatibility with the rules of cost allocation.

The necessity of concerted planning and action in this field seems obvious for reasons connected with both the smooth operation of the common market and the effectiveness of its policy.

If the Member States were to differ in their estimates as to the cost of anti-pollution measures, particularly if these estimates were not based on comparable legislative measures and a uniform definition of costs, the possible repercussions of this on policies at the national level would severely hamper the implementation of a common policy.

It is therefore necessary to work out common methods of costing. This should be made easier by the fact that the work already undertaken by most of the Member States has progressed at more or less the same rate.

In addition, the differences between the principles of rules of cost allocation and in the interpretation each Member State gives to their application would have obvious repercussions on prices and hence on trade, conditions of competition and the location of investment.

The Member States and the Commission have advocated the adoption of the 'polluter pays' principle. This should be taken as the guiding principle for applying economic instruments to carry out the environmental programme without hampering the progressive elimination of regional imbalances in the Community.

It will therefore be necessary to jointly define the nature, scope and means of implementing this principle including exceptions thereto, without prejudice to Article 92 *et seq.* of the Treaty establishing the European Economic Community.

B. Aim and content

1. The adoption of common rules for allocating the costs of anti-pollution measures (1). At the same time the adoption of common rules on the application of the exceptions. The establishment of the principles of common regulations on the methods for applying exceptions to the 'polluter pays' principle. Finding a common definition of the effectiveness of economic instruments which can be employed in the fight against pollution and, where necessary, harmonization of the methods for applying them.

2. The study of methods for evaluating the costs of anti-pollution measures with a view to harmonizing them. The first stage will be an attempt to define methods for evaluating the costs of combating water, air and industrial pollution. This work will be carried out in collaboration with the OECD.

3. The study of possible methods of estimating the cost to society of damage to the environment with a particular view towards including these costs in national accounting figures and in the determination of the Gross National Product.

(1) Without prejudice to the measures recommended by the Commission in its Memorandum of 24 March 1971 on the system of charging for the use of transport infrastructures.

4. The development of a common method for the classification and description of anti-pollution measures taking due account of existing methodological work, e.g., Frascati Manual.

C. Procedure

The Commission, basing its work on the opinion of a group of economics experts specializing in the field of the environment, and taking account of the work undertaken within the OECD, will transmit proposals to the Council on certain of the points referred to in B.

D. Timetable

The work described in B will be carried out according to the following timetable:

1. Without prejudice to the application of Articles 92 *et seq.* of the Treaty establishing the European Economic Community, a proposal concerning the allocation of costs involved in controlling pollution and the principles of common interpretation of the methods for applying the exceptions to the 'polluter pays' principle will be forwarded by the Commission to the Council before 31 December 1973.

2. A study of the effectiveness of the economic instruments which can be applied in the fight against pollution will be carried out before 1 July 1974.

3. The first results of the study on the evaluation of the costs of anti-pollution measures will be available during the second half of 1974.

4. The work mentioned in B 3. and B 4. above will begin in 1973.

Chapter 10

RESEARCH PROJECTS CONCERNING PROTECTION OF THE ENVIRONMENT

A. Reasons and Content

The implementation of the Community's programme of action, whether it be a matter of pollution control, of safeguarding the natural environment and natural resources or of improving the quality of life, will call

for a broad range of scientific and technical knowledge on the natural environment, ecology, toxicology, chemistry, technology, etc.

Available knowledge will in many cases prove inadequate and an effort need to be made to extend and supplement it by means of research and development (1) (2). Some of these projects could be carried out at Community level so as to ensure effective cooperation between the various laboratories and institutes concerned in the Member States and the Joint Research Centre. It will thereby be easier to direct and coordinate the requisite research work in keeping with the requirements of the programme of action, and the results obtained will be directly applicable to it. This cooperation is all the more desirable as in certain cases it will only be possible to solve problems by calling upon the services of a whole series of highly specialized laboratories which cannot as a general rule be found in a single Member State.

Certain subjects for research are mentioned above in the sections concerning the various objectives of the present programme.

One can quote by way of example the research work which is intended to fill in the gaps in our knowledge of pollutants and their effects or to improve the methods of measuring pollution, these being of great importance both for the objective assessment of hazards (Chapter 1 of this Title), the fixing of standards (Chapter 2 of this Title) and the determination of quality objectives (Chapter 3, Section 2 of this Title), and for specific action on certain products (Chapter 4 of this Title), on certain industrial sectors and on energy production (Chapter 5 of this Title) and on maritime pollution (Chapter 6, Section 1 of this Title).

B. **Procedure**

Research work on the environment could be carried out through the coordination of relevant national activities or by way of Community projects undertaken within the Multiannual Research Programme.

The award of industrial development contracts to promote the development of instruments for measuring pollution or of techniques for reducing pollution might also be considered (3).

To support these projects, it will be useful to establish and to keep up to date an inventory of environment research activities throughout the Community.

C. **Timetable**

1. An initial set of Community research projects was adopted by the Council on 5 February, 14 May (4) and 18 June 1973 (5) under the Community's Multiannual Research and Training Programme. It is divided into direct action (carried out at the Joint Research Centre) and indirect action, and covers the following subject:

   — analysis and measurement of pollutants,

   — pathways and effects of pollutants,

   — models and analysis of systems,

   — toxic effects of lead,

   — effects of micropollutants on man,

   — ecological effects of water pollutants,

   — remote sensing of atmospheric pollution,

   — setting up of a data bank on pollutants,

   — epidemiological survey.

   The direct action programme was adopted for the period from 1 January 1973 to 31 December 1976 and was allocated 15·85 million units of account while the indirect action programme was adopted for the period from 1 January 1973 to 31

(1) The implementation of this type of action would involve taking a decision of principle at Community level regarding the grant of development aids. At the same time appropriate procedures should also be decided upon to allow participation, in individual cases, by experts appointed by the Member States.

(2) This ought not, however, to have any delaying effect on the application of emergency measures in cases where there is a real or potential danger to man or his environment, since these measures can be reviewed and modified subsequently in the light of the results of research carried out.

(3) The implementation of this type of action would involve taking a decision of principle at Community level regarding the grant of development aids. At the same time appropriate procedures should also be decided upon to allow participation, in individual cases, by experts appointed by the Member States.

(4) OJ No L 153, 9. 6. 1973, p. 11.

(5) OJ No L 189, 4. 1. 1973, p. 43.

December 1975 with an allocation of 6·3 million units of account. A first review of this programme is planned for the beginning of 1974 to take account of the requirements of the environmental programme which will have been adopted in the meantime.

A 'Consultative Committee on Environment Research' will assist the Commission in carrying out the programme. The members of this Committee will be appointed by national authorities. The Council Working Party on the Environment will be informed periodically of the progress made in the programme and of the opinion of the Committee.

Annex II shows all these projects in relation to the various items of the action programme.

It should be noted that the Community is also taking part in the three joint COST projects on safeguarding the environment:

No 61 a) physico-chemical behaviour of sulphur dioxide in the atmosphere (1972-1976)

No 64 b) analysis of organic micropollutants (1972-1974)

No 68 sewage sludge (1973-1974).

The Commission is providing the secretariat for these projects and the Joint Research Centre is taking part in research for Projects Nos 61 a and 64 b.

2. Research requirements not covered by the above programme which may become apparent when the environment programme begins will be examined by the Commission with the assistance of the Consultative Committee referred to above and other national experts, in order to decide on the advisability of launching new projects and, where appropriate, to submit proposals to the Council. Community projects could be included in the Multiannual Research Programme during the periodic reviews.

Without prejudging how the work will progress, it would seem that research requirements during the next two years will relate to the following subjects in this programme:

Title I:

Chapters 1, 2 and 3

— noise pollution,

— epidemiological survey No 2,

— dispersion of atmospheric pollutants.

Chapter 4

— quantitative analysis of pollutant levels in certain products.

Chapter 5, Section 1

— waste from intensive stock-rearing,

— treatment and use of liquid waste.

Chapter 5, Section 2

— thermal pollution.

Chapter 6, Section 1

— land-based marine pollution.

Title II.

Chapter 1

— safeguarding the natural environment: ecological research.

Chapter 2

— depletion of natural resources.

Chapter 11

DISSEMINATION OF KNOWLEDGE RELATING TO ENVIRONMENT PROTECTION

A. Reasons and aim

1. *Introduction*

Environmental quality (EQ) is very closely related to most scientific, industrial, economic and social activities of all countries; it is also involved in their international relations.

This multidisciplinary character of EQ produces, in all concerned, information needs corresponding at the same time to the preoccupations of the specialists of one particular field and to the demands of those who, at either the political or the economic level, have to make numerous and important decisions: to mention only a few instances, the legislator may need accurate scientific and technical data; the industrialist, hydrological and geological data; the authorities responsible for public health, meteorological information; whereas those concerned with agriculture may wish to explore the field of toxicology.

In the last few years, the number of publications on EQ and pollution control has grown in such a way that one is now witnessing a true literature explosion which does not show any sign of abatement; new journals and periodical reviews on EQ are being born and are intended for the information of the experts in certain specific fields (air, water, noise etc); a few abstracting services and some recently created mechanised documentation systems are attempting to channel the 100 000 or so new documents on EQ published every year which include some 20 000 patents. It is worth noting that, every year, the world fund of scientific and technical knowledge grows to the tune of nearly four million documents; it is therefore not surprising that, in spite of all the efforts, most of the information on EQ is still scattered in publications concerning fields such as chemistry, biology, energy, instruments, meteorology, hydrology, medicine, sociology, economics, etc. In addition, there is a very great amount of operational and monitoring data. It is thus easy to understand the difficulties daily encountered by non-specialists in taking rational decisions backed by accurate and complete information.

The information needs which have been expressed cover a vast field; it is therefore preferable at this stage to limit any action to the following needs which have been given priority.

2. *Technical and technological aspects and their economic and sociological implications*

2.1. The reduction of pollution and nuisances

There will be an inventory of existing technologies and a study of the various steps which should be taken to develop better and cheaper processes and equipment to control pollution as well as to find less polluting products and processes.

It wil be necessary to make available, to those who will have to take the decisions on the creation and siting of new industrial plants, the most complete and recent information which will enable them to cut the risks of pollution to a minimum as cheaply as possible, or to keep unavoidable pollution below accepted standards by appropriate technical means.

Of particular importance are:

— purifying plants and processes and the recycling of pollutants,

— storage and destruction of waste products,

— re-use of industrial waste, etc.

The processes, methods and devices used are often quite new developments; many of them are therefore protected by patents which must be detected and listed so as to prevent them from hampering the fight against pollution.

2.2. Methods and instruments for the measurement of pollution and nuisances

Pollution emissions and effluents will have to be permanently monitored in order to make sure that the standards which will be agreed upon are complied with. Methods of analysis involve a number of disciplines and technologies, e.g.:

— analytical chemistry,

— instrumentation,

— the use of labelled compounds, etc.

The most urgent problem is to pick out from the specialist literature the relevant information, particularly that enabling the cost and advantages of such monitoring to be assessed.

The work described above will be concerned as a matter of priority with the techniques and technologies involved in the industrial sectors referred to in Chapter 5 of this Title and to the recycling and treatment of waste mentioned in Chapter 7 of this Title.

3. *Health, ecological and socio-economic aspects*

The evaluation of the risks to health and the ecology risks and material damage due to pollution is based on the knowledge of the effects of the polluting agents aud nuisances on the health of man and his environment.

This knowledge is essential for the definition of criteria, the establishment of standards and the determination of Environmental Quality objectives.

It comes mostly from toxicological research, clinical observations, experiments on animals, epidemiological surveys and ecological and socio-economic studies.

Access to this information, which is often distributed at random in references not specific to Environmental Quality, should be undertaken and organized as systematically and completely as possible. Owing to the very large numbers involved, modern automated information techniques are required for sorting and exploiting the available data.

Another aspect of the approach to reducing pollution and nusiances is information on existing standards and regulations and also the analysis of the health, ecological and socio-economic implications of their application in differing types of environment. For the identification and comparison of these data, owing to their wide distribution and their variety, a special effort also has to be made to exploit them systematically using modern documentation techniques.

The identification, processing and dissemination of this data will have priority in respect of the pollutants mentioned in Chapters 1 and 2 and Chapter 3 Section 2 of this Title.

B. Content

1. Owing to the very wide dispersal of information on Environment Quality it is necessary, in order to make it accessible to the users, that relevant information sources, including those services which provide information in the form of abstracts (services using computers, abstracting journals) should be detected and listed.

   The Commission has already undertaken this inventory and will make it available, when it is completed, to the 'International Referral Service on EQ Information Sources', the creation of which is contemplated by the United Nations.

   It is obvious that, to keep its value, the inventory will have to be kept permanently up to date.

2. It is well known that a large number of important documents on Environmental Quality are covered by the main abstracting services of world renown, even when these services specialise in well-determined fields and disciplines (Chemical abstracts, Biological Abstracts, Nuclear Science Abstracts, the European Nuclear Documentation System — ENDS — of the Commission, etc.); obviously, each service covers only the information which refer to its own speciality.

   As most of these important services offer their customers magnetic tapes which contain mostly bibliographical data and indexing terms representing the essence of the scientific contents of the documents, these tapes generally enable their users to obtain with the help of a computer answers to their queries either through the titles of the relevant documents or through the references which lead to these documents.

   The Commission will acquire the relevant magnetic tapes produced by the services which cover best the problems related to Environmental Quality; it could do experiments with merging these subset into an experimental file and make this available to experts of the Member States.

3. The experimental use of the magnetic tapes will show the gaps in and the defects of these sources of information; this will enable a comparison to be made with a view to reassessing whether the users' needs are best met by improving access to the different sectoral services or by merging bibliographic records into a single data base.

   (a) One defect is clear already:

   the references supplied by the mechanized documentation services and the abstracting journals are seldom very recent; it takes these services an average of three to six months to acquire the original literature (journals, reports, proceedings of conferences, patents, theses), scan it, prepare informative abstracts, index it and lastly record on magnetic tape the bibliographical data and the indexing terms; this is particularly inconvenient in the case of conference proceedings, which are usually published about a year after the meetings. It is, however, during these conferences that experts give an account of their work and their papers constitute practically a synthesis of the state of the art in their fields; it would therefore be of particular interest to make a special effort to collect the papers read when the conferences are being held and to add them promptly to the data base.

   (b) Experience has shown, in other fields, that the services of the large documentation firms or organizations do not always give adequate coverage to world-wide information, either intentionally, because their customers are in

favour of this geographical discrimination, or because such information presents difficulties for reasons of availability, understanding or language

The Commission, after consulting a group of experts representing user interests will prepare a critical inventory of effectively available information services. Assisted by the Scientific and Technical Information and Documentation Committee (STIDC), it will carry out a study of the coordinating actions and of the information systems the creation of which could satisfy the Community's needs. The information systems to be created would, if the need arises, be integrated into the European documentation network mentioned in the Council's resolution of 24 June 1971 [1] and where appropriate, into information systems at world level. They could probably be organized on a decentralized basis, and should seek to avoid undesirable competition between public and private information services.

C. Procedure

The Commission will put forward proposals before the end of 1974 after consulting two expert groups. The first will be a group of experts representing customer interests who will be asked to identify more closely the management information requirements necessary to sustain the Communities' Environment Programme. The Scientific and Technical Information and Documentation Committee (STIDC) would be asked to take on the tasks of the second group and identify the possibilities for improving the provision and networking of scientific and technical information relevant to environmental quality and in response to the real needs of users.

The following could be allocated to the most appropriate of the two groups, with necessary support and feasibility studies being carried out by the Commission:

— a study of the non-documentary management information requirements needed to handle and evaluate monitoring and other operational data in direct support of the Environment Programme,

— a study of the environmental planning and management information systems presently being established in Member States and the relevance of these activities to the Environment Programme,

— a feasibility study on starting a modest European information (including patents) analysis centre on pollution control technology,

— the updating of the inventory of documentation sources already started by the Commission and its integration into a European contribution to appropriate UN and other international systems,

— the creation of a constantly kept up-to-date pilot file on conference papers relevant to environmental protection,

— a reassessment of whether the needs of environmentalists are best met by improving access to the different disciplinary or sectoral information services or by merging relevant bibliographic records into a single data base,

— the identification of gaps in the networks which provide the scientific and technical information used in environmental protection.

— the study of the ways and means of achieving a coordinated European environmental information policy so as to harmonize common practices, to avoid duplication of effort and to make the maximum use of modern information-handling skills and user-markets already developed in Member States,

— the placing of all these activities in the wider international setting,

— the production of interim reports as soon as possible with a view to arriving at a realistic draft working timetable by the end of 1973 agreed between the two groups and the relevant services of the Commission.

[1] OJ No C 122, 10. 12. 1971, p. 7.

TITLE II

ACTION TO IMPROVE THE ENVIRONMENT

Chapter 1

PROTECTION OF THE NATURAL ENVIRONMENT

A. General guidelines

As already indicated, the protection of open spaces calls for examination of certain aspects of the policies which affect the use of rural areas, particularly the agricultural policy.

As part of their activities, farmers already play a valuable role in tending the soil and the land. It is in the interests of the general public that they be encouraged in this role. Consideration should be given to the idea of starting in certain agricultural areas new tourism-linked activities which could provide certain farmers with an additional income and former farmers with new employment. These measures can also help to prevent the depopulation of some of these regions.

Agricultural activity affects the natural environment in certain ways. Such phenomena are accentuated particularly by the intensive use of certain types of fertilizer and the misuse of pesticides. In the interests of protecting the natural environment, the dangerous effects of such practices should be lessened.

B. Projects

The Commission expresses its intention of increasing its campaign in the future for the protection of the natural environment and particularly within the framework of the agricultural policy, intends to take the following immediate measures or to undertake the following studies immediately.

The list of these measures is not exhaustive; it is limited to measures which can be implemented shortly and which will serve as examples.

Implementation of these measures will bring to light other actions necessary to protect the natural environment.

(a) *Proposal for a Directive on arming in certain less-favoured areas*

The Commission has forwarded to the Council a proposal for a Directive on this subject which has since the subject of a Resolution [1], in which it was foreseen that 'with a view to maintaining farming and hence a minimum population level for the preservation of the countryside in less-favoured areas, Member States will be authorized, in accordance with Community rules to be laid down in due course, to establish a special aid system designed to encourage farming and to improve farmers' incomes in such areas.

The Council shall implement this Resolution by means of a Directive which it shall adopt before 1 October 1973'.

(b) *Preparation of a Proposal for a Directive on the promotion of measures in the forestry sector aimed at structural improvement in agriculture*

(1) Aims

The aim of these measures is to promote the afforestation of areas hitherto used only for farming which are uneconomic, to make virtually unproductive areas of forest productive, and to set up protective plantations, chiefly for the purpose of protecting the soil from erosion. The essential task of promoting afforestation should form part of the general development programme for each region as regards the use of the soil and the maintenance of the landscape.

(2) Content

The system of aids at present under examination relate to work such as soil preparation; the supply and the planting or sowing of plants and seeds; upkeep, including after-culture; the erection of fences; and the introduction of firebreaks.

The work would also include the making and clearing of forest roads and paths for pedestrians, cyclists and horseback riders.

The aids represent a large sum, which would be more than two-thirds of the afforestation costs borne by the farmer. In addition it is proposed to examine the possibility of granting over a certain period an annual aid

[1] OJ No C 33, 23. 5. 1973, p. 1.

per hectare reafforested in order to increase the incentive to plant trees in areas released as a result of the cessation of farming in the context of the Council Directive of 17 April 1972, on the cessation of farming and the use of the area for the purposes of structural improvement (1).

(3) Timetable

The Commission will present this proposal to the Council before 31 December 1973.

(c) *Ecological effects of the use in agriculture of modern production techniques*

(1) Reasons

Obviously the development of farming has certain effects on the natural environment. These effects will be intensified by the increase in production resulting from the modernization of agricultural holdings. Following the decisions taken by the Council on the reform of agriculture, the Community has assumed a major role in guiding policies on the modernization of agricultural holdings (Council Directive of 17 April 1972 on the modernization of farms (2)).

Scientific knowledge in this field is not, however, sufficiently detailed and it is therefore necessary to carry out a study in order to ascertain how far such knowledge has now progressed.

(2) Content

The aim of this study is to make it easier to assess the effects on the natural environment of the use of production techniques such as:

— single-crop farming and certain practices connected with crop-growing which may impoverish the soil or change its properties,

— intensive use of certain fertilizers,

— excessive use of pesticides,

— intensive stock-rearing involving the danger of organic pollution and microbic contamination,

— the effects on the natural environment of land improvement schemes (draining of marshes, disturbance of the water system, destruction of hedges, etc.).

The conclusions drawn from this study should show the areas in which the Community could take measures and the areas in which further research is essential.

(3) Timetable

This study will be completed by the end of 1973.

(d) *Quality foodstuffs*

(1) Reasons

Community consumers are increasingly paying attention to the quality of foodstuffs. There is ample evidence to suggest that demand for quality products will expand even further in the future.

Farmers are also increasingly developnig so-called 'biological' products or products obtained by methods which are 'closer to natural processes'.

At present, consumers are not always sufficiently protected as regards the authenticity of so-called 'natural' products, which are sold under a very wide variety of names.

This problem should be studied in relation both to production techniques and to marketing methods (3).

(2) Content

Two studies have been undertaken in this sphere: one on the conditions and possibilities for developing integrated and biological anti-pollution methods in agriculture and the other on the possibilities for developing the marketing of typical quality agricultural produce and 'biological' products.

These studies should enable the Commission to take measures, where appropriate, to

(1) OJ No L 96, 23. 4. 1972, p. 9.
(2) OJ No L 96, 23. 4. 1972, p. 1.

(3) The Commission is continuing its work of harmonizing the legislation on agricultural produce and foodstuffs and on veterinary and zootechnical questions; the Council has received a large number of proposals for Directives and Regulations and others will be forwarded in the next few months.

encourage farmers who make a special effort to improve the quality of their produce and also to increase consumer safeguards.

(3) Timetable

This study will be completed by the end of 1973.

(e) *Problems relating to effluents from intensive stock-rearing*

(1) Aim

There is growing concern about the various nuisances in this field, and particularly the air and water pollution resulting from the increasingly industrialized nature of pig and poultry production.

(2) Content and timetable

This project is described in Title I, Chapter 7 (Action concerning wastes and residue).

(f) *Protection of birds and certain other animal species*

(1) Aim

Hundreds of millions of migratory birds and songbirds are captured and killed in Europe every year provoking worldwide protests against the countries which allow the trapping of birds.

This massive destruction provokes a serious threat to the ecological balance in Europe, because it causes plant parasites to proliferate. As a result, the campaign against such parasites requires use on a bigger scale of insecticides which are sometimes harmful to man and to the natural environment.

Policy for the protection of the environment should therefore include measures to prevent the large-scale destruction of birds, particularly songbirds and migratory birds, and more generally to protect the existence of certain animal species threatened with extinction.

(2) Content

Promotion of joint action by the Member States in the Council of Europe and other international organizations.

Study with a view to possible harmonization of national regulations on the protection of animal species and migratory birds in particular.

(3) Timetable

This action should be carried out as quickly as possible, and by 31 December 1974 at the latest (1). Where appropriate, the Commission will make proposals before this date.

Chapter 2

ENVIRONMENT PROBLEMS CAUSED BY THE DEPLETION OF CERTAIN NATURAL RESOURCES

A. Reasons for action and guidelines

The problems posed by the pollution of the environment and also the solutions thereto are closely bound up with the fact that for certain non-regenerating natural resources such as certain metals, oil and natural gases, there could at some time in the future be world-wide shortages (2) even if account is taken of various factors such as price rises due to the scarcity of a commodity, the probability of new discoveries, technological progress and the recycling of metals. Similar problems could occur with water which can be recycled, arising out of the sharp increase in demand and pollution levels.

The supply of certain non-regenerating resources thus merits closer analysis at both world and Community levels in the light of their importance to the environment. It seems essential to acquire basic data, in order to lay down guidelines for a common policy on anti-pollution measures and to decide upon the programme to be implemented with a view to conserving or discovering substitutes for shrinking resources. In this connection, we must examine to what extent a high annual rate of world consumption of non-regenerating resources involves a deterioration in the quality of the environment and also to what extent recycling contributes towards improving the quality of the environment in certain cases. Work to be done in this field should possibly, and according to the matter in question, be done in liaison with

(1) Due account will be taken of the results obtained in the Council of Europe in this connection.

(2) The Meadows Report, 'Limits to Growth', which can be greatly improved upon as to its basic data on non-regenerating resources, adopts a global approach to the problem of exhaustion, in the near or distant future, of certain resources which are essential to economic growth. This report also underlines the importance of salvaging and recycling in the conservation of mineral resources and the fight against pollution by certain metals (mercury, chrome, cadmium).

work in the field of industrial and energy policies. This study should also take into account work done within various international bodies.

B. **Action**

Studies will be carried out with a view to:

— examining future supplies and demand for certain non-regenerating mineral resources, the depletion and rate of consumption of which could have repercussions on economic and social development and environmental policy; this study will be at both world and Community level and will take account of various factors (technological progress, recovery etc.).

  In a first phase the Commission proposes limiting these studies to certain specific resources such as hydrocarbons, metals in the platinum group, tin, mercury, reserves of which appear to be limited or such as chromium, fluorspar and phosphorus whose annual rate of consumption is significantly high,

— analysing the potential medium and long-term effects of the depletion and increasing use of these resources on environmental policies and on the Community's industrial policy,

— examining to what extent conservation of these resources by means of recycling and substitution is important for environmental protection,

— studying the medium and long-term availability of water supplies within the Community against increases in consumption and use, in particular, by:

  — anaylsis of its water resources, including their quality,

  — analysis of future water requirements for industrial, domestic and agricultural purposes, including medium and long-term supply problems,

  — comparative analysis of management and planning techniques.

C. **Procedure**

The Commission will undertake the studies set out in B with the aid of consultants. It will then forward suitable proposals to the Council after having consulted national experts, where necessary.

D. **Timetable**

The studies set out in B would be started in 1973. The results should be ready by the following dates:

(a) Studies on environment problems linked with availability of the mineral resources mentioned above: December 1974.

  Availability of water resources in the Community: December 1974.

(b) Analysis of possible repercussions of the exhausting of resources: July 1975.

(c) Conservation of non-regenerating resources: December 1975.

Chapter 3

URBAN DEVELOPMENT AND IMPROVEMENT OF AMENITIES

A. **Guidelines**

The functioning of the common market has intensified the problem already present at national level of the optimum geographical distribution of the population and its activities.

Free movement of persons and capital, structural changes, particularly in agriculture, rapid technological, economic and sociological transformations — all these developments tend to create or exacerbate regional imbalance between urban and rural areas.

Urban areas tend to spread, often without control. Starting from great conurbations, themselves the source of serious environment problems, new types of less dense urban development expand haphazardly outwards and make progressive and insidious inroads on the green spaces which are vital to a balanced environment. This phenomenon spreads far and wide, crossing frontiers and creating virtual European megalopolises.

Rural areas are also undergoing profound changes. In some cases, they border on urban areas with which they are then rapidly merged; in other cases land previously used for quite different purposes is built up with leisure and recreation centres. In other areas, modern farming methods bring about structural changes and depopulation.

Such imbalances have important effects on the environment and living conditions: they either aggravate pollution, hinder abatement measures or contribute to the deterioration of living conditions and the quality of life.

It would be purposeless to improve living conditions in densely populated areas unless the process of concentration itself is brought under control by the action of concerted national policies. Any adjustment in one country has consequences in others; if national policies remain isolated a country affected could do nothing more than mitigate these harmful repercussions without being in a position to deal with the causes as a whole.

In areas where the natural environment and the countryside has hitherto been fairly well preserved, it is essential that this state of affairs be maintained through measures relating to agricultural structures. It is the best means whereby these areas can attract people and new activities. They will thus be able to fulfil aspirations and a need for balance, which are no longer merely regional or national preoccupations but the common concern of all the peoples of the Community.

It is therefore particularly important that in both cases the environmental problems inherent in urban development and the geographical distribution of the population and its activities should be examined at Community level: not only are problems similar in the various countries but in many cases identical and, in view of the unity of the economic area of the common market, susceptible to solution by concerted policies.

The efforts to be made should aim at promoting in the appropriate circles — in conjunction with regional policy coordination — a comparison and discussion of ideas, experience and achievements regarding environmental problems linked with urban development and the geographical distribution of human activities. This will also make it possible to seek a joint approach to the inclusion of environment requirements in land-improvement policies. Finally, this will facilitate consultations on aspects of the environment in frontier areas, as requested by the Ministers of the Environment of the Member States of the Community, meeting in Bonn on 31 October 1972.

B. Projects

In a first phase, the Commission intends to concentrate its efforts upon four sets of problems, carefully selected on the basis of the general nature and Community scale of the problems.

1. *Environmental problems relating to the development of urban areas in the Community. Special case of the megalopolis developing in North-West Europe*

The improvement of towns and the countryside presents serious problems in the various areas in the Member States where conurbations (whether or not they extend over several countries) are growing up around nuclei of varying sizes. This is particularly true of North-West Europe, where the large and small urban centres and the green spaces which separate them are gradually merging into a megalopolis with approximately 100 million inhabitants, extending over the territory of six Member States.

These urban areas (and in particular this megalopolis) present problems formerly not experienced even by very large urban centres; the problems concern administration, infrastructure, transport, social and cultural facilities, leisure, public health and ecological balances. They are sometimes of such dimensions that it is decided to set up new towns, with varying degrees of autonomy.

The measures required to prevent the consequences of allowing this process to be unchecked must at all costs be examined and adopted jointly by the Member States concerned as soon as possible, i.e., before it is too late to reverse the process.

2. *Environment problems specific to town centres*

Most town centres are at present undergoing a period of crisis. Traditional activities have been discontinued, places of work are taking over from housing (particularly in the tertiary sector), small crafts are disappearing, etc.

The introduction of the tertiary sector into town centres involves the building of large functional complexes of excessive proportions, which are a source of traffic jams in rush hours and 'deserts' at night. They also cause the decay of old houses and a division between the fairly well-off social classes in the newer districts and the less affluent classes who settle for a time in the older ones. The cultural identity of Europe, which is largely determined by its town centres, is also gravely endangered by these tendencies. The development of automobile

transportation is forcing the authorities to seek solutions which will overcome transportation problems in town centres without destroying the latter's character.

3. *Environment problems specific to open spaces and landscape*

Problems similar to those of town centres arise in respect of the open spaces and landscapes of Europe. The overflow of the towns into the countryside, intensification of traffic, open-air pastimes and tourism, modern farming methods, etc., are rapidly and radically changing the countryside, the rural landscape and the biotopes which are characteristic of Europe and which, like the town centres, represent an important cultural heritage and are just as vulnerable.

These problems are particularly marked in areas of rapid urban development but are also found in declining areas threatened with depopulation as a result of natural handicaps to agriculture or a falling-off in traditional industrial activities. They also exist in tourist areas such as coastal and mountainous regions.

4. *Environment problems specific to coastal areas*

Urban development, industrial expansion, tourism, etc., affect the coastal areas of the Community in a very special way. They profoundly alter the landscapes and biotopes of these areas.

These developments are liable to lead to the disappearance of certain characteristic types of coasts and biotopes in Europe and seriously impede the functions fulfilled by the coastal areas in the ecological balance (e.g., spawning grounds for fish, resting places for migratory birds). Moreover, the effect of these distortions could, from an economic point of view, be harmful to fishing and certain agricultural sectors.

Again, new economic activities which are being set up on the coast sometimes hinder each other because of their contradictory demands and conflict with the need for rest and recreation in the open air which is felt more and more by the urban population.

To supplement the proposed measures for combating coastal water pollution, therefore, it is very important that the policy for the development of coastal areas should take into account, not only local or national needs but also the future needs of all the nationals of the Community countries (1). Otherwise, some siting plans in which these needs have not been considered could prevent full use from being made of the coast (2).

C. **Procedure**

The four sets of problems briefly outlined in B are closely linked to one another and therefore cannot be solved separately. Consequently, the Commission intends to study them together with a working party of national experts.

The working party will work closely with the 'Standing Committee for Regional Development' provided for as part of the common regional policy.

In preparing the working party's discussions, the Commission will pay particular attention to work already in progress at the national and international levels. If necessary, the Commission will set up study groups to examine specific questions covered by the working party.

D. **Timetable**

The Commission intends to call a meeting of the working party before 30 June 1974.

Chapter 4

IMPROVEMENT OF THE WORKING ENVIRONMENT

A. **Guidelines**

Any project for improving the working environment should aim at:

— obtaining more effective protection of workers, by modernizing industrial medicine, hygiene and safety techniques,

— making work more acceptable by the introduction of the same criteria for the working environment as are being progressively applied to the living environment as a whole.

(1) Measures to combat pollution of the high seas should also be taken into consideration when coastal areas are being developed.

(2) In the course of this work the studies carried out by the OECD on the problems of developing Mediterranean coastal areas should be consulted.

Proposals in this field will have to be prepared by the Commission in connection with and/or as part of the definition of the social programme.

B. Projects

A real improvement in the working environment and the establishment of safe and acceptable working conditions must be made technically feasible for the greatest possible number of firms (including small and medium-sized firms).

Exploratory studies were launched in 1972 and will be completed in 1973.

The work under way at the beginning of 1973 is based on the following plan:

1. *Knowledge to be collected, processed and disseminated*

   — determine for each environment factor and for harmful emissions:

      — statistical principles of sampling,

      — methods of sampling and measuring,

      — models for evaluating risks, including cumulative ones, in space/time zones corresponding to the workers' activities,

   — methodology of assessment of complex situations:

      — effects of environment factors and harmful demissions on people (individually, but more especially in groups: knowledge of the population, its categories, and individual disease proneness),

      — effects on firms (indicators for all the workers of a particular firm, their general behaviour and the reasons for it),

      — effects on society (economic and social cost of manpower deterioration, absorption of this cost).

2. Projects

   — development of a strategy to combat risks at work and exposure to hazards, based on criteria similar to those applied in combating pollution,

   — setting of requirements to be laid down for machinery, products aud all other equipment, to ensure they can be used safely,

   — development of industrial hygiene equipment, application of ergonomic principles for remedy and improvement,

   — promotion of ergonomic designs for new plants,

   — determination of human and sociological aspects of the organization of work, and working out of methods for reducing dissatisfaction and encouraging effective participation.

C. Procedure

On the basis of the above projects, the Commission intends to draw up a work programme which will form part of the social programme.

The Commission will use all the means at its disposal, in cooperation with the national authorities and professional bodies concerned. In particular it intends to:

— carry out and encourage methodological research,

— promote the practical measures required to enable the necessary information on working conditions to be obtained,

— promote training of the necessary personnel (technical experts, e.g., in industrial health, people who have to deal with such problems from time to time),

— set up documentation networks,

— propose general outline measures and reference values for checking specific risks so that all firms will have the same obligations and all workers the same guarantees of protection,

— organize the biggest possible information campaign.

D. Timetable

1. Completion of the exploratory studies launched in 1972.

2. Meeting of experts before the end of October 1973 to:

   — take stock of the situation in each field on the basis of the findings in the studies,

— draw up a series of specific projects (concerning the various types of risks, using the abovementioned means) to be launched as of 1 January 1974,

— help map out a policy for the protection of workers and the improvement of working conditions under the social action programme.

Chapter 5

CREATION OF A EUROPEAN FOUNDATION FOR THE IMPROVEMENT OF WORKING AND LIVING CONDITIONS

A. **Guidelines**

The problems which have to be resolved in order to improve living and working conditions in modern society are numerous and complex. Study and research in this field have been relatively modest and scattered: results are often quite limited in scope and bearing. The Community still lacks a body which weighs up problems, concerts actions, carries out analyses and studies and in doing so makes possible an overall and systematic approach to these problems and their solutions on the basis of Community needs as well as Community resources.

The Community institutions should set up a body capable of scanning those elements which, through their combined effects, affect living and working conditions, and of carrying out a long-term forward study of those factors which may endanger the conditions of existence and those which are capable of improving them.

B. **Projects**

To this end, the Commission intends to submit a proposal to the Council before 31 December 1973, for setting up a European Foundation for the Improvement of Working and Living Conditions whose tasks should be defined in accordance with the provisions of the Treaty establishing the European Economic Community and the respective powers of the Institutions.

Here, for example, is a list of questions on which the Foundation could encourage research. The list does not claim to be exhaustive, nor is there any suggestion that research must necessarily begin at once.

1. *Improvement of working conditions*

   (1) Changes in industrial practices with a view to eliminating tasks of a physically or psychologically arduous nature,

   (2) Improvement of working relationships,

   (3) Working hours.

2. *Improvement of living conditions*

   (1) Living space in towns:

   — different types of dwelling,

   — optimum utilization of available territory,

   — preservation and renovation of old quarters and town centres, new towns, optimum size of towns,

   (2) The development of transport,

   (3) The development of communications and the data-processing revolution, the 'push-button' society, political and cultural implications,

   (4) Social integration of immigrants, notably those from non-Member States.

Any attempt to deal with such a wide range of subjects as these could easily fall into difficulties unless strict terms of reference are laid down for the Foundation's activities, based not on what must remain a very broad and diverse range of subjects but on clearly defined priorities and considerations of effectiveness.

C. **Functions of the Foundation**

By these functions, the Foundation should be capable of providing the stimulus needed to promote research and experimentation in furtherance of Community and Member State objectives, without becoming a mere centralized research agency competing with centres or institutes already in existence.

The functions of the Foundation could be the following:

— to draw up a list of all Community research which falls within the terms of reference of the Foundation,

— to facilitate contacts and cooperation between institutes, research centres and research workers,

— to contribute, in whole or in part, to the financing of research or experiments in connection with the aims assigned to the Foundation on the basis of directives issued by the Community institutions,

— to ensure that the findings of this research and experimentation are disseminated,

— compare notes with similar institutes and bodies in third countries.

Chapter 6

PROMOTION OF AWARENESS OF ENVIRONMENT PROBLEMS AND EDUCATION (1)

A. Guidelines

Conservation and improvement of the environment call for a general awareness of the existence and importance of the risks no less than the responsibilities resulting therefrom. In varying degrees, all of us can make a positive contribution to the environment, both through our actions and attitudes. For, after all, we are the ones who use and mould this environment and ours is at once an individual and collective responsibility.

To induce individuals to accept full responsibility for these problems, appropriate measures should be taken to educate and inform them by:

— school and university education based on the introduction of practical examples in the various disciplines,

— information on the state of affairs in certain areas and the consequences of courses of action selected,

— training of teachers and other responsible persons.

Through a combined effort of this kind it should be possible to provide the public with a better understanding of decisions taken by Governments, especially since these decisions are bound to have a direct effect on the living standards and conditions of people everywhere.

To sum up, the first priority must be the adoption of a systematic and orderly approach which will bring home to people, particularly youth, that an environment problem really exists. Secondly, a training programme must be drawn up for administrators and others holding active positions of responsibility in economic and social fields as well as for management and planning departments concerned with the environment. Thirdly, aid must be made available to universities, and higher education in general to enable this sector to carry out its triple environmental vocation of amassing knowledge through research, providing training through education and disseminating knowledge through the spoken and written word.

As far as the Member States of the Community are concerned, these information and training needs are characterized by the fact that a certain proportion of the basic data required for the proper functioning and development of highly industrialized countries, are substantially the same throughout the Member States. Consequently, the guiding principles for any action in this field will generally be equally valid in all the Member States of the Community.

It will also be seen that the didactic approach to environmental problems in the Member States of the Community is in its preliminary stages and that the efforts which have been made are still relatively modest, few and far between and limited in their educational scope. Similarly, environmental studies in the universities represent a new departure in education and efforts to promote the subject frequently lack coordination, particularly with regard to those aspects which are necessarily interdisciplinary.

B. Projects

These considerations form the basis of the projects described below. In general, however, such projects will have to be subordinated to those taken at regional or national level.

(a) *Projects to promote awareness*

These measures will consist in publicising past accomplishments achieved at Community and national level in the field of environmental protection and improvement.

The Community's information services will be made available for this purpose and the Commission will publish regular reports on the state of the Community environment.

(b) *Training projects*

Children and adolescents must be made aware of the problems of the environment when attending primary and secondary school. The Council of Europe, the OECD and UNESCO have devised studies and programmes of instruction, and also issued educational directives. In the majority of countries, teachers have been given instructions on how to integrate environmental themes into their geography, technology and economics courses at all levels of general, technical and vocational education.

The Commission intends to cooperate with these bodies and contribute to the general effort by placing

(1) The measures in this chapter refer to the whole of the objectives of an environmental policy as specified in the programme.

educational dossiers at the disposal of lecturers and teachers. The dossiers will cover environmental problems on a European scale discussed by experts.

The Commission will also undertake the work involved in producing a school manual for use in the Member States, especially in primary teaching.

Quite a number of universities and colleges (especially colleges of agronomy) have set up groups where chemists, physicists, toxicologists, engineers and economists can compare notes on their research and experiments. Two types of training are beginning to evolve: one leading to a university degree in 'environmental engineering', the other aimed at providing an interdisciplinary training for graduates from various disciplines. Interdisciplinary research groups consisting of several departments and preparing students for the doctoral thesis on environmental questions will of necessity have to adopt a multidisciplinary approach.

The universities and institutes which have taken the initiative in this new educational venture are at present at the preparatory and experimental stage. The Commission could assist them in the following ways by:

— awarding research contracts for projects of European interest,

— granting scholarships to students and young research workers wishing to pursue studies in the environmental disciplines outside their countries of origin,

— giving institutions concerned in the Member States the opportunity to compare their research and education programmes,

— encouraging the exchange of teachers and research workers,

— assisting institutions to organize summer courses for engineers, chemists, etc., who deal with environment problems in a professional capacity.

It would also be advisable to make a study of the most effective means of providing the authorities, at the earliest opportunity, with the specialists they need most urgently.

Lastly, the Member States currently engaged in an examination of educational means and aims and comparing systems of education in an attempt to harmonize education policies, should coordinate, within the Council, the measures they have adopted so that these ideas on environmental protection can be introduced at the various levels of formal education.

TITLE III

COMMUNITY ACTION OR JOINT ACTION BY THE MEMBER STATES IN INTERNATIONAL ORGANIZATIONS

A large number of international organizations currently deal with environment problems in various contexts. Their activities cover the different political, economic, legal, health, ecological and scientific aspects of the pollution abatement campaign and the efforts to restore and conserve the natural environment.

In the majority of cases, the results of these activities find expression in resolutions or recommendations addressed to the national governments, and although they have no mandatory force they nonetheless exert a not inconsiderable influence on the decisions of these governments or on draft agreements drawn up within the organizations themselves.

The Community will follow this work with considerable interest especially since the measures proposed and the procedures implemented are most often likely to affect international trade in general, the functioning of the common market, the economic interests of the Community and its Member States, and often fall within the competence of the Community.

It must, however, take steps to avoid duplication of its own and the international organizations' efforts, and the Commission will make a point, particularly as regards studies, of carrying out complementary work using the results obtained by other international organizations, while at the same time it adapts them to the specific requirements and characteristics of the Community, thus retaining the latter's original character, which lies mainly in the implementation of standardizing measures.

Nevertheless, parallel efforts could have considerable importance in certain fields. This is particularly so in the case of the work planned or in progress at the OECD, the Economic Commission for Europe in Geneva and the Permanent Secretariat of the United Nations, as well as by the UNEP. Comparison with the activities of the third countries participating in the work of these international organizations would benefit the Community by shedding a new light on its activities. This possible parallel work, however, should neither retard work in progress in these international bodies nor that being carried out by the Community.

In any case, it is in the Community's interest to continue the very active cooperation it has entered into with most international organizations and in particular with the OECD, UNESCO, the Council of Europe and the UNEP. This cooperation will enable joint action to be undertaken by these organizations, without detriment to projects carried out by the Community itself within the framework of its own competences [1].

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[1] It should be remembered that:

— the Ministers of the Environment who met in Bonn on 31 October 1972 were unanimous in considering that the States of the European Communities should act together with regard to the activities of international organizations in the field of the environment and endeavour to adopt a joint position.

— Article 5 of the Agreement of the Representatives of the Governments of the Member States meeting in the Council of 5 March 1973 on information for the Commission and for the Member States with a view to possible harmonization throughout the Communities of urgent measures concerning the protection of the environment (OJ No C 9, 15. 3. 1973) provides that the Governments of the Member States will coordinate their views on any international initiative in respect of the environment likely to affect the functioning of the common market or the implementation of those parts of the Communities' programme for the reduction of pollution and nuisances and the protection of the natural environment to which the procedure laid down in item 2 applies by virtue of item 3, without prejudice to the application of the Treaties and in particular of Articles 113 and 116 of the Treaty establishing the European Economic Community.

ANNEX I

ENVIRONMENTAL PROTECTION TERMINOLOGY

Preliminary note: Some of the terms defined below may have application outside the field of environmental protection. The definitions set out here are not concerned with these.

1. Criteria

1.1. The term 'criterion' signifies the relationship between the exposure of a target to pollution or nuisance, and the risk and/or the magnitude of the adverse or undesirable effect resulting from the exposure in given circumstances.

1.2. 'Target' means man or any component of the environment actually or potentially exposed to pollution or nuisance.

1.3. The 'exposure' of a target, envisaged in this relationship, should be expressed as numerical values of concentration, intensity, duration or frequency.

1.4. 'Risk' is the probability of occurrence of adverse or undesirable effects arising from a given exposure to one or more pollutants or nuisances considered alone or in combination with others.

1.5. The 'adverse or undesirable effect' envisaged in this relationship may be a direct or indirect, immediate or delayed, simple or combined action on the target. The risk and the magnitude of this effect should be expressed, whenever possible, in quantitative terms.

1.6. The methods of evaluating the parameters describing exposure and adverse or undesirable effects should be harmonized to ensure comparability of the results from studies and research on criteria.

2. Quality objectives

2.1. The 'quality objective' of an environment refers to the set of requirements which must be fulfilled at a given time, now or in the future, by a given environment or particular part thereof.

2.2. In setting this objective, the following are taken into account:

(a) a 'basic protection level' such that man or another target is not exposed to any unacceptable risk.

(b) a 'no-effect level' such that no identifiable effect will be caused to the target.

These two levels are determined on the basis of the criteria described above. Due allowance is also made for the specific regional conditions, the possible effects on neighbouring regions, and the intended use.

3. Environmental protection standards

3.1. 'Standards' are established in order to limit or prevent the exposure of targets and can thus be a means of achieving or approaching quality objectives. The standards are directly or indirectly addressed to the responsible individuals or bodies and set levels for pollution or nuisance that must not be exceeded in an environment, target, product, etc. They may be established by means of laws, regulations or administrative procedures or by mutual agreement or voluntary acceptance.

3.2. Standards include:

3.2.1. 'Environmental quality standards' which, with legally binding force, prescribe the levels of pollution or nuisance not to be exceeded in a given environment or part thereof.

3.2.2. 'Product standards' (the term product is used here in its broadest meaning) which

— set levels for pollutants or nuisance which are not to be exceeded in the composition or the emissions of a product,

— or specify properties or characteristics of design of a product,

— or are concerned with the way in which products are used (1).

Where appropriate, product standards include specifications for testing, packaging, marking and labelling products.

3.2.3. Standards for fixed installations, sometimes called 'process standards', such as:

(a) 'emission standards', which set levels for pollutants or nuisances not to be exceeded in emissions from fixed installations,

(b) 'installation design standards', which determine the requirements to be met in the design and construction of fixed installations in order to protect the environment,

(c) 'operating standards', which determine the requirements (1) to be met in the operation of fixed installations in order to protect the environment.

3.3. In some cases, it may be advisable to set standards even when it has not yet been possible to formulate the relevant criteria and quality objectives.

4. **General**

In all instances, as knowledge develops, criteria, objectives and standards will need to be periodically reviewed and, where appropriate, altered.

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(1) Such methods of use and specifications may be issued in the form of 'codes of practice'.

ANNEX II

EUROPEAN COMMUNITIES' ENVIRONMENTAL PROGRAMME AND COMMUNITY RESEARCH PROGRAMME

Programme	A. Research already undertaken or approved [1]	B. Other research possibly to be undertaken
Part Two		
Title 1: Measures to reduce pollution and nuisances		
Chapter 1: Objective evaluation of the risks to human health and to the environment from pollution	1. Data bank on chemical pollutants 2. Noxiousness of lead 3. Epidemiological surveys	1. Thermal rejects 2. Acoustic irritants 3. Problem of unpleasant smells
Chapter 2: Setting of standards	4. Effects of micropollutants on humans, including biochemical toxicology and the biotelemetry of toxic effects 5. Ecological effects of pollutants, including bioindicators of water pollution 6. Remote sensing of atmospheric pollution 7. Mathematical models of the diffusion of atmospheric pollution 8. Analysis of organic micro-pollutants in water (COST 64b) 9. Multidetection unit (contribution to COST 64b) 10. Physico-chemistry of SO_2 (COST 61a) 11. Uptake of SO_2 by soil and vegetation (contribution to COST 61a)	4. Marine pollution from the continent 5. Physical model for studies on the diffusion of atmospheric pollutants
Chapter 3: Specific action on environment pollution		
Section 1: Exchange of information between the surveillance and monitoring networks	1. Data bank on chemical pollutants 6. Remote sensing of atmospheric pollution	6. Improvement of methods of analysis and measurement of pollutants

[1] As part of the multiannual Research and Training Programme and COST projects.

Programme	A. Research already undertaken or approved	B. Other research possibly to be undertaken
Section 2: Methods for defining quality objectives for the environment and for establishing rules to enable the objectives to be achieved	see Chapter 1 and Chapter 2	see Chapter 1 and Chapter 2
Chapter 4: Measures relating to certain products	1. Data bank on pollutants 2. Noxiousness of lead 5. Ecological effects of pollutants	7. Improvement and harmonization of techniques for analysing the quantity of pollutant in certain products 8. Long-term toxicity studies and standardization of toxicity tests.
Chapter 5: Action specific to certain industrial sectors and energy production	7. Mathematical models of the diffusion of air pollutants 10. Physico-chemistry of SO_2 11. Uptake of SO_2 by soil and vegetation 12. Sewage sludge (COST 68)	1. Thermal rejects 5. Physical models of the diffusion of atmospheric pollutants 9. Desulphurization 10. Anti-pollution technology. Processing of industrial sewage 11. Processing and use of sewage, e.g. sewage from intensive breeding
Chapter 6: Action specific to certain areas of common interest		
Section 1: Marine pollution		4. Marine pollution from the continent
Section 2: Protection of the waters of the Rhine basin from pollution	1. Data bank on chemical pollutants	
Section 3: Action relating to protection of the environment in frontier zones	1. Data bank on chemical pollutants 6. Remote sensing of atmospheric pollution	
Chapter 7: Action concerning wastes and residues	12. Sewerage sludge	12. Solid waste (treatment, storage, etc.) 10. Anti-pollution technology 11. Treatment and use of effluent, e.g. effluent from intensive farming
Chapter 8: Actions to ensure compliance with the limits imposed for the protection of the environment (p.m.)		

Programme	A. Research already undertaken or approved	B. Other research possibly to be undertaken
Chapter 9: Action to be taken on the economic aspects of anti-pollution measures	1. Data bank on chemical pollutants	
Chapter 10: Research projects (p.m.)		
Chapter 11: Dissemination of knowledge relating to environment protection	1. Data bank on chemical pollutants	
Title II: Action to improve the environment		
Chapter 1: Protection of the natural environment		13. Structure and function of ecological systems 14. Ecological effects of modern production techniques employed in farming 15. Integrated campaign against harmful insects 16. Improvement of the quality of agricultural products 17. Utilization of waste water for irrigation purposes 18. Water supply and administration of water resources
Chapter 2: Depletion of certain natural resources		
Chapter 3: Urban development and improvement of amenities (p.m.)		
Chapter 4: Improvement of the working environment (p.m.)		
Chapter 5: European Foundation for the Improvement of Working and Living Conditions		19. Long term perspective of living and working conditions
Chapter 6: Promotion of awareness of environmental problems and education		20. Organization of instruction on the environment at various educational levels