ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL POLICY IN THE FEDERAL REPUBLIC OF GERMANY

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I.

The examination and consideration of environmental impacts in the framework of public as well as private decision making are essential aspects of environmental policy. The significance of environmental considerations in the decision making process depends substantially on the relative weight given to environmental goals with respect to other political objectives. The legal, technical, and administrative nature of the role environmental considerations play in the legislative economic, and procedural systems of the individual countries is not the determining factor.

Human life today and in the future is only possible and can only truly freely develop in a healthy and sound environment. The development of comprehensive safeguards for the natural essentials of life is a governmental responsibility of the highest rank and of existential importance.

Whatever we do or fail to do now and in the near future will determine the fate of generations to come.

II.

Clearly, it is always necessary to be prepared to and capable of responding to imminent danger or damage suffered. However, this can only be achieved if we focus our planning on avoiding environmental damages, instead of waiting until we are forced to react after the fact. In other words, we should pursue a precautionary environmental policy. Environmental policy, whose central objective is to secure the conditions for a sound environment, is by nature in conflict with other political objectives. It must take into account other tasks for the safeguarding of our existence, and must therefore consider what is economically justifiable and technically feasible. Environmental policy is thus characterized by a constant balancing process with other social goals. Its absolute limits, however, lie where human life and health are directly or indirectly threathened. Thus, for example, in the field of the peaceful use of atomic energy, safety from harmful effects always has absolute priority over economic gain.

Seen in this light, the principle of precautionary environmental policy, together with the polluter pays principle through which it is implemented, and the principle of cooperation, is the basis of our environmental policy. The Cabinet of the Federal Republic of Germany which was reformed 1 1/2 years ago after the 1976 election has adhered to this appraisal of the significance of environmental policy; the Chancellor himself emphasized this in his Governmental Declaration.

Environmental policy is not simply a convenient byproduct of periods of prosperity and full employment. Rather, it must be seen as the imperative answer to a long term and otherwise una-

voidable threat to the essential basis of human existance. All industrialized nations are faced with this situation, one in which they are compelled to tkae political action. An answer of lasting validity to these problems can only be developed through international cooperation.

III.

Which means, which instruments should be used to implement precautionary environmental policy in the context of such a constitutional mandate?

The most important tool for the implementation of precautionary environmental policy is law, in the form of statutory legislation and ordinances. In fact, German law has included for a long time provisions which either regulate specific environmentally relevant matters, or at least require the consideration of all aspects influencing public wellbeing, to which environmental protection belongs. In this way, they already realize certain elements of precautionary policy. However, it was not until 1972 that legislation was passed which at the time appeared to incorporate all environmentally relevant processes and vital conditions capable of standardization. In that year a constitutional amendment transferred the legislative responsibility for waste disposal, air quality management, and noise abatement from the States to the Federal Government. The legislative program contained in the Federal Environmental Program of 1971 has been almost entirely realized. The array of regulatory provisions (I will refrain from discussing how they are structured in the legal system here) includes a variety of standards for emissions, ambient quality, products, and processes. In so doing, the Federal Government is in harmony with the experiences of other countries and has placed particular emphasis on the complementarity of emissions and ambient quality standards, and has avoided following an ideological "one-sided" approach.

Some German legal provisions make specific activities directly dependent on their environmental soundness, or absolute pollution limits are set. In these cases the legislature has anticipated the choice between environmental protection and other societal objectives. As examples I would like to mention two of our environmental laws:

- the Federal Ambient Air Quality Control Law, and
- the Law regulating the lead content of gasoline.

The Federal Law on Ambient Air Quality control makes protection of the environment from the harmful effects of air pollution and other potential contaminants a binding requirement. Express provision is made for precautionary action in the construction and operation of those installations which subject to licensing. Measures which reflect the latest technological developments will be introduced to limit emissions. The requirements of this law, some of which are still abstract, will be specified in concrete terms in ordinances and administrative regulations.

The law regulating the lead content of gasoline, on the other hand, prescribes with directly binding force, and in the sense of a prototypical product standard, the maximal value of 0.15 of lead additives per liter of fuel for internal combustion engines. It goes without saying that the above mentioned regulations provide for the imposition of fines or penalties. Most of the States have introduced a "fine catalogue", which ensures a nation-wide standardization of the application of fines prescribed in the relevant legislation. We are presently working on reforming penal provisions relating to the environment in order to increase their efficiency. We expect to initiate legislation in this area this year.

However, experience in nearly all legal systems has proven that it is impossible to regulate all aspects of human life through legislation. A certain amount of latitude will always remain for administrative decision makers, who are expected to use due dis-

In order to ensure the application of the principle of maximum environmental soundness of public measure within this latitude accorded to decision makers, the Federal Cabinet adopted in 1975 the "Principles for the environmental assessment of Federal public actions." These principles require all Federal agencies to examine and consider at the earliest possible stage any harmful effects upon the environmentcaused by measures taken within their fields of responsibility. They include the two key elements of any environmental impact assessment, namely the requirement of balancing environmental precautions with the proposed action, and the duty to consult experts when necessary.

The States have for some time intended to adopt principles along these lines, however, only one has done so thus far. As as result of our federal political structure, the Federal Government can influence the behavior of the States only within strictly defined limits. In adopting the principle of environmental impact assessment the Federal Government has shon that it is acting in a way it would like to see others act.

In developing these principles we have learned a great deal from the American Impact Statement, drawing inspiration from it without actually copying it. This would not be possible owing to the problems of constitutional law involved. The construction of our environmental impact assessment revealed one point: the design of the legislation is not the essential factor, but rather its efficiency with respect to the relevant goal. The problem of efficiency reviews is, however, one which will be faced by every country in the near future, including the Federal Republik of Germany.

Our provision -- which can only be considered subsidiary to laws, ordinances, and administrative regulations -- has already been criticized for not being concrete or far-reaching enough. In my opinion, however, such a definitive criticism is premature.

However, I do not belong to those who see the principles as the last word. In my view they are a first step, a minimal provision which raises the question as to their future development if

practical results are not satisfactory in the long run. I personally believe that such further steps could focus particularly on a greater visibility of the assessment process, which up to now has been conducted exclusively within agency administration. In other words, the results of examinations should be publicized and other agency expertise be consulted, in keeping with our constitution (Article 65 GG).

There has also been criticism of the fact that we have only taken the first step of incorporating the procedural essentials of "balancing", and "consultation",without providing specific criteria, standards, and planning aids. I still feel that we have taken the right approach. As much as I support the demands for expanding the procedural regulations with specific criteria, I emphatically believe that the development of criteria must be preceded by the existence of a suitable process of application which will facilitate and guarantee their observance. The reverse strategy reminds me of the view held by those who want to wait until we have explored all environmental impact criteria and all limits of pollution of the environment before introducing environmental legislation.

Naturally, the exploration of environmental criteria and pollution limits will have to be undertaken as quickly as possible after the first --procedural-- step has been taken, In fact, work is being done in many countries as well as in our own to obtain well-founded knowledge about the effects of environmental pollution on human beings and property. We must not overlook the fact that these necessary scientific results not only serve to protect human beings, but also provide the necessary conditions for environmentally sound development and land use. It is only on the basis of this knowledge that we can assume long term responsibility for the necessary industrial and residential developments. And, as pessimistic as it might be, it is only with the help of applicable knowledge that we can stop the world-wide process of ecologically destructive land-use.

In spite of all recent progress, the most important gaps in our knowledge remain -- and I need only to remind you of the hearing on the ambient quality standards held this February -- about the long term effects of substances, not only regarding air but the atmosphere as a whole. It appears essential to me that we should study not only the effects of individual substances or isolated measures, but also the complex effects of all substances and all measures, and that we integrate our information into the planning process. At present some important pilot projects are being conducted in the Federal Republic of Germany; I would like to mention two which have already received a certain amount of attention:

- a large scale project to determine and present the ecological situation in the lower Elbe region, which can serve as a prototype for further studies in other areas, and

- the development of a handbook of ecological planning, which has unfortunately frequently been commented on condescendingly and associated with excessively high expectations, as though all ecological problems relating to land use would be resolved in future by the handbook.

In spite of this, I am quite sure that the results of these studies will in general facilitate the consideration of environmental aspects in land use and regional planning in future.

Such well-founded knowledge will definitely contribute to legitimizing the necessary environmental protection measures (such as further absolute standards for emissions or ambinet quality) in the eyes of polluters and affected groups. A significant part of the resistance to environmental policy measures is rooted in the still uncertain knowledge about the dangers which we have to avert with precautionary environmental policy measures.

Well-founded knowledge is thus directly relevant to the role of environmental considerations in the decision making process, and therefore for environmental impact assessment. With its assistance, we can reduce the gap in legitimacy still faced by some environmental and regional planning decisions. On the basis of such information the people at large can arrive at an appropriate judgment and the parliaments of the States can exercise responsible codetermination in such decisions as the planning of large industrial development.

Up to now we have considered almost exclusively the area of administrative decision making. However, comprehensive precautionary policy for the protection of the environment also requires environmentally sound behavior in the private sector, both business and individual citizens.

If special reference to business has to be made in this connection, it is because the potentially most dangerous effects known today result from industrial production and processing. Certainly, a minimum level of protection is guaranteed by law: nobody, including business, may directly impair or endanger the health or life of others. Beyond this, however, it is largely the responsibility of business itself to optimize environmentally sound behavior in its sphere. The government can intensify the fulfillment of this wide-ranging responsibility of business through economic incentives. For example, I should like to mention the system of charges under the Waste Water Act, in which the polluter-pays principle, advocated by most indstrialized countries, is particularly evident. Government support for practical attempts to apply environmentally sound technology is another example.

The polluter-pays principle, which after the precautionary policy, is the second basic principle of our environmental policy, is primarily a regulatory instrument for the assignment of costs; however, it also includes an element of delegated responsibility. The quality of our environment is the result of a sum of a multitude decision making processes by many actors at different levels. By including business in this circle of decision makers, we also

assign it a part of the total societal responsibility for our environment.

This applies not only to business, but of course to each individual citizen as well. Citizens, each in their own way and in their own position, affect the sum of decisions which influence our environment. There are clear indications that growing portions of the population recognize how significant their influence can be, and that environmental protection can not be conducted by government measures alone. The contribution of the environmentally aware citizen includes not only environmentally sound behavior, but also personal or communal efforts to influence others, from which I do not wish to exclude organs of government.

V.

In an environmentally aware society an intricately intermeshed system of active partnership, of hearings and mutual influence between all those concerned must be developed. Only in this way can the bases of decision making be enriched, understanding be improved, and individual citizens participate in government decisions. This reciprocal Process of influence between public decision makers, business and citizens also contributes to the improvement of environmental impact assessment in the broadest sense of the term.

This cooperation is conducted in a variety of ways: I will not dwell on the opportunities guaranteed by the constitution to each citizen to protect his or her rights when they are affected. Beyond this we are increasingly including citizens and their associations in the preparation of decision making processes and government planning. These endeavors range from the participation of "affected groups" prior to legislative action and the discussion of basic environmental questions with relevant social groups, to the participation of the individual citizen in the concrete planning procedures of government. In this context we should include

discussions about authorizing specific associations the right to take legal action, as now provided for the first time in an amendment to the Atomic Law. Although this would be an interesting subject to deal with in more detail, it would be beyond the scope of our present discussion.

VI.

I have already pointed to the need for control of efficiency in the environmental impact assessment procedure: this necessity, however, always arises. The well-balanced environmental policy concept I have outlined must be confirmed in general terms by practical results, in other words, by the real improvement of the environmental situation. Our monitoring facilities are signalling initial successes. For certain types of pollution the status quo is maintained, while for others it can be proven that existing levels were significantly reduced. Even the Rhine, our problem child, has become somewhat healthier in certain respects in spite of unfavorable climatic conditions. We will improve our monitoring systems, and refine and elaborate the data. These measures are accompanied by attempts, together with the States and our Council of Experts on Environmental Questions, to examine, and where needed to improve, the practicability of our laws and regulations and the conditions of administrative action.

VII.

I hope I have provided you through this short sketch with an overview of the framework within which environmental impacts receive consideration in our country, and also of the form this consideration takes. I mentioned in my introduction that the demands of environmental protection in many cases can only be met through international cooperation. This is also shown by the fact that the theme of environmental impact assessment is on the agenda of almost all suprantional and international organizations. Many of these

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Background information on procedural and institutional questions on environmental impact assessment in the Netherlands.

Introduction

This paper starts with a global outline of the existing legal framework concerning environmental impact analysis and of its shortcomings. Next the preparation of the possible introduction of environmental impact assessment (EIA)is described in short. The paper concludes with an indication of the main topics which are under discussion now and an impression of some of the opinions of the most important interest groups.

Legal framework

At present there is no legislation regulating standardized, systematic analysis of the environmental impact of proposed actions in the Netherlands.
Even so,it is true that in some individual cases studies have been carried out, that could be considered as EIA-reports. However, the existing legislation does not provide for such reports,although all environmental protection laws - most of which have licensing procedures - demand information relevant to environmental impact analysis. But this information is mainly limited to estimated emission or immission levels at best, and does not include effects on the environment.

Also there is a great deal of variation between the requiremen of,for example, the Nuisance Act, the Nuclear Energy Act, the Water Pollution Act and the Air Pollution Act. This is true fo the requirements concerning the collection of documentary evidence relating to the environmental impact of the proposed action, as well as for the requirements concerning consultation with involved agencies and public participation.
Moreover the Dutch legislation on environmental protection does not cover all actions affecting the environment. Apart from actions not covered by any law, there are actions such as road planning, urban development or mining, which are governed by legislation whose function is not primarily the protection of the environment.
Looking at this category we see an even greater variation. In some cases no information on the environmental consequences of a proposed action is required at all.

Since several licensing procedures- each of them dealing with other environmental aspects - may apply for one and the same proposed action, the existing system does not provide for an integral judgement of the environmental impact by the respective authorizing bodies.

In summary the existing legal framework, as far as the analysis of the environmental impact of proposed actions is concerned in general has the following shortcomings:

- no information on the effects of a proposed action on the environment is required
- a great deal of variation between the requirements of different laws (information, consultation, public participation)
- some laws require no information on the environmental consequences at all
- the information does not result into an integral picture.

In december 1976 an Environmental Protection (General Provisions) Bill has been submitted to Parliament. It includes uniform provisions on consultation of involved agencies and public participation in the licensing procedures pursuant to a great number of environmental protection laws. The Bill also contains provisions on the co-ordination of the various licensing procedures for one and the same activity.
So the Bill provides for a uniform regulation of certain fundamental aspects of the EIA-process namely consultation and public participation and for a frame work of integral judgement of environmental information.

Advise Provisional Central Council on Environmental Protection

At the request of the Minister of Public Health an Environmental Protection - also on behalf of the Minister of Economic Affairs in so far as EIA may contribute to the streamlining of licensing procedures - the Provisional Central Council for Environmental Protection submitted an advisory report on EIA in November 1976. The Council, which consists of representatives of interest groups and environmental experts, confirmed that EIA can play an essential and valuable part in environmental management. For it encourages an integral approach to solving environmental problems and finding alternatives, fosters public participation as an important element of the procedure and prevents decisions being made without full

Governmental Stand

The Dutch government is of the opinion that EIA can be valuable for a number of reasons:

- it makes possible a comprehensive description of environmental effects and an integral and systematic judgement of the environmental consequences of a proposed action
- this might lead to the coördination and streamlining of licensing procedures
- making the EIA-information public at an early stage improves public participation ; this may prevent that one has to retrace one's steps after investments already have been made
- it stimulates the conception of alternative solutions at an early stage
- it creates an understanding on the gaps in information and knowledge to be taken into account in the planning and decision-making process.

Trial runs

Therefore, at the instigation of the Provisional Central Council, the former Minister of Public Health and Environmental Protection decided to carry out some trial runs. As a preparation preliminary research was carried out in the spring of 197. In these trial runs the environmental impact assessment concentrates on the effects of proposed actions on the physical environment *. While studying alternatives, the costs will also be considered, both of the alternatives themselves, and of measures to compensate or eliminate possible damage to the environment. This means that, contrary to the environmental impact statement procedure in the United States, in the Dutch experiment an aspect approach is used, excluding for instance social-economic effects etc. of a proposed action. These other effects are only considered as far as they have secondary effects on the physical environment. The Minister of Public Health and Environmental Protection is of the opinion that apart from other reasons, a broader scope in this phase would mean over-extending. However, since a broadening of the scope of EIA in the future remains a possibility, in the trial runs an indication must be given where other effects than those on the physical environment would have to be considered.

* a) effects caused by the pollution of air, water and land, by noise, radiation etc.;
b) interference with the condition of the physical environment and with eco-systems

For the trial runs plans and projects - governmental as well as private-have been selected. This was done in such a way that experience will be gained with environmental impact assessment implementing environmental protection laws, as well as non-environmental protection laws. With a few trial runs the proposed action is not covered by any law.

At the moment trial EIA-reports are being made on the following proposed actions:

- the proposed development of petro-chemical industry at the Dutch Shallows
- the proposed new establishment of Dutch State Mines (DSM) (chemical industry)
- the proposed establishment of a paint factory
- the choice of a location for a sewage treatment plant
- the proposed construction of (a part of) a national highway
- the choice of a location for a sanitary landfill
- the proposed development of an industrial park
- the preparation of a dredge and fill program for the Rotterdam harbours.

Finally an introductory study for EIA is being prepared on the proposed (artificial) industrial island in the North Sea.

All the reports are prepared by the proponents on a voluntary basis. The necessary assistance by consulting firms has been provided. In principle the Ministry of Public Health and Environmental Protection and the proponent share the costs. These vary from about U.S. $ 95,000,-- to about U.S. $ 300,000,-- for the individual trial runs.

The reports should at least contain the following elements:
- a description of the reasons for and/or the necessity of the proposed action
- a description of the proposed action (including reasonable alternatives)
- a description of the existing condition of the environment which might be affected
- an assessment of the probable environmental impact of the proposed action including a comparison with the relevant quantitative as well as qualitative norms and principles; comparing the alternatives, also the costs have to be regarded
- a(global)risk analysis with regard to dangers for the environment
- gaps in knowledge and information: (in the trial runs no basic research is carried out)
- a description of the legal procedures in which the EIA will play a role.

As part of the experiments the quality and adequacy of the reports is tested by an ad hoc panel of independent experts.

The reports are prepared on behalf of the authorities who have authorizing power on the proposed action. They are used within the framework of existing planning and decision making procedures.

Since trial runs cannot provide an answer to all questions, complementary research is done at the same time. It concerns technical questions, such as methods available for analyzing effects on the physical environment, as well as administrative questions, such as whether (independent) testing of the report is needed, and if so, how such testing should be set up.

At the moment the trial runs and the complementary research are well on their way. A few EIA-reports have been provisionally completed. That is, that the results of public participation and independent testing have

not yet been worked up in order to finalize the report.

Two consulting firms, charged with the daily management, evaluate the experiences and information of the experiments and the complementary research. Their report in September of this year will form the basis of the preparation of a governmental stand on the introduction of EIA in the Netherlands.
Although this report will be based on the facts collected up to July, the evaluation of the trial runs after July will go on, while the different planning and decision-making procedures in which the EIA-report play a role are not yet finished.

Topics

In The Netherlands a lively discussion on the subject of EIA has started, in particular on the following topics:

- scope
- field of application
- alternatives
- public participation
- testing
- responsibilities.

Though as yet no crystallized stand of the competent authorities and other interest groups exists, an impression of some opinions is given below:

The question of what the scope of EIA in the Netherlands should be is both a problem of competence and of policy. The preparation of the possible introduction of EIA in the Netherlands is done by the Ministry of Public Health and Environmental Protection. In the trial runs the EIA concentrates on the effects of a proposed action on the physical environment, as was described on page 3, which is the competence of this ministry. Consequently the assessment of for example social-economic effects and effects on the infrastructure are dealt with only as far as secondary effects on the physical environment are involved.

On the other hand it is worth noting that there is some fear that EIA,as described above,will give the protection of the physical environment in the planning and decision making process too much emphasis.
Environmentalists,not worried by problems of competence, favour a broad scope of EIA including consequences for (limited) resources and energy,as was also proposed by the Provisional Central Council on Environmental Protection in 1976 (page 2). However, the trial runs do not cover this aspect.

In considering the possible field of application one may distinguish different categories of EIA (legislative assessment, plan assessment, project assessment , research and development assessment and product assessment).
The Provisional Central Council on Environmental Protection believes that EIA should extend to all actions which might have an impact on the environment. Although the council did not elaborate on this one could be of the opinion that - while the same basic approach should be used for all different categories of actions - there must be differentiation in its elaboration. A special procedure seems required only when a considerable impact can be expected.
Up to this moment the discussion on the possible field of application of EIA has centered on the question whether only large scale plans and projects should be subject to EIA, as proposed by the employers' organisations,or also smaller scale plans and projects.
The question came up, whether an EIA for a plan is a valuable contribution to the planning and decision making process when there are hardly any concrete data available. Even when a general agreement upon the field of application has been reached, the problem remains to specify legally the precise boundaries within which plans and projects must be subject to an EIA procedure.

A third topic of discussion is, how the number of alternatives to be included in the EIA should be defined. In the trial runs reasonable alternatives of the proposed action should be included. It seems that when public agencies are proponent, acting in the general interest, more alternatives can be deemed reasonable, than in the case of a private proponent, who has a specific action in mind.
To determine what is reasonable, could be the task of the authorizing body in a dialogue with the proponent. Public partipation, testing and administrative review will make sure that no reasonable alternatives have been left out.
One alternative which has to be included is the o-alternative (doing nothing).

There is little disagreement, that public participation is a major feature of EIA. It remains an open question at which moment it should take place. Basically there are three possibilities assuming that testing by independent experts of the EIA-report takes place(below), namely before or after the testing, or at the same time of the testing. In the last case it is also a possibility that public participation takes place in the presence of the testing experts.

The above leads to the fifth topic of discussion, namely: how should testing of the quality and adequacy of EIA be organized? The Provisional Central Council on Environmental Protection proposed a special panel of independent experts with far reaching power. Authorities which are competent to decide on proposed actions fear that testing by independent experts diminishes their - politically controlled - power and will cause unnecessary delay.

Finally an important topic of discussion is, who should be responsible for carrying out the EIA, for the contents and for the costs. For carrying out the EIA one can think of the proponent, the authorizing body, a special governmental body and/or selected consulting firms.
The employers' organisations do not agree that the - private proponent should carry out the EIA and bear the costs, in order to provide the information necessary to judge the environmental impact of - private - proposed actions. Focusing

that given an opportunity for industrial establishment, should carry out the EIA (even though in co-operation with the proponent) and bear the costs.

The Provisional Central Council recommended the proponent, in combination with the authorizing body, to prepare the EIA in the case a private party is the proponent. When the proponent is a public agency it should make the EIA itself.

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