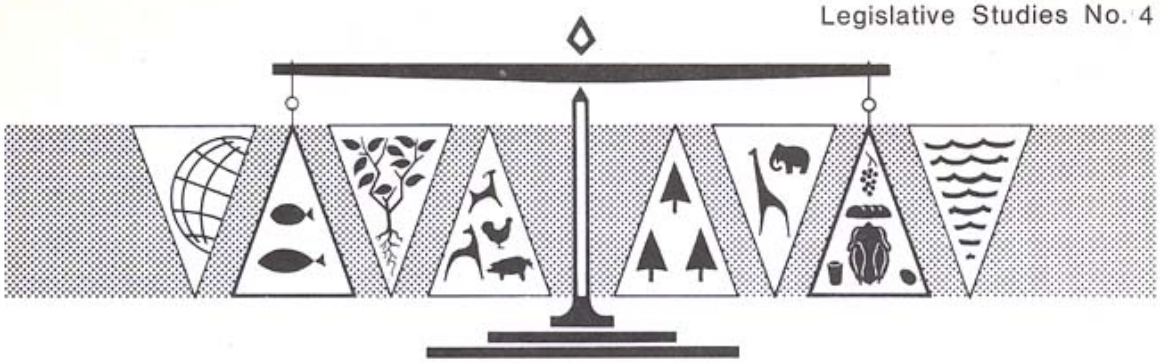
Legislative Studies No. 4



LEGAL SYSTEMS FOR ENVIRONMENT PROTECTION

JAPAN, SWEDEN, UNITED STATES

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

LEGISLATIVE STUDIES No. 4

LEGAL SYSTEMS FOR ENVIRONMENT PROTECTION: JAPAN, SWEDEN, UNITED STATES

A Comparative Study

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SUMMARY

In view of the growing importance of environmental problems in the modern law of food, agriculture, forestry and fisheries, this pilot study describes three national legal systems for environment protection: Sweden, Japan, and the United States of America. Each system is presented under three headings: basic laws and institutions (including central-regional or federal-state structures, and forms of government-industry cooperation), sectoral regulation, and legal methods of implementation. The conclusions briefly assess the experience of the three legal systems compared, with particular emphasis on its relevance to developing countries.

In addition to detailed source references and bibliographical annotations throughout the text, the Annex provides complete English translations of the basic legislative instruments.

INTRODUCTION

1. The principal objective of this study is to provide legislative reference information on modern legal systems for environment protection, in response to a growing number of requests from governments. Although the problems of environmental pollution and degradation are commonly associated with industrial activities and products, their impact is no less direct (and the need for legal protection.no less urgent) in the sectors of agriculture, forestry and fisheries. It is not surprising, therefore, that the first among the modern regulatory agencies for environment protection (the Swedish naturvårdsverk) originated within a national Ministry of Agriculture 1/. Similar world-wide trends are reflected in current legislation as received, analyzed and disseminated by the Food and Agriculture Organization of the United Nations, as part of its constitutional obligations 2/ and in continuation of the work begun by its predecessor, the International Institute of Agriculture 3/. Modern environmental law, far from being limited to broad programmatic principles, has rapidly become a highly specialized branch of legal expertise. Indeed, the general social objectives of environment protection will only be attained if governments make the fullest use of

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1/ See infra note 10.

2/ Articles I and XI/1, FAO Constitution of 16 October 1945 as amended on 24 November 1971 by Resolution 13/71, 16th Session of the FAO Conference, Report C.71/REP, p. 72.

3/ See Hobson A., The International Institute of Agriculture (Berkeley 1931), p. 105. The Institute (founded in 1905) published the International Yearbook of Agricultural Legislation (34 volumes 1911 - 1946 in French, 4 volumes 1923 - 1926 in English).

special regulatory methods developed in the more "technical" disciplines of natural resources laws, i.e., the law relating to land, water, air, and living resources, as they and their products affect the quality of human life 4/.

2. For the same reasons, law for enviroment protection is of direct interest not only to the industrialised states of the world but also to the developing countries, which are vitally dependent on the continued qualitative and quantitative integrity of their natural resources. While it is true that each sovereign government must set its own priorities, and no national system can be considered as a universal "model" for others, information on foreign experience can be particularly useful here — partly because current problems abroad may be future problems at home, and partly because some of the legal-institutional innovations which have been developed for environmental resource management are equally suited for more rational and efficient resource development. "Environmental law" should indeed be an integral part of "development law". Wider international diffusion of these innovative forms of law can be expected to have further standardising and harmonising side-effects on national legislation, which in turn would facilitate regional and global regulation and thus contribute to the objectives of the United Nations Conference on the Human Environment.

The four stages of environmental law

3. In spite of its conceptual novelty, "environmental law" must be seen against the background of a long historical evolution which shows remarkably similar lines in different legal systems end which may conveniently be divided into four major stages: primary protection, use allocation, resource conservation, and ecological control. In somewhat simplified fashion, these stages may be equated to a risk-oriented, a use-oriented, a resource-oriented and a system-oriented approach to environmental regulation.

- Primary protection

4. Human societies have, from times immemorial, established certain norms of behaviour for the purpose of ensuring group survival and protection against a "hostile" environment. While the threats and emergencies for which these norms were designed originally had purely natural causes (such as floods or "dangerous"animals), social and technological development generated a need for additional protection against new environmental risks caused partly or wholly by human action and interaction with nature (such as water pollution or "dangerous" machines). Legal provisions for this purpose today cover a wide range of preventive measures for environmental hygiene and public health (e.g., food quality laws, disease control laws), warning and emergency measures to reduce potential harm (e.g., legislation on natural disasters and catastrophic accidents), remedial measures and insurance to asist and compensate potential victim (e.g., workmen's compensation for occupational hazards, agricultural insurance for farmers, etc.). The common characteristic of these norms is their defensive-protective function to preserve specific quality standards of human life against specific environmental risks.

4/ The FAO legislative collection of approximately 120,000 national laws related to the work programme of the Organization includes at least 19 specific subject categories directly related to environment protection. Selected legislative texts are translated or summarised in the FAO publication "Food and Agricultural Legislation" (20 volumes 1952-1971, in English, French and Spanish). See also FAO-Doc. DC/SP 21, Environment: Annotated Bibliography (Rome 1971).

- Use allocation

5. As man began to master nature, the function of environment-related norms changed from protection to domination. The primary role of law in the management of conquered natural resources was to assure their equitable or economically optimal allocation, use and development. Legal protection of acquired rights became an incentive for intensified use of available resources and for progressive tapping of undeveloped resources. Legal restrictions on resource use were primarily aimed at preventing frictions within the allocation system so established, mainly by protecting neighbouring users against "nuisances" or "immissions". This use-orientation is still at the core of most of our contemporary law on land, subsoil, water and air resources.

- Resource conservation

6. The accelerating pace of exploitation by competing users eventually created new economic risks of depletion for the earth's non-renewable resources, and of irreversible degradation for renewable resources. In efforts to cope with these risks, legal regulation turned to comprehensive management of threatened resources on a national and international level, with the maintenance of a safe minimum stock or maximum sustainable yield taking priority over any given right of use. Conservation of specific natural resources at an assumed minimum or optimum level thus found its expression in a body of sectoral "esourceoriented" law (for the conservation and management of soil, water, air, forest, wildlife, fisheries, genetic, etc. resources), which until recently was regarded as the essence of rational environmental management.

- Ecological control

7. There is mounting evidence, however, that in long-range perspective not even a combination of primary protection, use allocation and resource conservation is sufficient to safeguard national and international environmental integrity. In particular, sectoral resource conservation law often results in a mere transfer, rather than a solution of pollution problems, as it fails to take into account the interdependence of environmental resources in their respective natural "ecosystems". The integrated system-oriented approach adopted by some of the most recent laws for environment protection is an attempt to cope with these shortcomings, through an optimal coordination of ecosystems and "multipurpose" legal-institutional systems 5/. The aim of the legislator thus is to subject the management of all natural resources to common ecological policies and central procedures on a national scale, and to adapt existing sectoral norms and institutions accordingly.

5/ See particularly Isard W. and others, "On the Linkage of Socio-Economic and Ecological Systems", Regional Science Association Papers vol. 21 (1968) p. 79. On proposals to apply an integrated approach to environmental policy-making, see e.g.: Mayda J., Environment and Resources s From Conservation to Ecomanagement (Univ. Puerto Rico 1968, 2nd ed. forthcoming 1972); Van Dyne G. (ed.), The Ecosystem Concept in Natural Resource Management (Campbell/Calif. 1969); Caldwell L.K., "The Ecosystem as a Criterion for Public Land Policy", Natural Resources Journal vol. 10 (1970) p. 203; Lieber H., "Public Administration and Environmental Quality", Public Administration Review vol. 30 (1970) p. 277. And cf. Dale M.B., "Systems Analysis and Ecology", Ecology vol. 51 (1970) p. 12s "An ecosystem might be evaluated in turn by an administrative system, a political system and a social system which employs a judicial system to enforce its control measures."

8. While the four stages outlined above appear as successive steps in the continuous evolution of environmental law, they also are necessary interlocking components co-existing on different levels of each national system. In all regulatory systems, at least some of these components are already available at one level or another; therefore no national legislator in this respect starts from zero. Nor would it be appropriate to consider the final stage of "ecological control" as the ultimate panacea for all environmental problems. What is required in most countries today is a reassessment and reform of environmental law at all four stages and levels. The reason why the present study focuses on the fourth stage is the need for up-to-date information on this most recent type of environmental law, as compared with the more readily available material regarding the three previous stages. The purpose of this study, then, is deliberately pragmatic and descriptive. Rather than proposing hypothetical models for new legislation, it will analyze existing legal system which have already accumulated a certain amount of practical experience.

Criteria for international comparison

9. Rather than attempting a world-wide survey, three national legal systems have been selected for comparison, representing the major developed regions of the world: Sweden, Japan, and the United States of America. The three countries compared happen to have the highest per capita income within their respective regions — with both the advantages and the problems flowing from this position — and may also in other economic and technological respects be considered as reference points for regional or global projections into the future.

10. At the same time, these countries represent major contemporary families of legal systems 6/, from the Scandinavian variant of European "civil law" to the U.S. variant of Anglo-Saxon "common law", with the characteristic "mixed system" of modern Japanese law in between. The current environment protection laws of all three countries have now been in effect for an average period of two years, and there is a certain amount of recorded practical experience available. The latter factor seemed particularly important for an evaluation of "law in action" rather than "law in the books", and the emphasis, therefore, will be on techniques for the implementation of laws. It is realized, however, that evaluation of a two-years experience can at best be preliminary.

11. Since many developing countries are now in the process of drafting their own environmental laws 7/, these so-called "advanced" systems are frequently cited as examples — though often without sufficient supporting evidence as to the context and national legal background in which they operate. The present study should provide an opportunity for somewhat more critical evaluation of these claims. Comparison, it is submitted, must first of all be based on adequate factual information.

12. The relevance of the experience from these three legal systems to others, and particularly to developing countries, depends on a number of factors, some of which will briefly be analysed in the conclusions of this study. It should be clear from the start that in the field of environment protection as in other subjects, specific national solutions are rarely fit for wholesale export to other countries, and that each nation will have to develop the system of environmental law best suited to its specific circumstances, traditions, requirements and goals. All a comparative study may hope to contribute for this purpose is information to illustrate alternative approaches, and thereby to provide legislators with an "arsenal of solutions" for a common problem.

6/ E.g., see David R. and Brierly J.E., Major Legal Systems in the World Today, (New York and London, 1968).

7/ For basic information, see U.N. Conference on the Human Environment, Handbook on National Environment Law and Institutions (Winter E.F. ed. 1972); and of. vol. 20 (1971) of the FAO "Food and Agricultural Legislation", which contains environmental legislation from Chile, Colombia, Ecuador, Honduras and Mexico.

CHAPTER I : SWEDEN

Basic laws and institutions

13. The "Nature Conservancy Act" (Naturvårdslag) and Ordinance of 11 December 1964 8/ laid down national policy guidelines and procedural principles for the protection and conservation of the natural environment. It regulates the legal protection of areas which are of value from the cultural or scientific points of view or are important for outdoor recreation. The Act contains provisions relating to national parks, nature reserves, natural monuments, the protection of plants and animals, protection of the shore and the landscape. In order to ensure free public access to bathing and recreational facilities at the seaside, lakes and rivers, beach protection areas extending up to 300 meters from the shoreline may be designated, within which no building works may be undertaken without licence (Section 16). A licence also is required for economic activities affecting the landscape, such as stone-quarrying (Section 18) or the setting up of permanent outdoor advertisements (Section 22). Landowners whose right to use their land is restricted to a significant extent pursuant to the Act are entitled to compensation in accordance with the legal rules on expropriation (Sections 25-36).

14. Administrative implementation of the Act, including the licence procedure, was originally delegated to the county administrations (länsstyrelsen). Following the recommendations of a Royal Commission on Natural Resources (1964-1967), however, a national "Nature Conservancy Agency" (naturvårdsverk) attached to the Ministry of Agriculture was set up by decree of 25 May 1967 9/ as the central regulatory agency for nature conservation including water and air conservation, outdoor recreation, wildlife and hunting. In 1968, a "Council on Environment Conservation" (miljövårdsberedning, also referred to as "Environmental Advisory Committee") was established for policy-planning and coordination, composed of 24 members (including scientists and representatives of labour, industry, finance, local authorities and the press) and chaired by the Minister of Agriculture 10/.

8/ Svensk Författningssamling (SFS) (1964) No. 822, as amended in SFS (1967) No. 377, (1969) No. 395, (1970) No. 891, (1971) Nos. 542 and 636; Ordinance SFS (1964) No. 825, as amended in SFS (1967) No. 387, (1970) No. 898, (1971) No. 370. English summary in Sweden's National Report to the United Nations on the Human Environment (Stockholm, Royal Ministry for Foreign Affairs and Royal Ministry of Agriculture 1971) p. 57; see also Barde J.P. and Garnier C., L'environnement sans frontières: la Suède en question (Paris 1971). Note that the first Swedish Nature Conservancy Act dates back to 1909. For a convenient collection of current texts see Florén, G., Miljöskyddslagen (Stockholm 1969) p. 200, with Supplement (1971) p. 33.

9/ Instruktion för Statens Naturvårdsverk, SFS (1967) No. 444, as amended in SFS (1968), No. 366, (1969) No. 390; see Florén, op. cit. supra (note 8) p. 214, and note 12 infra.

10/ The leading role of the Ministry of Agriculture originally grew out of the Ministry's concern over fish poisonings from mercury compounds used as fungicides in Sweden's pulp and paper industry until 1965; see Greenberg D.S., "Pollution Control: Sweden Sets Up and Ambitious New Programme", Science vol. 166, No. 3902 (10 October 1969) p. 201; of. Barde and Garnier, op. cit. supra (note 8) p. 56.

15. The "Environment Protection Act" (Miljöskyddslag) and the "Environment Protection Ordinance" of 29 May 1969 11/ further consolidated the existing laws and provided new comprehensive legislation against water pollution, air pollution, noise and other nuisances from real property. The Act introduces a general licensing requirement for all activities which are potentially harmful to the environment, and related rules on strict liability for pollution, administrative supervision, penalties, etc. The existing Nature Conservancy Agency was designated as executive agency for the new legislation; its regulatory powers were extended accordingly, and additional functions of environmental research conferred on it 12/. The licensing procedure of the new Act is supervised by an independent quasi-judicial body, the "franchise Board (koncessionsnämnd) for Environment Protection"established by decree of 13 June 1969 13/. The board is composed of four members, including an experienced judge as chairman, a technical expert, an expert on nature conservation, and a member with experience in industry or local government; biological, medical or other experts may be co-opted in certain cases.

16. The present Nature Conservancy Agency (now frequently referred to as "Environment Protection Board", and headed by a Director-General), which started out with a staff of 130 in 1967 rising to approximately 350 in 1971, consists of a Planning Secretariat, a Research Laboratory and four major Bureaus: I. Administration (General Affairs, Accounting, Personnel, Legal Affairs), II. Nature Conservancy (Conservation, Outdoor Recreation, Landscape, Hunting and Wildlife), III. Water Conservation (Planning, Industrial Affairs, Municipal Affairs, Purification Technology), IV. Air Conservation (Industrial Affairs, Municipal Affairs, Noise). It is supported by three advisory bodies (the Nature Conservancy Council, the Water Conservation Council, and the Air Conservation Council), a Land Acquisition Delegation (for land expropriation and compensation matters) and a Research Council and Secretariat 14/.

17. Besides the research carried out under the auspices of the Nature Conservancy Agency and its Research Council (which administers over 50 per cent of the research grants on environment protection) 15/, other central research institutions remain active in this area, including: the Ecological Committee of the National Scientific Research Council, the National Institute of Public Health (for pesticide residues in food, and for health effects of air pollution), the National Museum of Natural History (for the effects of biocides on wildlife), the "Motor Vehcile Exhaust Laboratory" (together with a special expert panel set up by the Ministry of Communications), the National Defence Research Institute (for remote sensing of air and water pollution), and the Swedish Meteorological and Hydrological Institute (for precipitation and runoff monitoring) 16/.

11/ SFS (1969) Nos. 387 and 388; Sveriges Rikes Lag (91st ed. 1970) B 1576 as amended in SFS (1970) No. 898, (1971) Nos 370 and 643; see Florén op. cit. supra (note 8) p. 7, Supplement p. 55. See Annex No. 1 infra pp. 37-46 for English translation of the Act; and WHO, International Digest of Health Legislation vol. 21 (1971) PP. 180-188, for English translation of the Ordinance.

12/ Amendment of the decree cited supra (note 9), SFS (1970) No. 897; Florén, op.cit.supra (note 8) Supplement p. 35.

13/ Instruktion för koncessionsnämnden för miljöskydd of 13 June 1969, SFS (1969) No. 389 as amended in SFA (1970) No. 827; Florén op. cit. supra (note 8) p. 72.

14/ For a detailed organizational chart see the Report by Olsson G.W., "Protection of Environment in Sweden" (Stockholm, National Environment Protection Board, 1969); see also Lundquist L., Miljövardsförvaltning och politiske struktur (Lund 1971).

15/ Figures in: Problems Relating to the Environment, Swedish Country Monograph for the 1971 ECE Conference in Prague (1971) pp. 11, 14; see also Barde and Garnier, op. cit. supra (note 8) pp. 103-109.

16/ Swedish National Report (supra note 8) pp. 47, 62-64.

18. At the regional level, there are nature conservancy offices, assisted by advisory nature conservancy councils, in each of the 24 counties (län), which retain important regulatory responsibilities for environment protection under the Nature Conservancy Act (Section 2) in accordance with the principles of administrative decentralization and self-government in Sweden 17/ , further delineated in the Environment Protection Act and Ordinance 18/. At the level of the local municipalities (numbering approximately 450, most of which have appointed a "nature conservancy deputy"), matters of environmental protection are dealt with by building boards, public health boards, and to some extent by cooperative councils of municipal blocks; in the special case of the Stockholm Metropolitan Region (which includes the capital city and 28 suburban municipalities), environmental responsibilities were transferred to the county administration in 1971 19/. Following the creation of a new Ministry of Physical Planning and Local Government (civildepartment) on 1 July 1969, preparations are under way for an integration of environmental policies and general land-use planning, both on the national level (a first draft physical plan covering the entire national territory was presented in 1971) and on the regional and local levels (in coordination with Regional Planning Associations) 20/. The National Board of Urban Planning attached to the Ministry already performs important environmental protection functions in this area through research on land-use planning and through guidelines to municipal authorities on construction standards under current zoning and urban planning legislation 21/. In addition, the Labour Market Board allocates and finances certain public work projects including landscape-conservation measures, in concert with the Nature Conservancy Agency 22/.

19. An example of government-industry cooperation for environment protection is the "Institute for Research on Air and Water Pollution" (IVL, founded in 1965), which is financed jointly by government and industry grants, and provides consultant services through its laboratory (IVLAB) 23/. The National Board for Technical Development (founded in 1968) supports applied research on environmental monitoring and protection (including the development of new engines and waste treatment processes) 24/, and the Swedish Development Corporation (SUAB, also founded in 1968) directly engages in the pilot development,

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17/ See Sundberg H.G.F., Kommunalrätt (Stokholm 1964) P. 323; Swedish Institute for Cultural Relations with Foreign Countries, "Local Government in Sweden" (1968); Sandalow T., "Local Government in Sweden", American Journal of Comparative Law vol. 19 (1971) PP. 766-785.

18/ Supra note 11: Sections 17, 38 of the Act, and Sections 12, 24-30 of the Ordinance.

19/ Sandalow, op. cit. supra (note 17) at p. 774; cf. Calmfors, Rabinovitz and Alesch, "Urban Government for Greater Stockholm" (1968); Anton "Incrementalism in Utopia: The Political Integration of Metropolitan Stockholm", Urban Affairs Quarterly vol. 5, (1969) p., 59; Calmfors H. "New Government Structure for the Greater Stockholm Region", Studies in Comparative Local Government vol. 4 (1970) pp. 2, 15-26.

20/ See the Swedish Country Monograph (supra note 15) pp. 7-11; Barde and Garnier, op. cit. supra (note 8) p. 266.

21/ The Building Act of 1947, SFS (1947) No. 385, as amended in SFS (1949) No. 666, (1955) No. 316, (1959) No. 611, (1964) No. 824, (1965 No. 718, (1967 No. 327; and the Building Regulations of 1959, SFS (1959) No. 612, as amended in SFS (1962) No. 264, (1964) No. 82, (1966) No. 175, (1967) No. 328. For a summary see Olsson, op. cit. supra (note 14) pp'. 6-7.

22/ Olsson, ibidem p. 11.

23/ See Jamison A., "How Sweden Tackles Pollution", New Scientist and Science Journal vol. 49 No. 737 (4 February 1971) p. 236; Barde and Garnier, op. cit. supra (note 8) pp. 69, 107-109.

24/ Swedish National Report (supra note 8) p. 63, and Swedish Country Monograph (supra note 15) p. 12.

manufacturing and marketing of new anti-pollution products, methods and systems 25/. The Corporation was instrumental in the creation of two new "mixed" share-holding companies (SUAB being the principal share-holder, together with the Association of Municipal Authorities and the Co-operative Union and Wholesale Association), which were formed in anticipation of the compulsory public cleansing monopoly introduced by the Municipal Cleansing Act of 1970 26/: SAKAB for chemical waste disposal and recycling, and INTERKAB for municipal waste treatment 27/. Finally, under the 1969 Ordinance on Government Grants to Industry for Water and Air Conservation Measures 28/, a unique cost-sharing programme was introduced which subsidizes up to 25 percent of industrial investments for anti-pollution installations over an initial period of five years 29/.

Sectoral regulation

20. Pursuant to its general or residual competence, the Nature Conservancy Agency also is responsible for coordination in several sectors of environmental protection where specialized laws and institutions exist. These sectors include water and air management, nature and culture conservation, environmentally dangerous substances, public health and waste treatment.

21. Water and air management: Existing legislation includes the Water Act of 1918 as amended to 1971 30/, the Public Waterworks and Sewerage Act of 1955, as amended in 1970 31/, the Act and Ordinance on Measures Against Water Pollution from Ships of 1956 and 1958 32/, the Ordinance on Limitation of the Sulphur-Content in Fuel Oil of 1968 33/, the Road Traffic Statute of 1951 34/, the Ordinance on the Limitation of Air Pollution from Motor Vehicles of 1968 35/, and the Act on the Prohibition of Waste Dumping in Water 36/. The pertinent

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25/ See Olsson, op. cit. supra (note 14) p. 14; and of. generally Reuss H.S., "Saving the Environment: The Swedish Way", Columbian Journal of World Business vol. 5 (1970) pp. 15-22.

26/ SFS (1970) No. 892, Section 4 (effective 1 January 1972); see Florén op. cit. supra (note 8) Supplement pp. 28-32; and see generally Davies A.W., "Environmental Protection in Sweden", Effluent and Water Treatment Journal vol. 11 (1971) pp. 316-319.

27/ Swedish National Report (supra note 8) p. 60.

28/ SFS (1969) No. 356, as amended in SFS (1971) No. 373.

29/ Figures in Ekholm I., "Environment in Sweden", American Forests vol. 77 No. 1 (January 1971) p. 49; and cf. Leijonhufvud C., Cooperation Between Government and Industry: Report to the OECD Water Management Research Group (Stockholm 1969) p. 14.

30/ SFS (1918) No. 523, with numerous amendments up to SFS (1971) No. 567; relevant provisions reprinted and annotated in Florén, op. cit. supra (note 8) pp. 160-184. A new water law is currently in preparation.

31/ SFS (1955) No. 314 and (1970) No. 244, (1971) No. 645; Florén op. cit. supra pp. 185-197, and Supplement pp. 5-27.

32/ SFS (1956) No. 86, as amended in SFS (1963) No. 187, (1967) No. 653, (1968) No. 116; SFS (1958) No. 191, as amended in SFS (1967) No. 126, (1970) No. 521.

33/ SFS (1968) No. 551.

34/ SFS (1951) No. 648, with numerous amendments.

35/ SFS (1968) No. 728, as amended in SFS (1969) No. 429, (1970) No. 214.

36/ SFS (1971) No. 1154.

regulatory institutions are the Water Court 37/, the National Board of Shipping and Navigation (for oil pollution and residues in ports), the Board of Customs and its coastguard service (for oil pollution control at sea and in coastal waters) and the National Road Safety Board (attached to the Ministry of Communications, for air pollution from motor vehicles).

22. Conservation of natural and cultural assets: Besides the Nature Conservancy Act and Ordinance of 1964, there is the Hunting Act and Regulations of 1938 as amended to 1971 38/, the Forest Management Act of 1948 as amended to 1970 39/, the Fishing Act, Fishing Pro-tection Areas Act and Fisheries Regulations of 195O and 1954 as amended in 1971 40/, the Ordinance on Local Regulations for Wildlife Protection of 1965 41/, the Land Maintenance Act and Ordinance of 1969 as amended in 1971 42/, certain provisions of the Road and Highways Ordinance of 1943 as amended 43/, and the Act on Archaeological Sites and Monuments of 1942 as amended in 1967 44/. The pertinent regulatory institutions are the National forestry Service (under the Crown Land and Forestry Board), the Private Forestry Board, the Agricultural Board, the Fisheries Board, the National Plant Protection Institute (all attached to the Ministry of Agriculture), the National Road Administration (attached to the Ministry of Communications), the National Land Survey Board (for the evaluation of land set aside for protection) and the Central Office of National Antiquities (attached to the Ministry of Education).

23. Environmentally dangerous substances: The National Radiological Protection Institute is the competent authority for radiation protection matters and for the licensing of radio-active emissions under special legislation, particularly the Radiation Protection Act of 1958 45/. The Poisons and Pesticides Board, in cooperation with other specialized bodies such as the Board of Trade (for food standards) and the National Veterinary Board (for residues in feedstuffs), regulates the registration and use of pesticides under the Pesticides Ordinance of 1962 46/ (including, e.g. general or temporary prohibitions of DDT, aldrin and dieldrin47/), and of other dangerous substances under the Poisons Ordinance of 1962 (e.g., regulations limiting the lead content of motor fuels, effective 1 January 1970 48/). Following the establishment of a national Committee of Inquiry on Dangerous Substances and Products in 1969, special legislation was enacted for the registration of polychlorinated biphenyls (PCB's) on 18 June 1971 49/.

37/ Statutes in SFS (1969) No. 306, as amended in SFS (1970) No. 533. Note that most of the functions of the court regarding water quality control have been transferred to the Nature Conservancy Agency, thereby facilitating particularly questions of standing to sue.

38/ SFS (1938) Nos. 274 and 279, as amended up to SFS (1971) Nos. 446 and 566.

39/ SFS (1948) No. 239, as amended in SFS (1952) No. 168, (1960) No. 266, (1970) No. 454.

40/ SFS (1950) Nos. 130 and 596 and (1954) No. 607, as amended up to SFS (1971) Nos. 564 and 565.

41/ SFS (1965) No. 67, as amended in SFS (1967) No. 388, (1969) No. 114.

42/ SFS (1969) Nos. 698 - 700, (1971) No. 644.

43/ SFS (1943) No. 437, as amended in SFS (1970) No. 893.

44/ SFS (1942) No. 350, as amended in SFS (1967) No. 77.

45/ Swedish National Report, op, cit. supra (note 8), p. 59; of. Florén, op. cit. supra (note 8) p. 146.

46/ SFS (1962) No. 703, effective since 1964, SFS (1964) Nos. 3, 227$ and cf. the Food Regulations of 21 December 1951, SFS (1951) No. 824, as amended.

47/ Issued on 27 March 1969; see the Swedish National Report, op.cit. supra (note 8), pp.33,42.

48/ Ibidem p. 45 (issued on 28 January 1969).

49/ SFS (1971) No. 385.

24. Sanitation and waste problems: The Health and Welfare Board, and for the working environment the Industrial Safety Board (both attached to the Ministry of Health and Welfare), deal with pollution and noise in cases affecting human health, in coordination with the public health boards of the municipalities under the Public Health Regulations of 1958 50/, the Ordinance on Government Grants for Sewage Treatment Plants of 1968 (30 - 50 per cent subsidies) 51/, and the Municipal Cleansing Act of 1970 52/. Protection against noise partly remains a municipal resonsibility, with a large body of case law available 53/, although some national legislation exists, e.g., for aircraft noise under the Aviation Ordinance of 1961 54/.

Legal methods of implementation

25. The Swedish system of integrated environment protection must be seen in the larger context of the Swedish legal system as a whole, which may be characterized as predominantly continental-European 55/, although much of Scandinavia's judicial tradition is equally close to the Anglo-Saxon "style" 56/. Not surprisingly, therefore, the new environment protection legislation was preceded by careful comparative studies of pertinent European and Anglo-American law 57/. There are however, distinctive features which set the Swedish system of law and government apart from other systems 58/ and which are particularly significant for the implementation of environment protection. These features relate to environmental rights and responsibilities, and to licence proceedings and remedies.

- Environmental rights and responsibilities

26. As distinct from comparable legal systems where real property rights are virtually exclusive and confer on the owner strong legal defences against trespassers, Swedish law has for centuries recognized a general right of common access and use (allemansrätt) regardless of ownership, for all natural areas in the country; i.e., land, forests, water-courses and beaches, as distinct from cultivated fields, gardens or parks. This customary (unwritten) right, which effectively limits private property rights in the general interest 59/ implies that anyone may move unhindered in the countryside, pass or stay on someone else's land, pick wild plants and fruits there and use any lake or watercourse for bathing or boating, provided that be does not cause damage or interfere with the owner's privacy 60/.

50/ SFS (1958) No. 663, as amended up to SFS (1970) No. 896; see annotated text with references to court decisions and legal literature in Florén, op. cit. supra (note 8) pp. 75-159, and Supplement pp. 36-37.

51/ SFS 1968 No. 308; for 1970 amendments see Florén, op.cit. supra (note 8) Supplement p. 56.

52/ SFS 1970 Nos. 892 and 894, supra (note 26); see also the Ordinance on Public Order, SFS (1956) No. 617 as amended in SFS (1970) No. 895.

53/ See Florén, op. cit. supra pp. 40, 148-150; and the report of the Swedish Ministry of Justice: Luftförorening, bul1er och andra immissioner (Stockholm 1966).

54/ SFS (1961) No. 558, as amended. The Swedish Government has announced its intention to ban supersonic air traffic over its territory; Report cited supra (note 8) p. 46.

55/ See Sundberg J.W.F., "Civil Law, Common Law and the Scandinavians", Scandinavian Studies in Law vol. 13 (1969) PP. 181-205; Gomard B., "Civil Law, Common Law and Scandinavian Law", ibidem vol. 5 (1961) p. 27.

56/ See Wetter G., Styles of Appelate Judicial Opinions (Leyden 1960).

57/ E.g., the study by Ulveson I. in the report cited above (note 53) pp. 453-477, which covers Germany, France, Switzerland, England, Norway, Finland, Denmark and the United States.

58/ See generally Andrén N., Modern Swedish Government (2nd ed. Stockholm 1968).

59/ See Malmström Å., Civilrättt (4th ed. Lund 1971) p. 176.

60/ Olsson, op. cit. supra (note 14); Swedish National Report (supra note 8) p. 57.

27. Along with this right, however, Swedish citizens traditionally share a sense of common responsibility for the natural environment which foreigners have described as almost mystical 61/ and which in recent years has been strengthened further by an effective programme of public education and information carried out on all levels by the Ministry of Education in cooperation with business and private groups, particularly the Society for Nature Protection (founded in 1909) with its approximately 150 local associations 62/. In addition to the general affirmation of this civic responsibility in the Nature Conservancy Act (Section 1), and to the specific criminal sanctions for littering (Section 23) and for damage to wild plants under the Penal Code of 1962 (Chapter 12), the 1970 amendments of the Nature Conservancy Act now provide a general clean-up obligation for everybody who causes outdoor litter 63/.

28. The principle of strict civil responsibility (i.e., delictual liability not requiring proof of individual fault or negligence) has long been established by judicial precedents 64/, following a Supreme Court decision in 1911 which concerned the emission of noxious odours 65/. Section 30 of the Environment Protection Act of 1969 confirmed this principle, though mitigated by the consideration of local circumstances 66/. It should be emphasized that the operation of civil sanctions for pollution is limited in practice to property damages at the neighbourhood level; personal damages rarely are an issue for litigation because of the remedies generally available under the Swedish social security system 67/.

- Licence proceedings and remedies

26. As a technique of economic regulation, the national emission standards set by the Nature Conservancy Agency serve as guidelines for industry, to induce preventive compliance either on a "best-practicable means" basis (i.e., by reference to currently available antipollution technology) or in certain cases following a time-schedule of progressively stricter requirements (thus forcing industry to develop more advanced environmental technology) 68/. From a legal point of view, however, these standards are not binding per se, but derive compulsory force only if imposed as specific conditions in each individual licensing or exemption procedure under the Environment Protection Act 69/. The advantage of this method is its flexibility, and the possibility to differentiate according to circumstances and industries.

61/ See Jamison, op. cit. supra (note 23) p. 234; for a vivid illustration of this popular attitude see Edberg R., Spillran av ett moln (Stockholm 1966), English translation: On the Shred of a Cloud (Alabama 1969).

62/ See Greenberg, op. cit. supra (note 10) and the Swedish National Report (supra note 8) pp. 64-65; cf. Barde and Garnier, op. cit. supra (note 8) pp. 112-124.

63/ Sections 23-24 as amended in SFS (1970) 891; see Florén, op. cit. supra (note 8) Supplement p. 28.

64/ Although Swedish law has been codified since 1734, with subsequent sectoral codes (balk) for specific areas of civil, procedural and criminal law, the codification remains fragmentary and gaps are progressively filled by judicial decisions. See Eek H., "Evolution et structure du droit Scandinave", Revue hellénique de droit international vol. 14 (1961) p. 38.

65/ Nytt Juridisk Arkiv (1911) p. 574; cf. Hellner J. "Développement et rôle de la responsabilité civile délictuelle dans les pays Scandinaves", Revue internationale de droit comparé vol. 19 (1967) p. 787.

66/ For detailed analysis see Plorén, op. cit. supra (note 8) pp. 37-41.

67/ See Hellner, op. cit. supra (note 65) p. 805.

68/ Swedish National Report (supra note 8) pp. 43-44, as regards air pollution standards.

69/ Ibidem p. 43.

27. As a regulatory technique, the licence (tillstand) requirement for environmentally dangerous activities, is not an innovation. It already existed under the Nature Conservancy Act 70/, and is widely used in Swedish administrative law to control various other economic activities, sometimes in the more specific form of a concession (koncession) for particular types of land or water use 71/. In actual practice, however, the bulk of environmental decision-making tends to shift from the formal licensing procedure (before the Franchise Board) to the exemption procedure (dispens) before the Nature Conservancy Agency or the County Administration, under Sections 10(2) and 17(2) of the Environment Protection Act. This has resulted in the creation of a new legal unit within the Nature Conservancy Agency: the dispensenhet, staffed by judicial experts and attached to the Administration Bureau. The exemption procedure is more expeditious, also provides for conditions but grants less permanent legal rights to the applicant than a licence 72/. In view of the alternative availability of the licence procedure, decisions of the Mature Conservancy Agency or the County Administration granting or revoking an exemption are not subject to appeal 73/.

28. As a central administrative board (centrala ämbetsverk). the Nature Conservancy Agency — not withstanding its formal subordination to the Ministry of Agriculture — enjoys a considerable degree of independence 74/. Contrary to constitutional practice in certain other countries, its. regulatory action is not subject to judicial review by the ordinary courts. Even the exceptional right of the Parliamentary Commissioner for the Judiciary (justitieombudsman) to bring penal actions against public officials when they have committed grave faults or when administrative practice imperils the general rights of the citizens (under Article 96 of the Swedish Constitution of 1809) 75/, cannot result in an administrative act being quashed 76/. There are, however, other safeguards for individual rights, which reflect long-standing legal traditions 77/.

70/ Supra note 8 and accompanying text; see also Blum M.E., Land schaftsschutzrecht im westlichen Europa (Munich 1969) pp. 147-148.

71/ Sundberg, op. cit. supra (note 17) p. 370; exceptionally, the term is also used for insurance "concessions".

72/ Contrary to the legal protection of licence-holders under Sections 22-29 of the Act (in principle for a 10 years period, subject to specified exceptions) a decision to grant an exemption may be revoked freely; see Barde and Garnier, op. cit. supra (note 8) p. 54. For an illustrative survey of exemption cases decided by the Agency, see Florén, op. cit. supra (note 8) Supplement pp. 39-45; and for a detailed outline of the dispens procedure ibidem pp. 47-52.

73/ Section 48 paragraph 1, as amended in SFS (1971) No. 643.

74/ See generally Herlitz N., Elements of Nordic Public Law (Stockholm 1969); and Arena F.G., L'esperienza delle agenzie nel sistema amministrativo svedese (Rome University thesis 1970).

75/ See Gellhorn W., "The Swedish Justitie-Ombudsman", Yale Law Journal vol. 75 (1965) p. 1; Haller W., Der schwedische Justizombudsman (Zurich 1964)5 Blix H., "Pattern of Effective Protection: The Ombudsman", Howard Law Journal vol. 11 (1965) p. 386; Bexelius A., "The Swedish Ombudsman", University of Toronto Law Journal vol. 17 (1967) p. 170.

76/ See Herlitz N., "Swedish Administrative Law", International and Comparative Law Quarterly vol. 2 (1953) p. 230.

77/ Pleas for these safeguards came from the legal profession during the drafting of the new environment law; see Waldenström C, "Bättre miljöskyddt sämre rättsskydd", Tidskrift för Sveriges Advokatsamfund vol. 35 (1969) P. 213, and cf. Ragnemalm H. and Walberg S., "Några besvärsrättsfrågor inom miljörätten", Förvaltningsrättslig Tidskrift vol. 34 (1971) p. 104.

29. Swedish law, as codified in the new Administration Act and Administrative Procedure Act of 1971 78/, provides a general right of administrative appeal (besvär) either to specialized administrative tribunals (i.e. for the purposes of the Environment Protection Act, the kaamerrtttt 79/) or to "the King in Council", which in practice means the highest competent department of the government (i.e. for the purposes of the Environment Protection Act, the Minister of Agriculture) 80/. Furthermore, cases involving compensation for public restrictions of private land use under Section 33 of the Environment Protection Act are referred to the land courts (fastighetsdomstol, pursuant to the Land Court Act of 20 May 1969) 81/ for decision in accordance with the Expropriation Act of 1917 82/.

30. Unlike comparable institutions in other European countries, the administrative appellate instances — sometimes described as a hybrid between judiciary and executive 83/— do not consider merely the legality of administrative acts, but can actually substitute their own substantive decision for the prior decisions of regulatory agencies 84/. In three major reported appeals against decisions of the Franchise Board for Environment Protection, — two of which were instituted by the Mature Conservancy Agency itself, as "public interest appellant" under Section 48(4) of the Environment Protection Act —the Minister of Agri-: culture as the authority of last instance thus modified the Board's decision 85/. On the whole, the comparatively small number of appeals to date would seem to confirm the general observation that the Swedish regulatory system, with its built-in-procedural safeguards, tends to obviate rather than to generate litigation 86/.

78/ Förvaltningslag of 4 June 1971, SFS (1971) No. 290. For illustrations see Herlitz N., "Swedish Administrative Law: Some Charaoteriatio Features", Scandinavian Studies in Law vol. 3 (1959) PP. 87-124.

79/ Section 48 paragraph 2 (effective 1 January 1972), as amended in SFS (1971) No. 643. The decision of the kammerrätt in this respect is final; the position of the Supreme Administrative Court (regeringsrätt. founded in 1909) is not comparable to the unified hierarchy of administrative courts in other European countries. See Herlitz N., "Legal Remedies in Nordic Administrative Law", American Journal of Comparative Law vol. 15 (1967) p. 698.

80/ See Herlitz, op. cit. supra (note 78) p. 126.

81/ SFS (1969) No. 246.

82/ SFS (1917) No. 189, with numerous amendments, particularly SFS (1964) No. 823. A new Expropriation Act is currently under preparation.

83/ Forstmann M.D., "Der Rechtsschutz im schwedischen Verwaltungsverfahren", Verwaltungsar-chiv (1971) p. 313; see also Herlitz, op. cit supra (note 76) p. 227 and op. cit: supra (note 78) p. 105.

84/ Herlitz, ibidem. The situation is somewhat different for appeals against municipal authorities; see Sandalow, op. cit. supra (note 17) p. 779.

85/ See Plorén, op. cit. supra (note 8) Supplement pp. 38-39, for a detailed account of the case involving the Esseli yeast factory at Rotebro.

86/ See Strömholm S.,"'Public' Rule-Making and 'Private': The Swedish Experience", Scandinavian Studies in Law vol. 15 (1971) P. 256, citing Hellner.

CHAPTER II : JAPAN

Basic laws and institutions

31. The "Basic Act for Environmental Pollution Control" (Kogai Taisaku Kihon-ho) of 3 July 1967 ,87/, following the comprehensive policy recommendations of the "Kogai Commission Report" of 7 October 1966 88/, defined the responsibilities of the national government, local authorities, industrial enterprises and individual citizens for the prevention and abatement of pollution. It provided for the setting of national environmental quality standards, specific implementation and planning measures on the national, regional and local level. In the course of the parliamentary drafting process, however, compromise clauses were initially inserted to harmonize environment protection "with sound economic development"89/, whereas the principles of primary health protection, enterprise liability and administrative coordination were relegated to supplementary resolutions 90/.

32. The Act established an inter-ministerial "Conference on Environmental Pollution Control" under the chairmanship of the Prime Minister and an advisory "National Council for Environmental Pollution Control", both of which were to be serviced administratively by the Environmental Hygiene Bureau in the Ministry of Health and Welfare 9l/. Important policy-making functions remained, however, with the "Commission on the Living Environment" (in the Economic Planning Agency), the "Environmental Pollution Panel" of the Commission on Industrial Structure (in the Ministry of International Trade and Industry), and several other ministerial agencies (especially in the Ministry of Construction, and in the Ministry of Agriculture and Forestry) 92/. In July 1970, a "Headquarters for Environmental Pollution Control" was established under the direct jurisdiction of the Cabinet to coordinate these activities 93/.

87/ Act No. 132 of 1967; for an English translation of the original text see Tsuru S., "Environmental Pollution Control in Japan", Proceedings of International Symposium on Environmental Disruption (Tokyo 1970), Appendix pp.342-348.

88/ After prior proposals for new legislation by the Japanese Bar Association in 1964, an expert commission on environmental pollution had been appointed by the government in 1965; see Tsuru (op. cit. supra) p. 337.

89/ Article I para. 2, and Article 9 para. 2 of the Act, reflecting similar "saving clauses' contained in earlier legislation for Air Pollution Control and Noise Control (Acts Nos. 97 and 98 of 1968); cf. Japan Annual of Law and Politics, No. 18 (1970), p. 8, and Tomishima T. and Oguri T., "The Basic Act for Environmental Pollution Control and its 'Harmony' Clause". Horitsu Jiho vol. 43 (1971) p. 162.

90/ Tsuru, op. cit. supra (note 87) p. 338.

91/ Articles 26(7), 28(4).

92/ See the chart describing the distribution of administrative responsibilities among the various ministries concerned, in : US-Japan Conference on Environmental Pollution (Tokyo 1970) pp. 13-16, reproduced in "Problems of the Human Environment in Japan": National Report Submitted by the Government of Japan to the United Nations Conference on the Human Environment (31 March 1971), Annex II.

93/ US-Japan Conference (supra note 92) pp. 36,38. For criticism of the previous lack of coordination see Watanabe S., "Public Administration and Finance Relating to Pollution", Horitsu Jiho vol. 41 No. 11 (1969) p. 13; and Kaino M., "Administrative Methods for Pollution Prevention", ibidem p. 28.

33. After initial enactments of air and water pollution standards (by Cabinet decision in 1969-1970 94/) and further implementing legislation (the Special Act on Relief for Victims of Environmental Pollution in December 1969, and the Act on Environmental Dispute Settlement in June 1970 95/), a special parliamentary session on 25 December 1970 passed a" "package" of 14 legislative texts and amendments on environment protection 96/. Among the most important changes in the 1967 Basic Act were the elimination of the "sound economic development" compromise clauses (Articles 1 para. 2 and 9 para. 2), the confirmation of a waste disposal duty for industry (Article 3 para. 1), the addition of soil pollution and nature conservation matters (Articles 2 para. 1 and 17 para. 2), the transfer of administrative service functions for Conference and Council to the Prime Minister's Office (Articles 26 para. 7 and 28 para. 4), and the creation of regional environmental councils on the prefecture level (Article 29) 97/.

34. Pursuant to the "Act for the Establishment of an Environment Agency" of 24 May 197.1, the former pollution Control Headquarters was dissolved in June 1971 and a National Environment Agency (kankyo-cho) set up on .1 July 1971 98/. According to Article 3 of the Act "the Environment Agency shall have primary responsibility for promoting the overall administration concerning environmental protection in order to contribute towards ensuring to the people a healthy and civilized life, by promoting pollution control and protection including the conservation and management of the natural environment". The new Agency has a staff of over 500, including the 283-men staff of the former Environmental Hygiene Bureau from the Ministry of Health and Welfare, and 60 officials transferred from the Ministry of Agriculture and Forestry. It is headed by a Director-General (Minister of State for Environment Affairs) with two Vice-Ministers, and consists of a Secretariat (Legal Counsel, Administration, General Affairs and International Liaison, Accounting) and four Bureaus: I. Planning and Coordination (Pollution Control Programmes, Environmental Hygiene, Research Coordination and Environmental Information Center), II. Nature Conservation (Planning, Natural Parks, Recreation facilities, Wildlife Protection), III. Water Quality Conservation (Planning, Water Quality Control, Soil and Agricultural Chemicals) 99/, IV. Air Quality Conservation (Planning, Air Pollution Control, Noise and Odour Control, Automotive Pollution Control). It is supported by four advisory bodies (Central Council for Environmental Pollution Control, Council on Natural Parks, Central Council on Wildlife, Central Council on Water Pollution), and is to supervise a Training Institute for Environmental Pollution Control (to be created by March 1973) and a.National Research Institute on Environmental Pollution (to be created by March 1974) 100/.

94/ US-Japan Conference (supra note 92) p. 21 (starting with emission standards for sulphur oxide on 12 February 1969). See generally Hashimoto M., "Law and Administration Concerning Environmental Standards", Jurisuto No. 408 (15 October 1968) p. 37. For an outline of the current standards system see the government report cited infra (note 96) p. 112.

95/ Infra notes 167 to 175 and accompanying text.

96/ 64th Extraordinary Session of the National Diet; for English summaries of the new laws see "The Situation of the Environmental Pollution in Japan and the Countermeasures Thereof": Second US-Japan Conference on Environmental Pollution (Tokyo 1971) P. 26.

97/ See the English translation of the revised Act, in the National Report (supra note 92) Annex I, reproduced infra p. 47; cf. Kanazawa Y., "Concept and Scope of the Basic Act on Pollution Control", Jurisuto No. 471 (1 February 1971) P. 34.

98/ Ministry of Foreign Affairs Information Bulletin vol. 18 No. 12 (1 August 1971) p.1.

99/ For a detailed organizational chart, see Hashimoto Y. "The Environment Agency Organization and its Role in the Agricultural Chemical Control Administration", Japan Pesticide Information No. 9 (October 1971), P. 33 for an English summary of the Act, see 2nd US-Japan Conference (supra note 96) p. 70.

100/ Information Bulletin (supra note 98) p.1. On current research in several national institutions, in the Science and Technology Agency (attached to the Ministry of International Trade and Industry) and in the Ministry of Agriculture and forestry, see 2nd US-Japan Conference (supra note 96) p. 87; on national monitoring systems ibidem p. 131.

35. Environmental control by local government authorities in Japan 101/ has regularly preceded national regulation, starting with the pollution ordinances of the Tokyo Metropo-litan Government in 1949, the Kanagawa prefecture and Yokohama municipality in 1951, the Osaka and Fukuoka prefectures in 1956. By 1970, all but three of the 46 prefectures, and approximately 70 municipalities, had enacted such ordinances 102/, best known among which is the current 1969 Tokyo Ordinance 103/. On 25 August 1970, the Conference on Environmental Pollution Control laid down guidelines to delineate the respective responsibilities of local and national institutions 104/. The creation of environmental divisions in the prefectural and municipal administration has been promoted, in addition to the advisory councils established under Article 29 of the Basic Act 105/.

36. Also pursuant to the Act, regional pollution control plans have been drawn up for designated areas. Environmental policies already play an important role in current land use planning legislation at the national, regional and local level. The Urban Planning Act of 1968 106/, in connection with the Act on Agricultural Development Areas of 1969 107/, strikes a balance between urban and rural land uses, by way of zoning restrictions (including nature conservation districts), land development permits for designated areas, and through special advisory boards at the national and prefectural level 108/.

37. Government-industry cooperation for pollution control began with the Act of 1 June 1965 establishing the Pollution Prevention Corporation 109/, which allocates public grants and loans for anti-pollution installations (e.g., waste treatment plants, acquisition of land for industry relocation). Loans for this purpose, and more recently for companies engaging in "leasing" of pollution control facilities, are also made available through the Japan Development Bank and the Small Business Finance Corporation 110/, and antipollution investments are further encouraged by tax legislation. The 1970 Act on industrial

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101/ See generally Steiner K.,Local Government in Japan (Stanford 1965), and Burks A.W., The Government of Japan (2nd ed. New York 1964), on the system of self-government introduced by the Local Autonomy Act No. 67 of 1947.

102/ See Kobayashi S., "Environmental Pollution", Japan Quarterly vol. 17 (1970) p. 403; Folz J.M., "La lutte contre la pollution au Japon", Notes et Etudes Documentaires No. 3853 (1972) P. 18; cf. Tobiki T., "Commentary on Ordinances Concerning Pollution",Horitsu Jiho vol. 41 No. 11 (1969) P. 81.

103/ Ordinance No. 97 (2 July 1969); see Tomisawa M., "On the Pollution Prevention Ordinance Issued by Tokyo", Horitsu Jiho vol. 41 No. 11 (1969) P. 23.

104/ Reproduced in US-Japan Conference (supra note 92) p. 41-A; of. Watanuki Y., "Powers of the State and Municipalities in Pollution Legislation", Jurisuto No. 471 (1 February 1971) p. 44.

105/ Ibidem p. 38.

106/ No. 100 of 1968; see Kuze K., "New Urban Planning Law and Local Autonomy", Jurisuto No. 403 (1 August 1968) p. 36; the zoning system was introduced by the Building Standards Act No. 201 of 1950.

107/ No. 58 of 1969; English summary in Japan Annual of Law and Politics No. 19 (1971) pp. 38-40.

108/ At the Ministry of Construction, the National Urban Planning Board; and at each prefecture, a local urban planning board and a development review board (for appeals in land development cases). On the National Comprehensive Development Plan see OECD, Salient Features of Regional Development Policies inJapan (Paris 1972); and cf. Kubota A., "Economic Planning and National Land Planning", Jurisuto No. 418 (1 March 1969) p. 98.

109/ No. 95 of 1965; see US-Japan Conference (supra note 92) p. 41 for a description of its activities and budget.

110/ Pursuant to Act No. 115 of 1951 on Financial Assistance for Small Business Modernization, as amended in March, 1971; see the National Report (supra note 92) p. 13, and 2nd US-Japan Conference (supra note 96) p. 83.

Cost-sharing for Public Pollution Control Works 111/ introduced a pro-rata apportionment system commensurate with the percentage of pollution caused by each industry, for the financing of specified anti-pollution projects. Local government authorities freouently conclude informal contractual agreements on joint anti-pollution measures with major industrial companies, following the "Yokohama formula" (an agreement in 1964 between the Yokohama municipality and enterprises planning to set up establishments on reclaimed coastal land at Negishi). By February 1971, 30 prefectures and 100 municipalities had anti-pollution agreements with a total of 174 enterprises 112/.

Sectoral regulation

38. While the 1971 Act for the Establishment of the Environment Agency 113/ transferred most of the sectoral responsibilities for environment protection to the new Agency (44 items enumerated in Article 4), special laws remain applicable in most of these sectors, and in specified sectors (such as radiation protection 114/) outside the primary jurisdiction of the Agency. The list which follows indicates the major sources of sectoral environmental law.

39. Water and air management; The Water Pollution Control Act and the Marine Pollution Control Act of 1970 115/, the Act on the Water Resources Development Corporation of 1961 116/, the River Act of 1964 117/, the Act and Regulations on Seaports of 1948 and 1950 118/; the Air Pollution Control Act and the Noise Control Act of 1968 as amended in 1970 119/, the Road Transport Vehicle Act of 1951 as amended in 1970' 120/, and the Offensive Odours Control Act of 1971 121/.

111/ No. 133 of 1970. Further legislation on pollution control facilities in specified factories is under preparation; see 2nd US-Japan Conference (supra note 96) p. 83, and Narita Y., "Survey of the Act Concerning Cost-Sharing for Anti-Pollution Works With Enterprises", Jurisuto No. 471 (1 February 1971) P. 49.

112/ Folz, op. cit. supra (note 102) p. 18; with special references to the 1968 agreement of the Toky Metropolitan Government with the Tokyo Electric Co., and to the 1970 agreement of the Kawasaki municipality (in consultation with the prefecture) with the Nippon Kokan steel factory. And cf. for legal analysis Uchida H., "Agreement Between a Local Self-Governing Entity and an Enterprise Regarding the Prevention of Pollution", Jurisuto No. 427 (1 July 1969) p. 59.

113/ Supra note 98.

114/ See Article 8 of the 1967 Basic Act (supra notes 87, 97); cf. infra note 131.

115/ Nos. 138 and 136 of 1970; see 2nd US-Japan Conference (supra note 96) pp. 29, 30, 77 and Annex p. 38. Special laws apply to industrial water uses and to groundwater pumping.

116/ No. 218 of 1961.

117/ No. 167 of 1964.

118/ No. 174 of 1948, Nos. 137 and 218 of 1950.

119/ Nos. 97 and 98 of 1968, as amended; see 2nd US-Japan Conference (supra note 96) pp. 27, 32; of. Tamura K., "Revision of the Air Pollution Control Act and its Problems", Jurisuto No. 471 (1 February 1971) p. 82.

120/ No. 185 of 1951, as amended; see 2nd US-Japan Conference (supra note 96) p. 33.

121/ Promulgated on 1 October 1971, effeotive 1 May 1972, this new type of legislation (applicable to industrial, agricultural and municipal sources) sets odour control standards (5 classes of intensity), designates 13 substances as "malodorous", and provides for the designation of odour control areas and other regulatory measures.

40. Conservation of natural cultural assets: The Forest Act and Ordinance of 1951 122/, the Basic Act on Forestry of 1964 as amended in 1968 123/, the Fisheries Conservation Act of 1951 124/ and the Fisheries Promotion Act of 1963, the Plant Protection Act of 1950, the Basic Act on Agriculture of 1961 and the Farm Lands Act of 1962 as amended in 1970, the Agricultural Soil Pollution Control Act of 1970 125/, several laws on coastal protection, erosion and landslide control, gravel and stone-quarrying 126/, and a long range of specific conservation legislation, from the 1919 Act on the Protection of Natural and Historical Sites and Monuments to the 1970 amendments of the Natural Parks Act 127/

41. Environmentally dangerous substances: The Agricultural Chemicals Act of 1948 128/, and the Toxic and Harmful Substances Act of 1950 129/, both amended in 1970; the Food Sanitation Act of 1947 and implementing food regulations 130/; the Basic Act on Atomic Energy of 1955 and related legislation 131/; and the Basic Act on Consumer Protection of 1968 132/.

42. Sanitation and waste problems: The Waste Disposal and Public Cleansing Act of 1970 133/, the Sewerage Act of 1958 as amended in 1970 and supplemented in 1971 134/, the Act on Government Grants for Municipal Pollution Control Works of 26 May 1971 135/; the Mining Safety Act of 1949 136/, and several laws regulating other economic activities which involve pollutant wastes, such as coal-dressing 137/, gas and electric power production 138/, slaughter-houses 139/, carcass-processing plants 140/, etc.

122/ Nos. 249 and 250 of 1951.

123/ No. 38 of 1968.

124/ No. 313 of 1951.

125/ No. 139 of 1970; see 2nd US-Japan Conference (supra note 96) p. 35.

126/ E.g., No. 291 of 1950 (Stone Quarrying Act), No. 74 of 1968 (Gravel Gathering Act); No. 21 of 1960 (Act on Emergency Measures for Erosion and Flood Control).

127/ No. 44 or" 1919; see generally Kanazawa Y. and others, "Nature Protection", Jurisuto No. 430 (August 1969); and cf. 2nd US-Japan Conference (supra note 96) p. 37-

128/ No. 82 of 1948; cf. Suzuki T., "Japanese Policy For Safe Use of Pesticides", Japan Pesticide Information No. 5 (1970) p. 32. Only part of the regulatory functions in this area were transferred to the Environment Agency; see Hashimoto, op. cit. supra (note 99) p. 32; and cf. 2nd US-Japan Conference (supra note 96) p. 36.

129/ No. 303 of 1950, as amended; see 2nd US-Japan Conference (supra note- 96) p. 38.

130/ No. 233 of 1947; and cf. the 1960 Food Additives Standards; see Suzuki I., "Japanese Laws and Regulations Concerned With Pesticide and Food Additive Residues in Foodstuffs", Residue Reviews vol. 4 (1963) p. 9; Kanazawa Y., "Food Control System", Jurisuto No. 392 (1 March 1968) p. 24; Fukunaga K. and Tsukano Y., "Pesticide Regulations and Residue Problems in Japan", Residue Reviews vol. 26 (1969) p. 1; Araki Z., "Establishment of Tolerances for Residues in Japan", Japan Pesticide Information No. 9 (October 1971) p. 28.

131/ No. 186 of 1955; for implementing laws on radiation protection see 2nd US-Japan Conference (supra note 96) Annex p. 32; as to the compensation system see infra note 164; and cf. Hattori M. "Pollution Caused by Atomic Energy: Radioactive Contamination", Jurisuto No. 458 (10 August 1970) p. 77.

132/ No. 78 of 1968.

133/ No. 137 of 1970; see 2nd US-Japan Conference (supra note 96) p. 34 and Annex p. 21.

134/ No. 79 of 1958, as amended. An Act on Emergency Sewerage Construction was passed in March 1971; see 2nd US-Japan Conference (supra note 96) pp. 77-82.

135/ No. 70 of 1971 ; cf. 2nd US-Japan Conference (supra note 96) p. 80.

136/ No. 70 of 1949; see infra notes 146, 154 and 158.

137/ No. 134 of 1958.

138/ No. 170 of 1964.

139/ No. 114 of 1950.

140/ No. 140 of 1948.

Legal methods of implementation

43. Modern Japanese law is a "mixed" system, a combination of codes based on German and French legislation (introduced as part of the Meiji reforms before World War I) and other substantial portions influenced by Anglo-American law (especially after World War II) 141/. The drafting of anti-pollution legislation, therefore, was done with the help of comparative studies of foreign law on the subject 142/. Yet Japan's indigenous social institutions remain crucially important for the implementation of laws in practice, and their amalgamation with foreign regulatory techniques has produced innovative approaches to environmental control, as illustrated by the allocation of legal responsiblity and by the legal schemes of public compensation and dispute settlement.

- Criminal and civil responsibility for pollution

44. Environmental problems are not a novelty in Japan. Due to singularly rapid industrialization and to a singularly intensive agriculture 143/, the first reports on pollution damage date back to the late 19th century 144/. At about the same time, the concept of kogai (i.e. literally "public damage", the opposite of kori, i.e. "public benefit") first appeared in legislation, in the 1896 River Act 145/- Until recently, kogai was primarily associated in legal terminology with the harmful environmental effects of mining activities, as formulated in the 1947 Mining Safety Act 146/. In recent years, however, (particularly since public investigation of the Yokkaichi case 147/) the concept gained colloquial currency, and notoriety in legal literature, as a synonym for pollution 148/. It now covers a broad scale of public nuisances ranging from bodily harm to noise, vibration, interference with sunlight and radio reception 149/.

141/ See generally Takayanagi K., "A Century of Innovation: The Development of Japanese law I868-1961", in: Von Mehren A.T. (ed.), Law in Japan: The Legal Order in a Changing Society (Cambridge/Mass. 1963) p. 5; id., "Contact of the Common Law with the Civil Law in Japan", American Journal of Comparative Law vol. 4 (1955) P. 60; Noda Y., Introduction au droit japonais (Paris 1966); and Kitagawa Z., Rezeption und Fortbildung des europäischen Zivilrechts in Japan (Frankfurt 1970).

142/ See Kato I. and others, "Pollution Law in Foreign Countries", Jurisuto Nos. 324, 326, 328, 332 (1965), analysing French, German, English and U.S. legal sources; and Sawai H., Private Law Aspects of Pollution (Tokyo 1969).

143/ Cf. Landes D.S., "Japan and Europe: Contrasts in Industrialization", in: Lockwood W.W. (ed.), The State and Economic Enterprise in Japan (Princeton 1965) p. 93; and Sawada S., "Innovation in Japanese Agriculture", ibidem p. 325.

144/ See the account of the Ashio copper industry case, by Tsuru op. cit. supra (note 87) p. 326 (damage to fish, rice crops, and human health observed since 1880).

145/ Tsuru, op. cit. supra (note 87) p. 325 n.2; the Act was superseded in 1964 by the current River Act (supra note 117).

146/ Supra note 136, Article 109; see Ishimura Z., "The Compensation and Prevention of Kogai", Horitsu Jiho vol. 32 (February 1960) p. 174; Yamamoto K., "Damages from Mining", ibidem vol. 34 No. 11 (November 1962) p. 36.

147/ The Kurokawa Inquiry (1963-1964); see Tsuru, op. cit. supra (note 87) pp. 328-331; and cf. Yoshida K., "Pollution Damages and Countermeasures in the Municipality of Yokkaichi", Jurisuto No. 408 (15 October 1968) p. 48.

148/ E.g., see the 1967 "Kogai Symposium" of the Japanese Association of Private Law: Taniguchi T. and others, "Pollution and Its Remedies", Shiho No. 30 (1968) and Jurisuto No. 390 (1 February 1968) p. 15; and cf. Kato I. (ed.), Formation and Development of Pollution Law, vol. 1 (Tokyo 1968); Kaino M. (ed.), A Study on Pollution Law (Tokyo 1969); Sato A. and Nishihara M. (ed.), Remedies Against Pollution, 2 vols. (Tokyo 1969).

149/ See Nomura Y. and Awaji T., "Legal Remedies for Light Disturbance and Interference with Broadcasting Reception", Jurisuto No. 390 (1 February 1968) p. 44; Awaji T., "Case Awarding Compensation for Damage Due to the Disturbance of Air and Light", ibidem No. 408 (15 October 1968) p. 54; Ushiyama T., "Law and Social Life : The Right to Sunshine", ibidem Special Issue No. 10 (1969) p. 57.

45. Based on a first general definition in the Basic Act of 1967 150/, the penal scope of kogai was laid down in the 1970 Act for the Punishment of Environmental Pollution Crimes Relating to Human Health 151/. According to Article 3, negligent industrial emissions of substances creating a threat to human life or of bodily injury are punishable by up to 2 years' imprisonment or up to 2 million yen fines (5 years and 3 million yen in case of actual injury or death). Article 4 extends the criminal sanction from the person who is operationally responsible, to the owner and manager of the enterprise; and Article 5 reverses the burden of proof by way of a presumption of fault, provided a causal link can be established between pollutant emission and health risk. The new Act thus updates the antiquated well-poisoning sanctions of the Penal code 152/ and some lesser sanctions for environmental offences under various other laws 153/.

46. As regards civil liability for environmental pollution, the heavy burden of proof for causation under the Mining Safety Act 154/, or for both causation and fault under the Civil Code 155/, severely limited plaintiffs' chances of recovery 156/. Following a catastrophic series of kogai deaths and injuries in recent years 157/, however, a new trend in judicial interpretation gradually eased the requirements of proof and culminated in two land-mark judgments, one adjudicating cadmium poisoning under Article 109 of the Mining Safety Act (the Itai-Itai decision by the Toyama District Court on 30 June 1971 158/), the other adjudicating organomercury poisoning under Article 709 of the Civil Code (the Minamata decision by the Niigata District Court on 29 September 1971 159/). The Ministry of

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150/ Supra note 87, Article 2.

151/ 25 December 1970 (effective 1 July 1971), No. 142 of 1970; for an English summary see 2nd US-Japan Conference (supra note 96) p. 38; cf. Shibahara K., "The Act fo the Punishment of Crimes Concerning Health Hazards Caused by Pollution", Jurisuto No. 471 (1 February 1971) p 57.

152/ Articles 142-146; English text in US-Japan Conference (supra note 92) p. 49.

153/ Ibidem pp. 47-49;and cf. Fujiko H., "Pollution and the Hole of Criminal Law", Jurisuto No. 420 (1 April 1969) p. 94.

154/ Supra notes 136, 146.

155/ Act No. 89 of 1896, No. 9 of 1898; Article 709 (delictual liability). From 1947 to 1967, a total of 35 kogai cases were decided under general tort law (20 relating to noise and vibration, 7 to water pollution, 7 to interference with sunlight, and 1 to offensive odours); Tsuru, op. cit. supra (note 87) p. 335; and the sources cited supra notes 148, 149. E.g., see the decision by the Tokyo District Court of 7 November 1959, reported in Japan Annual of Law and Politics No. 10 (1962) p. 59; and the decision by the Tokyo High Court of 27 April 1964, reported ibidem No. 14 (1966) p. 127.

156/ Cf. Kokuri Y., "Problems of Pollution Litigation: Requisites for Compensation", Horitsu Jiho vol. 40 No. 10 (1968) p. 9; and Ushiyama T., "Problems of Pollution Litigation: The Causal Link", ibidem p. 15.

157/ According to Folz, op. cit. supra (note 102) p. 1, at least 64 persons died of organomercury poisoning, and at least 100 of cadmium poisoning caused by pollution. The Ministry of Health and Welfare reported that 83 persons died of pesticide residues in food from 1955 to 1959; see Suzuki, op. cit. supra (note 130) p. 11. Kobayashi, op. cit. supra (note 102) pp. 403-404 lists a total of 112 deaths by pollution from 1964 to 1968.

158/ See Japan Times (1 July 1971) p.1. The Mitsui Mining and Smelting Co. Ltd. was held liable for 57 million yen ($ 1.5 million) in damages to 31 plaintiffs (out of a total of 514 claims pending); for background see Ishizaki A., "Problems of Pollution Litigation: Cause of a Disease in the Jintsu River Basin", Horitsu Jiho vol. 40 No. 10 (1968) p. 24; and cf. Tsuru, op. cit. supra (note 87) p. 334.

159/ See Japan Times (30 September 1971) p.1. The Showa Denko K.K. Co. was held liable for 270 million yen ($ 7.1 million) in damages to 77 plaintiffs; for background see Tsubaki T., "Problems of Pollution Litigation: Mercury Poisoning in the Agano Paver Basin", Horitsu Jiho vol. 40 No. 10 (1968) p. 20; and Tsuru, op. cit. supra (note 87) p. 334.

Justice — besides promoting a certain degree of uniformity in judioial interpretation, through special conferences for all judges involved in major kogai cases 160/— has now prepared new legislation on civil liability for unintentional pollution, with a presumption of fault for all industrial emissions which contain specified toxic elements such as cadmium or lead 161/.

- Public compensation for pollution victims, and dispute-settlement

47. The 1969 Act on Compensation for Victims of Environmental Pollution 162/ projects onto the national scale a relief scheme that had been developed by local practice (e.g., in the municipality of Kawasaki) 163/: In geographic areas designated by decree, specified diseases or ailments are officially recognized as being pollution-related, and all persons who upon examination by a special medical board are found to be affected by such diseases are entitled to free medical treatment and to financial allowances payable by the municipal or prefectural authorities. Precedents for public compensation schemes to assist victims of technology already exist in Japanese nuclear energy legislation 164/, and especially in the 1955 Automobile Damage Compensation Security Act 165/. The novel feature of the 1969 Act is its system of joint financing from national, municipal and industry contributions (the latter being raised and allocated by a Mutual Fund for Pollution Countermeasures) 166/.

48. The 1970 Act for the Settlement of Environmental Pollution Disputes 167/ makes use of another charaoteristio Japanese institution; viz., conciliation (chotei) of the parties by way of third-party mediation or arbitration 168/. This traditional extra-judicial technique of dispute-settlement continues to operate today in several sectors of Japanese private law, provided since 1921 by special legislation on mediation for land tenancy,

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160/ In March and November 1971; see Japan Times of 5 November 1971.

161/ For an outline of the draft legislation, see Technocrat vol. 4 No. 7 (July 1971) p. 44; and cf. Nakamura M., "Liability Without Fault in Pollution Cases and Social Costs", Jurisuto No. 471 (1 February 1971) p. 97.

162/ 15 December 1969, No. 90 of 1969; for an English summary see US-Japan Conference (supra note 92) p. 33; of. Bando K. and Toyota M., "Pollution: Remedies for Victims",. Hbritsu Jiho vol. 43 (1971) P. 167.

163/ See Fblz, op, cit. supra (note 102) p. 21.

164/ Act No. 147 of 196I on compensation for Nuclear Energy Damage, and Act No.. 148 of 1961 on Indemnification Contracts for Nuclear Energy Damage Compensation; see Hoshino E., "Nuclear Liability Legislation of Japan", Japanese Annual of International Law vol. 7 (1963) p. 38; and Wagatsuma S., "The Japanese System of Compensation for Damages Caused by Nuclear Industry", Law in Japan Annual vol. 2 (1968) p. 173.

165/ No. 97 of 1955 as amended by Ordinance No. 270 of 1969; see Kato I., "The Treatment of Motor-Vehicle Accidents: A Study on the Impact of Technological Change on Legal Relations", in: Von Mehren (ed.) op. cit. supra (note 141) p. 399.

166/ See Folz, op. cit. supra (note 102) p. 21, on the precedents for this system in municipal practice.

167/ 1 June 1970 (effective 1 November 1970), No. 108 of 1970; for an English summary see US-Japan Conference (supra note 92) p. 32.

168/ See Kawashima T., "Dispute Resolution in Contemporary Japan", in: Von Mehren (ed.), op. cit. supra (note 141) p. 41; Morimatsu K., "Study on the Japanese Conciliation System", Hogaku Shimpo vol. 71 No. 12 (December 1964) p. 39; Kimiya T., "Private Settlement: Its Significance and Current State", Jurisuto Special Issue (25 August 1969) p. 47; and Von Mehren A.T., "Some Reflections On Japanese Law", Harvard Law Review vol. 71 (1958) p. 1494.

house leases, construction contracts, labor relations, etc. 169/. Negotiated private settlement of pollution damages, however, had led to manifest abuses 170/t due mainly to the absence of a qualified impartial fact-finding body comparable to the "conciliation boards" which in other sectors are provided by law. Consequently, the 1970 Act empowered the National Council for Environmental Pollution Control 171/ to deal upon request with private pollution disputes of more than local significance, and the corresponding prefectural councils to deal with local disputes.

49. Furthermore, the Act provides for the appointment of "citizens' grievanoe officers" for pollution matters in prefectural administrations and in all municipalities with a population over 250,000. This provision also reflects praotioal experience with existing institutions: The 1946 Constitution 172/ had abolished Japan's European-style administrative court system and introduced the American variant of administrative review by the ordinary courts 173/. As this formal procedure turned out to be rather ineffective in practice 174/, the Japanese Administrative Management Agency since 196I developed new informal institutions to deal with citizens1 grievances viz., honorary "Local Administrative Counselors", of whom there are approximately 4,000 at present 175/. The 197O Act emulates and adapts this institutional model for the investigation and settlement of minor environmental grievances.

169/ Kawashima, op. cit. supra pp. 55-56 (e.g., the Construction Industry Act No. 100 of 1949).

170/ E.g., the settlement in the first Minamata case between the Chisso New Japan Nitrogen Company and the Mutual Aid Society of Victims' Families on 30 December 1959, which contained a waiver of all future claims. Tsuru, op. cit. supra (note 87) p. 333. A new settlement (through third-party mediation) was reached in 1968; cf. generally Kato I. and others, "Settlement of Pollution Disputes and Legal Remedies", Jurisuto No. 408 (15 October 1968) p. 14.

171/ Supra note 91 and accompanying text.

172/ Promulgated on 3 May 1947; English text in Maki J.M., Government and Politics in Japan: The Road to Democracy (New York 1962) p. 245; cf. Ward R.E., "The Origins of the Present Japanese Constitution", American Political Science Review vol. 50 (1956) p. 980; and Roehl W., Die japanische Verfassung (Frankfurt 1963).

173/ Article 17 of the Constitution; and cf. the 1962 Administrative Review Act and Administrative Procedure Act; see Hashimoto K., "The Rule of Law: Some Aspects of Judicial Review of Administrative Action", in Von Mehren (ed.), op. cit. supra (note 141) p. 241; Tanaka J., Administrative Law (Tokyo 1964); Tanaka and' Kato, Commentary on the Administrative Review Act (Tokyo 1963).

174/ See Gellhorn W., "Settling Disagreements with Officials in Japan", Harvard Law Review vol. 79 (1966) p. 686.

175/ According to Gellhorn, op. cit. supra, p. 700, there were 3605 in 1965. with additional "citizens' counseling rooms" organized by municipal and prefectural administrations (ibidem p. 726). On the Administrative Management Agency see Burks, op. cit. supra (note 101); and cf. generally Toriu T., "Pollution and the Citizens", Horitsu Jiho vol. 41 No. 11 (November 1969) p. 39.

CHAPTER III : UNITED STATES OP AMERICA

Basic laws and institutions

50. The National Environmental Policy Act of 1969 (NEPA), enacted on 1 January 1970 176/ laid down the principles of a national policy to "encourage productive and enjoyable harmony between man and his environment". It established the duty of federal authorities to consider in advance the potential environmental effects of each legislative proposal or major administrative action (environmental impact statements 177/). The Act created a national Council on Environmental Quality (CEQ, composed of three full-time advisors in the Executive Office. of the President 178/) and defined its functions, which include policy formulation, coordination of related federal activities, and preparation of an annual Environmental Quality Report 179/.

51. After the announcement of a federal anti-pollution programme and a related Message to Congress in February 1970 180/, Executive Order No. 11514 of 5 March 1970 181/ further defined the responsibilities of federal agencies, empowered the CEQ to issue guidelines and instructions to them, and rearranged the President's existing cabinet-level environment committee 182/. The Environmental Quality Improvement Act of 3 April 1970 183/ affirmed the primary responsibility of the states for implementing environmental policies, and provided the CEQ with an administrative office. The CEQ is assisted by three advisory committees (Advanced Automotive Power Systems, Legal Affairs, Tax Policy) 184/.

176/ Public Law 91-190, 83 Stat. 852; see text infra p. 53 . For background see U.S. Congress, Senate Committee on Interior and Insular Affairs, "Congress and the Nation's Environment: Environmental Affairs of the 91st Congress", 91st Cong., 2nd Sess. (Washington 1971).

177/ Infra pp. 30-31.

178/ Appointed by the President on 29 January, and confirmed by the Senate on 6 February 1970. For a critical appraisal of the CEQ see Jackson H.M., "Environmental Policy and the Congress", Natural Resources Journal vol. 11 (1971) P. 403; for a member'w view see Cahn R., "CEQ: The President's Council on Environmental Quality", Journal .of Forestry vol. 69 (1971) p. 82.

179/ Council on Environmental Quality, First Annual Report (Washington, August 1970); Second Annual Report (Washington, August 1971).

180/ Executive Order No. 11507 on Prevention, Control, and Abatement of Air and Water Pollution at Federal Facilities (4 February 1970), reprinted in First CEQ Report (supra note 179) P. 272; President's Message on the Environment (10 February 1970), reprinted ibidem. p. 254.

181/ Protection and Enhancement of Environmental Quality, reprinted in Second CEQ Report (supra note 179) P. 276.

182/ Chaired by the President, created under the name of "Environmental Quality Council" by Executive Order of 29 May 1969, changed to "Cabinet Committee on the Environment" by Executive Order of 5 March 1970, and integrated into the "Domestic Committee" by Reorganization Plan No. 2 of 12 March 1970 (effective 1 July 1970). There also is a Citizens Advisory Committee on Environmental Quality, since 1969.

183/ Public Law 91-224, 84 Stat. 91; see text infra p. 57.

184/ See Seoond CEQ Report (supra note 179) p. 350.

53. Following the recommendations of the President's Advisory Council on Executive Reorganization (the "Ash Council" set up on 5 April 1969 185/), Reorganization Plan No. 3 of 9 July 1970 186/ created the Environment Protection Agency (EPA) as a new federal administrative agency 187/, to which a number of regulatory functions were transferred from existing departments (mainly Interior; Agriculture} Health, Education and Welfare). The EPA, which became operative on 2 December 1970 and now has a staff of over 7000, consists of a staff service (Offices of Congressional Affairs, Personnel/Equal Opportunity, International Affairs, Public Affairs), and five major divisions: I. Planning and Management (Administration, Planning and Evaluation, Audit, Resources Management); II. Enforcement and Legal Affairs (Enforcement, Legal Counsel); III. Media Programmes (Air, Water); IV. Categorical Programmes (Pesticides, Radiation, Solid Wastes); V. Research and Monitoring 188/.

54. By Reorganization Plan No. 4 of 9 July 1970 189/, the National Oceanic and Atmospheric Administration (NOAA) was established within the Department of Commerce, to consolidate the major federal research and monitoring programmes. This merger of the existing 10,000-man Environmental Science Services Administration (ESSA) with various other services (mainly from the Departments of the Interior, Transportation, and Navy) brought the staff of NOAA to well over 13,000 190/. A National Advisory Committee on the Oceans and Atmosphere was set up on 16 August 1971 191/. However, the combined volume of environmental research and development activities by other federal agencies and institutions still is considerably higher than NOAA's share 192/. The Environmental Education Act of 1 November 1970 193/ provided federal support for training and mass media programmes, and set up a 21-member Advisory Committee and a government Office of Environmental Education. Further reorganization plans for a Department of Natural Resources 194/ have not yet materialized.

185/ Named after its chairman, Roy L. Ash, president of Litton Industries.

186/ Reprinted in First CEQ Report (supra note 179) P. 308; summary description of the regulatory functions transferred (including water pollution, air pollution, pesticides and radiation control) in the Congressional Report cited supra (note 176) p. 16.

187/ On the structure and role of independent regulatory agencies in U.S. administrative law see Nelson D.H.; Administrative Agencies of the USA: Their Decisions and Authority (Detroit 1963); and Kohlmeier L.M. jr., Regulators: Watchdog Agencies and the Public Interest (New York 1970),

188/ Detailed organizational chart in Seoond CEQ Report (supra note 179) p. 5.

189/ First CEQ Report (supra note 179) p. 314; summary description of the research and development functions transferred (including meteorological and marine science services) in the Congressional Report cited supra (note 176) p. 20.

190/ Ibidem p. 21.

191/ Public Law 92-125.

192/ See the survey of federal environmental programme budgets for fiscal year 1972 in Second CEQ Report (supra note 179) p. 347.

193/ Public Law 91-516, 84 Stat. 1312.

194/ Legislative proposals of 25 March 1971; S.1431, H.R. 6959, 92nd Cong. 1st Sees. (1971); organizational chart in Second CEQ Report (supra note 179) p. 7.

55. Besides administrative decentralization within EPA (10 regional offices, patterned approximately after the regions formerly designated by the Department of Health, Education and Welfare 195/), the federal structure of the United States favours environmental regulation at the state and local level. With the exception of functional-ecological regions delineated for certain watersheds 196/ and more recently "airsheds" 197/ or both 198/, sub-national regulation tends to follow the existing political-administrative boundaries, adjusted to some extent by agreements among neighbouring units (interstate compacts) 199/.

56. Past experience with self-governing "special districts" for natural resource management (particularly irrigation and water conservancy districts 200/, and to a lesser degree soil conservation districts 201/) encouraged the formation of similar regulatory systems at the local level, e.g. for air pollution control 202/. Starting with a 1957 enabling Act in Massachussetts, citizens organized "conservation commissions" in municipalities 203/ and "conservation councils" at the state level 204/. Comprehensive land use planning in most states is implemented by a combination of state and municipal regulations and institutions 205/, increasingly extended now from urban zoning to non-metropolitan

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195/ See the list of EPA regions in Seoond CEQ Report (supra note 179) P. 5, and compare tne 8 "atmospheric areas" designated by HEW on 16 January 1968.

196/ E.g.. multi-purpose river basin development by the Tennessee Valley Authority (since 1933); see Gartnell P.E. and Barber J.C., "Environmental Protection: TVA Experience", Proceedings of the American Society of Civil Engineers, Journal of the Sanitary Engineering Division vol. 96 (SA-6), Paper No. 7761 (1970).

197/ Several of the 253 federal "air quality regions" designated pursuant to the 1970 Clean Air Act Amendments (infra note 214) out across state or municipal boundaries; see Lieber H., "Controlling Metropolitan Pollution Through Regional Airsheds: Administrative Requirements and Political Problems", Journal of the Air Pollution Control Association vol. 18 (1968) p. 86.

198/ E.g., see Haydel D., "Regional Control of Air and Water Pollution in the San Francisco Bay Area", California Law Review vol. 55 (1967) p. 702.

199/ See the Hearings on Bill S.907 in the U.S. Senate. Committee on the Judiciary, "Interstate Environment Compacts", 91st Cong., 1st Sees. (1971).

200/ See Swenson R.W., "Local and Private Water Distribution Agencies", in Clark R.E. (ed.), Water and Water Rights vol. 4 (Indianapolis 1970) p. 414.

201/ Set up since 1936 pursuant to a standard Soil Conservation District Law; see Smelcer D.R., in Christy L.C., "Legislative Principles of Soil Conservation", FAO Soils Bulletin N0.15 (Rome 1971) p. 53; but of. the critical evaluation by Morgan R.J., Governing Soil Conservation: Thirty Years of the New Decentralization (Baltimore 1965).

202/ On local Air Pollution Districts see Hagevik G.H., Decision-Making in Air Pollution Controls A Review of Theory and Practice, With Emphasis on Selected Los Angeles and New York City Management (New York 1970).

203/ See Booth D.A. and Hebert P.J., "Environmental Protections The Conservation Commission Approach", State Government vol. 44 (1971) p. 178.

204/ First CEQ Report (supra note 179) P. 214.

205/ See Ronart S., A Synopsis of the Planning Legislation in Seven Countries (Amsterdam 1957) PP. 109-123.

lands 206/. The Maine Environmental Improvement Commission 207/ and the Vermont Environmental Board 208/ thus are empowered to regulate land use management on a state-wide scale, whereas legislative proposals for a federal land-use policy were not successful 209/.

57. A growing number of states have enacted special environmental legislation, to proclaim a constitutional "right to a healthful environment" (as in Illinois, Pennsylvania and Rhode Island 210/) to facilitate citizen law-suits in environmental matters (as in Michigan,Connecticut, Indiana and Minnesota 211/), to introduce environmental impact statements in state administration (as in Puerto Rico, Montana, California and Delaware 212/), or to establish regulatory bodies for environmental control (as in Minnesota, Wisconsin, Washington, New York, etc. 213/). The constitutional priority of state regulation for the

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206/ Note, "Protection of Environmental Quality in Nonmetropolitan Regions by Limiting Development", Iowa Law Review vol. 57 (1971) P. 126; and cf. the Delaware Coastal Zoning Act of June 1971 (Delaware Acts vol. 58, Ch. 171) and the 1971 New York Zoning Act (New York Laws Ch. 479) cited in Second CEQ Report (supra note 179) p. 63.

207/ Maine Revised Statutes Annotated, tit. 38 ch. 3 Art. 1, 6(1970); see Haskell E.H. and others, Managing the Environment : Nine States Look For New Answers (Washington 1971) p.322.

208/ Vermont Land Use and Development Act, No. 250 of July 1970; see Haskell op. cit. supra p. 293.

209/ See the Hearings on S.3354 in U.S. Senate Committee on Interior and Insular Affairs, "National Land Use Policy", 91st Cong. 2nd Sess.(Washington 1970); see, however, the "Urban Growth and New Community Development Act" of 31 December 1970, Public Law 91-609, 84 Stat. 1770.

210/ Illinois Constitution, Article XI Sections 1-2 (effective 1 January 1972); Pennsylvania Constitution, Article 1 Section 27 (adopted 18 May 1971); Rhode Island Constitution, Article 17 (adopted 3 November 1970). Pennsylvania established a Department of Environmental Resources in January 1971; on the Illinois Environmental Protection Act (effective 1 July 1970) see Haskell, op. cit. supra (note 207) p. 69. and Comment, "The Illinois Environmental Protection Act: A Comprehensive Program for Pollution Control", Northwestern University Law Review vol. 66 (1971) p. 345; organizational chart in Second CEQ Report (supra note 179) P. 55.

211/ Michigan Environmental Protection Act of 1970, text infra p. 59,and see infra notes 272-274; Connecticut House Bill No. 5037 (9 May 1971); and cf. Second CEQ Report (supra note 179) p. 172. Indiana Act No. 345 of 1971; Minnesota Environmental Rights Act (7 June 1971), Minnesota Laws Ch. 952.

212/ Puerto Rico Public Environmental Policy Act, No. 9 of 18 June 1970; Montana Environmental Policy Act, Ch. 238 of 9 March 1971; California Public Resources Code Section 2100, and Delaware Laws Ch. 70 Titel 7 (28 June 1971); see Second CEQ Report (supra note 179) p. 171. Puerto Rico has an Environmental Quality Board, Montana an Environmental Quality Council, and Delaware a Department of Natural Resources and Environmental Control (since November 1969).

213/ The Minnesota Pollution Control Agency created on 25 May 1967 (Minnesota Laws of 1967, Ch. 882; and 1969, Ch. 115-116); the Wisconsin Department of Natural Resources (Wisconsin Laws of 1967, Ch. 75 Section 25); the Washington Department of Ecology, Ecological Commission and Pollution Control Hearings Board created on 1 July 1970 (Washington Revised Code Annotated Section 43.21A-B; organizational chart in Second CEQ Report, supra note 179 , P. 53); the New York Department of Environmental Conservation, effective since 1 July 1970 (Environmental Conservation Law, Laws of New York 1970, Ch. 140; organizational chart in Second CEQ Report p. 51); see Haskell, op.cit. supra (note 207) pp. 122, 208, 174, 257, and for New York City: Malin H.H., "Gotham's EPA," Environmental Science and Technology, vol. 5 (1971) P. 468. On the New Jersey Department of Environmental Protection, the Oregon Department of Environmental Quality, the Arkansas Pollution Control Commission, and the South Carolina Pollution Control Authority see Haskell p. 64; Connecticut has a Department of Environmental Protection.

environment — except for matters expressly preempted by federal law (such as certain emission standards pursuant to the 1970 Clean Air Act Amendments 214/) — is thus reflected in new legal-institutional systems, which are rapidly catching up with the initial lead taken by federal (and municipal) authorities.

58. The practice of "government contracts" allocating publicly-financed projects to private enterprises, an important economic tool in pollution abatement, is utilized as a regulatory instrument under a 1971 Executive Order excluding from such contracts all enterprises that are in violation of the Clean Air Act 215/. Tax exemptions and depreciation aids 216/, small business loans 217/, and voluntary or semi-voluntary industry commitments are designed to encourage the development of new environmental technology by private enterprise 218/. As one way to ensure that industry will actually keep up with advances in pollution control technology (by the "best practicable means" usually required by federal and state standards), the 1970 Clean Air Amendments provide for mandatory patent licensing 219/. Several states have created public corporations for the financing, construction and operation of sewage treatment and solid waste disposal facilities 220/; thus, the Maryland Environmental Service (MES, created in 1970) is empowered to install or operate such facilities for any municipality, firm or individual that has failed to comply with an order by state pollution control officials 221/. Advisory institutions to represent industry have been created (such as the National Industrial Pollution Control Council, attached to the Department of Commerce), and several environmental research projects are financed jointly from government and industry contributions 222/.

214/ Public Law 91-604, 84 Stat. 1676; 42 U.S.C.A. 1857, 49 U.S.C.A. 1421, 1430; and see the National Ambient Air Quality Standards of 7 April 1971, 36 fed. Reg. 1503; of. the Note, "Environmental Controls Higher State Standards and the Question of Preemption", Cornell Law Review vol. 55 (1970) p. 846; Morgenstern A., "The Relationship Between Federal and State Laws to Control and Prevent Pollution", Environmental Law vol. 1 (1971) p. 238; and for the earlier situation in water laws Morreale E.H., "Federal-State Rights and Relations", in Clark, op. cit. supra (note 200) vol. 2 (1967) P.

215/ Executive Order No. 11602 (30 June 1971)» Second CEQ Report (supra note 179) P. 330; and cf. ibidem p. 336 and Haskell op. cit. supra (note 207) p. 417 on current federal funding for pollution abatement.

216/ See Second CEQ Report (supra note 179) P. 140; Brown D.H.M., "Tax Incentives Far Clean Industries", Environmental Science and Technology vol. 5 (1971) P. 672; McNulty J.W., "State Tax Incentives To Fight Pollution", American Bar Association Journal vol. 56 (1970) p. 747; but see also Reitze A.W. and G., "Tax Incentives Don't Stop Pollution", ibidem vol. 57 (1971) p. 127.

217/ On recent legislative proposals for a special $800 million loan fund for water pollution control under Section 7 of the Small Business Act, see Malin H.H., "Pollution and the Small Businessman", Environmental Science and Technology vol. 6 (1972) p. 123? cf. Second CEQ Report (supra note 179) p. 142.

218/ Second CEQ Report, ibidem p. 80; and cf., e.g. Crofoot E.J., "Effective Air Quality Control Achieved by Government and Industry Cooperation", Journal of the Air Pollution Control Association vol.15 (1965) p. 387.

219/ Supra note 214; see Schwartz W.F., "Mandatory Patent Licensing of Air Pollution Control Technology", Virginia Law Review vol. 57 (1971) p. 719.

220/ On the New York Environmental Facilities Corporation (NYEFC) and the Ohio Water Development Authority (OWDA) see Second CEQ Report (supra note 179) p. 57.

221/ Maryland Annotated Code (1970), Article 33B; see Haskell op. oit. supra (note 207) p. 331; but cf. on the local governments'veto Second CEQ Report (supra note 179) p. 57.

222/ Second CEQ Report (supra note 179) p. 88.

Sectoral regulation

59. In view of the principle of state priority, as reaffirmed by the 1970 Environmental Quality Improvement Act and as illustrated by the mounting volume of state legislation 223/, the power of the federal government to prescribe and enforce environmental law is limited 224/. While the coordinating function of the CEQ is all-inclusive, the regulatory function of the EPA is not. Among the various other federal agencies retaining regulatory responsibilities are the Departments of the Interior (for water resources management and reclamation, national parks, outdoor recreation, wildlife and sports fisheries), Agriculture (soil conservation, land acquisition), Housing and Urban Development (land use planning for metropolitan areas), Commerce (NOAA for commercial fisheries), Defense (Corps of Engineers for construction, waste disposal), etc. The list which follows here indicates some of the major current sources of federal environmental law 225/.

60. Water and air management: The 1965 Water Resources Planning Act as amended in 1971 226/; the 1956 Federal Water Pollution Control Act as amended by the 1970 Water Quality Improvement Act 227/; the 1952 Saline Water Conversion Act as amended to 197I 228/; the 1968 Estuarine Areas Act 229/; the 1968 Wild and Scenic Rivers Act 230/; the 1970 Water Bank Act 231/; the 1967 Clean Air Act as amended in 1970 232/.

61. Conservation of natural and cultural assets; The 1960 Multiple-Use Sustained Yield Act (for national forests) 233/, the 1964 Classification and Multiple Use Act (for public lands) 234/, the 1916 National Park Servide Act as amended to 1970 235/, the 1964 Wilderness Act as amended to 1970 236/, the 1956 Fish and Wildlife Act as amended to

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223/ Supra notes 207-214; for current developments in state laws on environment see the serials "Environment Reporter" and "Environmental Law Reporter"; and of Degler S.E., State Air Pollution Control Laws (Washington 1969).

224/ E.g., see Rosenthal A.J., "Federal Power to Preserve the Environment; Enforcement and Control Techniques", ins Grad Rathjens and Rosenthal, Environmental Control: Priorities, Policies and the Law (New York 1971).

225/ On allocation of federal responsibilities, see Haskell, op. cit. supra (note 207) p. 416; on conflicts see Grad F.P., "Intergovernmental Aspects of Environmental Controls", in; Grad, Rathjens and Rosenthal, op. oit. supra (note 224). For a selective compilation of applicable legislation see Second CEQ Report (supra note 179) p. 180.

226/ Public Law 89-80 (22 July 1965)} Public Law 92-27 (17 June 1971).

227/ Public Law 91-224, 84 Stat. 91, 33 Ü.S.C. 1171 (3 April 1970).

228/ Public Law 91-221, 84 Stat. 87 (31 March 1970).

229/ 16 U.S.C. 1221.

230/ Public Law 90-542, 16 U.S.C. 1271 (2 October 1971).

231/ Public Law 91-559, 84 Stat. 1469 (19 December 1970).

232/ Supra note 214.

233/ Public Law 86-517, 16 U.S.C. 528 (12 June 1960).

234/ Public Law 88-607, 16 U.S.C. 1411.

235/ 16 U.S.C. 1 (25 August 1916); as amended by Public Law 91-383, 84 Stat. 825 (18 August 1970).

236/ 16 U.S.C. 1131} as amended by Public Law 91-504, 84 Stat. 1104 (23 October 1970).

1970 237/, the 1969 Prevention of Importation of Endangered Species Act (also applicable to interstate shipment) 238/; the 1965 Land and Water Conservation Act as amended in 1970 239/, the 1935 Soil Conservation Act as amended 240/, the 1970 National Mining and Minerals Policy Act 241/, the Outer Continental Shelf Lands Act 242/, the 1966 National Historio Preservation Act 243/, and the 1971 Executive Order on Protection and Enhancement of the Cultural Environment 244/.

62. Environmentally dangerous substances,and waste problems: The 1964 Federal Insecticide, Fungicide and Rodenticide Act 245/, the 1938 good, Drug and Cosmetic Act as amended 246/, the 1954 Atomic Energy Act as amended 247/, the Transportation of Explosives Act as amended 248/, the 1968 Natural Gas Pipeline Safety Act 249/, the 1961 Oil Pollution Act as amended 250/, the 1970 National Oil and Hazardous Materials Pollution Contingency Plan 251/; the 1899 Rivers and Harbors (Refuse) Act as implemented by 1970 Executive Order 252/, and the 1965 Solid Waste Disposal Act as amended by the 1970 Resource Recovery Act 253/.

237/ Public Law 84-1024, 16 U.S.C. 742 (8 August 1956) as amended lay Public Law 91-387 (24 August 1970); see also the Fish and Wildlife Coordination Act as amended in 1958 (16 U.S.C. 661).

238/ Public Law 91-135,83 Stat. 275 (5 December 1969); Eiglish, French and Spanish texts in FAO, Food and Agricultural Legislation vol. 20 No. 1 (1971) p. 88.

239/ 16 U.S.C. 460 (1) 4, as amended.

240/ 16 U.S.C. 590a, as amended, establishing the Soil Conservation Service) and of. the 1956 Great Plains Conservation Programme as extended to 1981 by Public Law 91-118, 83 Stat. 194 16 U.S.C. 590 p (18 November 1969).

241/ Public Law 91-631, 84 Stat. 1876 (31 December 1970).

242/ 43 U.S.C. 1334; see also the 1953 Submerged Lands Act, 43 U.S.C. 1301; English, French and Spanish texts in FAO, Food and Agricultural Legislation vol. 2 No. 3 (1953; Fasc. 17.

243/ 80 Stat. 915, 16 U.S.C. 470, as amended.

244/ Executive Order No. 11593 (13 May 1971) 36 Fed. Reg.8921; Second CEQ Report (supra note 179) p. 327.

245/ 7 U.S.C. 135) on the proposed Föderal Environmental Pesticide Control Act of 1971 (S. 745, 92nd Cong. 1st Sess.) see Second CEQ Report (supra note 179) p. 15.

246/ 21 U.S.C. 346(a), as amended: on the proposed Toxic Substances Control Act of 1971 (S. 1478, 92nd Cong. 1st Sess.) see Second CEQ Report (supra note 179) p. 17.

247/ 68 Stat. 919, 42 U.S.C. 2011, as amended) and of. the 1968 Radiation Control for Health and Safety Act , and the Radiation Protection Standards, 10 C.F.R. 1.20.

248/ 18 U.S.C. 1671.

249/ 49 U.S.C. 1671.

250/ 33 U.S.C. 1001, implementing the 1954 Convention for the Prevention of the Pollution of the Sea by Oil, as amended.

251/ 35 Fed. Reg. 8508 (2 June 1970), pursuant to Section 12 of the 1970 Water Quality Improvement Act (supra note 227)) see also Executive Order No. 11548 (22 July 1970), 35 Fed. Reg. 11677) and the further legislative references in Christol C.Q., "Oil Pollution of the Marine Environment t A Legal Bibliography", U.S. Senate Committee on Public Works, Serial No. 92-1 (Washington 1971).

252/ 33 U.S.C.40 (1964)) and see Executive Order No. 11574 (23 December 1970)).35 Fed. Reg. 19627) Second CEQ Report (supra note 179) p. 280.

253/ Public Law 91-512, 84 Stat. 1227, 42 U.S.C.A. 3251 (26 October 1970).

Legal methods of implenentation

63. While there is a long tradition of conservation legislation in the United States, it never ranked as an important legal discipline 254/. In contrast, "environmental law" in the modern sense has become an independent focal branch of law, as evidenced by the growing volume of specialized literature, periodicals, law reports and university courses on the subject 255/. The methods developed for the implementation of environmental law in practice are partly innovative additions to the national regulatory process (e.g., environmental impact statements), and partly an adaptation of more traditional procedures (e.g., environmental defence litigation).

- Environmental impact statements

64. Further to the new standard-setting, licensing and monitoring functions vested in the EPA, NOAA and other federal authorities, the 1970 legislative reforms initiated a unique method of administrative self-control in response to the phenomenal growth of federal involvement in activities affecting environmental quality. Section 102(2)(C) of the National Environmental Policy Act 256/ requires all federal government agencies proposing legislation or planning to undertake an action "significantly affecting the quality of the human environment" to file in advance an impact statement with the Council on Environmental Quality (CEQ). The statements must describe the legislation or action, its impact, and the alternatives considered. Before final filing, the statements must be circulated to the public and to appropriate federal , state and local environmental agencies) and the comments received must be attached to, and considered in the final statement filed.

65. The new procedure was implemented in 1970 by detailed guidelines from the CEQ 257/. As of 31 January 1972, the CEQ had received a total of 2388 statements (at an average rate of about 4 per day) from the 25 major operational departments of the federal government, ranging from highway construction projects to space programmes 258/. Besides parallel state legislation 259/, a similar review procedure was provided for EPA under the 1970 Clean Air Act Amendments 260/.

254/ See generally Smith P.E. (ed.) Conservation in the United States; A Documentary History, 5 vols. (New York 1971). - A notable exception is the thorough legal-historical case study of environmental disruption by Hurst J. W., Law and Economic Growths The Legal History of the Lumber Industry in Wisconsin 1836-1915 (Cambridge/Mass. 1964).

255/ See Baldwin M. and Page J.K., Environmental Law Bibliography (New York 1970); the law report series cited supra (note 223); several new legal periodicals ("Ecology Law . Quarterly", "Environmental Law"); and a number of texts such as Gray O.S., Cases and Materials on Environmental Law (Washington 1970); Landau N.J. and Rheingold P.D., The Environmental Law Handbook (New York 1971); Reitze A.W., Environmental Law (Washington 1972).

256/ Supra note 176, see text infra p.

257/ Pursuant to Executive Order No. 11514 of 5 March 1970 (supra note 18l); see CEQ,

Statements on Proposed Federal Actions Affecting the Environments Guidelines (23 April 1971), 36 Fed. Reg. 7724, reprinted in Second CEQ Report (supra note 179) P. 309.

258/ CEQ, Environmental Impact Statements; 102 Monitor, vol. 2 No. 1 (February 1972) p. 69. For a collection of texts and statements from the agencies concerning their compliance with the procedure, see the Hearings in U.S. Congress, House Committee on Merchant Marine and Fisheries, Subcommittee on Fisheries and Wildlife Conservation, "Administration of the National Environmental Policy Act", 91st Cong., 2nd Sess., Serial No. 91-41 (1971). And cf. the decision of the U.S. Court of Appeals (D.C. Circuit) of 13 January 1972, Natural Resources Defense Council vs. Morton, reported in CEQ, 102 Monitor vol. 2 No. 1 (February 1972) p.1.

259/ Supra note 212.

260/ Supra note 214, Section 309 (42 U.S.C. l857-h-7).

66. This procedure is not an "environmental clearance" device as under some other federal legislation for construction projects 261/, for neither CEQ nor EPA can halt federal projects which they or other reviewing agencies consider as environmentally harmful 262/. Rather, it is an administrative mechanism for information feedback, with the,two agencies acting as switchboards. Whereas the basic principle of public disclosure of administrative data had already been laid down in the 1966 Freedom of Information Act 263/, the novelty of this procedure is the systematic inclusion of advance public notice and review in the daily routine of administrative decision-making.

- Environmental defence litigation

67. Under the Anglo-Saxon "common law" system, built on judicial precedents, various remedies by court action (suits for injunctions or damages) have long been available either against private environmental disturbance (under the concepts of nuisance, trespass, strict liability, products liability, etc. 264/) or against governmental misconduct (by judicial review of administrative decisions 265/). While the new environment protection law in the United States thus did not enter a legal vacuum, the assertion of citizens' rights in this field was hampered by traditional concepts of standing to sue, sovereign immunity, burden of proof, and other "mind-forged manacles of law" 266/. In recent years, however, the situation changed dramatically, and environmental defence litigation in the ordinary courts has become an important strategy both for private individuals or civic associations, and for public enforcement agencies 267/.

261/ Such as Section 10(a) of the Federal Power Act (16 U.S.C. 803-a), Section 136 of the Federal-Aid Highway Act (23 U.S.C. 109-g/j), Section 16(c)(4) of the Airport and Airway Development Act (49 U.S.C. 1716-c-4), Section 14 of the Urban Mass Transportation Act (49 U.S.C. 1610); sees Primer for the Practice of Federal Environmental Law, Environmental Law Reporter vol. 1 (1971) at 50001.

262/ The only enforcement means would be the budgetary process, through the Executive Office of Management and Budget or through.the congressional Appropriation Subcommittees; see Haskell op. cit. supra (note 207) p. 431.

263/ Publie Law 89-554 as amended, 5 U.S.C. 552; see Second CEQ Report (supra note 179) p.163.

264/ See the analysis of 625 American court cases on water pollution, in Davies P.N., "Theories of Water Pollution Litigation", Wisconsin Law Review (1971) P. 738; and cf. Juergensmeyer J., "Control of Air Pollution Through the Assertion of Private Rights", Duke Law Journal (1967) P. 1126. See also U.S. Congress, House Committee on Government Operations, Subcommittee on Conservation and Natural Resources, "Qui Tarn Actions and the 1899 Refuse Act; Citizen Lawsuits Against Polluters of the Nation's Waterways" (Washington 1970).

265/ See the Note, "Preservation of the Environment Through the Doctrines Governing Judicial Review of Administrative Agencies", St. Louis University Law Journal vol. 15 (1971) p.429.

266/ Sax J.L., Defending the Environment! A Strategy for Citizen Action (New York 1971) p. 125. See also the Report by the CEQ Legal Advisory Committee, Private Litigation on Environmental Protection (Washington 1970).

267/ The EPA enforcement record from the date of its start of operations (3 December 1970) to 8 September 197I includes 36 direct referrals to the Department of Justice (31 civil actions, 5 criminal actions) and 28 actions (13 civil, 15 criminal) initiated by the Department of Justice with assistance of EPA regional offices; Environmental Science and Technology vol. 5 (1971) p. 995. And of., e.g., Yannacone V.J. and Cohen B.S., Environmental Rights and Remedies (Rochester/N.Y. 1971).

68. The change is partly due to new trends in the judicial interpretation of classical legal concepts favouring environmental control (such as the "public trust" doctrine 268/), but primarily to legislative intervention. Besides general federal laws — such as the Administrative Procedure Act 269/, the above-mentioned Freedom of Information Act 270/, or the 1966 amendments of the Federal Rules of Civil Procedure, facilitating "class actions" 271/ — a leading example is the 1970 Michigan Environmental Protection Act 272/, which laid down the right of every public or private entity to sue any other public or private entity in state courts to protect the environment. Under this Act, which has been followed by some other states 273/ and by federal legislative proposals 274/, private citizens are further given the right to intervene in all types of "administrative licensing or other procedures" (as members of the public rather than on the premise of harm suffered individually), while the state courts are given broad powers to reopen administrative proceedings, and discretion to determine the "validity, applicability and reasonableness" of administrative standards or eventually to specify new standards.

69. This approach has also been followed to some extent by the 1970 Clean Air Act Amendments, which broadly permit popular actions against polluters and against EPA 275/. As these provisions will become operative on 1 July 1972 only 276/, their consequences in practice are still open to speculation. While environmental defence litigation may lend itself to abuse in what has been described as "the most law-ridden of all nations" 277/, the two years of experience with the 1970 National Environmental Policy Act show a strong, though not abnormally high, record of court-testings as of 31 December 1971, the Act had been invoked and interpreted in 15 Court of Appeals decisions, in 48 District Court opinions, and in 3 Supreme Court dissents 278/. One moderating factor presumably has been the simultaneous improvement of the regulatory process and the environmental impact statements. It is-conceivable that the evolution of general environmental quality control in the United States will be similar to the experience in water quality protection, where eventually "the center of decision-making has moved away from the courts to the administrative agencies" 279/.

268/ See Sax J.L., "The Public Trust Doctrine in Natural Resource Law; Effective Judicial Intervention", Michigan Law Review vol 68 (1970) p. 471; and Sax J.L., "Legal Remedies of Environmental Disruption in the United States : The Role of the Courts", in; Tsuru op. oit. supra (note 87) p. 223.

269/ Act of 11 June 1946, Ch. 324, 60 Stat. 237, as amended; 5 U.S.C. 551. For application to EPA proceedings see Second CEQ Report (supra note 179) p. 164.

270/ Supra note 263.

271/ 39 F.R.D. 94 to 1O9 (1966); but cf. on some of the ensuing difficulties; Dole R.A., "The Settlement of Class Actions for Damages", Columbia Law Review vol. 71 (1971) p.970.

272/ Supra note 211, text infra p. 59. The author of the Act was Professor Joseph L. Sax (supra notes 266, 268).

273/ On the 1971 Connecticut Act see supra note 211.

274/ On the Hart-MoGovern Bill (S.1032) to this effect, see Lutz R.E. and McCaffrey S.C., "Standing on the Side of the Environments A Statutory Prescription for Citizen Participation", Ecology Law Quarterly vol. 1 (1971) p. 561 (text at p.650).

275/ Supra note 214, Section 304.

276/ The National Ambient Air Quality Standards issued pursuant to the Act on 7 April 1971 (supra note 214) oall for completion of all state implementation plans (allowing for review and correction by EPA) on 1 July 1972.

277/ Cavers D., "Legal Education in Porward-Looking Perspective", in: Hazard J.T.(ed.), Law in a Changing America (Brussels 1968) p. 153. - E.g., see the critique by Rogers J.P., "Isaiahs at the Bar: Environmentalists and the Judicial Process", Land and Water Law Review vol. 7 (1972) p. 63.

278/ Summaries of all cases in CEQ, Environmental Impact Statements: 102 Monitor, vol. 1, No.12 (January 1972) p. 2.

279/ Johnson R.W., "The Changing Role of the Courts in Water Quality Management", in: Campbell T.H. and Sylvester R.O. (eds.), Water Resources Management and Public Policy (Seattle 1968) p. 203, continuing as follows: "Nevertheless, the courts still play a significant part in the total process through their review of legislative and administrative action".

CONCLUSIONS

70. This study is not concerned with the academic question whether there is a "common core" 280/ of legal systems for environment protection, nor with the selection of "ideal" legislative models. Rather, it is intended to provide comparative "background information to assist governments in quest of new legal approaches, and in anticipation of new legal problems. It would be entirely premature to extrapolate universal guidelines from the short experience of the three pilot systems analyzed in the foregoing chapters. The conclusions which follow here, therefore, are limited to a tentative identification of common trends and problems of environmental law, particularly in view of their relevance to developing countries.

Common trends and problems of environmental law

71. First, a common structural pattern emerges for the over-all national regulation of the environment. Governments tend to follow an institutional division of work between three central bodies: a top-level advisory council which formulates national policy and coordinates departmental activities; an independent executive agency of ministerial rank, which translates policy into administrative action and ensures compliance by way of sanctions or incentives; and a distinct science-oriented group which centralizes surveillance networks, allocates research priorities, and generally provides a channel of communication with the scientific community. This structure reflects a functional distinction between three major tasks which may be described as "strategy" (policy-making and coordination), "operations" (standard-setting and implementation) and "intelligence" (monitoring and research). The main difficulty for the law here is to provide the new institutions with the necessary legal powers to carry out their respective functions, while at the same time demarcating their jurisdictional boundaries and the continuing role of existing sectoral institutions.

72. Secondly, as regards the content of legislative and administrative rules, priorities appear to shift from the first and second stage of environmental law (primary protection and use allocation) to the third and fourth stage (resource conservation and ecological control) 281/. The main difficulty for the law here is to develop new procedural techniques which can make this change in priorities effective (e.g., licensing, reporting, sanctions for pollution), while at the same time improving the more traditional instruments of primary protection (e.g., sanitary regulations) and use allocation (e.g., water rights). A substantial amount of information is available on the different areas of sectoral regulation, including a number of comparative legislative studies by FAO and other specialized intergovernmental and non-governmental organizations.

73. Thirdly, there is a common trend towards decentralized decision-making inenviron mental matters, settlement of problems "on the spot" and at the lowest appropriate point in the decision-making structure. The main difficulty for the law here is to determine the proper forum for decentralized "horizontal" decisions (e.g., judicial or extra-judicial settlements between private litigants, or agreements between enterprises and local communities), while at the same time ensuring the participation of individual interested parties in "vertical" decision processes (e.g., public hearings, administrative appeals) 282/,

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280/ E.g., see Schlesinger R.B. (ed.), Formation of Contracts: A Study of the Common Core of Legal Systems, 2 vols. (Dobbs Ferry/N.Y. 1968).

281/ Supra pp. 2-3.

282/ Cf. Caldwell L.K., "Organizational and Administrative Aspects of Environmental Problems at Various levels", U.N. Public Administration Division (1971); Stein S.B., "Environmental Control and Different Levels of Government", in: Tsuru (ed.), op. cit. supra (note 87) p. 249; and International Union of Local Authorities, "Local Government and the Human Environment", Basic Paper for the U.N. Conference on the Human Environment (1972).

Environment protection systems for developing countries

74. Historical experience shows that laws can be transplanted from one country to another, and that transfer of the right type of legal know-how from developed to developing countries can be as beneficial as the transfer of technological know-how. Eclectic "borrowing" of foreign legislation has successfully been used as an instrument to accelerate national development and reform 283/. With regard to environmental controls, the 1971 Founex Report thus recommends that a range of specific policies be made available to the developing countries, from which they can choose in accordance with their requirements and preferences 284/,

75. It must be realized, however, that there also are inherent constraints on the transferability of law, particularly across socio-cultural boundaries. Some of these are determined by the strength of traditional legal structures and attitudes in the receiving system, which require careful study and adjustment to change. Customary rights of land tenure and resource use in some developing countries can thus become crucial for the success or failure of environmental policies; e.g., because of the "absence of any balance in customary law between grazing rights and the carrying capacity of the land" 285/, On the other hand, sectoral law reforms for specific environmental resources — which are currently under way in many developing countries under bilateral or multilateral technical assistance programmes 286/ — can create new problems for over-all national environment policy where the sectoral laws are based on heterogeneous or incompatible foreign models 287/. Hence the need for an integrated approach to environmental control, by systematic central planning of legislation.

283/ see Rheinstein M., "Types of Reception", Annales de la Faculté de Droit d'Istanbul .vol. 5 No. 6 (1956) p. 31; Zajtay I., "La réception globale, des droits étrangers", in: Etudes de Droit Comparé (Paris 1970) p. 31; cf. supra note 141.

284/ Development and Environment: Report Submitted by a Panel of Experts Convened by the Secretary-General of the Ü.N. Conference on the Human Environment (Founex 1971) p. 33; see also U.N. Conference on the Human Environment, "Development and Environment" (Subject Area V), A/CONF.48/10 (1972) p. 10.

285/ Mifsud F.M., Customary Land Law in Africa, FAO Legislative Series No. 7 (Rome 1967) p. 62, with illustrative case studies.

286/ E.g.,see U.N. Secretariat, Report on Permanent Sovereignty Over Natural Resources, A/8058 (1970) p. 142; for a survey of legislative assistance by specialized agencies see Elisha A, Les institutions internationales et le développement économique en Afrique (Paris University thesis 1969) vol. I, pp. 110-262.

287/ On the growing difficulties with multiple legal sources in developing countries see Sand P.H., "Current Trends in African Legal Geography: The Interfusion of Legal Systems", African Law Studies No. 5 (New York 1971) p. l8.

76. Law reform cannot consist in simply copying foreign environment protection systems. Apart from their general national idiosyncrasies, the legal institutions of industrialized countries usually depend on a highly developed administrative infrastructure which is too complex, and costly to be duplicated in a developing country. In most cases, designation of the three basic institutions mentioned above will be sufficient to provide a focus in the governmental structure to which decisions on environmental problems can be referred as the need arises, beginning ad hoc and gradually developing into a more formalized legal process commensurate with the problems. A necessary first task for concerted action would be a survey of all environmental resources for which a national policy is required, and a survey of the legal controls currently available for these resources.

77. Instead of creating new administrative institutions for environment protection, and thereby aggravating the central bureaucratic overhead, existing structures should be used and adapted for this purpose wherever possible. Many developed countries are in fact following this course, by simply adding environmental control functions to the responsibilities of an existing Ministry of Agriculture (e.g., Sweden), Forestry (e.g., Bulgaria), Public Works (e.g., Denmark), Health (e.g., Austria), etc. 288/. A logical choice for most developing coun tries would be to integrate their environmental concern within the framework of existing machinery for economic planning and development (especially land use planning). A similar reorientation is possible for surveillance institutions — e.g., adaptation of existing meteorological and hydrological networks to include environmental monitoring; nature conser vation enforcement by existing forest ranger services; or industrial pollution supervision by existing labour inspection service 289/. With regard to national institutions, therefore, a wise prescription would be "use well before shaking" 290/.

78. The specific requirements of sectoral environment regulation in developing countries differ considerably from those of the industrialized world. Apart from certain minimum controls uniformly required by all countries participating in .international trade (e.g., import/export regulations for environmentally hazardous commodities, including customs and sanitary rules), the priorities of national environmental law are largely determined by a country's level of economic development. As distinct from the typical urban affluence problems of pollution in industrialized countries, the most pressing problems of environmental law in developing countries are either the effects of continued under-development and poverty 291/ or side-effects of accelerated growth in rural areas, as illustrated by the problem of grazing controls for soil, forest and wildlife conservation 292/. Contrary, then, to the above-mentioned legislative trend in contemporary industrial societies, developing countries today are more likely to need immediate action and reform at the first and second stages of environmental law; i.e., primary protection and use allocation 293/.

288/ See the Handbook on National Environment Law and Institutions (supra note 7).

289/ E.g., the governmental factory inspectorates in Northrhine-Westphalia (the most industrialized part of the Federal Republic of Germany), which were originally concerned exclusively with the protection of employees pursuant to the 1947 ILO Convention on Labour Inspection, are now dealing with air pollution and noise control in factories. Similar labour inspection authorities exist in many developing countries; cf. Landy E.A., The Effectiveness of International Supervision: Thirty Years of ILO Experience (London and New York 1966) p. 157.

290/ Landsberg H.H., "The Demonology of Pollution", in Gray (op. cit. supra note 255) P. 1226.

291/ Founex Report (supra note 284); and U.N. Co-ference on the Human Environment, "Identification and Control of Pollutants of Broad International Significance" (Subject Area III), a/CONF. 48/8 (1972), p. 4. See also the examples cited by Mabogunje A.L., "Imagination Rather Than Money", CERES: FAO Review vol. 5 No. 1 (1972) p. 28.

292/ Mifsud, loc. cit. supra (note 285); and Christy, op. cit. supra (note 201) p. 33. On conflicts between forestry development and customary grazing rights in Afghanistan see the note by Jordan H.W. in: Entwicklung und Zusammenarbeit (1971) No. 1, p. 20.

293/ Supra pp. 2-3, and p. 33 (paragraph 72).

79. Environmental law in most developing countries faces special problems of implementation. It would be an over-simplification, however, to attribute these problems wholly to inadequate law enforcement, sometimes explained by the so-called "soft state" syndrome 294/. Expressly or by implication, comparison is frequently made with the more rigid exercise of compliance controls during the pre-independence period 295/. Yet the alleged efficiency of law enforcement based on colonial police rule can hardly serve as a valid standard of comparison for modern democratic governments. Without denying the need for sanctions, the WHO Expert Committee on National Environmental Health Programmes in 1970 rightly pointed out that laws should not be considered exclusively as restrictive and punitive 296/. Positive incentives to compliance also have to be provided by law. Among the pertinent legislative experience of developed countries, the history of soil conservation law offers the widest range of promotional measures, from direct financial subsidies and cost-sharing to preferential credit, furnishing of equipment, technical assistance (such as free conservation plans, training, etc.), and other benefits granted for compliance with the prescribed practices 297/.

80. Finally, citizen participation in environmental control must be ensured. Environment protection law is not limited to regulatory measures imposed from above by central government rule, but has to provide for adequate representation of individuals in the decision-making process, and for the integration of environmental policies in private (inter-individual) law and in local community relations. Rather than merely imitating foreign institutional and procedural examples (such as nature conservation societies, or private law-suits for environmental defence), suitable alternatives must be developed to channel popular concern for the environment into appropriate political action and assertion of community interests; e.g. by assigning some of these new functions to established political organizations which would be in a position to reach and inform the population. Here again, optimal use should be made of existing social and legal institutions in each country, so that laws can "guide and help people, and establish a trend of acceptance" 298/.

294/ See Myrdal G., "The 'Soft State' in Underdeveloped Countries", University of California Los Angeles Law Review vol. 15 (1968) p. 118 (summarizing some points from "Asian Drama").

295/ See U.N, Conference on the Human Environment, "The U.N. System and the Human Environment", A/CONF. 48/12 (1971) p. 55, stating that "regulatory services of the central government in most developing countries have run down in the post-independence period."

296/ WHO Report on the Planning, Organization and Administration of National Environmental Health Programmes (Geneva 1970); reprinted in : Kulzer B.A. (ed.), Annual Review of United Nations Affairs (New York 1971) p. 111-

297/ See Christy, op. cit. supra (note 201) p. 26.

298/ Recommendations of the WHO Report cited supra note 296/.

ANNEX: LEGISLATIVE TEXTS

1. SWEDEN

Environment Protection Act (Miljoskyddslag) of 29 May 1969, Svensk Forfattningssamling Wo. 387 (24 June 1969), PP. 903-912, Sveriges Rikes Lag (91st ed. 197O) B-1576; as amended to December 1971, SPS (1970) Nos. 898 and 1025, (1971) Nos. 370 and 643. English translation (excerpts from the 1969 Act) in. WHO, International Digest of Health Legislation, Vol. 21 (1970), pp. 173-180.

Introductory provisions

1. This Act shall be applicable to:

1. the discharge of waste waters, solid substances or gases from land, buildings or installations into watercourses, lakes or other bodies of water;
2. the utilization of land, buildings or installations in such -a way that pollution of watercourses, lakes or other bodies of water may result, except where the utilization is associated with waterworks;
3. the utilization of land, buildings or installations in a way liable to disturb the environment by causing air pollution, noise, vibrations, light or similar effects, except where such disturbance is wholly accidental.

This Act shall not apply to waste disposal as provided in Act No. 1154 of 1971 on the Prohibition of Waste Dumping in Water, nor to disturbances on radio receivers. It shall likewise not be applicable in matters concerning ionizing radiations or the effects of electrical current from electrical installations, in respect of which special provisions shall apply.

Operations or uses which, in accordance with the aforesaid, are covered by this Act shall be termed "environmentally harmful activities" [miljofarlig verksamhet].

2. In addition to the provisions of this Act, environmentally harmful activities shall be subject to the pertinent provisions of the legislation on health, buildings and nature conservation or other legislation. As regards certain environmentally harmful activities, special provisions shall apply pursuant to Act No. 850of 1971 promulgating the Convention on Boundary Waters between Sweden and Finland of 16 September 1971.

The Water Act contains provisions applicable to waterworks intended for the control of water pollution and the use of land for drainage or other wastewater installations.

The Crown or authority designated by the Crown shall be empowered to issue special provisions on the prevention of water pollution by solid wastes.

3.For the purposes of this Act, the term "waste waters" [avloppsvatten] means:

1. effluents [spillvatten] or other liquid wastes:
2. water which has been used for cooling in the operation of a factory or other establishment;

3. water resulting from drainage from land, within the framework of a town or construction plan, where this operation cannot be ascribed to the building or buildings in question;

4. water resulting from drainage from a cemetery.

Rules as to permissible operations

4. A site must be selected for environmentally harmful activities such that the objective can be attained with the least interference and inconvenience and without excessive expense,

5. Any person undertaking or proposing to undertake an environmentally harmful activity shall take protective measures, tolerate restrictions placed on the activity and observe such precautions as can reasonably be imposed to prevent or remedy any nuisance caused. The scope of the measures to be taken in pursuance of the first paragraph shall be determined on the basis of what is technically feasible for an activity of the particular type in question and with consideration to both public and private interests.

In evaluating different interests, special attention shall be paid on the one hand to the conditions in the district which may be subject to disturbance and the extent of the effects of the latter and, on the other hand, the necessity for the activity in question and the cost of protective measures envisaged.

6. Where an environmentally harmful activity is liable to create a considerable nuisance, even if the precautionary measures referred to in Section 5 are taken, the activity may be carried out only if there are special reasons for so doing.

If the anticipated nuisance would entail a substantial deterioration in the living conditions for a large number of persons or a significant loss from the standpoint of the protection of nature, or considerable harm to similar public interests, the activity may not be carried out. Notwithstanding the above, the Crown may grant a licence, under the terms of this Act, where the activity has considerable importance economically, for the district in question or from the general standpoint.

The provisions of the first paragraph and of the first sentence of the second paragraph shall not hinder the utilization, for the purpose intended, of airfields, roads or railways, the construction of which is covered by special rules.

7. Waste waters of the following categories may not be discharged into watercourses, lakes or other bodies of water if it is not certain that the operation can be performed without creating a nuisance:

1. waste waters from water-closets or originating from population centres without undergoing any purification other than sedimentation;

2. expressed liquid from silos;

3. urine from animal sheds;

4. whey;

5. surface treatment baths in the metal industry or concentrated rinse water from such baths.

The Crown may extend the provisions of the first paragraph of this Section to waste waters of other specified types.

8. Where such a measure is of particular importance from the nature conservation standpoint or in regard to the public interest, the Crown may prohibit, within a particular part of the country, any discharge of waste waters, solid substances or gases from land, buildings or installations into watercourses, lakes or other bodies of water, provided that this does not entail unreasonable difficulties for the proprietors of factories or establishments constructed before the decision is notified or for the municipality or for other persons who have already commenced the drainage of waste waters.

Examination of applications for licences

9. The Franchise Board for the Protection of the Environment [koncessionamnd for mil.jo-"skydd J may, on application by a person undertaking or proposing to undertake an environmentally harmful activity, grant a licence after an examination of the case in accordance with this Act.

10. The Crown may prescribe that:

1. certain types of factories or other establishments must not be built;
2. waste waters of a specified quantity, nature or composition must not be discharged;
3. solid wastes or other solid substances must not be discharged or deposited in such a way that the watercourse, lake or other body of water may be polluted as a result;
4. certain types of establishment or the operation thereof must not be modified in such a way that they constitute an increased or new nuisance or would cause appreciable disturbance in other respects,

unless the Franchise Board has issued a licence in accordance with this Act or a notification has been made to the Nature Conservancy Agency [statens naturvârdsverk] J or the County Administration, [lansstyrelse]

The Nature Conservancy Agency may, after an examination of each particular case in accordance with this Act, grant exemptions from the obligation to apply for a licence as prescribed in the first paragraph. The decision to grant an exemption shall indicate the conditions attached.

11. The Franchise Board shall consist of a chairman and three other members. The Chairman may act on his own in preliminary matters and in the examination of. questions relating to the rejection of applications or the termination of proceedings.

The Chairman must be a lawyer with experience of judicial duties. One member must have knowledge of and experience in technical questions. Another member must have experience in questions within the field of jurisdiction of the Nature Conservancy Agency. The fourth member must have experience in industrial activities. If in the opinion of the chairman a matter before the Board mainly concerns municipal affairs, the fourth member of the Board may be replaced by a person with experience in such affairs.

The Crown shall appoint the chairman and other members as well as, whenever necessary, replacements for them. The provisions governing members shall apply to their replacements.

The Crown may prescribe that the Franchise Board is to be made up of several divisions. The provisions governing the Board shall, where relevant, apply to each division.

12. The provisions of Chapter IV of the Code of Criminal Procedure relative to the rejection of a judge shall also apply to members of the Franchise Board. The members of the Board, however, may not be rejected by reason of the fact that:

1. before the Water Court *[*vattendomst8l*]* they dealt with questions concerning the environmentally harmful activity under examination by the Board;
2. before any authority other than the Water Court, they dealt with such questions without rendering a decision on the merits of the matter.

13. Applications for a licence shall be in writing. The application must contain the in formation, sketches and technical details necessary to assess the nature, scope and effects of the environmentally harmful activity.

The application must be submitted in the number of copies considered necessary by the Franchise Board,

If the application does not contain the information prescribed in the first paragraph or it has not been presented with a sufficient number of copies, the applicant shall be ordered to make good the shortcoming within a specified period. The order may impose a fine or prescribe that the shortcoming be made good at the applicant's expense,

14. The Franchise Board shall be responsible for a full investigation of any matter which is submitted to its examination.

The Board shall:

1. by means of an announcement in one or more local newspapers or in another suitable manner, provide those who may be affected by the environmentally harmful activity with an opportunity to express their views;
2. consult with national and municipal authorities which have significant interests to protect in the matter;
3. hold consultations with the parties concerned and make onsite inspections, unless this is manifestly unnecessary;
4. keep the person who makes an application or submission informed on relevant submissions by persons other than himself, and invite him to comment on such submissions if any, unless otherwise provided by Section 15 of the Administration Act No. 290 of 1971.

The Board may delegate one or more of its members to conduct the consultations or inspections provided for in subparagraph 3 above.

The Board may appoint an expert for the purpose of conducting a special investigation.

The costs of the announcement and the investigation referred to in paragraph 4 above shall be borne by the person undertaking or proposing to undertake the environmentally harmful activity. The Board shall, on request, determine the fee for the investigation,

15. If, in the course of the proceedings, divergent opinions become evident among members of the Board, a fresh vote shall be taken; and if in connection with such vote the question arises concerning the applicability of this Act, or concerning the adoption of a preliminary decision, or submission (to the Crown) under Section 16, a separate vote shall be taken on any of these questions.

In the event of a fresh vote being taken, that view shall be carried which attracts the greatest number of votes or, in the event of tie, that in favour of which the chairman casts his vote.

16. If in the course of examining an application for a licence under the terms of this Act, the Franchise Board finds that there is an impediment, under Section 6, second paragraph, first sentence, to the granting of a licence but that the circumstances are as referred to in the second sentence of the said paragraph, it shall submit the matter, with its own comments, to the Crown for decision.

17. 'The Crown may assign the County Administration the task of examining matters in regard to licences in certain specified aspects. The pertinent provisions of this Act concerning matters examined by the Franchise Board shall apply to matters submitted to the examination of the County Administration.

The Crown may assign the County Administration the right to grant exemptions, as referred to in the second paragraph of Section 10, in certain specified cases.

Decision to grant a licence

18. The decision to grant a licence shall specify in detail the environmentally harmful activity which the licence covers and the conditions attached thereto.

The decision may specify a period, in principle not exceeding ten years, during which the activity covered by the licence must commence.

19. Where the Crown grants a licence in the cases referred to in Section 6, second paragraph, it may impose special conditions for the general benefit of the region.

20. Where the Crown grants a licence, it may assign the Franchise Board or the County Administration the task of establishing the detailed conditions attached to it.

21. If at the time of granting a licence for an environmentally harmful activity, the conditions to which it should be subject cannot in certain respects be determined with sufficient certitude, the decision on this point may be postponed until experience has been acquired in the activity in question.

In connexion with the postponement provided for in the first paragraph of this Section, provisional instructions as to the protective measures or other precautionary measures to be taken shall be given where this is necessary to prevent a nuisance. Questions of postponement shall be settled with the least possible delay.

22. Persons who have received a licence to undertake an environmentally harmful activity under the terms of this Act may not be ordered, on the grounds of the provisions of this Act or of Regulations No. 663 of 19 December 1958 relating to Public Health, to cease this activity or to take, in connexion therewith, precautions over and above those specified in the licence decision, unless otherwise provided in Sections 23-25 and Section 40, second paragraph, of this Act.

23. If a person fails to comply with the conditions specified in the licence and the digression is significant, the Franchise Board may declare the licence void and prohibit the continuance of the activity.

24. After a lapse of ten years from the date on which the licence decision acquired force of law, or if the previous circumstances have changed to a significant extent, the Franchise Board may prescribe new or stricter conditions for the activity, so far as is reasonable.

If there are special grounds for so doing, the Board may review a licence to discharge waste waters into a specific watercourse, after the lapse of the period mentioned in the first paragraph.

25. If an environmentally harmful activity causes an appreciable nuisance not foreseen when the licence was granted, the Franchise Board may issue instructions intended to prevent or reduce this nuisance in the future.

26. The matters referred to in Sections 23 to 25 shall be examined on the proposition of the Nature Conservancy Agency.

27. The Franchise Board may, at the request of the licence-holder, rescind or relax the conditions in the decision if it is evident that these conditions are no longer necessary or are stricter than required, or if circumstances not foreseen when the licence was granted render their modification necessary.

28. Where the Crown has prescribed the conditions to which a licence is subject, the Board may not introduce any significant changes thereto, pursuant to the provisions of Sections 24, 25 or 27, without the consent of the Crown.

29. The licence shall become void if the activity to which it relates has not commenced within the period prescribed in Section 18, second paragraph.

If proof is presented of a valid justification for the delay or if the annulment of the licence would entail serious disadvantages, the Board may extend the period by up to 10 years, if an application to this effect is submitted before the prescribed period expires.

Compensation, etc.

30. Any person who, by undertaking an environmentally harmful activity, causes a nuisance shall make compensation therefor. If the nuisance is not caused maliciously, the obligation of compensation shall apply only in those cases where the nuisance is at a significant level and only if such nuisance cannot reasonably be tolerated with due regard to local circumstances or to its general occurrence in similar circumstances.

Unless otherwise provided hereinafter, the compensation shall be determined in accordance with the general rules on damages.

31. If, in those cases where damage or nuisance is caused to property, it is possible to assess the amount of compensation in advance, compensation for future damage shall be so assessed wherever the party concerned so requests. Where there are good reasons therefor, compensation for future damage caused to any property may be assessed for payment in specified annual instalments. Any compensation determined in this manner may be modified to the just amount where changes in circumstances so warrant.

32. Where as a result of any environmentally harmful activity any real property becomes unusuable wholly or partly for the owner or where the use of such property is impaired, the property or part of such property affected shall be redeemed *[*lösas*]* where the owner so requests.

33. The owner of any property who intends to request redemption under Section 32, shall Take action before the land court in the area in which the environmentally harmful activity is or is to be undertaken.

Where the aforesaid redemption is concerned, the pertinent provisions of the Expropriation Act No. 189 of 12 May 1917 shall apply. If the claim for redemption is rejected, the general provisions concerning court costs shall apply (Cf. Land Courts Act, of 20 May 1969).

34. Any person who wants to file a claim for compensation or other specific claim in consequence of an environmentally harmful activity shall take action before the land court referred to in Section 33. Likewise any person undertaking or intending to undertake an environmentally harmful activity may request that the question of compensation shall be examined in the manner here referred to. In such cases be shall indicate the amount of compensation which be offers.

35. A lump-sum compensation assessed for future damage to real property in favour of the owner or lease-holder *[*tomträtt*]* of the property in question shall be deposited with the County Administration, if the property or lease-hold is affected by mortgage or an application for mortgage. However, such deposit neeed not be made where the damage or nuisance is of little substantial significance for the security of the creditor who holds a pledge certificate based on the mortgage.

In the case of the assessment of such compensation by the land court, the land court itself shall indicate the amount to be deposited.

The amount so deposited shall immediately be paid by the County Administration into a bank where it shall bear interest; where the allocation and payment of the sum so deposited and the interest thereon are concerned, the provisions governing cases in which usufruct rights or servitudes are transferred by way of expropriation shall apply.

If the creditor referred to in the first paragraph suffers loss due to the fact that the compensation was calculated at an excessively low level, and that the compensation itself, as a result of an agreement made between whoever is required to pay it and whoever is entitled to receive it, or for any other reason, has not been laid down by the court, the creditor shall be entitled to receive reimbursement from the person upon whom the payment of compensation is incumbent against cancellation of documents attesting the credit in question. Action for such reimbursement shall be taken before the land court referred to in Section 33.

36. If any person takes action before the land court concerning an injunction against an environmentally harmful activity or concerning the precautionary measures required for anybody engaging or intending to engage in such activity, and if the question of licence for engaging in such activity under this Act is currently under examination, or is to be examined before the land court has issued its own ruling, the court itself shall declare the proceedings to be suspended until such time as a decision has been taken as regards the aforesaid licence.

37. In the case of the proceedings under Section 34, second sentence, the regulations concerning costs of expropriation proceedings shall apply mutatis mutandis.

If the action referred to in Section 36 is rejected because the defendant subsequent to the filing of such appeal has applied for and obtained a licence under this Act, the court shall rule, according to circumstances, that each of the parties shall bear his own share of the cost of litigation or that full or partial compensation shall be made to either.

Supervision

38. The Nature Conservancy Agency and the County Administrations shall exercise supervision over the protection against environmentally harmful activities liable to jeopardize public interests.

The Nature Conservancy Agency shall be responsible for overall supervision; it shall coordinate the supervisory activities of the County Administrations and assist them, where necessary, in such activities. The County Administrations shall exercise continuous supervision in their respective counties:.

The supervisory authorities shall co-operate with one another as well as with such national and municipal agencies as are responsible for supervision in special fields or perform other functions of importance for supervisory activities.

39. If the supervisory authority finds that a nuisance of importance from the general stand-point is being caused or could be caused by an environmentally harmful activity, it may give advice and instructions regarding appropriate measures for its elimination.

40. If a licence has not been granted under the terms of this Act, the County Administration may issue orders respecting such precautionary measures or prohibitions as are manifestly necessary in order that the provisions of this Act are observed. In case of emergency or if there are other special reasons for so doing, the order must be given immediately, while in all other cases the order shall be given after it has been determined that advice and instructions will not remedy the situation.

A licence decision granted under the terms of this Act shall not prevent the County Administration from prescribing such emergency measures as are necessary to cope with special circumstances.

If a licence-holder disregards the measures indicated in the licence, the County Administration may order the shortcomings to be made good at his expense or order him to remedy the shortcoming himself.

The County Administration may impose a fine in its decision as to an order under this Section.

41. Where a licence has not been granted in accordance with this Act, the Franchise Board may, on the proposition of the Nature Conservancy Agency, issue an injunction against an environmentally harmful activity not permissible under the terms of this Act, or prescribe provisions dealing with precautionary measures. With regard to the examination, the provisions of Sections 14 and 16 shall be applicable mutatis mutandis.

42. In order to exercise its supervisory functions in accordance with this Act, the super-visory authority shall have the right to enter factories or other installations, whether or not they are in service, and to conduct an inspection of the establishment or the grounds belonging to it.

If an inspection of other premises is necessary, the authority shall have the right of access in order to carry out the inspection. This right does not however extend to dwelling-houses, plots of land, or gardens.

43. If an activity in an installation is liable to be harmful to the environment, the occupier shall be required to provide the supervisory authority, at the latter's request, with the information required concerning the installation.

44. Any person exercising supervision within the meaning of this Act shall be required not to disclose unduly any professional secrets or technical arrangements or business relations or circumstances of importance for national defence of which be may thereby come into possession.

Sanctions, enforcement, administrative appeal, etc.

45. Any person who knowingly or through negligences:

1. contravenes the injunctions issued pursuant to Sections 8, 23 and 41;
2. fails to comply with the orders issued by the Crown under Section 10, first paragraph, without having obtained prior exemption pursuant to Section 10, second paragraph or Section 17, second paragraph;

3. disregards the conditions and orders issued pursuant to Sections 10, second paragraph, 17, 18, first paragraph, 19-21, 24, 25, 27, 41, in such a way that injury is done to any public or private right, or

4. contravenes Section 44;

shall be punished with a fine or a term of imprisonment not exceeding one year.

Any person who knowingly or through negligence fails to carry out his obligations under Section 33, shall be punished with a fine.

46. Where an offence against Section 44 concerns a matter other than a circumstance of Importance for national defence, proceedings shall be instituted by the public prosecutor only if the aggrieved party so requests.

47. If any person has committed any of the acts contemplated in Section 45, first paragraph, subparagraph 1-3, the enforcement authority may prescribe enforcement measures in order to remedy the situation. In such cases the appropriate rules set forth on this subject, in the Act on the Recovery of Debts, Section 191, shall apply.

Where the public interest is affected, proceedings in order to secure the aforesaid enforcement measures shall be instituted by the Nature Conservancy Agency or any other authority concerned.

If any injunction under Section 40, first and second paragraphs, is not complied with, the officer of the court shall, at the request of the County Administration, ensure that the order is carried out.

It shall be incumbent on the police authority to undertake the enforcement measures necessary for the exercise of supervision within the meaning of this Act.

48. No recourse shall lie against a decision rendered by the Nature Conservancy Agency under Section 10, second paragraph, or by the County Administration under Section 17, second paragraph.

Recourse against a decision pursuant to Section 14, last paragraph, second sentence, or regarding an injunction under Section 51, shall be taken by way of administrative appeal to the Administrative Court *[* kammerrätt *]* .

Recourse against any other decision by the Franchise Board or by the County Administration under this Act shall be taken by way of administrative appeal to the Crown. .

For the purpose of safeguarding the public interest, the Nature Conservancy Agency may take recourse against a decision by the Franchise Board or by the County Administration regarding licence matters under this Act, against a decision by the Franchise Board regarding matters under Section 41» and against a decision of the County Administration regarding matters under Section 40.

This rule shall enter into effect on 1 January 1972.

The provisions previously in force shall continue to apply to recourse against decisions rendered prior to 1 January 1972.

49. A decision regarding licence matters under this Act, a decision regarding matters under Section 41, and a decision under Section 14, last paragraph, second sentence, shall have effect from the date when the decision acquires force of law. The decision may prescribe that it shall be immediately executory.

Decisions concerning matters under Section 40 shall enter into force immediately unless provision is made otherwise.

50. If the County Administration pursuant to Section 40, first paragraph, or the Public Health Board *[*hälsovardsnamnd *]* has prohibited an environmentally harmful activity or has ordered any person who engages in or intends to engage in such activity to take precautionary measures and if the said person applies for a licence to engage in such activity as provided in this Act, the Franchise Board may, where the applicant offers security for costs and damage, decide that the ruling of the County Administration or the Public Health Board shall not be implemented until a decision has been reached on the question of the licence or until the Franchise Board has prescribed otherwise.

51. If any person, in order to establish the effects of any environmentally harmful activity that be engages in or intends to engage in, desires to conduct measurements or other investigations on property owned or occupied by a third party, the County Administration may, if there is sufficient cause therefor, decide that for a given period such person shall be granted access to the property in question. If it is necessary to make use of measuring or similar instruments the said County Administration may also rule that the instruments in question shall not, under injunction sanctioned by fine, be moved or damaged.

The investigation shall be conducted in such a way as to cause the least possible damage or nuisance. Compensation shall be payable for any damage or nuisance so caused. Action for compensation shall be taken before the land court referred to in Section 33.

52. Further provisions for the implementation of this Act shall be issued by the Crown.

(Transitional provisions)

2. JAPAN

Basic Act for Environmental Pollution Control *[*Kogai Tai salku Kihon-ho *]* No. 132 of 3 July 1967, as amended to December 1970. English translation in : "Problems of the Human Environment", National Report submitted by the Government of Japan to the United Nations Conference on The Human Environment (31 March 1971), Annex I.

Chapter I : General Provisions

Article 1 (Purpose)

In view of the vital importance of environmental pollution control for the preservation of a healthy and civilized life for the nation, this Act is enacted for the purpose of identifying the responsibilities of the enterprise, the State and the local government bodies determining the fundamental requirements for control measures, in order to promote comprehensive policies to combat environmental pollution, thereby ensuring the protection of the people's health and the conservation of their living environment.

Article 2 (Definition)

(1) The term "environmental pollution" [kogai], as used in this Act, shall mean any situation in which human health and the living environment are damaged by air pollution, water pollution (including the deterioration of the quality and other conditions of water as well as of the beds of rivers, lakes, the sea and other bodies of water). The same shall apply hereinafter, except in the case of Article 9, paragraph 1, to soil pollution, noise, vibration, ground subsidence (except hereinafter for subsidence caused by drilling activities for mining), and offensive odours, which arise over a considerable area as a result of industrial or other human activities.

(2) The term "living environment", as used in this Act, shall include property closely related to human life, and animals and plants closely related to human life and the environment in which such animals and plants live.

Article 3 (Responsibilities of enterprises)

(1) Enterprises shall be responsible for taking the measures necessary for the prevention of environmental pollution, such as the treatment or disposal of smoke and soot, polluted water, wastes, etc. resulting from their industrial activities, and for cooperating with the State and local government bodies in their efforts to prevent environmental pollution.

(2) Enterprises, in manufacturing and processing activities, shall endeavor to take precautionary measures to prevent environmental pollution which might otherwise be caused by the use of the products which they manufacture or process.

Article 4 (Responsibility of the State)

The State has the responsibility to establish fundamental and comprehensive policies for environmental pollution control and to implement them, in view of the fact that it has the duty to protect the people's health and conserve the living environment.

Article 5 (Responsibility of local government bodies)

In order to protect the health of the local population and to conserve the living environment, local government bodies shall take measures in line with the policy of the State and shall also work out and implement appropriate measures for environmental pollution control which take into account the specific natural and social conditions of the area concerned.

Article 6 (Responsibility of citizens)

Citizens shall endeavour to contribute to the prevention of environmental pollution in all appropriate ways such as cooperating with the State and with local government bodies in the implementation of control measures.

Article 7 (Annual report, etc.)

(1) The Government shall present to the Diet an annual report on the situation with regard to environmental pollution and on those measures taken by the Government in order to control it.

(2) The Government shall present to the Diet annually a document, outlining the measures which the Government is going to take to deal with the environmental pollution situation described in the report referred to in the preceding paragraph.

Article 8 (Control of air pollution, etc. caused by radioactive substances)

With regard to measures for the control of pollution of air, water and soil by radioactive substances, the Atomic Energy Basic Act (No. 186 of 1955) and other related laws shall apply.

Chapter II: Fundamental Policies for Environmental Pollution Control

Section I : Environmental quality standards

Article 9

(1) With regard to environmental conditions relating to air, water and soil pollution and noise, the Government shall establish environmental quality standards, the maintenance of which is desirable for the protection of human health and the conservation of the living environment.

(2) In the event that one of the standards referred to in the preceding paragraph establishes more than one category and stipulates that land areas or water areas to which those categories are to be applied should be designated, the Government may delegate to the prefectural governors concerned the authority to designate those land areas or water areas.

(3) With regard to the standards provided for in paragraph 1, due scientific consideration shall always be given and such standards shall be revised whenever necessary.

(4) The Government shall make efforts to ensure the maintenance of the above-mentioned standards, by implementing environmental pollution control measures in a comprehensive, effective and appropriate manner.

Section II: Measures to be taken by the State

Article 10 (Emission control, etc.)

(1) In order to control environmental pollution, the Government shall take measures for the control of the emission of pollutants responsible for air, water and soil pollution, establishing standards to be observed by the enterprise.

(2) In order to control environmental pollution, the Government shall endeavour to take measures to deal with noise, vibration, ground subsidence and offensive odours, in a manner similar to that referred to in the preceding paragraph.

Article 11 (Control of land use and installation of facilities)

In order to control environmental pollution, the Government shall take necessary measures with regard to land use and shall, in areas where environmental pollution is serious or likely to become serious, also take measures to control the installation of facilities which cause environmental pollution.

Article 12 (Promotion of establishment of facilities for the prevention of environmental pollution)

The Government shall take measures to promote necessary projects for the prevention of environmental pollution, such as the establishment of buffer zones, etc., as well as those projects to establish the public facilities which will contribute to the prevention of environmental pollution, such as sewerage and public waste disposal plants.

Article 13 (Establishment of surveillance and monitoring systems)

The Government shall endeavour to establish systems for surveillance, monitoring, measurement, examination and inspection in order to ascertain what the situation with regard to environmental pollution is and to ensure adequate enforcement of measures to combat environmental pollution.

Article 14 (Carrying out of surveys and investigations)

The Government shall carry out surveys and investigations necessary for the planning of measures for environmental pollution control, such as those for predicting environmental pollution trends.

Article 15 (Promotion of science and technology)

In order to promote the development of science and technology which will contribute to the prevention of environmental pollution, the Government shall take the necessary measures such as the consolidation of survey and research systems, the promotion of research and development, the dissemination of the results of such research and development work, and the education and training of research experts.

Article 16 (Dissemination of knowledge and information)

The Government shall endeavour to disseminate knowledge and information concerning environmental pollution and also to make the nation more conscious of the need to prevent environmental pollution.

Article 17-1 (Consideration of environmental pollution control in the planning of regional development policies, etc.)

The Government shall take into consideration the need to control environmental pollution in the planning and implementation of regional development measures such as those for urban development and the construction of factories.

Article 17-2 (Protection of the natural environment)

In order to contribute to the prevention of environmental pollution, the Government shall, in conjunction with other measures prescribed in this Section, endeavor to protect the natural environment, as well as conserving green areas.

Section III : Measures to be taken by local government bodies

Article 18

The local government bodies shall, provided that the measures do not infringe laws and regulations, take measures in line with the policy of the State provided for in the preceding Section and shall also implement measures for environmental pollution control which take into account the specific natural and social conditions of the area concerned. In this case, the prefectural governments shall be responsible mainly for the implementation of measures covering wide areas and also for the coordination of measures to be taken by the municipal governments.

Section IV t Environmental pollution control in specified areas

Article 19 (Formulation of environmental pollution control programmee)

(1) The Prime Minister shall instruct the prefectural governors concerned to formulate programmes relating to the environmental pollution control measures (hereinafter called "Environmental Pollution Control Programmes") to be implemented in specific areas which fall into any one of the following categories, by giving to those governors guidelines for such programmes:

(a) areas in which environmental pollution serious and in which it is recognised that it will be extremely difficult to achieve effective environmental pollution control unless comprehensive control measures are taken;

(b) areas in which environmental pollution is likely to become serious on account of rapidly increasing concentration of population, industry, etc. and in which it is recognised that it will be extremely difficult to achieve effective environmental pollution control unless comprehensive control measures are taken.

(2) When the prefectural governor concerned has received the instruction referred to in the preceding paragraph, be shall draw up an Environmental Pollution Control Programme in accordance with the guidelines referred to in the preceding paragraph and shall submit it to the Prime Minister for his approval.

(3) Prior to issuing an instruction under paragraph 1 or giving the approval required .ander the preceding paragraph, the Prime Minister shall consult with the Conference on Environmental Pollution Control.

(4) Prior to issuing an instruction under paragraph 1, the Prime Minister shall seek the opinion of the prefectural governor concerned.

Article 20 (Implementation of environmental pollution control programmes)

The State and local government bodies shall endeavour to take measures necessary for the full implementation of Environmental Pollution Control Programmes.

Section V : Settlement of disputes relating to environmental pollution and relief for damage caused thereby

Article 21

(1) The Government shall take the measures necessary to establish a system for the settlement, by such means as mediation and arbitration, of disputes which arise in connection with environmental pollution.

(2) The Government shall take the measures necessary to establish a system which will make possible the efficient implementation of relief measures for damage caused by environmental pollution.

Chapter III : Bearing of Costs and Financial Measures Article 22

(1) The enterprise shall bear all or part of the necessary cost of the works carried out by the State or local government bodies to control environmental pollution arising from the industrial activities of such enterprise.

(2) The nature and amount of the costs which the enterprise shall bear under the preceding paragraph, the enterprises which shall bear such costs, the method of calculation of the amount to be borne by such enterprises, and other necessary matters relating to the bearing of costs shall be laid down in other laws.

Article 23 (Financial measures for local government bodies)

The State shall endeavour to take necessary financial and other measures relating to the necessary cost of environmental pollution control measures implemented by local government bodies.

Article 24 (Assistance to enterprises)

(1) The State and local government bodies shall endeavour to take the necessary measures, such as monetary and taxation measures, to encourage the installatio and improvement, by enterprises, of facilities for the prevention of environmental pollution.

(2) In taking the measures referred to in the preceding paragraph, special consideration shall be given to small and medium enterprises•

Chapter IV : The Conference on Environmental Pollution Control and the Councils on Environmental Pollution Control

Section I : The Conference on Environmental Pollution Control

Article 25 (Establishment and functions)

(1) There is hereby established a Conference on Environmental Pollution Control (hereinafter called "the Conference") as an Agency attached to the Prime Minister's Office.

(2) The Conference shall perform the following functions. It shall:

(a) deal with matters provided for in Article 19, paragraph 3, with respect to the Environmental Pollution Control Programmes;

(b) in addition to performing the function referred to in the preceding sub-paragraph, deliberate on basic and comprehensive measures for environmental pollution control, and promote the implementation of such measures;

(c) in addition to performing the functions referred to in the preceding two subparagraphs, deal with matters which come within the jurisdiction of the Conference under laws and regulations.

Article 26 (Organisation, etc.)

(1) The Conference shall be composed of a Chairman and Members.

(2) The Prime Minister shall hold the office of Chairman.

(3) Members shall be appointed by the Prime Minister from among the heads of related Ministries and Agencies.

(4) There shall be Secretaries of the Conference.

(5) The Secretaries shall be appointed by the Prime Minister from among the officials of related Ministries and Agencies.

(6) The Secretaries shall assist the Chairman and Members in dealing with the matters which come within the jurisdiction of the Conference.

(7) The secretarial affairs of the Conference shall be handled by the Prime Minister's Secretariat.

(8) Matters necessary for the organisation and operation of the Conference, other than those provided for in the preceding paragraphs, shall be provided by Cabinet Orders.

Section II : Councils on Environmental Pollution Control

Article 27 (Organisation and functions of the Nationál Council on Environmental Pollution Control)

(1) There is hereby established a National Council on Environmental Pollution Control (hereinafter called "the National Council"), as an advisory body to the Prime Minister's Office.

(2) The National Council shall perform the following functions. It shall:

(a) study and deliberate on basic matters related to environmental pollution control, when requested to do so by the Prime Minister;

(b) in addition to performing the function referred to in the preceding sub-paragraph, deal with matters which come within the jurisdiction of the Central Council under laws and regulations.

(3) The National Council may express its opinion to the Prime Minister with regard to matters provided for in the preceding paragraph.

Article 28

(1) The National Council shall be composed of not more than 20 Members.

(2) The Members shall be appointed by the Prime Minister from among those experts who have both knowledge and experience in environmental pollution control.

(3) The Members shall serve on a part-time basis.

(4) The secretarial affairs of the NationalCouncil shall be handled by the Prime Minister's Secretariat.

(5) Matters necessary for the organisation and operation of the NationalCouncil, other than those provided for in the preceding paragraphs, shall be provided for by Cabinet Orders.

Article 29 (Prefectural Councils on Environmental Pollution Control)

(1) The prefectural governments shall establish Prefectural Councils on Environmental Pollution Control which shall perform such functions as the study of and deliberation on basic matters relating to control measures for environmental pollution within the prefectures concerned.

(2) Matters necessary for the organization and operation of the Prefectural Councils on Environmental Pollution Control shall be provided by prefectural ordinances.

Article 30 (Municipal Councils on Environmental Pollution Control)

Municipal governments may, under the provisions of pertinent municipal ordinances, establish Municipal Councils on Environmental Pollution Control which shall perform such functions as the study of and deliberation on basic matters relating to control measures for environmental pollution within the municipalities concerned.

3. UNITED STATES OP AMERICA

National Environmental Policy Act of 1969 (An Act to establish a national policy for the environment, to provide for the establishment of a Council on Environmental Quality, and for other purposes), Public Law No. 91-190 of 1 January 1970; 83 Stat. 852, 42 U.S.C. 4321-4347 (1970); English, French and Spanish texts in: FAO, Food and Agricultural Legislation, vol. 20 No. 2 (1971) pp. 66-71.

Purpose

Sec. 2. The purposes of this Act are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the health and welfare of man} to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

Title I : Declaration of National Environmental Policy

Sec. 101. (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may:

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Sec, 102. The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall:

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment ;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical consideations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on-:

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5,United States Code, and shall accompany the proposal through the existing agency review processes;

(D) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(E) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support initiatives, resolutions, and programmes designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(H) assist the Council on Environmental Quality established by title II of this Act.

Sec. 103. All agencies of the Federal Government shall review their present statutory authority, administrative regulations, and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies therein which prohibit full compliance with the purposes and provisions of this Act and shall propose to the President not later than July 1, 1971, such measures as may be necessary to bring their authority and policies into conformity with the intent, purposes, and procedures set forth in this Act.

Sec. 104. Nothing in Section 102 or 103 shall in any way affect the specific statutory obligations of any Federal agency (1) to comply with criteria or standards of environmental quality, (2) to coordinate or consult with any other Federal or State agency, or (3) to act, or refrain from acting contingent upon the recommendations or certification of any other Federal or State agency.

Sec. 105. The policies and goals set forth in this Act are supplementery to those set forth in existing authorizations of Federal agencies.

Title II : Council on Environmental Quality

Sec. 201. The President shall transmit to the Congress annually beginning July 1, 1970, an Environmental Quality Report (hereinafter referred to as the "report") which shall set forth (1) the status and condition of the major natural, manmade, or altered environmental classes of the Nation, including, but not limited to, the air, the acquatic, including marine, estuarine, and fresh water, and the terrestrial environment, including, but not limited to, the forest, dryland, wetland, range, urban, suburban, and rural environment; (2) current and foreseeable trends in the quality, management and utilization of such environments and the effects of those trends on the social, economic, and other requirements of the Nation; (3) the adequacy of available natural resources for fulfilling human and economic requirements of the Nation in the light of expected population pressures; (4) a review of the programmes and activities (including regulatory activities) of the Federal Government, the State and local governments, and nongovernmental entities or individuals, with particular reference to their effect on the environment and on the conservation, development and utilization of natural resources; and (5) a programme for remedying the deficiencies of existing programmes and activities, together with recommendations for legislation.

Sec. 202. There is created in the Executive Office of the President a Council on Environmental Quality (hereinafter referred to as the "Council"). The Council shall be composed of three members who shall be appointed by the President to serve at his pleasure, by and with the advice and consent of the Senate. The President shall designate one of the members of the Council to serve as Chairman. Each member shall be a person who, as a result of his training, experience, and attainments, is exceptionally well qualified to analyze and interpret environmental trends and information of all kinds : to appraise programmes and activities of the Federal Government in the light of the policy set forth in title I of this Act; to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs and interests of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

Sec. 203. The Council may employ such officers and employees as may be necessary to carry out its functions under this Act. In addition, the Council may employ and fix the compensation of such experts and consultants as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof).

Sec. 204. It shall be the duty and function of the Council :

(1) to assist and advise the President in the preparation of the Environmental Quality Report required by section 201;

(2) to gather timely and authoritative information concerning the conditions and trends in the quality of the environment both current and prospective, to analyze and interpret such information for the purpose of determining whether such conditions and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in title I of this Act, and to compile and submit to the President studies relating to such conditions and trends;

(3) to review and appraise the various programmes and activities of the Federal Government in the light of the policy set forth in title I of this Act for the purpose of determining the extent to which such programmes and activities are contributing to the achievement of such policy, and to make recommendations to the President' with respect thereto;

(4) to develop and recommend to the President national policies to foster and promote the improvement of environmental quality to meet the conservation, social economic, health, and other requirements and goals of the Nation;

(5) to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality;

(6) to document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary date and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes;

(7) to report at least once each year to the President on the state and condition of the environment; and

(8) to make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

Sec. 205. In exercising its powers, functions, and duties under this Act, the Council shall :

(1) consult with the Citizens' Advisory Committee on Environmental Quality established by Executive Order numbered 11472, dated May 29, 1969, and with such representatives of science, industry, agriculture, labor, conservation organizations, State and local governments and other groups, as it deems advisable; and

(2) utilize, to the fullest extent possible, the services, facilities, and information (including statistical information) of public and private agencies and organizations, and individuals, in order that duplication of effort and expense may be avoided, thus assuring the Council's activities will not unnecessarily overlap or conflict with similar activities authorized by law and performed by established agencies.

Sec. 206. Members of the Council shall serve full time and the Chairman of the Council shall be compensated at the rate provided for Level II of the Executive Schedule Pay Rates (5 U.S.C. 5313). The other members of the Council shall be compensated at the rate provided for Level IV of the Executive Schedule Pay Rates (5 U.S.C. 5315).

Sec. 207. There are authorized to be appropriated to carry out the provisions of this Act not to exceed $300,000 for fiscal year 1970, $700,000 for fiscal year 1971 , and $1,000,000 for each fiscal year thereafter.

Environmental Quality Improvement Act of 1970, Public Law No. 91-224 of 3 April 1970, 42 U.S.C.A. 4371-4374 (Supp. 1971).

Findings, declarations, and purposes

Sec. 2C2. (a) The Congress finds:

(1) that man has caused changes in the environment;

(2) that many of these changes may affect the relationship between man and his environment; and

(3) that population increases and urban concentration contribute directly to pollution and the degradation of our environment.

(b) (1) The Congress declares that there is a national policy for the environment which provides for the enhancement of environmental quality. This policy is evidenced by statutes heretofore enacted relating to the prevention, abatement, and control of environmental pollution, water and land resources, transportation, and economic and regional development.

(2) The primary responsibility for implementing this policy rests with State and local governments.

(3) The Federal Government encourages and supports implementation of this policy through appropriate regional organizations established under existing law.

(c) The purposes of this title are:

(1) to assure that each Federal department and agency conducting or supporting public works activities which affect the environment shall implement the policies established under existing law; and

(2) to authorize an Office of Environmental Quality, which, notwithstanding any other provision of law, shall provide the professional and administrative staff for the Council on Environmental Quality established by Public Law 91-190.

Office of Environmental Quality

Sec. 203. (a) There is established in the Executive Office of the President an office to be known as the Office of Environmental Quality (hereafter in this title referred to as the "Office"). The Chairman of the Council on Environmental Quality established by Public Law 91-190 shall be the Director of the Office. There shall be in the Office a Deputy Director who shall be appointed by the President, by and with the advice and consent of the Senate.

(b) The compensation of the Deputy Director shall be fixed by the President at a rate not in excess of the annual rate of compensation payable to the Deputy Director of the Bureau of the Budget.

(c) The Director is authorized to employ such officers and employees (including experts and consultants) as may be necessary to enable the Office to carry out its functions under this title and Public Law 91-190, except that be may employ no more than ten specialists and other experts without regard to the provisions of title 5, United States Code, governing appointments in the competitive service, and pay such specialists and experts without regard to the provisions of chapter 51 and subchapter 111 of chapter 53 of such title relating to classification and General Schedule pay rates, but no such specialist or expert shall be paid at a rate in excess of the maximum rate for GS-18 of the General Schedule under section 5330 of title 5.

(d) In carrying out his functions the Director shall assist and advise the President on policies and programmes of the Federal Government affecting environmental quality by:

(1) providing the professional and administrative staff and support for the Council on Environmental Quality established by Public Law 91-190;.

(2) assisting the Federal agencies and departments in appraising the effectiveness of existing and proposed facilities, programmes, policies, and activities of the Federal Government, and those specific major projects designated by the President which do not require individual project authorization by Congress, which affect environmental quality;

(3) reviewing the adequacy of existing systems for monitoring and predicting environmental changes in order to achieve effective coverage and efficient use of research facilities and other resources;

(4) promoting the advancement of scientific knowledge of the effects of actions and technology on the environment and encourage the development of the means to prevent or reduce adverse effects that endanger the health and well-being of man;

(5) assisting in coordinating among the Federal departments and agencies those programmes and activities which affect, protect, and improve environmental quality;

(6) assisting the Federal departments and agencies in the development and interrelationship of environmental quality criteria and standards established through the Federal Government;

(7) collecting, collating, analyzing, and interpreting data and information on environmental quality, ecological research, and evaluation.

(e) The Director is authorized to contract with public or private agencies, institutions, and organizations and with individuals without regard to sections 3618 and 3709 of the Revised Statutes (31 U.S.C. 529; 41 U.S.C. 5) in carrying out his functions.

Report

Sec. 204. Each Environmental Quality Report required by Public Law 91-190 shall, upon transmittal to Congress, be referred to each standing committee having jurisdiction over any part of the subject matter of the Report.

Authorization

Sec. 205. There are hereby authorized to be appropriated not to exceed $500,000 for the fiscal year ending June 30, 1970, not to exceed $750,000 for the fiscal year ending June 30, 1971, not to exceed 31,250,000 for the fiscal year ending June 30, 1972, and not to exceed $1,500,000 for the fiscal year ending June 30, 1973. These authorizations are in addition to those contained in Public Law 91-190.

Approved April 3, 1970.

Michigan Environmental Protection Act of 1970 (An Act to provide for actions for declaratory and equitable relief for protection of the air, water and other natural resources and the public trust therein; to prescribe the rights, duties and functions of the attorney general, any political subdivision of the state, any instrumentality or agency of the state or of a political subdivision thereof, any person, partnership, corporation, association, organization or other legal entity; and to provide for judicial proceedings relative thereto); Public Act No. 127, State of Michigan (75th Legislature, Regular Session of 1970), approved by the Governor on 27 July 1970.

Sec. 1. This act, shall be known and may be cited as the "Thomas J. Anderson, Gordon Rockwell environmental protection act of 1970".

Sec. 2. (1) The attorney general, any political subdivision of the state, any instrumentality or agency of the state or of a political subdivision thereof, any person, partnership, corporation, association, organization or other legal entity may maintain an action in the circuit court having jurisdiction where the alleged violation occurred or is likely to occur for declaratory and equitable relief against the state, any political subdivision thereof, any person, partnership, corporation, association, organization or other legal entity for the protection of the air, water and other natural resources and the public trust therein from pollution, impairment or destruction.

(2) In granting relief provided by subsection (1) where there is involved a standard for pollution or for an anti-pollution device or procedure, fixed by rule or otherwise, by an instrumentality or agency of the state or a political subdivision thereof, the court may:

(a) determine the validity, applicability and reasonableness of the standard.

(b) when a court finds a standard to be deficient, direct the adoption of a standard approved and specified by the court.

Sec. 2a. If the court has reasonable ground to doubt the solvency of the plaintiff or the plaintiff's ability to pay any cost or judgment which might be rendered against him in an action brought under this act the court may order the plaintiff to post a surety bond or cash not to exceed $500,00.

Sec. 3. (1) When the plaintiff in the action -has made a prima facie showing that the conduct of the defendant has, or is likely to pollute, impair or destroy the air, water or other natural resources or the public trust therein, the defendant may rebut the prima facie showing by the submission of evidence to the contrary. The defendant may also show, by way of an affirmative defense, that there is no feasible and prudent alternative to defendant's conduct and that such conduct is consistent with the promotion of the public health, safety and welfare in light of the state's paramount concern for the protection of its natural resources from pollution, impairment or destruction. Except as to the affirmative defense, the principles of burden of proof and weight of the evidence generally applicable in civil actions in the circuit courts shall apply to actions brought under this act.

(2) The court may appoint a master or referee, who shall be a disinterested person and technically qualified, to take testimony and make a record and a report of his findings to the court in the action.

(3) Costs may be apportioned to the parties if the interests of justice require.

Sec. 4. (1) The court may grant temporary and permanent equitable relief, or may impose conditions on the defendant that are required to protect the air, water and other natural resources or the public trust therein from pollution, impairment or destruction.

(2) If administrative, licensing or other proceedings are required or available to determine the legality of the defendant's conduct, the court may remit the parties to such proceedings, which proceedings shall be conducted in accordance with and subject to the provisions of Act No, 306 of the Public Acts of 1969 being sections 24.201 to 24.313 of the Compiled Laws of 1948. In so remitting the court may grant temporary equitable relief where necessary for the protection of the air, water and other natural resources or the public trust therein from pollution, impairment or destruction. In so remitting the court shall retain jurisdiction of the action pending completion thereof for the purpose of determining whether adequate protection from pollution, impairment or destruction has been afforded.

(3) Upon completion of such proceedings, the court shall adjudicate the impact of the defendant's conduct on the air, water or other natural resources and on the public trust therein in accordance with this act. In such adjudication the court may order that additional evidence be taken to the extent necessary to protect the rights recognized in this act.

(4) Where, as to any administrative, licensing or other proceeding, judicial review thereof is available, notwithstanding the provisions to the contrary of Act No. 306 of the Public Acts of 1969, pertaining to judicial review, the court originally taking jurisdiction shall maintain jurisdiction for purposes of judicial review.

Sec. 5. (1) Whenever administrative, licensing or other proceedings, and judicial review thereof are available by law, the agency or the court may permit the attorney general, any political subdivision thereof, any person, partnership, corporation, association, organization or other legal entity to intervene as a party on the filing of a pleading asserting that the proceeding or action for judicial review involves conduct which has, or which is likely to have, the effect of polluting, impairing or destroying the air, water or other natural resources or the public trust therein.

(2) In any such administrative, licensing or other proceedings, and in any judicial review thereof, any alleged pollution, impairment or destruction of the air, water or other natural resources or the public trust therein, shall be determined, and no conduct shall be authorized or approved which does, or is likely to have such effect so long as there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety and welfare.

(3) The doctrines of collateral estoppel and res judicata may be applied by the court to prevent multiplicity of suits.

Sec. 6. This act shall be supplementary to existing administrative and regulatory procedures provided by law.

Sec. 7. This act shall take effect October 1, 1970.

This act is ordered to take immediate effect.