



**HANDBOOK OF
ENVIRONMENTAL LEGISLATION
AND MACHINERY**

**MARCH 1983
NAIROBI**

UNITED NATIONS ENVIRONMENT PROGRAMME



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L I S T O F C O U N T R Y P R O F I L E S

AUSTRIA

ARGENTINA

BARBADOS

BOLIVIA

CANADA

CHINA

DOMINICAN REPUBLIC

FINLAND

JAPAN

KENYA

LUXEMBURG

THAILAND

SINGAPORE

UNITED KINGDOM OF GREAT BRITAIN AND
NORTHERN IRLAND

INTRODUCTION

Since 1978 UNEP has been considering the publication of a handbook to outline a general picture of the environmental legislation and machinery in various countries.

The handbook should serve the following purposes:

- as a base for UNEP's advice on the establishment of sound environmental machinery and legislation as a basis of better environmental management;
- as a source of information and data on where UNEP's constituents are;
- as a source of information and data for Governments, particularly from developing countries, who may wish to receive information on the environmental machinery and legislation of other countries in order to consider alternative mechanisms or who may wish to ascertain where their counterparts are within the environmental administration of another country;
- as source material for environmental education and training.

To show the general pattern and the various approaches possible for producing the handbook, UNEP produced three country profiles (Austria, France and the Philippines) during the Governing Council's tenth session in May 1982.

So far UNEP has prepared 52 country profiles which were sent to the respective Governments for clearance. Until now 41 country profiles have been officially cleared.

However, not all these country profiles are ready for publication, because of gaps and the fact that much of the statistical data as well as some of the information on legislation and environmental administration was outdated since the respective Governments cleared the country profiles.

For the Council's eleventh Session it was therefore decided to publish only a limited number of country profiles which are sufficiently complete and updated, and then to continue to up-date and publish the rest of country profiles in loose-leaf form.

The first part of each country profile includes basic statistical data, and the second part contains information on the history of environmental concerns, organization of environmental administration and on major acts of general environmental legislation and their implementation.

The profiles are printed as cleared by the respective Governments, except that data from the United Nations Statistical Yearbook 1978 were replaced by new data from the 1979/80 edition.

As guidance for further work, UNEP would appreciate receiving from interested representatives of Governments and United Nations specialized agencies and bodies, other inter-governmental organizations and NGOs, both during and after the present session of the Governing Council, comments on the usefulness of such a document, its structure, scope, format and content.

AUSTRIA

Area: <u>1/</u>	83,849 sq km
Terrain: <u>2/</u>	Mountains, lakes and forests dominate the Austrian landscape. In the northeast, the Danube winds between the eastern edge of the Alps and the hills of Bohemia and Moravia, heading toward the Hungarian plain. The Austrian Alps compose the western finger of Austria and a massive Alpine spur extends eastward to just short of Vienna. North of this spur extends a hilly subalpine region to the Danube. North of the river lies a richly wooded foothill area. The lowland area downstream from Vienna may be regarded as a western extension of the great Hungarian plain.
Natural resources: <u>2/</u>	Iron ore, petroleum, timber, aluminium, oil, coal, lignite, copper, cement, hydroelectric power. Austria is the world's leading producer of magnesite.
Climate: <u>2/ 3/</u>	The wetter western regions, with an Atlantic climate, have a yearly rainfall of over 990 mm whereas the eastern regions, particularly those under the influence of the drier, more continental type of climate, have less. In the lowlands and the hilly eastern regions, the median temperature ranges between -3°C in January and 20°C in July.
Population: <u>3/</u>	7,555,338 (1981 census).
Population density: <u>1/</u>	90 per sq km (1979).
Annual population growth: <u>3/</u>	1.3 percent (1971 - 1981).
Population distribution: <u>2/</u>	There has been a distinct population shift from the east to the west of Austria, to urban industrialized areas, and away from rural, agricultural areas.
Life expectancy: <u>3/</u>	68.97 years male; 76.15 years female; 1981.

Gross national product: 3/

\$US 10,250 per capita (1980, preliminary); growth rate per capita (real): 3.6 per cent (1970 - 1980).

Employment: 3/

Economically active population (1980 average): 3,128,300; in agriculture, forestry, hunting and fishing: 324,100; 18,200 in mining and quarrying; 1,047,100 in manufacturing; 278,800 in construction; 40,300 in electricity, gas, water and sanitary services; 415,800 in commerce; 195,500 in transport and communications; 804,400 in services.

Industrial and agricultural output: 2/ 3/ 4/

Industry and trade form the most important sources of national income. About half of the GNP comes from manufacturing and construction. Agriculture accounts for only 4,5 per cent of the GNP, radically declines since 1950, but it provides 79 per cent (1981) of domestic food requirements due to modern farming techniques.

- 1/ United Nations Statistical Yearbook, 1979/80.
- 2/ Encyclopedia Britannica, 1977.
- 3/ Encyclopedia Britannica Book of the Year, 1978.
- 4/ Austrian Government figures.

I. Background, history of environmental concerns, constitutional situation

1. Austria suffers the traditional problems of increasing urbanization, industrialization, protection of water supplies, air and water pollution. Due to its geographic position, Austria serves as a major transport artery, particularly between Europe and Asia on the waterways, railways and highways. The mountainous areas are potentially endangered from the effects of tourism and the decay of rural population, population migrations, and increasing industrialization.

2. Austria is a democratic republic organized on the federal system, with power divided between the federal government and the nine federal states (Länder).

3. The two chambers of the legislative body are comprised of the National Council, popularly elected, and the Federal Council, made up of representatives from the federal states. The President, who is elected directly by the people, is the Head of State. Federal level administration is carried out by the Federal Chancellor and his Cabinet of Ministers.

4. In decisions of legislation, the Constitution provides for appeals by the government to the electorate on specific points by means of referendum. There is further provision in the Constitution that if 200,000 or more electors present a petition to the government, it must, in turn, lay the petition before the National Council.

5. Austria has an independent judiciary.

II. Organization of national environmental administration and policy-making bodies

6. In 1972, the Federal Ministry for Health and Environmental Protection was established in accordance with Federal law. This Ministry assumes the main responsibility for coordination of environmental policy and heads an Interministerial Committee on which the Federal Ministries of Finance, of Social Welfare, of Building and Technology, of Trade, Commerce and Industry, and of Agriculture and Forestry are also represented. The Federal Law of 7 May 1981 has amended the Federal Law on Ministries to make the Federal Ministry for Health and Environmental Protection responsible for "general matters of environmental protection". These general matters comprise those questions of environmental protection which go beyond the concrete context of one administrative sectors. This means in particular that the Ministry is competent in the following areas:

- General policy of environmental protection;
- General questions of protection against immissions;
- Matters relating to the office of the environmental attorney;
- General affairs of environmental impact studies;
- Research in the field of environmental protection;
- Questions of monitoring, evaluation and documentation in the field of environmental protection.

Other areas falling in the jurisdiction of the Federal Ministry for Health and Environmental Protection are health services, other public health matters, pharmaceuticals, food control, and veterinary matters.

7. The responsibilities of the Federal Ministry of Building and Technology include road construction, waterways construction and maintenance, water supply and sewerage, housing affairs, Federal housing and building projects, building techniques in connection with town and country and land-use planning, and standard-setting in matters concerning construction.

8. In relation to environmental protection, the Federal Ministry of Trade, Commerce and Industry is concerned with mining, energy in so far as construction of utilities is not concerned and all commercial and industrial matters, with particular emphasis on the economic aspects.

9. The Federal Ministry of Agriculture and Forestry is responsible for all matters concerning forestry, those aspects of water management which are not the responsibility of the Ministry of Building and Technology, regulation of mountain torrents and avalanches, protection of plants, land reform and agricultural agencies, policies and law, and nature and landscape protection, including natural areas.

10. The Federal Ministry of Transport is concerned with traffic policies, railways, shipping and airlines, with motor vehicles, all construction associated with the railway system, administration of traffic matters, and of the shipping and river police.

11. The Federal Ministry of Science and Research is responsible for matters concerning scientific institutions, foundations, and research other than that carried on in the Federal Ministries. This Ministry allocates Federal funds for and co-ordinates all the research supported on the Federal level, and is specifically responsible for all matters concerning protection of monuments.

III. Relationship between national, regional and local levels of environmental administration

12. Each of the nine federal states (Länder) has its own popularly elected State Assembly, which exercises the same function as the National Council. The members of the State Assembly elect a government consisting of a state governor and his counselors.

13. On the local level of government, or commune, a popularly elected council chooses one of its members to be head of the commune (Bürgermeister) and a committee for the administration and execution of its resolutions.

14. Each of the federal States has assigned environmental responsibilities to a specific governmental body that acts as a focal point for environmental matters on the State level. These bodies are as follows:

- Burgenland: State Directorate "Landesamtsdirektion";
- Carinthia: State Directorate "Landesamtsdirektion";
- Lower Austria: Landsamtsdirektion, Division R/1 (technical matters) Division R/3 (legal matters)
- Upper Austria: State Directorate ("Landsamtsdirektion");
- Salzburg: State Director ("Landsamtsdirektion"), Division VII;
- Styria: State Directorate ("Landesamtsdirektion");
- Tyrol: Office of the Tyrol State Government, Division III a 2 (Legal matters of environmental protection);
- Vorarlberg: State Directorate ("Landesamtsdirektion");
- Vienna: Municipal Board ("Magistrat") of the City of Vienna, Division 22.

15. The Austrian Federal Constitution allocates various powers between federal and state governments in accordance with particular situations. Generally speaking however, the division of legislative and executive competences takes one of four forms:

- (a) the federal government has exclusive legislative and executive powers;
- (b) the federal government passes legislation, and the state governments execute it;
- (c) the federal government passes a framework legislation and the state governments must pass implementing legislation and execute it;
- (d) the state governments have exclusive legislative and executive powers.

16. The allocation of definite jurisdictions in which the federal and state governments are to exercise their respective legislative powers has been decided by the judicature of the Constitutional Court in numerous judgements based primarily on precedent since 1925. The jurisdictions having to do with environmental protection on which the Federal level legislates, are matters concerning criminal law, enforcement and punishment; maintenance of the public peace, order and security, with the exception of the local security police; matters of business and industry;

traffic matters concerning railways, airlines, and shipping; motor vehicles; matters concerning federal highways, river and shipping police; mining; forestry; construction and maintenance of waterways; water rights; health matters; veterinary medicine and related matters; nutritional matters, including control over foodstuffs; protection of monuments; census matters as well as other statistics having to do with two or more federal states; research institutions and foundations having concerns outside an individual federal state; traffic police; sanitation; inland shipping with respect to its business aspects; land reform, particularly agricultural operations and resettlement; protection of plants against pests and diseases; electricity supply; taxation; and educational matters.

17. The state governments have legislative powers in the following environmentally-related jurisdictions: land reform (implementing legislation); protection of plants (implementing legislation); electricity supply (implementing legislation); building law, including sewage disposal and gas lines into buildings, and construction noise laws, with the exception of those areas (mining, traffic, railway, etc.) specifically under federal jurisdiction; road construction, insofar as federal highways are not concerned; matters concerning cultural events; matters concerning camping places; fire police and fire departments; tourism; basic traffic; town and country and land-use planning, with the exception of those areas (railways, mining, forestry, water rights, etc.) which fall under federal jurisdiction; hunting and fishing rights; agricultural matters, including land improvement and stock breeding; nature conservation; local security police; matters concerning state research institutions and foundations; traffic matters outside of the jurisdiction of the federal level; organization of environmental protection (organization laws, laws on disaster aid, and on mountain rescue services); waste disposal; water supply; and matters concerning corpses and burials.

18. In determining regional development policy, the state and federal governments cooperate to a high degree in setting objectives and establishing methods for achieving them. In 1972 the federal government, the states and communes established the Austrian Conference on Regional Planning for the purpose of working out a coordinated concept for regional policy and for making proposals for dealing with particular problems of regional development policy within a framework of national policies. It consists of the federal government, the state governors, representatives of the communes, and, in an advisory capacity, the presidents of the employers' and employees' associations and the Board of Presidents of the Chambers of Agriculture.

IV. Major acts of general environmental legislation

19. Austria does not have a single unified environmental code. The major law dealing at all with general environmental protection was the law establishing the Federal Ministry for Health and Environmental Protection. The Minister then presented the Health and Environmental Protection Plan to the Council of Ministers for approval, and it was, in effect, the charter of the new Ministry, which defined its tasks and stated the ways and means by which the Ministry will fulfill its functions either within its autonomous sphere of responsibility or in cooperation with other authorities.

V. Implementation and enforcement of environmental laws and policies

20. Environmental laws and regulations are implemented by the competent federal and state ministries, in accordance with the constitutional division of competences.

21. Methods and incentives to compel compliance with environmental laws and regulations include licensing procedures, inspection, fines and/or imprisonment penalties for violation of the laws and regulations, tax concession and credit incentives, and the "polluter pays" principle.

VI. Relationship between government, industry, non-governmental organizations and others

22. Industry plays a large part in regional development policy, particularly at the state level, in the form, for the most part, of industrial siting corporations and professional associations, such as the Chambers of Commerce and Industry of Labour, and of Agriculture.

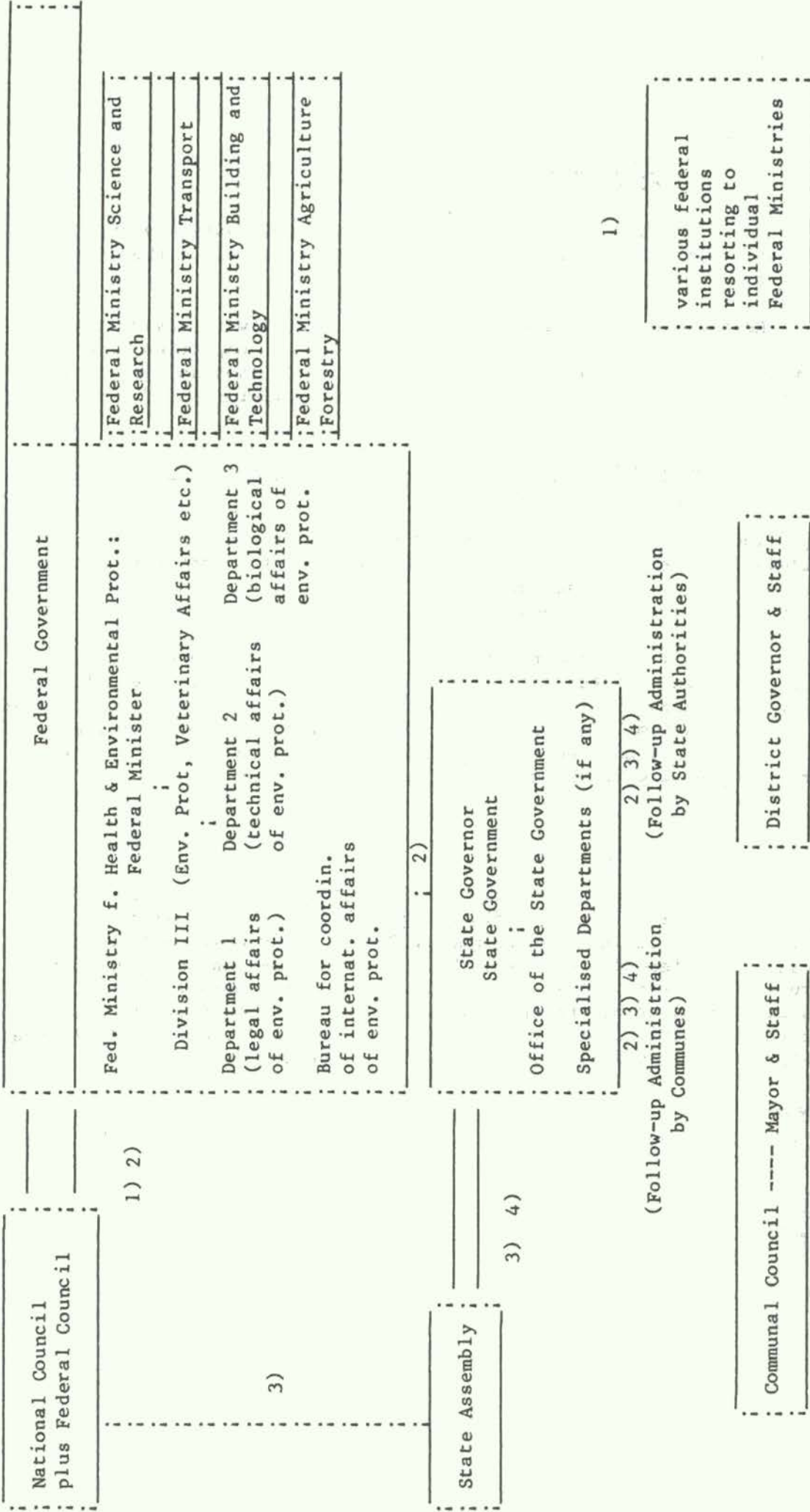
23. Nationalized industry provides the platform for government participation in a sector that accounts for approximately one-fifth of the total net industrial output. This does not mean, however, direct state ownership as in some other countries because state control over the management of nationalized companies is limited to the rights granted by Austria company law to shareholders' general meetings.

VII. Citizens' participation

24. Private organizations and citizen action groups play an increasingly active role in influencing Parliament and Government decisions in the field of environment. One of their most powerful means has been the referendum by which the electorate may supersede or even overrule legislation. It was through such a referendum in 1978 that legislation regulating the installation of nuclear power plants was rejected by majority vote and Austria's only nuclear power plant, though already completely constructed, was vetoed to become operational.

Legislation

Administration



ARGENTINA

- Area: 1/ 2,766,889 sq km
- Terrain: 2/ Argentina has one mountain system (the Andes) which reaches considerable altitudes (Aconcagua - 6,960 m) and three other independent mountain systems, the Central, the South-east and the Misiones systems.
The Pampa occupies a considerable part of the country, and is located between the foot-hills of the Andes in the west, and the Parana and Plate rivers and the Atlantic in the east, and between the south of the Salado and the north of the Patagonian plateaux. The river Plate estuary is the most prominent of the hydrographic systems.
- Natural resources: 2/ Small deposits of iron ore and coal; oil and natural gas resources; agricultural and stockraising land.
- Climate: 2/ Although it is located in the temperate zone of the southern hemisphere, Argentina has practically the entire range of climate, ranging from tropical, hot and humid in the north and north-east to the cold climate of Tierra del Fuego in the south.
- Population: 2/ 26,740,000 (mid-1979, preliminary).
- Population density: 1/ 10 per sq km (1979).
- Annual population growth: 1/ 1.3 per cent (1975 - 1979).
- Population distribution: 2/ High degree of urban concentration in and around Buenos Aires. The metropolitan region, consisting of the Federal Capital and greater Buenos Aires, contains more than 36 per cent of the country's population.
- Life expectancy: 1/ 65.16 years male; 71.38 years female (1970 - 1975).
- Gross national product: 3/ \$US 2,280 per capita (1979, preliminary); growth rate per capita (real): 1.5 per cent (1970 - 1978).
- Employment: 2/ The agricultural labour force has fallen to 15 per cent of total employment. Manufacturing employed 30 per cent of the labour force.
- Industrial and agricultural output: 2/ Agricultural products make up the bulk of Argentina's exports. Argentina is the world's third biggest producer of beef; it is fourth in the production of wool and wine, and about twelfth in the output of wheat. It is the second most

important oil-producing country in Latin America. Agriculture and fishing contributed 15 per cent of the GDP in 1969. The contribution of the mining and quarrying industries to GDP rose from 1.1 to 1.7 per cent in the 1960s. Manufacturing accounted for 35,1 per cent of the annual GDP in the late 1960s.

- 1/ United Nations Statistical Yearbook, 1979/80.
- 2/ Encyclopedia Britannica, 1974.
- 3/ World Bank Atlas, 1980.

I. Background, history of environmental concerns, constitutional situation

1. Argentina formed part of the Spanish colonial empire until, as a result of the efforts of an independence movement between 1810 and 1816, it achieved its separation from the Spanish Crown. The definitive organization of the new Republic was achieved with the Political Constitution of 1 May 1853, which is still in force. 1/

2. Argentina's economic growth, which until the 1930s was founded principally on a primary exporting economy based on agriculture and stock-raising, was diversified with the establishment of manufacturing industry, concentrated in the first phase in the food and clothing sectors, and for some years now also encompassing heavy industry a diversified light industry. The Pampa has traditionally produced wheat and beef for export, reaching the limits of intensive exploitation, while the rest of Argentina's agricultural land has been used for commercial crops destined first and foremost for the internal market. Industry in Argentina is highly concentrated: approximately 70 per cent of it is grouped together in the narrow 400-km strip along the Parana and Plate rivers which includes the metropolitan areas of Buenos Aires, La Plata and Rosario. The high geographical concentration is attributable to the dependence of industry on inputs imported through the port of Buenos Aires. Another important section of the national economy consists of forest resources: Argentina's natural forests cover more than 60 million hectares, of which 39 million are productive. Mineral resources are also important, but production is not highly developed. However, oil production in 1974 covered 87.4 per cent of internal demand.

3. Argentina's particular agricultural-industrial situation means that it faces not only the environmental problems characteristic of countries dependent on a single primary commodity, where intensive exploitation of natural resources is predominant, but also those typical of countries at a high level of industrial development, which suffer from less than ideal distribution of industry and indiscriminate discharges of harmful wastes, accompanied by over-concentration of population and uncontrolled urbanization. In Argentina, the rapacious exploitation of natural resources and/or the under-exploitation of their potential have given rise to migratory phenomena which in turn have caused excessive urban concentration: the metropolitan region, comprising the Federal Capital and Greater Buenos Aires (made up of 26 districts of Buenos Aires Province), contains more than 36 per cent of the country's population in an area equivalent to 0.2 per cent of its area. Half of Argentina's population is located in Buenos Aires province and in the Federal Capital of the same name.

4. Constitutionally, Argentina is a federal republic. The national authorities are the Federal Government and the Provincial Governments. The federal branches of Government are made up of a two-chamber Congress invested with legislative authority, a citizen who, with the title of President of the Argentine Nation, exercises executive authority, and a Supreme Court and other lower courts, which exercise judicial authority. Since 1976, however, under the Statute for the Process of National Reorganization, a military junta composed of the Commanders-in-Chief of the Army, the Navy and the Air Force is the supreme organ of the nation, and ensures the normal functioning of the other powers of the State. This junta designates the citizen who, with the title of President of the Argentine Nation, exercises executive authority. Some of the powers inherent in this authority are, however, exercised by the Military

Junta. The legislative powers, which the National Constitution assigns to Congress, are exercised by the President of the Nation, with the exception of a few exercised by the Military Junta. A Legislative Advisory Committee assists in drafting and approving legislation. This Committee is made up of nine senior officers, three designated by each branch of the armed forces.

5. Under the representative republican system each Province decides upon its own Constitution, which provides among other things for arrangements at the municipal level. The provinces establish their own local institutions and govern through them, electing their Governors, legislators and other officials without the intervention of the Federal Government. Nevertheless, under the Statute for the Process of National Reorganization referred to above the National Executing Authority takes decisions relating to the provincial governments, and designates the Governors, who exercises their powers in accordance with instructions from the Military Junta.

II. Organization of national environmental administration and policy-making bodies

6. At the national level, the country is administered by the President of the Nation, who exercises these functions through the various organs making up the national administration.

7. There is no ministry or public body in which national environmental administration is centralized. Nor is there any special system for co-ordinating the work of the various public agencies performing environmental functions. 2/

8. The Organic Law on Ministries provides that the conduct of the Nation's business is the responsibility of the following ministries: Planning, Interior, Foreign Affairs and Worship, Justice, Defence, the Economy, Culture and Education, Labour and Social Welfare. The Law also establishes the sphere of competence of each of these ministries, assigning environment-related functions to a number of them, for example the Ministry of the Interior, the Ministry of Defence, the Ministry of Culture and Education and the Ministry of Labour. The most important functions in this respect are assigned to the Ministry of the Economy and the Ministry of Social Welfare, which are required to exercise some of them in co-ordination with each other. The sphere of competence of the Ministry of the Economy is laid down in article 15 of the Organic Law on Ministries, which provides that its generic functions are to "assist the President of the Nation in all matters relating to the conduct of economic activities, through the adoption of a policy of true liberation, reaffirming national decision making power over natural resources and economic activity, designed to maintain full employment and growing production of goods and services, which will make it possible to ensure a just distribution of wealth, promoting regional development and increasing the share of labour in the national income, and realizing the nation's economic potential through intensive foreign trade...". The sphere of competence of the Ministry of Social Welfare is laid down in article 18 of the Organic Law on Ministries, which provides that its generic functions are to "assist the President of the Nation in all matters relating to social security, health, housing, coverage of risks, protection of the family, women, young people, minors, recreation, tourism and other community activities which require the efforts, assistance and protection of the State in order to attain social justice in the Nation...".

9. The Organic Law on Ministries provides that each of these subdivisions shall have such secretariats and undersecretariats as are established by decree of the Executive Authority.

10. Within the Ministry of the Economy, there are secretariats of state for housing, industrial development, agriculture and stockraising, trade, transport and public works, communications, energy, foreign trade and international economic negotiations, mining, and maritime affairs. ^{3/} A number of these secretariats of state discharge, through their undersecretariats, the environment-related functions falling within the competence of the Ministry of the Economy. Some of these functions fall within the competence of the Secretariat for Agriculture and Stock-Raising, for example, which discharges them through the Undersecretariat for Renewable Natural Resources and Ecology. The Secretariat for Maritime Affairs, for its part, has been assigned certain functions of an environmental nature, such as those related to river and marine fisheries, which it discharges through the Undersecretariat for Fisheries. However, the broadest of these environmental functions are the responsibility of the Secretariat for Transport and Public Works, and are discharged in particular through the Undersecretariat for Environmental Management. This Secretariat of State, in co-ordination with the Ministry of Social Welfare, is responsible for the provision of advice, selection of technologies and surveying in respect of environmental preservation, and for the provision of advice in relation to the location of productive activities. This Secretariat contains an Undersecretariat for Environmental Management, ^{4/} whose functions are to assist the Secretariat of State of which it forms part "in all matters relating to the implementation and supervision of policy regarding the restoration, improvement and preservation of the human environment". These terms derive from Decree No. 705, which also assigns to it a series of specific functions, making the Undersecretariat for Environmental Management the organ of the National Government which proposes national environmental policy to the Executing Authority from a global standpoint, and ensures its implementation through its own programmes, co-ordinated with those of other national organs, as appropriate, in line with the sphere of competence of the sector concerned. The Undersecretariat is also the standing advisory body for the Ministry of Foreign Affairs and Worship in drawing up international policy on the subject and in its relations with UNEP, and also assists it in its links with the other agencies of the United Nations system and other international organizations on all environmental matters. In addition, the Undersecretariat participates in the work of the National Co-ordinating Committee for the Control of Water Resources Pollution, and the Commission for Conservation and Improvement of Air Resources. Finally, the same Undersecretariat is the channel for national Government collaboration with and assistance to the provincial governments in all matters relating to the implementation of the national environment policy and of provincial policies and activities in this sphere. It should also be pointed out that the National Fund for Environmental Management operates within the Secretariat of State for Transport and Public Works (Undersecretariat for Environmental Management), carrying out programmes and activities to preserve, conserve and restore the environment.

11. The Ministry of Social Welfare has under it, apart from the general secretariat of the Ministry, Secretariats of State for social development and assistance, public health, social security, sport and tourism, urban development and housing, and minors and the family. A number of these secretariats discharge environment-related functions, as in the case of the

Secretariat for Urban Development and Housing, which assists the Minister of Social Welfare in all matters relating to the formulation of housing, urban development and land use policies. Within this Secretariat of State there is an Undersecretariat for Urban Development, which is responsible for assisting the Secretary of State in the formulation of urban development and land-use policies and drawing up appropriate plans, as well as in evaluating and approving the relevant programmes. The Secretariat for Public Health, for its part, has among other functions that of assisting the Minister of Social Welfare in the drafting and introduction of standards for the health of the physical and biological environment, in co-ordination with the competent authorities. Within this Secretariat of State there is an Undersecretariat for Sanitary Medicine.

III. Relationship between national, regional and local levels of environmental administration

12. As has been seen, under the Argentine constitutional system there are three levels of public authority: national, provincial and municipal.

13. Argentina is made up of 22 provinces (Buenos Aires, Cordoba, Santa Fe, Entre Rios, La Rioja, Catamarca, Salta, Jujuy, Tucuman, Santiago del Estero, Corrientes, Chaco, Formosa, Misiones, Mendoza, San Juan, San Luis, La Pampa, Neuquen, Rio Negro, Chubut, Santa Cruz), the Federal Capital (Buenos Aires city) and the federal territories of Tierra del Fuego, the Antarctic and the south atlantic islands. The relationships between the National Executive Authority and the provincial governments are currently as outlined in section I above.

14. Each province organizes its own municipal structure within the territorial divisions it establishes, delegating to the municipalities such powers as it deems appropriate. Many of these powers relate to environmental matters, and thus the municipalities, through by-laws, have legislated for the prevention and elimination of harmful effects - especially on the urban environment - arising from industrial activity (liquid, gaseous and solid effluents, noise, etc.), from domestic, commercial and industrial activity (waste and refuse), and from means of transport (toxic gases, noise, etc.).

15. The Municipality of the City of Buenos Aires has a special status. The Political Constitution provides that the Federal Capital has as its immediate head the President of the Nation (article 83, paragraph 3), and that Congress shall exercise exclusive authority throughout the territory of the National Capital (article 67, paragraph 27). In line with these constitutional provisions, the corresponding Organic Law provides that the government and administration of the City of Buenos Aires shall be exercised by the public legal entity known as the Municipality of the City of Buenos Aires. The Act also provides that the institutional organs of the municipal government are the House of Representatives, the Executive Department and the District Councils. These organs are entrusted with the environment-related functions assigned by the Act to the Municipality of the City of Buenos Aires, such as town planning policy, monitoring of the cleanliness of public places, movement of persons and vehicles, etc. Cases of violation of the municipal regulations and of those national regulations whose enforcement is the responsibility of Buenos Aires City are heard by a municipal court.

IV. Major acts of general environmental legislation

16. The legal arrangements in Argentina, at the national, provincial and municipal levels, include a body of provisions which make up its environmental legislation. These provisions deal on a sectoral basis with certain environmental questions or the use of certain natural resources. 5/

17. Under article 104 of the 1853 Constitution, "the provinces retain all authority not assigned by this Constitution to the Federal Government, as well as that authority expressly reserved to them by special agreements at the time of their incorporation." Since the Constitution federalizes some matters which relate directly or indirectly to the environment, there is a certain amount of national legislation on this matter. In this respect, the provisions of article 67, paragraphs 16 and 11 of the Constitution are particularly important. Under the first of these, the National Congress is responsible for "providing what is conducive to the prosperity of the country, the advancement and well-being of all the provinces, and the development of learning, drawing up plans for general university education and promoting industry, immigration, the construction of railways and navigable canals, the settlement of land owned by the nation, the introduction and establishment of new industries, the import of foreign capital and the exploitation of rivers in the interior, through legislation protecting these aims and through the temporary granting of privileges and incentives". Under the second paragraph, Congress is responsible for "drawing up the civil, commercial, penal, mining and labour and social security codes...".

18. The Civil Code of 1864, which governs private property at the national level, establishes the means of acquiring ownership of property (including natural resources) and regulates the conduct of private individuals and liability for damage they may cause. The Mining Code of 1887, amended several times, regulates the manner of acquiring ownership of mineral resources, and in general the rights, obligations and procedures relating to the acquisition, exploitation and development of mineral substances. Finally, the Penal Code of 1919 provides for sanctions against certain particularly serious forms of conduct which may endanger human health or life (for example, the poisoning of waters referred to in article 200 of the Code).

19. Still at the national level, various laws relate to specific environmental problems. The earliest environmental legislation made it compulsory to purify sewage and harmful industrial waste before discharging it into the rivers of the Republic. 6/ This was followed by a law empowering the Executive Authority to take all measures conducive to the prevention of pollution of the waters of the River Plate. 7/ Later the Forest Resources Protection Act was passed, regulating the exercise of rights over privately or publicly owned woodlands and forest lands located under federal jurisdiction or in those provinces in which the Act is applied. Subsequently, the Organic Law for the General Sanitary Administration of the Nation was passed, providing among other things that the General Administration was authorized to take the necessary measures to prevent direct or indirect pollution of the water supply sources it used. It should be noted that on the basis of this Law a decree was recently enacted which provides for the payment of indemnities if, through the lack or inadequacy of sewage purification plants, effluents are produced which do not comply with the conditions laid down by the National Sanitary Enterprises of the Nation. Other important items of environmental legislation enacted at this time are the Aeronautical Code and the Argentine

Food Code, together with the National Parks, Natural Monuments and National Reserves Act and the Labour Safety and Hygiene Act. The use of certain substances capable of affecting human and animal health was also prohibited. Environmental legislation has also been enacted more recently, for example that establishing under the General Ports Administration arrangements for preventing water pollution by hydrocarbons and approving regulations to that end. Another important piece of environment legislation is that on industrial development, which lays down as one of the general criteria for granting benefits, the preservation of the environment and of proper living conditions, as well as establishing the decentralization of industry as a regional criterion. In this connexion it should be recalled that the Profits Tax Act provides for tax relief for industrial enterprises which establish systems for the treatment of polluting effluents, and that the National Development Bank has created lines of credit for investment in treatment plants. The Maritime and River Navigation Regime Act is also environmentally important. Finally, it should be borne in mind that provisions have been established for the preservation of air resources.

20. The provincial constitutions generally contain a number of provisions relating to natural resources, especially water. This is the case, for example, in the constitutions of Chaco, Chubut, Formosa, La Pampa, Mendoza, Neuquen, Rio Negro, etc. These provisions are elaborated upon at the provincial level through the rural codes, water codes and other special legislation. For example, the provinces with the greatest water shortage and/or consumption have enacted water acts or codes regulating the use and protection of water, with a view to ensuring proper and balanced distribution. Others, for example Misiones in respect of forests, have legislated for the protection of their basic natural resource. Some have also developed regulations designed to limit and control the polluting effects of industrial activity. In respect of urban land management and utilization, the City of Buenos Aires has a Town Planning Code, while Buenos Aires Province has Act No. 8.912 on Physical Planning and Land Use. Buenos Aires Province also has a draft environment act.

V. Implementation and enforcement of environmental laws and policies

21. As far as administration is concerned, environmental legislation is applied by the organs of the administration which play a role in environmental management, which have been referred to above. As far as enforcement is concerned, a distinction must be made, following the terms of the Constitution (articles 50, 104 and 105), between the national authority, exercised by the Nation at the locations and in the sphere within its jurisdiction, the provincial authority, exercised by the provincial governments in their own jurisdictions, and the municipal authority, exercised by local or communal governments within their delegated functions. In juridical terms, environmental legislation is applied by the federal and provincial courts of justice, depending on the nature of the legislation. The former hear and rule on all cases involving matters governed by the Constitution and by the laws of the Nation, with certain exceptions.

VI. Relationship between government, industry, nongovernmental organizations, and others

22. There are a number of associations of industrialists and traders which handle relationships between the Government and these sectors. In the field of the environment there are a number of non-profit-making private institutions with different relationships with the Government, such as the Environmental Protection Association, the Argentine Association of Ecology, the Argentine Union for the Conservation of Nature, the Air Pollution Association, the Argentine Society of Environmental Law and Natural Resources, and so on. However, there is no formal machinery specifically providing for public participation in environmental matters.

1/ In 1949, a new Political Constitution was proclaimed, but in 1955 it was abrogated and the Constitution of 1853 restored.

2/ By Interministerial Resolution of 24 February 1972, an Interministerial Environmental Preservation Commission was established. Decree No. 4858, published in the Boletin Oficial of 13 June 1973, made it compulsory for the whole of the National Public Administration to comply with the National Environment Policy proposed by that Commission, in accordance with provisions set forth in the Decree. The Commission is not currently in operation.

3/ Article 1 of Decree No. 75, published in the Boletin Oficial of 29 October 1973 and subsequently amended by Decree No. 520, of 21 May 1976. It should be noted, that Decree No. 75 provided for the existence of a Secretariat for Renewable Natural Resources and the Human Environment, whose over-all function was to "advise the Minister of the Economy in all matters relating to the formulation, implementation and supervision of the policy and arrangements relating to the conservation and improvement of the human environment..." (former article 10 of Decree No. 75).

4/ Established as the Undersecretariat for the Human Environment and subsequently named the Undersecretariat for Environmental Planning. It acquired its current title by virtue of Decree No. 3301 of 14 February 1978.

5/ The draft of a Basic Law on National Environmental Management is in existence, proposed by the Ministry of the Economy, whose express aim is to raise this legislation to the status of an organic law. The 26 articles of which the draft is composed establish the objectives and principles of environmental policy, describe activities liable to degrade the environment, establish a general system of sanctions and preventiv laws, etc., and, where institutional matters are concerned, provide for the establishment of an Interministerial Environment Commission, a Federal Environment Council, etc.

6/ Act No. 2797, promulgated on 13 September 1891.

7/ Act No. 4198, promulgated on 31 August 1903; regulations approved by Decree of 17 July 1904.

BARBADOS

Area: <u>1/</u>	431 sq km
Terrain: <u>3/</u>	Barbados is an island which from south to west is made up of plains that lead into a mountain range that runs along the eastern coast. Mount Hillaby, with an altitude of 332 m, is its highest point. There are no rivers on the island and the rain quickly seeps into the soil forming underground streams. The territory is ringed with beaches of white sand.
Natural resources: <u>8/</u>	Arable soils, ocean resources.
Climate: <u>8/</u>	The temperature does not rise above 30°C or fall below 22°C. The average rainfall is about 1,520 mm a year, but it varies markedly from district to district.
Population: <u>7/</u>	253,000 (mid-1979, preliminary).
Population density: <u>1/</u>	582 per sq km (1979).
Annual population growth: <u>1/</u>	1.0 per cent (1970[-(1977)).
Population distribution: <u>2/</u>	Percentage of urban population: 45.3.
Life expectancy: <u>1/</u>	62.74 years male; 67.43 years female (1959[-(1961)).
Gross national product: <u>7/</u>	\$US 2,400 <u>per capita</u> (1979, preliminary); growth rate <u>per capita</u> (real): 2.1 per cent (1970[-(1978)).
Employment: <u>4/</u> <u>5/</u> <u>6/</u>	Total workforce: 91,069; i. e. 38.7 per cent of the population; Employed population by sectors (1970): Primary sector: 18.1 per cent; Industrial sector: 26.2 per cent; Services sector: 55.7 per cent; Unemployment: 1960 - 12 per cent; 1970 - 9 per cent.

Industrial and agricultural
output: 8/

Traditionally, sugar and its by-products - rum and molasses - have dominated the economy, constituting in 1970 about 50 per cent of domestic exports. In recent years, fishing has been encouraged, and a number of light industries have sprung up, including food processing and textiles.

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- 1/ United Nations Statistical Yearbook, 1979/80.
 - 2/ IDB Progreso Economico y Social en América Latina. Report Washington, D.C., 1976.
 - 3/ Barbados Development Plan 1973[-(1977.
 - 4/ ILO Yearbook of Labour Statistics 1976.
 - 5/ OAS, The Economic and Social Development of Barbados. Characteristics, Policies and Perspectives. 26 February 1976, Washington, D.C.
 - 6/ Development Plan, Barbados 1973 - 1977.
 - 7/ World Bank Atlas, 1980.
 - 8/ Encyclopedia Britannica, 1974.

I. Background, history of environmental concerns, constitutional situation.

1. The exact date of the discovery of Barbados is not known but it is thought that the first English settlers arrived in 1625. They initiated cultivation with tobacco, cotton and sugar brought from Dutch Guiana. As was the case in the other British colonies of the Caribbean, slave labour brought from Africa was employed in raising sugar and producing rum. The first Parliament was established in 1639 and a representative government has been maintained since that time. Barbados was a member of the West Indies Federation from 1958 to 1962 when the group was dissolved, and became a member of the British Commonwealth on 30 November, 1966.

2. The economy of Barbados, a raw-materials exporter, is based mainly on the production of sugar cane and its derivatives. Tourism is also a very important source of income. The country's most significant environment problems-[soil degradation, water pollution, unbalanced development between rural and urban areas]-[are thus closely related to those activities.

3. As provided by the Constitution, the Government is made up of Parliament, the Executive Branch, and the Judicial Branch. Parliament is composed of Her Majesty, the Senate and the House of Assembly.

4. Her Majesty's representative in Barbados is a Governor General whom she appoints and whose functions are discharged in accordance with the recommendations of the Cabinet. The Senate is composed of 21 members, 12 of whom are appointed by the Governor General on the recommendation of the Prime Minister and two by recommendation of the leader of the opposition. The seven remaining members, who represent religious, economic and social interests of the island, are appointed at the discretion of the Governor General.

5. The 24 members of the House of Assembly are elected by universal suffrage in the country's election districts. Parliament's primary functions are to legislate and act as a check upon the Executive Branch.

6. Her Majesty is the titular head of the Executive Branch, the powers of which are, in fact, exercised through the Governor General who appoints a member of the House of Assembly as Prime Minister. The Prime Minister, in turn, selects the Ministers who are formally appointed by the Governor General. The Cabinet consists of no less than five Ministers and the Prime Minister who presides over it and is responsible for the general direction and administration of the government.

7. The administration of justice is similar to that in the United Kingdom, and the Judicial Branch is made up of the Supreme Court of Justice, the President of which is appointed by the Governor General in accordance with the recommendation of the Prime Minister. The former consists of a High Court and a Court of Appeal.

II. Organization of the national environmental administration

8. There is no Ministry of the Environment in Barbados. Responsibilities in the field of environment are shared among the various ministries of the Government, following the guidelines of sectoral administrations, with no one body to co-ordinate the various policies of existing organizations. The functions of the following government institutions are related to environmental issues: the Ministry of Health and National Insurance, the Town and Country Planning Department of the Ministry of Agriculture, Food and Consumer Affairs, the Water Works Department of the Ministry of Communications and Works, and the Parks and Beaches Commission.
9. The Ministry of Health and National Insurance is in charge of developing and promoting national policy in the field of health and social welfare, for purposes of which it issues general and specific measures aimed at ameliorating or preventing environmental pollution. The Ministry carries out its functions through various departments, most important among them is the Environmental Engineering Division, which is in charge of making regular analyses of the water-distribution system and ocean waters. It is also required to keep a check on waste-treatment plants, as well as the sanitary facilities in buildings and constructions. The Ministry is also in charge of the collection and disposal of refuse and must propose and apply effective techniques and methods for its handling. Regulations for the supervision of industrial production contain compulsory provisions aimed basically at protecting the worker, in particular, as well as the environment in general. The Ministry maintains control over problems arising from air pollution through various laws that regulate the discharge of toxic gases from motor vehicles, as well as smoke produced by factories, particularly sugar mills.
10. The Town and Country Planning Department, established in 1958, controls the physical development of the most important urban centres. With the passage of the Town and Country Planning Act in 1965, this control over development was extended to cover the entire island, with the necessary powers assigned to the Ministry of the Attorney General for ensuring the balanced development of the country. The Town and Country Planning Department shares responsibility with the Ministry of Health and National Insurance for the zoning of lands for protection of the water. They also ensure balanced town and country development through the enforcement of regulations and laws on buildings and urbanization. The Department is invested with powers within a very broad range of action which includes all aspects of development planning, as well as the preparation of development plans. The Department makes inventories for this purpose which seek to establish the needs of the population and it is also required to co-ordinate sectoral development plans.
11. The Ministry of Agriculture, Food and Consumer Affairs keep check through its Fisheries Department on the country's fishing fleet to prevent harbour pollution, besides planning the diversification of basic-food production and fostering the development of animal industry, and includes in its plans recommendations for the rational management of the island's soils.

12. The Water Works Department of the Ministry of Communications and Works supervises the use of underground streams, analyses the domestic water supply frequently together with the Ministry of Health and National Insurance, builds sewers and keeps check on solid and liquid industrial wastes. Lastly, it advises the Ministry of Health and National Insurance and the Harbour Administration in the field of oil and petroleum pollution of the sea.

13. Among other government agencies that have been assigned functions connected with conservation and environmental administration are: the Caribbean Meteorological Institute, which is in charge of studying all the information relating to weather that is registered and measured in the country, and the Parks and Beaches Commission, which controls, maintains and develops the public parks and beaches of Barbados and ensures proper sanitary conditions at parks and beaches, including constructions of any kind executed in those areas.

III. Relationship between national, regional and local levels of environmental administration

14. The island is divided into eleven parishes for administrative purposes. These are the Parishes of: Christ Church, St. Michael, St. James, St. Peter, St. Andrew, St. Joseph, St. John, St. Philip, St. George and St. Thomas. The system of local governments, mainly responsible for the administration of services, was abolished on 1 April 1967, and these functions were turned over to an Interim Commissioner for Local Government. However, since 1969, these functions have been absorbed by the Central Government and various statutory bodies have been set up specifically for this purpose.

15. Interest in environmental questions has been growing in recent years, and the Government has focused its attention on those areas that constitute the severest problems for the country: environmental pollution, conservation of natural resources and town and country development planning.

IV. Major acts of general environmental legislation

16. Barbados does not have an all-encompassing law on environmental protection. However, legislative efforts have led to the enactment of laws in a number of areas of environmental concerns.

17. Various regulations and laws promulgated by the Ministry of Public Health and National Insurance in the field of environmental pollution are of particular interest, namely, those covering water pollution, treatment of industrial, domestic and agricultural wastes, atmospheric pollution, and noise, dust and petroleum pollution. Control is likewise exercised over pollution of the sea and sanitary installations in buildings and the like.

18. With respect to conservation of natural resources, note should be taken of the Fisheries Regulations Act of 1904 and the Harbours Act of 1961 which regulate the country's fishing fleets and harbour pollution. The zoning of territories for the protection of water resources and restricted zone surveillance are covered by the Water Board, the Water Protection Policy, 1962 and the regulations of the Ministry of Health and National Insurance. Forestry, industry, soil conservation, fertilizer use, and pest control are regulated by various acts the application of which is the province of the Ministry of Agriculture, Food and Consumer Affairs.

The development of scenic beauty and its conservation as well as the care of beaches and parks are regulated by the Parks and Beaches Commission Act, 1970. The island's caves are under the jurisdiction of the Caves Authority which administers them under the Caves Authority Act, 1975. Finally, the Wildbirds Protection Act of 1907 and the Marine Areas Preservation and Enhancement Act of 1976 should be mentioned. They provide measures for the protection of endangered species and underwater coral formations.

19. With regard to human settlements, the Town and Country Planning Act passed in 1956 controls the physical development of the island and the construction of buildings. It is also important to take note of the Housing Act of 1956 and the Tenancies (Control and Development) Act of 1965 which regulate the construction of low-cost housing and sanitary installations.

V. Implementation and enforcement of environmental laws and policies

20. The central Government, acting through its ministries and statutory bodies, applies the standards concerning the environment contained in the various laws and regulations.

21. British common law is the model followed for the administration of justice in Barbados. Any citizen having a legitimate claim may bring suit before Courts of Summary Jurisdiction to have acts of the administration declared illegal, with the right to bring his case before the Court of Appeals if the decision is against him.

22. Criminal cases are tried by the Courts of Summary Jurisdiction through the Ministry of the Attorney General.

VI. Relationship between government, industry, non-governmental organizations and others

23. The Government of Barbados maintains relations with the main entrepreneurs' associations and chambers, the most important of which are the Barbados Sugar Producers Association, Inc. and the Barbados Chamber of Commerce

BOLIVIA

Area: <u>1/</u>	1,098,581 sq km
Terrain: <u>2/</u>	Bolivia consists of three clearly differentiated regions: the highlands in the western portion of the country, with elevations of from 3,000 to 4,500 m and the plains in the eastern portion, with elevations of between 400 and 1,000 metres, the largest part of the country.
Natural resources: <u>2/</u>	Minerals, oil, woodlands, lands appropriate for agriculture and livestock-raising, water, salt deposits and natural scenery.
Climate: <u>2/</u>	The climate in Bolivia varies according to region. In the highlands, the average temperature is 10°C, in the Andean valleys, 15°C, and in the eastern plains 25°C. Rainfall also varies from region to region, reaching 2,900 mm in some areas and in others only 50 mm per year.
Population: <u>3/</u>	5,444,000 (mid-1979).
Population density: <u>1/</u>	5 per sq km (1979).
Annual population growth: <u>4/</u>	2.7 per cent (1970 - 1977).
Population distribution: <u>5/</u>	Nearly half of the population lives in the Altiplano, where most of the important cities are located.
Life expectancy: <u>1/</u>	46.5 years, male; 51.1 years, female (1970 - 1975).
Gross national product: <u>3/</u>	\$US 2,400 <u>per capita</u> (1979); growth rate <u>per capita</u> (real): 3.1 per cent (1970 - 1978).
Employment: <u>2/</u>	Economically active population (1976): 1,501,391.
Industrial and agricultural output: <u>5/</u>	While minerals still represented over 80 per cent of all exports in the 1970s, an accelerated production of domestic foodstuffs has begun.

1/ United Nations Statistical Yearbook, 1979/80.

2/ National Statistics Institute, Department of Social Statistics, 1979. Information provided to the UNEP Regional Office for Latin America and the Caribbean based on Resultados del Censo Nacional de Poblacion y Vivienda, 1976, Vol. 10 (being printed).

3/ World Bank Atlas, 1980.

4/ United Nations Statistical Year Book, 1978.

5/ Encyclopedia Britannica, 1974.

I. Background, history of environmental concerns, constitutional situation

1. Bolivia was part of the Spanish colonial empire until 1825, when it separated from the Crown and was organized as a republic. Its present form of government derives from the Political Constitution of 1967. The Bolivian economy has been founded on mining since colonial times, and the country has traditionally been an exporter of minerals, particularly of silver in the last century and tin in the present. Nevertheless, agriculture and forestry have been intensively developed in certain areas and an industrialization process was initiated in the period between 1920 and 1930. Bolivia's environmental problems derive mainly from water pollution resulting from mining activities, the management of forest resources and desertification.

2. Bolivia is a unitarian republic with a democratic, representative form of government. Sovereignty lies with the people, who delegate its exercise to the legislative, executive and judiciary branches. 1/ The legislative power resides in the National Congress, composed of a Chamber of Deputies and a Senate. The executive power is exercised by the President of the Republic and the Ministers of State. For internal administrative purposes the country is divided politically into departments, provinces, provincial sections and cantons, which are administered by officials of the executive branch known as prefects, subprefects and magistrates respectively. The judiciary power is exercised by the Supreme Court of Justice, the higher district courts, and other courts and tribunals established by law.

3. Bolivia's constitutional organization also provides for autonomous community government made up of municipal councils and mayors in the provinces, provincial Sections and their sub-divisions, and of municipal agents in the cantons.

4. At the present time the country's departments are Beni, Cochabamba, Chuquisaca, La Paz, Oruro, Pando, Potosi and Tarija. The capital city is Sucre, in the Department of Chuquisaca; however, the seat of the executive and legislative branches is La Paz, in the Department of La Paz.

II. Organization of national environmental administration and policy-making bodies

5. Bolivia's public administration is the responsibility of the entities making up the executive branch, which under the Law on the Administrative Organization of the Executive Branch are the President of the Republic and the Ministers of State (central administration); the development corporations, public institutions, government-owned and semi-public companies (decentralized administration); and regional units and department administrations (local administration). Organizations not part of the central administration are subordinate to the Office of the President and to the Ministers of State; however, the municipios are autonomous organizations constituted under the terms and conditions specified by the Political Constitution and the Law on Municipal Organization.

6. No special ministry or other entity exists in which national administration of the environment has been concentrated. Rather, under the legal structure in force, various ministries and other organizations have administrative competence in the field of the environment. No councils or committees exist that have been explicitly entrusted with formulating environmental policies and/or with co-ordinating the administrative activities of the organizations responsible for environmental management. 2/

7. Among the ministries having competence in environmental matters is the Ministry of Social Welfare and Public Health. This Ministry is responsible for "... formulating, directing and implementing the national health policy; preventive and curative medicine; the rehabilitation of human beings; the promotion of research and campaigns to improve nutrition, hygiene and health education; and the regulation and supervision of State and private medical, clinical and hospital services, without prejudice to its functions in the field of social welfare." The Health Code furthermore designates this Ministry as the authority in matters of health and assigns it responsibility for enforcing the Code. The Ministry contains an Environmental Sanitation Division whose essential functions are basic rural sanitation and the supervision of foods and beverages sold publicly in the cities. The former function is exercised through the construction of drinking water supply and sanitation systems in areas inhabited by fewer than 800 people. 3/ The National Occupational Health Institute (INSO) is another decentralized public institution of the Ministry of Social Welfare and Public Health whose objectives are the elimination and control of occupational diseases and the improvement of the health of workers, with particular attention to rapid physical and vocational rehabilitation of workers and adaptation of the working environment to the mental and physical capacities for the workers. INSO is the only governmental institution responsible for the regulation and surveillance of occupational health in the country, and is consequently responsible for integrating and co-ordinating all available resources for this purpose in the public sector.

8. The Ministry of Rural and Agricultural Affairs also has competence in the environmental field in that it is responsible, inter alia, for the promotion and supervision of the national use of renewable natural resources. This power is exercised mainly through the Forestry Development Centre (CDF), a decentralized public institution that is in charge not only of forestry matters, but also of all questions related to wildlife, national parks, hunting and fishing. CDF is composed of, inter alia, Departments for Forests, Wildlife, National Parks, Hunting and Fishing, in addition to a Department of Cinchona and Forest By-Products, and also maintains regional offices in all geographic areas as determined by its regulations. The Office of Agricultural Engineering of the same Ministry engages in similar activities through its Soils and Irrigation Departments.

9. Another Ministry with competence in environmental matters is the Ministry of Urban Development and Housing, which is responsible, inter alia, for the formulation, supervision and implementation of urban development policies; the establishment of standards for urban development plans and projects; the providing of technical assistance to Municipios for city planning; the study of city planning and housing arrangements designed to deter the flow of rural populations to urban centres and reduce urban marginalization; the structural co-ordination and planning of cities; and the

formulation of standards for rational use of urban property. This Ministry includes two decentralized public institutions that carry out important environmental functions in the country: the Potable Water and Sewerage Corporation (CORPAGUAS) and the National Urban Development Service (SENDU). As mentioned in footnote 3, CORPAGUAS carries out the environmental functions of the Sanitation Division of the Ministry of Social Welfare and Public Health. Specifically the Decree establishing this Corporation confers upon it powers not only to formulate the general policy for the supply of drinking water, the construction of rain and sewage water disposal systems, and the treatment of sewage and its final disposal, but also to study, design and build drinking water and sewage disposal systems in areas lacking such services. SENDU is responsible for promoting the efficiency of municipal governments and assisting regional and local organizations with respect to urban development.

10. The Ministry of Mines and Metallurgy also performs important environmental management functions. This Ministry is responsible for formulating, supervising and implementing national mining and metallurgy policy and directing the exploration, prospection and exploitation of mineral deposits. Subordinate to this Ministry is the Bolivian Mining Corporation, an autonomous public organization responsible for exploring, exploiting and processing the minerals extracted from the deposits assigned to it by the State, which consist essentially of those nationalized in 1952 - principally tin, and secondarily silver, copper and bismuth.

11. The Ministry of Energy and Hydrocarbons also carries out significant environmental management activities as it is responsible for formulating, supervising and implementing the national hydrocarbons and energy resources policy, in addition to directing the exploration, prospection, exploitation, industrialization and utilization of all energy resources and supervising authorized public and private activities in this field. This Ministry supervises and regulates the activities of the hydrocarbons sector through the Hydrocarbons Office. Also subordinate to this Ministry is the organization known as Bolivian National Oil Fields (YPFB), an autonomous entity under public law that has been assigned exploration throughout the country and subsequent exploitation and utilization of oil-producing areas in accordance with specific plans. YPFB is also supervised by the Hydrocarbons Office.

12. Lastly, on the national level, mention should be made of the Ministry of Planning and Co-ordination, which also indirectly performs environmental functions. This Ministry, as the key organization in the national planning system, carries out inter-ministerial co-ordination functions and provides a permanent link between the President of the Republic and the Ministries of State. It is responsible for formulating national economic and social development plans based on general policy and strategic guidelines approved by the National Economic and Planning Council, and also for co-ordinating and orienting the activities of central, decentralized and local administration organizations as means of conciliating short-term decisions with economic and social development plans and programmes.

13. The National System for Scientific and Technological Development functions within the purview of the Ministry of Planning and Co-ordination, and is composed of the National Scientific and Technological Development Council, the Science and Technology Bureau, which is a dependency of the

Ministry of Planning and Co-ordination, and of the persons and/ or institutions directly involved in scientific and technological activities. Within the System, the Council and the Bureau make up an institutional entity for planning, co-ordinating and guiding the activities of the System.

III. Relationship between national, regional and local levels of environmental administration

14. As was stated above, for internal administrative purposes Bolivia is divided politically into departments, provinces, provincial sections and cantons, which are administered by officials of the Executive Branch (Prefects, Subprefects and Magistrates respectively). On the local level, autonomous community governments exist with legislative and executive powers. The legislative power in this case is exercised by the municipal councils, which formulate ordinances within the spheres of their competence. However, with respect to the imposition and elimination of municipal taxes, this power is exercised by the Mayor, subject to the limits defined by the Constitution. Various laws provide for co-ordination among the functions of the municipios and the corresponding functions of the organs of the central administration, particularly with regard to technical and financial assistance, as in the case of the regional development corporations.

15. The regional development corporations are attached to the Ministry of Planning and Co-ordination as public agencies designed to promote the economic and social development of their respective regions. For these purposes, "region" is understood as the territory included within the political limits of each department. In addition to carrying out their own programmes and projects, the regional development corporations carry out co-ordination functions as organs of the Ministry of Planning and Co-ordination. The directorates of these corporations are responsible for most of the co-ordination activities they carry out, inter alia, with local officials (prefects, municipal mayors and so forth) and with the regional representatives of certain national institutions, such as the Ministry of Planning and Co-ordination and the Ministry of Rural and Agricultural Affairs.

16. On the local level, the municipios also perform significant environmental functions. Under the provisions of the Organic Law on Municipios, it is the responsibility of each deliberating council in its respective jurisdictional territory to formulate regulations with regard to hygiene, health, comfort, beautification, recreation and welfare, to regulate specifications for privately constructed buildings with respect to height, building lines and maximum bulk; to regulate the construction of housing to ensure that it is comfortable, sanitary and aesthetic; and to order the widening and opening of streets, avenues, plazas, promenades and parks. The responsibilities of the mayors are, inter alia, to supervise services related to street-cleaning, comfort, beautification, city planning, recreation, the supply of drinking water and the hygiene of local populations; to order construction of drainage systems, the closing of wells, the drainage of swamplands and other sanitation projects of this nature; and to implement all sanitary measures ordered by health officials.

17. Public services have been established with typically municipal environmental functions within the geographic jurisdiction of the municipios. Such is the case of the Autonomous Municipal Drinking Water and Sewerage Service in the city of La Paz and the Drinking Water and Sewerage Service in the city of Cochabamba, which are primarily designed to provide and administer drinking water and sewerage services in these cities.

IV. Major acts of general environmental legislation

18. Bolivia's environmental legislation is incorporated into various bodies of laws. First of all, the Constitution contains several provisions establishing the principle of the dominion of the State over natural resources and their use, 4/ in addition to regulations that recognize the fundamental right of all to health and the State's duty to protect the health of the population. 5/

19. At the secondary legislative level, a number of legal texts exist that deal with various environmental issues. With respect to environmental sanitation the most important body of laws is the Health Code, whose Book II regulates environmental control and protection by establishing standards regarding environmental sanitation with respect to water, land, air (including noise), sanitary urbanism, foods and beverages, radiation, industrial hygiene, safety and medicine, pollution of work environments and the disposition of corpses. The Civil Code of 1975 establishes certain rules regarding the harmful use of property and the causing of nuisances to neighbours. The National Traffic Code also establishes certain regulations with regard to noise.

20. The most important bodies of laws with respect to renewable natural sources are the General Forestry Law and the General Law on Wildlife, National Parks, Hunting and Fishing. The first of these laws has regulations, whereas the second does not. The hunting of animals of the family Camelidae has been regulated in Bolivia since 1863 down to the present time. Bolivia has subscribed to an agreement with Peru for the conservation and development of this native species, to which Chile later adhered. Various parks and reserves have also been established. The General Law on Waters dates from November 1906; however, a new one is presently being prepared. Water resources are also regulated by the Civil Code of 1975 and other laws.

21. Non-renewable natural resources are regulated by other bodies of law. Generally speaking, minerals are regulated mainly by the Mining Code of 1965, which reiterates the constitutional precept that all mineral resources belong to the State and also establishes a system of concessions. This Code contains only a few provisions regarding conservation and improvement of the environment, but sets forth the principle that concessionaires who cause damage through exploration and exploitation must compensate landowners for such damages. Hydrocarbons are regulated by the General Law on Hydrocarbons, which also reiterates the constitutional precept that the State has direct domain over hydrocarbons deposits. With respect to contracts entered into with YPF, the General Law on Hydrocarbons provides that the contracting party must agree to observing industrial safety measures in the work he performs and to adopt appropriate measures for preserving fauna, flora and all other natural resources.

22. The Basic Housing Law supplements the regulations governing the activities of housing organizations by establishing the basic principles of the Government's housing policy with which other provisions on building, urban management, rural centralization, tenancy systems, condominiums and the like must comply.

V. Implementation and enforcement of environmental laws and policies

23. Administratively speaking, the public officials indicated in Section III above are responsible for enforcing environmental laws and policies. Some of these officials are empowered to apply sanctions to private parties who fail to comply with the laws in force.

24. Juridically, enforcement of environmental legislation is the responsibility of the Courts of Justice: examining judges, district judges, higher district courts and the Supreme Court of Justice. In addition, parochial judges attend to correctional matters and those involving small claims. Specialized jurisdiction exists for mining matters. No court exists in Bolivia for contesting the legality of administrative acts. However, appeal for nullification is possible in ordinary machinery to contest the acts of those who assume functions beyond their competence and the acts of those who exercise jurisdiction or powers not prescribed by law. The possibility exists of filing for amparo (writ of relief) against illegal acts or undue omissions of officials who restrict, suppress or threaten to restrict or suppress the rights or guarantees of individuals as recognized by the Political Constitution and the laws of the country.

VI. Relationship between government, non-governmental organizations and others

25. An Institute of Ecology has been established in Bolivia under an agreement between San Andrés University in La Paz and the University of Göttingen in the Federal Republic of Germany to carry out research and provide instruction in the field of ecology. A Bolivian Ecological Society also exists whose main objective is to protect and support conservation of nature in all its aspects, with particular attention to land, water, atmosphere, flora, fauna, biological communities and scenery, in addition to establishing contacts for this purpose with national, foreign and international institutes with the same objectives. Other non-governmental institutions, such as the Biology Society and the Engineers Society, also pursue similar aims.

1/ Cf. Articles 1 and 2 of the Constitution. In recent years, successive de facto régimes have governed the country; however, as of 6 August 1979 with the installation of elected legislative and executive authorities, application of the 1967 Constitution which had been subordinated to the purposes of such de facto régimes, has been completely restored.

2/ A bill for a Supreme Resolution exists calling for the establishment of an inter-institutional committee to deal with environmental problems, in addition to a bill for a ministerial resolution to establish an Office of Science and Technology as head of the committee with a national planning system, which will be referred to below.

3/ In places of greater population the same function is carried out by the Drinking Water and Sewerage Systems Corporation (CORPAGUAS), which is subordinate to the Ministry of City Planning and Housing.

4/ Articles 133, 136, 137, 138, 170 and 172 of the Political Constitution. The Constitution also establishes standards for the conservation of the historical heritage of the nation in Article 191.

5/ Articles 7 (a) and 158 of the Political Constitution.

CANADA

Area: 1/

9,976,139 sq km

Terrain: 4/

Canada comprises eight physical regions: The Canadian Shield, which comprises 49 per cent of the total area of the country; the principal lowlands; in the west, the vast interior plains; in the east, the Great Lakes - St. Lawrence lowlands; in the north, the Arctic plains and plateaux; in the far west, the high mountains and plateau; in the south east, lower mountains; and the Hudson Bay lowlands.

Natural resources: 2/ 4/

Canada is rich in minerals and is the leading world producer of nickel and zinc. Also of importance are asbestos and uranium. In addition, Canada is a major producer of petroleum, natural gas, copper, iron ore, potash, sulphur, gypsum, silver, cadmium, cobalt, magnesium and platinum. Further natural resources are arable land, timber and energy in the form of hydroelectric potential from the great water resources.

Climate: 4/

Canada has a variety of climates dominated by cold winters and hot summers and sufficient, but not over-abundant, precipitation. In winter, average temperatures are below freezing everywhere except in the extreme south west. Rainfall varies in the different regions, and snow reaches a maximum of 240 inches in the Rocky Mountains.

Population: 3/

22,992, (1976).

Population density: 1/

2 per sq km (1979).

Annual population growth: 1/

1.1 per cent (1975 - 1979).

Population distribution: 4/

The relatively small total population is concentrated in the southern part of the country. Ninety per cent of the people live on 12 per cent of the land. About three-quarters of the population live in communities of more than 1,000 people. Almost two-thirds of the urban dwellers are in cities of 100,000 or more.

Life expectancy: <u>1/</u>	69.34 years male; 76.36 years female; (1970-1972).
Gross national product: <u>3/</u>	\$US 7,510 <u>per capita</u> 1976.
Employment: <u>3/</u>	Total workforce in 1976 was 9.6 million. 2 million in manufacturing; 1.7 in trade; 0.5 million in agriculture and 2.6 million in public services.
Industrial and agricultural output: <u>2/</u>	Canada is one of the world's leading industrial countries, although farming still accounts for about 4 per cent of the country's gross domestic product, and Canada is the world's fourth largest exporter of agricultural products.

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- 1/ United Nations Statistical Yearbook 1979/80.
 - 2/ Europa Yearbook 1977.
 - 3/ The Statesman's Yearbook 1978/1979.
 - 4/ Encyclopaedia Britannica 1974.
 - 5/ World Bank Atlas 1977.
 - 6/ Canada Year Book 1976/1977.

I. Background, history of environmental concerns and constitutional situations

1. Canada is a country of great diversity in physiography, climate, distribution of resources, regional economic potential and the distribution ethnicity of its people. In area, it is the second largest country in the world. Canada has a federal system in which the respective jurisdictions of the federal Government in Ottawa and the ten provincial governments are defined by the British North America Act, 1867. The federal Government is formally a parliamentary monarchy based on British constitutional law. The principle of parliamentary supremacy in relation to the executive and judicial branches of Government is an integral part of the Canadian system. The executive function is formally vested in the Governor-General, the Queen's representative in Canada. In practice, however, the Governor-General acts only on the advice of the Prime Minister and his Cabinet. Together they must command majority support in the House of Commons. Thus, the executive authority is derived from Parliament.

2. Though the Canadian Parliament is technically bicameral, real legislative power rests with the House of Commons. The Senate is an appointed rather than elected body, and in practice enjoys no significant powers. The judiciary is independent. Though the courts were established by statutes which could theoretically be amended by Parliament, there is a well-founded tradition of judicial independence which cannot be easily ignored. Provincial governments are patterned after the federal Government, with a lieutenant-governor representing the Crown, an elected unicameral legislative assembly, and a premier with an executive council serving at the discretion of the legislature in roles analogous to those at the federal level. Jurisdictional disputes between federal and provincial governments and interprovincial conflicts are resolved in the Supreme Court of Canada.

II. Organization of national environmental administration and policy-making bodies

3. The Department of the Environment, commonly called Environment Canada, went into service on 11 June 1971, in accordance with the Government Organization Act, 1970, which consolidated under the new department all of the functions of the former Department of Fisheries and Forestry as well as most environmental protection responsibilities previously vested in other federal ministries. However, the new Government Organization Act, 1979, created a Department of Fisheries and Oceans separate from the Department of the Environment. The latter now comprises the Environment Protection Service, the Environment Management Service, the Canadian Forestry Service, and the Atmospheric Environment Service.

4. In addition to its meteorological functions, the Atmospheric Environment Service is establishing a nation-wide network for monitoring air quality and is conducting a wide range of research on atmospheric pollution. Regulations and standards dealing with water and air pollution, noise control, solid waste disposal and ecological disruptions are established by the Environment Protection Service, which administers federal environment control activities, operates an emergency pollution centre, and is generally responsible for liaison with industry and with other levels of government. The Environment Management Service includes the Inland Waters Directorate, the Canadian Wildlife Service, the Lands Directorate, and the Policy and Programme Development Directorate. The Canadian Forestry Service is responsible for forest management and protection; its activities extend more specifically to

forest production and utilization; to pest control and fire protection; and to forest ecology and environmental forestry. The Planning and Finance Service provides support for the department in the areas of administration, financial management, technical information, educational and public relations.

5. An Environmental Advisory Council with a permanent secretary directly responsible to the Minister has been established to provide a forum for representatives of industry, the universities, the scientific community, and public groups and organizations concerned with environmental problems. A Special Advisor on Renewable Resources reports to the Minister and Deputy Minister on matters related to development of renewable resources.

6. Although many environmental responsibilities were consolidated under Environment Canada to provide a unified structure for a comprehensive national programme, certain functions were left with other ministries with special jurisdictional competence. The Ministry of Transport is generally responsible for regulating pollution caused by vehicles operating on land and by navigation on inland waterways and territorial oceans, while the Department of Indian and Northern Affairs is charged with protection of northern inland waters and the Arctic seas against pollution and harmful development. Pesticide and agricultural chemical regulations are administered by the Department of Agriculture under the Pest Control Products Act and the Fertilizers Act. Radio-active substances are regulated by the Atomic Energy Control Board, established under the Atomic Energy Control Act. The Board is under the direction of a designated minister, currently the Minister for Energy, Mines and Resources.

III. Relationship between national, regional and local levels of environmental administration

7. The relationship between the federal and provincial governments with regard to environmental protection is determined by their respective proprietary rights and legislative jurisdictions as defined by the British North America Act in 1867. Provincial governments have proprietary rights, and thus legislative authority, over most publicly owned natural resources within their respective provinces, including land, water, minerals, forests and wildlife. Ownership of public resources provides a firm constitutional basis for provincial environmental law. Many provinces have their own environmental protection agencies and well developed bodies of environmental law. The provinces have jurisdiction over all matters which are entirely local in nature. In other cases, they often share jurisdiction with the federal Government. Where valid federal and provincial laws are in conflict, the federal law takes precedence. Federal ownership of resources within the provinces is limited to national parks, harbours, canals and other property purchased or expropriated for official purposes. In addition, the federal Government owns all public resources lying outside of provincial boundaries, such as those in the northern territories or under coastal waters. Thus, federal authority to enact environmental legislation on the basis of proprietary rights is restricted in the provinces, but virtually unlimited with regard to northern territories and coastal waters.

8. In addition to authority from its proprietary rights, the federal Government can enact environmental legislation under certain headings of the British North America Act. Though the scope of federal authority in this respect has not yet been clearly defined due to the vagueness of the act and often contradictory judicial interpretations, there are certain clauses under which the federal Government is clearly competent to enact important environmental legislation. Environmental problems such as pollution sources

across provincial or international boundaries, and hazards accompanying the use of radio active substances have been dealt with under the power to make laws for the peace, order and good government of Canada. This had been broadly interpreted to mean matters which are inter-provincial in scope and affect Canada in general, providing there is no encroachment upon clearly established provincial prerogatives. Further authority to enact environmental legislation is derived from the power of the federal Government to regulate certain specific activities such as navigation and shipping; marine and inland fishing; harbour, river and lake improvements; certain mining operations, waterworks and similar undertakings; and some aspects of agriculture. General authority to enact legislation concerning the criminal code, trade and commerce, taxation, and expenditure of public funds can also be used to strengthen national environmental programmes. Because of the broad impact of environmental programmes and the complicated jurisdictional problems that arise, Environment Canada has adopted a policy of establishing co-operative environmental programmes at all levels of government. Provincial authorities are consulted when federal legislation is being drafted, and responsibility for implementation and enforcement is left as far as possible at the local level.

9. Both the federal and provincial governments have constitutionally defined jurisdictions which are subject only to court interpretation. Municipal governments, on the other hand, exist entirely at the pleasure of provincial governments. Federal environmental programmes for the cities, such as grants and loans for construction of sewage treatment plants, are administered through the provincial governments.

IV. Major acts of general environmental legislation

10. Though Canada does not have a unified federal environmental code, comprehensive national legislation has been enacted to control water and air pollution.

V. Implementation and enforcement of environmental laws and policies

11. The most important device for implementing environmental laws and policies is the federal Environmental Assessment and Review Process (EARP) established by the Cabinet in 1973. EARP is administered by the Federal Environmental Assessment Review Office (FEARO), which is headed by an Executive Chairman who reports directly to the minister of the Environment.

12. Under the Process, federal departments and agencies are obliged to screen their programmes, projects and activities, including those in which provincial governments and/or private organizations are involved. If it is found that an activity may have a significant adverse environmental impact, it must be referred to FEARO for a review by an independent panel; FEARO establishes a separate panel for each such activity. The Panel issues site-specific guidelines to the initiating agency for the preparation of an environmental impact statement, which is subjected to a full public review. Then, following a study of all data presented, the panel submits a report to the Minister of the Environment, in advance of which the project may not proceed. The report includes an examination of the project as well as recommendations. These recommendations usually allow the project to proceed, with or without conditions; alternatively, they require the project to be cancelled or deferred. The Minister of the Environment, in consultation with the minister of the department initiating the project, decides whether or not to accept the panel's recommendations. In the case of a disagreement between ministers on the course of action that should be taken, the matter would normally be referred to the Cabinet for resolution.

13. The federal initiative for environmental assessment is in support of similar action by provincial governments, and includes provisions to establish joint review boards with the provinces.

14. Environmental laws are enforced by agents of the federal or provincial government, as the case may be. Thus, under the Canada Water Act, water management agencies established by Environment Canada, alone or in co-operation with the provinces, operate public sewage treatment facilities and collect effluent discharge fees from polluting enterprises. They are also responsible for monitoring water quality and inspecting public or private sewage treatment facilities within the area of their jurisdiction. In enforcement of the act, inspectors may enter and search establishments suspected of discharging wastes into waters regulated by the act, take samples of wastes, and obtain copies of pertinent records and documents.

15. Co-operation between the federal and provincial governments is a basic principle behind the implementation and enforcement of national air pollution legislation. In absence of such co-operation, however, there are strong measures that can be taken by the federal Government to enforce compliance at the provincial and municipal levels. Under the Clean Air Act, the Minister of the Environment is authorized to enter into agreements with the provincial governments to facilitate formulation and implementation of pollution abatement programmes. In the absence of such an agreement, however, the federal Government may unilaterally issue national emission standards for enterprises causing air pollution hazardous to public health or resulting in violation of international air pollution abatement agreements.

VI. Relationship between Government, industry, non-governmental organizations

16. Recognizing that control of industrial pollution by regulation alone puts the entire responsibility for pollution abatement on the government, Environment Canada encourages co-operation with the industry in the prevention of environmental degradation. Industries are urged to participate actively in developing environmental protection regulations and pollution control methods. Advisory committees representing industry, as well as other segments of society, may be established by the Environment Minister under the Canada Water Act and the Clean Air Act to provide information on related matters.

17. In order to carry out its responsibility for initiating action to prevent and combat pollution, the Environmental Protection Service of Environment Canada maintains close contact with industry and provincial governments. Liaison with industry and other levels of government is primarily the responsibility of this Service.

CHINA

Area: <u>1/</u>	9,596,961 sq km
Terrain: <u>2/</u>	The relief of China is high in the west and low in the east. The plateau of Tibet, with an average height of well over 4,000 m, is the loftiest high-land area in the world. To the north of the Kunlun Mountains, the mountains descend sharply to heights of 2,000 - 1,000 m above sea level, after which basins intermingle with plateaux. Eastwards to the China Sea, almost all of the area is made up of hills and plains lying below 500 m.
Natural resources: <u>2/</u>	Coal, iron ore, lignite, manganese, tungsten, tin, lead, zinc.
Climate: <u>4/</u>	Ranges from subtropical in the far south to an annual average temperature of below 10°C in the north, and from the monsoon climate of east China to the aridity of the north-west.
Population: <u>3/</u>	965,279,000 (mid-1979, preliminary).
Population density: <u>1/</u>	90 per sq km (1977).
Annual population growth: <u>1/</u>	1.4 per cent (1975 - 1979).
Population distribution: <u>2/</u>	Because of complex natural conditions, the population of China is quite unevenly distributed. Population density varies strikingly, with the greatest contrast occurring between the eastern half of China and the lands of the west and north-west.
Life expectancy: <u>1/</u>	60.7 years male; 64.4 years female (1970 - 1975).
Gross national product: <u>3/</u>	US\$ 230 <u>per capita</u> (1978); growth rate <u>per capita</u> (real): not available.
Employment:	(Figures not available).
Industrial and agricultural output: <u>2/</u>	By 1970 the value of industrial production reached \$US 90 billion, accounting for 75 per cent of the combined total for industry and agriculture. Agricultural output in 1971 was below 30 per cent of the country's GNP, although China remains essentially an agricultural country and is self-sufficient in many crops. Some 11 per cent of the total land area is under cultivation.

- 1/ United Nations Statistical Yearbook, 1979/80.
- 2/ Encyclopedia Britannica, 1974.
- 3/ World Bank Atlas, 1980.
- 4/ Europa Yearbook, 1981.

I. Background, history of environmental concerns, constitutional situation

1. The People's Republic of China was founded in October 1949. During the century preceding that date, little or almost no action was taken in the field of environmental protection in China. However, since October 1949 much emphasis has been placed on this aspect.

2. The guiding principles governing environmental protection work are: overall planning, rational layout, comprehensive utilization, conversion of harm into good, and reliance upon the masses with everybody taking part in the protection of the environment for the benefit of the people.

3. It is emphasized that while developing the national economy, the planning of environmental protection should be strengthened. Industry and agriculture, cities and rural areas, production and living conditions, economic development and environmental protection should be promoted at the same time and in a co-ordinated manner.

4. In regard to the construction of urban and industrial areas, a policy of decentralization, minor concentration and development of small cities and towns is followed. New cities and factory and mining areas are constructed to integrate urban and rural areas, industry and agriculture with a view to facilitating production and improving living conditions.

5. At present, the emphasis of environment protection efforts in China is on controlling industrial pollution. Two important measures are taken:

(a) Reformation of outdated enterprises. Factories, mines and enterprises which cause pollution and hazard to the environment must carry out plans for control and take control measures, by stages and in groups, by a target date. The method of control is primarily based on comprehensive utilization. Emphasis is placed on technological innovation and conversion of harm into good;

(b) Control of new pollution. In planning all new construction, reconstruction and extension projects, installations for the prevention of pollution and other hazards to the environment should be designed, built and put into operation at the same time as the main project. When violations of environmental regulations take place, production will not be permitted upon completion of the project. Production is allowed to begin only after corrective measures have been taken.

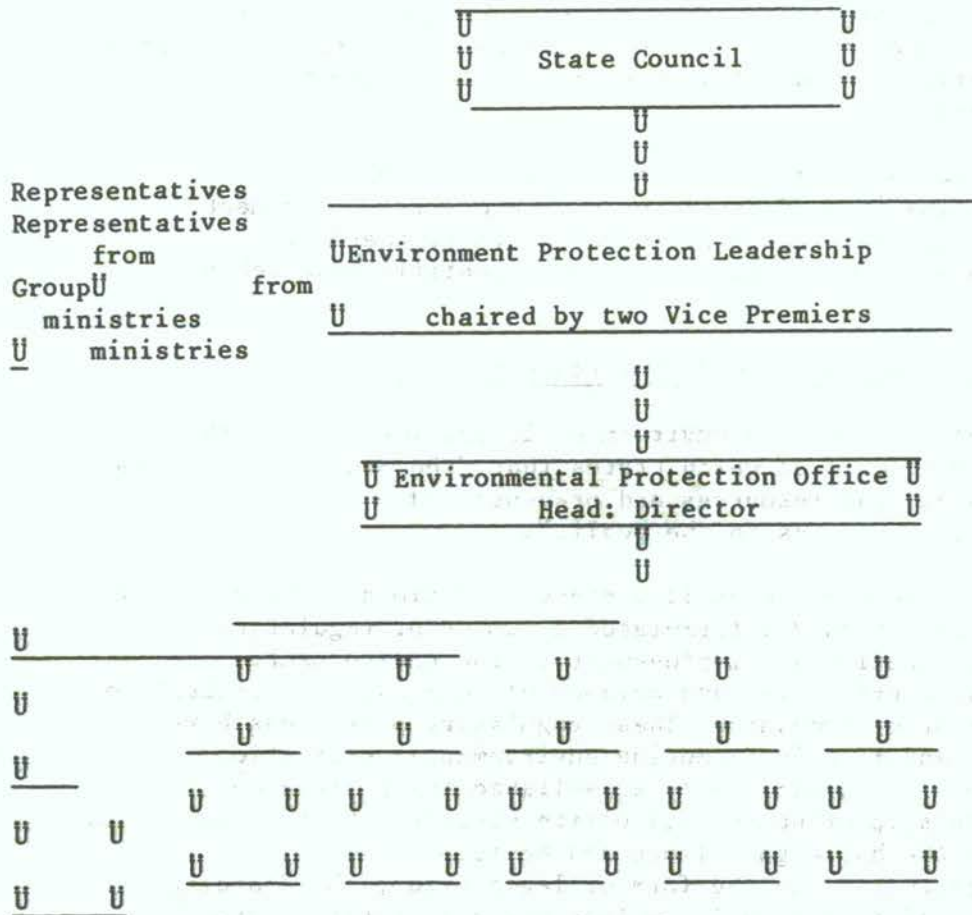
6. Constitutionally, China is a socialist republic in which the People's Congress is the supreme legislative body and the State Council the central executive organ. Administratively, the country is divided into 22 provinces, five autonomous regions and three municipalities directly under the State Council. Each province or autonomous region is further divided into districts, and districts into counties. Each county administers several people's communes as its basic administrative unit.

II. Organization of national environmental administration and policy-making bodies

7. At the national level, the Environment Protection Leadership Group of the State Council is a policy-setter and a decision-maker in the field of environment. The Group is headed by two vice-premiers, and includes responsible officials from over twenty ministries. Its functional body, the Office of the Environment Protection Leadership Group of the State Council or "Environmental Protection Office", consists of one director, several deputy directors and over 50 officials. The Office has eight services, namely: planning, science and technology, water resources, atmosphere, nature protection, investigation and research, foreign affairs, and secretariat.

8. The main functions of the Environmental Protection Office are:

- (a) To implement and supervise the carrying out of national guidelines, policies, laws and acts relating to environmental protection;
- (b) To draft, in conjunction with relevant departments, regulations, rules, standards, and economic and technical policies relating to environmental protection;
- (c) To draw up in conjunction with relevant departments, long-term programmes and annual plans for the protection of the environment and to encourage and supervise their implementation;
- (d) To make unified plans for environmental monitoring of the environment; carry out investigations and keep under review the environmental situation and trends of development of the whole country, and recommend improvement measures;
- (e) To organize and co-ordinate in conjunction with relevant departments, research and educational programmes in environmental science, and actively promote advanced techniques in the field of environmental protection;
- (f) To direct the environmental protection work of all departments under the State Council, and of the provinces, autonomous regions, and municipalities directly under the central Government.
- (g) To organize and co-ordinate international co-operation and communication in the field of environmental protection.



Branch offices for environmental protection in each of the 22 provinces, 5 autonomous regions and 3 municipalities directly under State Council and ministries under State Council.

9. Each of the ministries concerned under the State Council, such as those for the metallurgical industry, the chemical industry, the petroleum industry, light industry, the textile industry, the power industry, communications, railways, the mechanical engineering industry, agriculture, forestry, public health, education, science and technology, and oceans, has its own environment protection body.

III. Relationship between national, regional and local levels of environmental administration

10. Provinces, municipalities directly under the central Government, and autonomous regions have environmental protection bureaux. Districts, municipalities and counties also have their environment protection departments.

11. There are also environmental protection units for major water courses and reservoirs, such as the Changjian (Yangtze) River, the Yellow River, Songhuajiang River, Pohai and Guanting Reservoir.

12. The environmental protection departments and units at various levels are under the direct authority of governmental and appropriate administrative departments at their respective levels. They receive operational guidance from higher level environmental protection bodies and are responsible for the work of environmental protection within their own department.

13. At the national level, as well as in key departments, provinces, municipalities directly under the central Government, autonomous regions, districts and municipalities, there are environmental protection institutions for scientific research and monitoring.

IV. Major acts of general environmental legislation

14. The protection of the environment is provided for in the Constitution, article 11 of which states that "the State protects the environment and natural resources and prevents and eliminates pollution and other hazards to the public".

15. In 1973, the State Council convened a national conference in environmental protection and formulated a number of regulations governing the protection and improvement of the environment. Subsequently, some principles and methods of environmental protection and improvement were formulated. These regulatory provisions have played an important role in promoting environmental protection efforts. In 1974, China officially established the Environment Protection Leadership Group and its Office under the State Council. In order to define the basic guidelines and basic policies of environmental protection in the form of legislation, the Standing Committee of the fifth National People's Congress ratified and formally proclaimed on 13 September 1979, for trial implementation, the Environmental Protection Law of the People's Republic of China. Its article 2 stipulates that the function of this Law "is to ensure, during the construction of a modernized socialist state, the rational use of the natural environment, the prevention and elimination of environmental pollution and damage to ecosystems, in order to create a clean and favourable living and working environment, protect the health of the people and promote economic development".

16. The Environmental Protection Law, in its 33 articles, covers a broad spectrum of environmental issues ranging from the rational use of the land to the protection of wildlife and the prevention and elimination of pollution. The "polluter pays" principle, is explicitly recognized (article 6, paragraph 2).

17. The Law contains the first set of environmental protection legislation in China. It makes comprehensive and systematic provision for environmental protection guidelines, policies and principles, for the objects of protection, as well as its basic requirements and modalities, and for the mechanisms of environmental management, scientific research, propaganda and education, rewards and punishment.

It also provides the basic guidelines and policies for environmental protection and water quality legislation to be developed subsequently, together with concrete regulations and rules for implementation. Since the Environmental Protection Law only attempts to set out the basic framework under which environmental policies and laws are to operate, article 33 specifically allows the State Council to promulgate specific and more detailed regulations in accordance with the Environmental Protection Law.

V. Implementation and enforcement of environmental laws and policies

18. While the Environment Protection Leadership Group plays an organizational, co-ordinating and supervisory role, the actual implementation of environmental protection measures remains the responsibility of each province, autonomous region and municipality, and of each ministry in the State Council, the major ones being the Ministry of Health, the Ministry of Agriculture and Forestry, the Ministry of Metallurgical Industry, the Ministry of Light Industry, the Ministry of Textile Industry, the Ministry of Water Conservancy and Power, the Ministry of the Petroleum Industry, the Ministry of the Chemicals Industry, the Ministry of the Coal Industry, the State Capital Construction Commission, the State Planning Commission, the State Scientific and Technological Commission, the State Economic Commission, etc. In the actual implementation of environmental policies, more emphasis is given to the promotion of public awareness and mass participation than to enforcement of laws. Disputes are normally settled through arbitration rather than through decisions of a law court. Nevertheless, article 32 of the Environmental Protection Law specifically permits administrative and even criminal sanctions against "unit leaders, persons directly responsible or other citizens who have caused serious pollution and damage to the environment resulting in casualties or substantial damage to farming, forestry, animal husbandry, subsidiary production and fishery".

19. Mass participation is a main feature of the implementation of environmental measures. Every year numerous mass rallies of various sizes are held all over the country to inform and mobilize the people to participate actively in numerous projects which have a bearing on environmental protection. A nationwide campaign to eliminate the four "plagues" - flies, mosquitoes, mice and bed bugs for example, achieved much success basically through large-scale public participation. Water conservancy, be it the construction of enormous irrigation systems or the control of floods caused by the Yellow River, relies primarily on participation by the masses. The planting of millions of trees all over the country, the fixation of sanddunes in the Gobi desert, the transformation of vast deserts into arable land, the control of schistosomiasis are but a few of the very many successes that would not have been possible without the participation of millions of people.

20. Chinese environmental protection measures can best be summarized in the slogan of "triple simultaneity", which applies when a new factory or a research institute is constructed. Basically, during different phases - the design, the construction and the completion phase - environmental considerations have to be taken into

account. Environmental protection should be a major concern in the design of the project, and has to be incorporated during the actual construction, as well as necessary measures that keep disruption of the environment to the minimum. Upon completion of the project, these protection measures have to be checked by the Environmental Protection Office before a licence can be obtained for the operation of the factory or institute. This elaborate approach is thought to add perhaps a bit more to construction costs, but certainly to pay in the long run.

VI. Relationship between government, industry, non-governmental organizations and others

21. In socialist China, Government and industry traditionally co-operate very closely. Article 28 of the Environmental Protection Law attempts to inject environmental considerations into industrial operations by stipulating that large and medium sized enterprises are to establish their own environmental protection offices within these enterprises. In fact, large and medium factories, mines and enterprises now generally have environmental protection units or designate special persons to be in charge of environmental management.

VII. Citizens' participation

22. According to article 8 of the Environmental Protection Law each citizen has the right to bring charges against units or the individuals who cause pollution and damage to the environment. To encourage such private actions and criticism, the individual thus accused and charged is barred from taking any retaliatory action against the citizen.

DOMINICAN REPUBLIC

- Area: 1/ 48,734 sq km
- Terrain: 2/ The Dominican Republic, the second largest island of the Greater Antilles archipelago, has five distinct highland areas running along a northwest to southeast axis. The Pico Duarte in the major Cordillera Central (Central Highlands) is the highest mountain in the West-Indies, rising to a height of 3,715 metres.
- Natural resources: 2/ Bauxite, gypsum, iron ore, nickel, salt.
- Climate: 2/ The Dominican Republic lies well in the tropical zone, but the hot, moist climate typical of this zone is tempered in many areas by the altitude and in other areas by the insular character of the republic and by the north-east trade winds that blow steadily from the Atlantic all year long. The island is constantly in danger from tropical storms and hurricanes. The country as a whole enjoys a mild and pleasant climate with temperatures about 25°C.
- Population: 4/ 5,128,000 (mid-1978).
- Population density: 1/ 108 per sq km (1979).
- Annual population growth: 1/ 2.9 per cent (1975 - 1979).
- Population distribution: 2/ The country is still largely rural, although since 1950 it has exhibited one of the highest urbanization rates of any country in the world.
- Life expectancy: 1/ 57.15 years male; 58.59 years female; (1959-1961).
- Gross national product: 4/ \$US 990 per capita (1979, preliminary); growth rate per capita (real): 4.2 per cent (1970 - 1978).
- Employment: 2/ The largest proportion of the population belongs to the lower-income group. This category includes small farmers, landless agricultural workers, and unskilled manual labourers in domestic and maintenance occupations, as well as in construction, industry, and shipping.
- Industrial and agricultural output: 3/ Agriculture is the chief source of wealth, sugar cultivation being the principal industry. Other cash crops are coffee, cocoa, tobacco and bananas. Output of the principal mining product, ferro-nickel, regained its former level of over 65,000 tons in 1979 after a fall of 42.6 per cent in 1978.

- 1/ United Nations Yearbook, 1979/80.
- 2/ Encyclopedia Britannica, 1974.
- 3/ Europa Yearbook, 1981.
- 4/ World Bank Atlas, 1980.

I. Background, history of environmental concerns, constitutional situation

1. The Dominican Republic was part of the Spanish colonial empire. The island it occupies was discovered by Christopher Columbus during his first voyage (1492) and given the name Hispaniola. In 1697 Spain ceded to France the western part of the island, which part in 1804 became the Republic of Haiti. Spanish domination ended in 1821, but in 1822 Haiti occupied the entire island. In 1844 the Haitian occupation ended and the Dominican Republic achieved its independence. Nevertheless, in 1861, the Dominicans voluntarily consented to their country being annexed to Spain, a status that continued until 1865, when the country again achieved independence. The present form of government of the Dominican Republic derives from the Political Constitution promulgated in 1966. 1/

2. Constitutionally, the Dominican people constitute a nation organized as a free and independent State in which national sovereignty lies with the people, from which derive all the powers of the State. The Government is essentially civil, republican, democratic and representative, and is divided into legislative, executive and judiciary branches. The legislative power is wielded by the Congress of the Republic, composed of a Senate and a Chamber of Deputies. The executive power is exercised by the President, and the judiciary power by the Supreme Court of Justice and other courts established by the Constitution and the laws.

3. The national territory is divided politically into a National District, which includes the nation's capital city, and provinces. The latter in turn are divided into municipios. Each province is headed by a Civil Governor appointed by the Executive Branch. As established by article 82 of the Constitution, the government of the National District and the municipios, however, is the responsibility of city councils composed of councillors elected by the inhabitants of the District and the municipios respectively. Aldermen, the public officials of the municipios, are elected in the same manner.

II. Organization of national environmental administration and policy-making bodies

4. Various ministries and numerous autonomous institutions are involved in management of the environment in the Dominican Republic, and there is no single organization in which environmental management is concentrated or co-ordinated.

5. Among the various ministries carrying out important functions in environmental management are the Ministries of Agriculture, the Armed Forces, Public Health and Social Welfare, Industry and Commerce, and the Technical Secretariat of the Ministry of the Presidency.

6. The Ministry of Agriculture has been assigned by law the following important environmental functions, inter alia: "... preserving renewable natural resources, regulating their use, increasing them and promoting their rational utilization", "rationalizing the use of land in accordance with laws and techniques", preventing and controlling animal and plant plagues and diseases"; and "regulating water conservation". Subordinate to this Ministry is a Division of Natural Resources that in turn includes, inter alia, Departments of Wildlife, Fisheries Resources, and Lands and Waters. In addition, this Division carries out an environmental education programme. Also part of the Ministry of Agriculture is the Dominican Agrarian Institute, whose main function is to carry out agrarian reform throughout the country.
7. The armed forces and the national police are responsible for the conservation, restoration and promotion of forest vegetation and for enforcing compliance with the legal provisions in force in this connexion. The Ministry of the Armed Forces consequently exercises the functions assigned by the Law on the Conservation of Forests and Fruit Trees to the Ministry of Agriculture, and is responsible for the Bureau of Forestry, the organization in charge of the administration of forests.
8. The Ministry of Public Health and Social Welfare is responsible for enforcing the provisions of the Public Health Code and its regulations throughout the country, either directly or through its subordinate technical organizations. Of these, the National Health Service is specifically responsible for studying and solving public health problems and for all health-related activities.
9. The Ministry of Industry and Commerce also carries out environment-related functions with regard to the formulation of the country's industrial, commercial, energy and mining policies. On the operational level, the Ministry includes departments for each of these fields responsible for applying the pertinent laws in each sector.
10. The Technical Secretariat responsible for managing the affairs of the Office of the President performs planning functions, and includes a Department of Natural Resources and Environment.
11. There are also a number of autonomous institutions with important environmental management functions, such as the National Institute of Drinking Water and Sewerage Systems (INAPA), the National Water Resources Institute (INDRHI), the National Parks Department and the Civil Defence Office. INAPA is an autonomous organization responsible for water supply systems for domestic, industrial and commercial consumption, and for sewage and rainwater disposal in urban and rural areas. INDRHI is the highest national authority with regard to surface and groundwater.
12. The National Parks Office is an autonomous organization responsible for developing, administering and managing a system of recreational, historical and natural areas, and is composed of an Advisory Committee that counsels the President with respect to determining which portions of the national territory should be included in the system. The Civil Defence Office is part of the Executive Branch and is mainly concerned with ensuring that the country is prepared for repairing any damage that may result from disasters and with providing assistance on such occasions. It performs co-ordinating functions and is responsible for formulating a general plan and programme for civil defence throughout the country.

13. On 4 September 1972, a commission of a few Ministers of State, other high officials and a few persons appointed on their own capacity headed by the Executive Director of Civil Defence, was composed and established to study the problems caused by environmental pollution with a view to adopting the measures required to solve such problems.

III. Relationship between national, regional and local levels of environmental administration

14. On the local level, the municipios also perform important environmental functions. In accordance with the Law on the Organization of Municipios, city councils are provided with powers such as formulating standards and regulatory plans for city planning purposes, drawing up building codes, determining areas for the prohibition of certain industries, providing for the supply and distribution of water for public and private consumption, establishing and maintaining slaughter-houses and markets, ensuring that the population has access to medical and pharmaceutical services during non-working hours and days, regulating the suppression of unnecessary and disturbing noise, and taking whatever other measures are required for civic beautification and for the hygiene, safety and comfort of the population. Similar regulations are in force in the National District.

15. An organization known as the Dominican Municipal League, which co-ordinates relations among the municipios, provides them with valuable technical and juridical assistance and collaborates in the exercise of their powers and duties with respect to the three branches of the Government.

IV. Major acts of general environmental legislation

16. The Dominican Republic does not possess an organic law on the environment. However, a project has been under way since 1975 to establish legislation of this nature. 2/

17. Dominican environmental legislation is found in a number of separate legal ordinances such as the country's Political Constitution, codes, laws, regulations and the like. Article 101 of the Constitution states that the country's artistic and historical wealth, its ownership notwithstanding, is part of the nation's cultural heritage. Consequently, it is to be safeguarded by the State, and laws are to establish whatever measures are necessary for its conservation and protection. Article 103 states that mine deposits are the property of the State and may be exploited by private parties only by concession or contract granted in accordance with the law.

18. One of the most important legal texts with regard to the environment is the Public Health Code, which regulates all matters related to health and public hygiene throughout the country. Articles 75 to 102 of this Code, which deal with environmental sanitation, include standards for sanitation of the urban and rural environment, for the control of foods and beverages, and for work hygiene and medicine. However, the regulations with regard to sanitation referred to in article 75, including sanitary and safety provisions with respect to mining and industrial establishments, have not yet been enacted. To date only the regulations concerning domestic sanitary facilities have been formulated (Decree No. 2323 of 16 December 1956), based on the provisions of article 82 of the Public Health Code. Industrial hygiene and safety have been dealt with in regulations decreed by the President (Decree No. 807 of 20 December 1966), based not on the Public Health Code, but rather on the regulatory powers granted him by Article 55 of the Political Constitution. These regulations contain rules for the location of industries.

19. With respect to mineral resources, the Mining Law regulates the exploitation of minerals under a system of concessions and establishes certain environmental standards. A Fisheries Law deals with protecting and developing the breeding of fish and regulates fishing with the aim of increasing this resource. The Law on Hunting dates from 1931, and establishes by Executive Decree the closed seasons for various areas and regions of the country. Waters are regulated by the Law on Control of Inland Waters and Distribution of Public Waters, supplemented by the Law for the Control of the Exploitation and Conservation of Ground Water. The latter law provided new regulations and repealed the provisions of the former. The Law on the Conservation of Forests and Fruit Trees is designed to regulate the conservation, restoration, development and utilization of forest vegetation; transportation and commerce of forestry products; national administration of the forest service; and proper development and integration of the forestry industry. Law No. 627 of 28 May 1977 declares the use and protection of all or part of the lands in the country's mountain ranges to be in the national interest. Law No. 632 of 22 May of the same year prohibits the felling of trees or cutting of shrubs at the sources of rivers and streams that feed the country's watersheds. Finally, as a further means of defending the country's forest wealth, the export of wood has also been prohibited. Various laws had established several national parks before the establishment of the National Parks Department, and after its establishment two new parks were established. At the same time it establishes regulations to improve the living and working conditions of the campesinos; the Agrarian Reform Law also legislates on the use of the agricultural lands included in this Reform. Lastly, the manufacturing, packaging, storage, import, distribution and sale of pesticides are legally regulated, and their sale must be authorized by the Ministry of Agriculture. Based on this Law, the Ministry of Agriculture prohibited the use of certain pesticides for specific crops and regulated their import, sale and use in the country (Resolution of 22 June 1972).

20. With regard to human settlements, in addition to the Law on Urbanization, Public Beautification and Building, a Law also exists that regulates city planning. Under this Law, city planning offices were established in the City Councils of each city with a population of more than 50,000 and were assigned various regulatory functions with regard to human settlements.

21. The Public Transit Law also contains environmental regulations, especially with regard to noise (use of horns, whistles, sirens and bells; use of mufflers; unnecessary acceleration and so forth) and with regard to the preservation of public areas (prohibition against littering public areas with trash and the like).

V. Implementation and enforcement of environmental laws and policies

22. Administratively speaking, it is the responsibility of the officials in charge of environmental management indicated in Section II above to apply environmental legislation and policy.

23. Juridically, enforcement of environmental legislation is the task of the Courts of Justice. Usually, matters of a legal nature are dealt with by means of a double instance procedure in Courts of First Instance and in Appeals Courts, and further appeal is also provided for to the Supreme Court of Justice. Nevertheless, certain cases must be tried before an Office of the Justice of the Peace, which exist in each Municipio, as in the case of matters of environmental importance such as those relating to sanitation. The Higher Administrative Tribunal has been instituted to deal with disputes deriving from administrative action.

24. The institution of civil proceedings is the prerogative of those with legitimate grievances, and the institution of criminal proceedings is the responsibility of the Public Prosecutor, except in cases the law considers of a "private" nature. In dealing with the violation of administrative laws, the Public Prosecutor usually acts only after indictment of the administrative authority in question has taken place.

VI. Relationship between government, industry, non-governmental organizations and others

25. Several private institutions exist that deal with environmental matters, such as the Dominican Society for the Conservation of Natural Resources. In addition, a Foundation for the Protection of the Environment is being established. Some of these institutions are of regional scope, such as the Ecological Society of El Cibao, the El Cibao Reforestation Commission and others that are operating in San José de Ocoa and in Boneo.

1/ From 1844 to 1966 the Dominican Republic has had six Political Constitutions. The country's basic legislation is of French origin (Civil Code, Civil Procedures Code, Criminal Code, Criminal Procedures Code, Commercial Code). This legislation was formally adopted in 1845, but was not applied until the time of the Haitian occupation.

2/ Article 1 of the project states, "The purposes of this Law are to establish a public policy to promote desirable and appropriate harmony between man, his environment and the biosphere; promote man's health and welfare; further understanding of ecological systems and natural sources; and establish an Environment Quality Board."

FINLAND

Area: <u>1/</u>	337,032 sq km
Terrain: <u>2/</u>	Heavily afforested (70 per cent of the land area), Finland contains 55,000 lakes, numerous rivers, and an extensive area of marshland in the north. Except for the few mountainous regions in the north west, the relief does not vary greatly. The land is low-lying in the south and higher in the centre and the north east. The highest mountain is 1,324 m.
Natural resources: <u>2/</u>	Timber, hydroelectric power, and some ores.
Climate: <u>2/</u>	Approximately one third of Finland lies north of the Arctic Circle and suffers extremely severe and prolonged winters. Temperatures can fall to 30°C, and the snow never melts on the northern mountain slopes. In its short summer of 2 months, temperatures can reach as high as 27°C. Further south, the extremes are less marked. Annual precipitation, about one third of which falls as snow, is about 610 mm.
Population: <u>3/</u>	4,772,000 (mid-1979).
Population density: <u>1/</u>	14 per sq km (1979).
Annual population growth: <u>1/</u>	0.3 per cent (1975 - 1979).
Population distribution: <u>2/</u>	Increased industrialization in Finland has steadily raised the proportion of the population living in towns. Nevertheless, rural settlement (49 per cent in the 1970 census) remains intensive. Major urban settlement is in the southern third of the country, where alternatives to employment in the wood processing industry induce the population drift.
Life expectancy: <u>1/</u>	68.49 years male; 77.12 years female;(1978).
Gross national product: <u>3/</u>	<u>\$US 8,260 per capita</u> (1979), growth rate <u>per capita</u> (real): 2.2 per cent (1970 - 1978).
Employment: <u>4/</u>	Total labour force: 2.253,000 (1978), including agriculture, forestry, fishing: 256,000; manufacturing: 527,000; community, social and personal services: 518,000; trade, restaurants and hotels: 301,000.

Industrial and agricultural
output

Finland is one of the world's leading exporter of pulp and paper. Among the manufacturing industries, the textiles and chemical industries in particular have grown. Output in textile and chemical industries and in metal and engineering industries rose by 5 per cent in 1979. Cereal and dairy farming is highly mechanized.

- 1/ United Nations Statistical Yearbook, 1979/80.
- 2/ Encyclopedia Britannica, 1977.
- 3/ World Bank Atlas, 1980.
- 4/ Europa Yearbook, 1981.

I. Background, history of environmental concerns, constitutional situation

1. Since timber and the associated wood processing industry form the backbone of Finland's economy, most of the country's environmental concerns centre around forest management and damage to the environment from the effects of the wood processing industry. The abundant lakes in Finland are relatively shallow, so water management is very important because of demands on water resources from the timber industry, and of increasing urbanization in the south where water resources are not so abundant.

2. Finland has a republican constitution which combines a parliamentary system with a strong presidency. The unicameral Parliament is elected by universal adult suffrage, using proportional representation. The President, entrusted with supreme executive power, is elected by a college of 300 electors, chosen by popular vote in the same manner as members of Parliament. Legislative power is exercised by Parliament in conjunction with the President. For general administration the President appoints a Council of State (Cabinet), headed by a Prime Minister, which is responsible to Parliament.

II. Organization of national environmental administration and policy-making bodies

3. During 1973 there were arrangements in the Finnish governmental machinery for environmental protection, and a Division for Environmental Protection, subordinate to the Ministry of the Interior, was established. The Division deals with matters concerning:

- (a) General planning, control and coordination of environmental projection;
- (b) Air protection;
- (c) Noise abatement;
- (d) Outdoor recreation.

4. The Environmental Council functions as an advisory board of trustees subordinate to the Ministry of the Interior (formerly, it was attached to the Prime Minister's Office). The Council deals primarily with matters of principle.

5. The functions of land-use planning and its control fall under the Ministry of the Interior. The responsibilities of the national Board of Housing include forming new residential environments and maintaining the existing housing stock.

6. The fields of water management, nature conservation and natural resources fall within the realm of the Ministry of Agriculture and Forestry. The subordinate government bodies handling these fields are, respectively, the national Water Board and the Bureau of Natural Resources management.

7. There are also other authorities with responsibilities in the field of environmental protection. In the Ministry of Education, there are Divisions of Environmental Research at the Central Board of Research Councils and at the national Board of Antiquities and Historical Monuments. The Finnish Meteorological Institute, subordinate to the Ministry of Transport, carries out air pollution monitoring surveys.

8. The National shipping Board under the Ministry of Commerce and Industry takes action to prevent pollution by oil. Research on the problems of marine pollution is carried out by the Institute of Oceanography under the same Ministry. Furthermore, the Ministry of Commerce and Industry deals with general food control and technical research, including inspection.

9. Functions of considerable importance are performed by the Ministry of Social Affairs and Health and by its central offices, the National Medical Board and the Labour Protection Board. They deal with water and air pollution, noise, etc. in cases where public health and occupational health are involved. In addition, matters concerning noise are dealt with by this Ministry.

III. Relationship between national, regional and local levels of environmental administration

10. For administrative purposes Finland is divided into 12 provinces. The administration of each province is entrusted to a governor appointed by the President. He directs the activities of the provincial office and of local sheriffs. In 1976 the number of sheriffs' districts was 228. Regional administration for environmental protection is the responsibility of the office of the Inspector of Environmental Protection in each provincial government.

11. The unit of local government is the commune. Main fields of communal activities are local planning, roads and harbours, sanitary services, education, health services, and social aid. There are three different kinds of communes two are urban and one rural. In 1976 there were altogether 475 communes, of which 85 were urban and 390 rural. In each commune, the executive power is vested in a board which consists of one or a few chief commune officials and of members elected by the popularly elected commune council. Several communes often form an association for the administration of some common institution, e.g. a hospital or a vocational school.

12. The autonomous county of a land has a country council of one chamber, elected according to rules corresponding to those for parliamentary elections. In addition to its provincial governor it has a county board with executive powers in matters within the field of the autonomy of the county.

13. Since Finland does not have a national master plan, all levels of government are involved in the area of physical planning and building control. Regional plans are drawn up by the Regional Planning Association, which is a federation of communes. The area covered by a regional plan has to be an economic-geographical unit and, where possible, follows the provincial borders.

14. General plans indicate the main features in the use of the communes. Town plans give detailed instructions for densely built-up areas in towns and boroughs; such plans may also be drawn up for rural communes. Similar instructions for densely populated rural areas are usually given in the building plan. The general town and building plans are drawn up by the communes and accepted by the Communal Council.

15. Shore plans, regulating the leisure time housing on lake shores are usually drawn up by the owner of the area and accepted by the Communal Council.

16. The division for Planning and Building in the Ministry of the Interior acts as the highest authority in the planning and building activity. The Division also confirms the regional, general, town and shore plans as well as building ordinances for towns and boroughs.

17. The provincial governments supervise planning and building activity in the provinces, and sanction the building plans and shore plans and the building ordinances for rural communes.

18. Lower levels of government are also involved in the integrated water management system, which draw up plans of water allocation, provides necessary data on water use and prepares the budget for financing related to water use. The country is divided into 19 integrated water management planning regions. The national Water Board has set up multidisciplinary working groups for each planning area. To guide the work of these groups, advisory committees have also been established for each area. These consist of representatives of the national Water Board, the Regional Planning Association, the Voluntary Water Pollution Control Association, the Regional Nature Conservation Association, local and regional authorities, industry, communities and farmers.

IV. Major acts of general environmental legislation

19. Legislation in the field of environmental protection is still incomplete in Finland. Except for the Nature Protection Act of 1923 and the Water Act of 1961, there is no special environmental legislation. Naturally, labour protection legislation and public health legislation deal with the working and residential environments, but their spheres are limited to hygiene aspects.

V. Implementation and enforcement of environmental laws and policies

20. Jurisdiction over matters concerning water rests with a Water Rights Court, although its decisions are subject to appeal in higher courts. This court is empowered to give specific users permission for the discharge of effluents into water. Usually, the permit contains the condition that, in order to obtain a permit renewal, the user must present a plan on intended measures to clean up future effluents.

VI. Relationship between government, industry, non-governmental organizations and others

21. The wood processing industry supports and maintains the Finnish Pulp and Paper Research Institute, which has an environmental research division developing new methods for returning cleaner waste water, and for decreasing air pollutants. The pulp and paper industry has also made major investments in its own and in governmental water purification efforts and research.

JAPAN

Area: <u>1/</u>	377,682 sq km
Terrain: <u>2/</u>	The country consists of a chain of islands (4 main islands and more than 3,00 smaller islands) stretching along the northeastern coast of Asia. The longest span - northeast to southwest - is 3,000 kilometres. Much of the terrain (about 70 per cent) is mountainous and prone to volcanic activities and thus to frequent earthquakes. Forest land covers 76 per cent of the total land area.
Natural resources: <u>2/</u>	Mineral resources are meagre except for limestone and sulphur. Coal is the most important mineral and copper the most important metallic ore. Timber resources are extensive, and Japan has hydroelectrical resources.
Climate: <u>2/</u>	Japan's overall climate is influenced by the country's latitudinal extent, the surrounding oceans, and the neighbouring Asian landmass, whereas local climate variations are the result of relief features. The winter monsoon picks up moisture and brings rain or snow on Japan sea-side and dry, windy weather on the Pacific Ocean side. Temperatures are generally warmer in the south than in the north.
Population: <u>1/</u>	116,133,000 (1979).
Population density: <u>1/</u>	312 per sq km (1979).
Annual population growth: <u>1/</u>	0.8 per cent (1979).
Population distribution: <u>2/</u>	Population is concentrated within the limited plains and lowlands there has been increasing expansion into urban areas, while the rural population has remained constant or declined.
Life expectancy: <u>1/</u>	73.46 years male; 78.89 years female;(1979).

Gross National Product:

\$US 8.800 (1979, preliminary) per capita; growth rate per capita (real): 7,8 per cent (1970-78). Total labour force: 54.8 million (1979); agriculture and forestry: 5.7 million; fishing: 450,000; mining: 120,000; construction: 5,4 million; manufacturing: 13 million; commerce and finance: 14 million; transport: 3.82 million; services: 9.8 million; (unemployed 990,000 1.9 per cent, 1975).

Industrial und agricultural output: 2/

Japan is one of the top three industrial nations in the world, the world's principal shipbuilder, and one of the major producers and exporters of manufactured goods. Agriculture, including forestry and fishing, accounted for 8 per cent of the net national income in 1970.

1/ Statistical handbook of Japan, 1981.

2/ Encyclopaedia Britannica, 1974.

I. Background, history of environmental concerns and constitutional situation

1. Like most other developed nations, Japan has both a long history of pollution, and a record of early efforts by government authorities to control its damaging effects on the environment. As early as 1880, a copper mine located at Ashio was seriously contaminating a river and the surrounding soil, and as early as 1877 the Prefectural Government of Osaka issued a Factory Establishment Control Ordinance. Only after the Second World War, however, did environmental pollution become an issue of national importance. It was around 1955 - the year that marked the end of the post war economic reconstruction and the beginning of rapid economic growth - that environmental pollution began to intensify on a nation-wide scale. During the ensuing decade of sustained and rapid economic growth, industrial development together with rapidly improving income and living standards brought in their wake deteriorating human health and environment caused by air, water and other types of pollution.

2. Japan's dramatic economic recovery and growth after the Second World War was accompanied by rapidly expanding economic activities, technological innovations, a switch from coal to petroleum as the primary source of energy, and changes in the nation's industrial structure. These changes resulted in wide-spread air pollution by sulphur oxides, water pollution by toxic substances, and offensive odours. The concentration of population in urban areas and the rising standards of living gave rise to serious water pollution problems, air pollution by automobile exhaust gas and noise pollution. Factors which contributed to the rapid deterioration of environmental quality include:

- (a) Highly concentrated economic activity relative to the area of land available;
- (b) Accelerated development of heavy chemical industries;
- (c) Concentration of population and industries in urban areas;
- (d) Lagging development of social capital.

3. Initial efforts to preserve environmental quality were largely directed, in response to public pressure in local communities, towards dealing with localized pollution, and tended merely to establish procedures for location of factories, very seldom placing any specific quantitative restriction on the emission of stack smoke or the discharge of effluents.

4. In the decade from 1955 to 1966, regional development plans with emphasis on development of heavy and chemical industries were promoted in various localities along the Pacific industrial belt. During the same period, incidents such as the outbreak of the Minamata disease in Kumamoto Prefecture (1966), the eruption of asthma-like diseases in Yokkaichi (1961), and the violent clash at a Tokyo paper-mill between fishermen and the company when their fishing ground was allegedly fouled by the mill's water discharges (1958) dramatized the damaging effects of industrial pollution and led, in the early 1960s, to the enactment of a series of laws designed to regulate the discharge of factory effluents, the extraction of underground water and the emission of stack smoke, and to the formulation of plans for the improvement of the living environment, primarily through construction of sewage and waste disposal facilities.

5. In the 1960s some people began to feel that the price being paid for economic growth was too high, and a rather rapid change in societal attitudes took place. In 1963-1964 the project for a petrochemical complex at Mishima and Numazu was rejected by local residents and the local authorities concerned. In the following years, the Japanese people became one of the most pollution-conscious nations of the world: the number of complaints, which was virtually zero in 1960, increased to about 20,000 in 1966 and to more than 60,000 in 1970.

6. This awareness was precipitated by the horrifying character of Minamata and Itai-Itai diseases. If such episodes had not occurred, environmental awareness in Japan would probably not have developed so strongly and so quickly. It was also greatly facilitated by the media. Pollution made news. Press coverage of environmental issues increased greatly. Editorials calling for immediate action appeared. The judiciary also played an important role in the development of environmental policies. In 1967-1969, victims of Minamata disease, Itai-Itai disease and pollution-related asthma sued the companies which they held responsible for the diseases. Four major lawsuits were decided in the early 1970s in favour of the plaintiffs the polluters being held responsible. The impact of these decisions on Government's attitudes, laws and practices was great.

7. In 1967 the Diet (see 8) had enacted the Basic Law for Environmental Pollution Control, which is described in paragraph 19 below. In 1970, the National Headquarters for Countermeasures to Environmental Pollution, headed by the Prime Minister, was created, and at a special session of the Diet on environmental issues, no less than 14 pollution-related laws were enacted or revised, thus providing a solid legal basis for national environmental policy. Under the new and amended laws, provisions designed to balance pollution control measures against interests of economic development were deleted, and the policy goals for the preservation of living environment were assigned equal importance to those for the protection of human health. Soil and sea-bottom contamination were also written into the areas of environmental pollution covered by the Basic Law.

8. Japan's government organization is a parliamentary system based on the separation of powers among the legislative, executive and judicial branches. The Diet, the supreme legislative organ, derives its power from the people and has the authority to enact laws and to determine national budgets, national policies, and plans. It is a bicameral organ consisting of the House of Representatives and the House of Councillors. The Cabinet consists of a Prime Minister who is nominated by the Diet from among its members, and 20 Cabinet members appointed by the Prime Minister. It executes national policies in accordance with the laws and budgets approved by the Diet. The Prime Minister, representing the Cabinet, submits bills, reports on general national affairs and foreign relations to the Diet, and exercises control and supervision over various administrative branches.

II. Organization of national environmental administration and policy making bodies

9. The Environment Agency was founded in July 1971 for the purpose of planning and administering comprehensive national environmental policies and co-ordinating the environment-related functions of the various Government ministries and agencies. The Agency is directly under the Prime Minister's office and is headed by a Director-General who, although the Agency is not a ministry, has the title of Minister of State for Environmental Affairs and ranks high in the Cabinet. In certain areas such as nature conservation and national parks, it has a directly executive role. The number of Agency personnel in 1981 was 901, an 80 per cent increase over the initial figure.

10. Following the establishment of the Environment Agency, many departments and sections at prefectural and municipal levels were created with enforcement, surveillance, monitoring and inspection responsibilities. As of 1 October, 1980, the total number of local officials at the prefectural level exclusively charged with pollution control duties was 7,285, and with nature conservation 1,607. At the municipal level, there were 5,205 officials dealing with pollution control in 1980.

11. The Agency's jurisdiction covers:

- (a) General responsibilities: These include the planning, drafting and promotion of basic policies relating to environmental protection; overall co-ordination of various branches of government responsible for environmental protection; co-ordination of budgetary policies for pollution control-related expenditures; and centralized control of appropriations for environmental research;
- (b) Nature conservation: The Agency has under its jurisdiction enforcement of the Nature Conservation Law, the Natural Parks Law and the Law Concerning Wildlife Protection and Hunting Law;
- (c) Pollution control: This includes establishment of environmental quality standards and enforcement of the Air Pollution Control Law, the Water Pollution Control Law and other laws relating to environmental pollution.

12. The Environment Agency has eight subsidiary bodies, all of which are accountable to the Director-General: the Central Council for Environmental Pollution Control, the Nature Conservation Council, the Seto Inland Sea Environmental Conservation Council, the Special Certification Council for Minamata Disease, the National Institute for Environmental Studies, the National Institute for Minamata Disease, the Training Institute for Environmental Pollution Control and the Pollution Related Health Damage Compensation Grievance Board. The Central Council performs planning and research functions in all phases of environmental protection, including air and water quality standards, monitoring and surveillance procedures, and compensation for victims of pollution. The National Institute for Environmental Studies carries out interdisciplinary and basic studies on the effects of environmental pollution, while the Training Institute for Environmental Pollution Control was established to provide training for national, prefectural and municipal government employees involved in the administration of environmental protection. The Pollution Related Health Damage Compensation Grievance Board handles cases where patients who are not satisfied with the judgements given in connection with the certification of pollution-related patients for the payment of compensation benefits.

13. Supplementing the work of the Environment Agency are several other government ministries and public bodies. For example, the Regional Administrative Inspection Bureau of the Administrative Management Agency assists the Environment Agency by carrying out surveys and collecting pollution data throughout the country. Regional affairs officers are posted at these Bureaux by the Environment Agency. In April 1972, the Japanese Government established an interministerial council composed of representatives of the Ministries of Health and Welfare, International Trade and Industry, Transport, Construction and Labour, as well as of the Environment and Fishery Agencies, to develop and enforce counter-measures against pollution by polychlorinated biphenyls, and in June 1973 a similar council was created for mercury and other chemicals. The councils' activities include the establishment of tolerance levels of pollution in fish, nationwide inspections of factories, and surveys of highly polluted bodies of water.

14. A variety of pollution control services is rendered by the Pollution Control Service Corporation, established in 1970, which installs pollution prevention facilities to be utilized jointly by several factories and participates in the relocation of factories in non-polluted areas, the construction of recreation areas, and the granting of loans for anti-pollution programmes. Financial assistance to industrial enterprises for pollution control is also provided by the Japan Development Bank, the Smaller Business Finance Corporation, the People's Finance Corporation, and the Agricultural, Forestry and Fishery Loans Corporation.

III. Relationship between national, regional and local levels of environmental administration

15. In general, Japan is a highly centralized country with only recent experience of local autonomy. Partly because they are closer to the needs and demands of the people, partly for purely political (partisan) reasons, local authorities have often been more innovative and stricter than the central Government. Pollution control and compensation schemes were first introduced at the local level, as was the idea of a ceiling to the total of emissions allowed over a given area, and many local authorities have set emission standards stricter than the standards set by the central Government.

16. All prefectural governments and many local authorities have administrative units for environmental protection, and a significant portion of environmental control administration is performed at the local levels of government. Several prefectures also operate pollution research centres. Prefectural and local authorities are empowered to enact ordinances regulating environmental pollution and to issue standards more stringent than national standards to suit specific local circumstances. They also assist in pollution control programmes through the surveillance of pollution sources, the enforcement of regulations and the promotion of pollution control projects.

17. In some cases the statutory and ordinance-based control regulations are further supplemented by pollution control agreements concluded between the prefectural or municipal authorities and factories located in their areas, originally conceived as an administrative tool for ensuring effective implementation of pollution control measures outside the purview of the statutes and local ordinances as of October 1979, these covered a total of 40 prefectural governments, 1,292 municipalities and 16,499 factories.

18. One of the most impressive achievements of local governments is in the field of air pollution monitoring. More than 70 networks have been established, and each network has 10-40 monitoring stations where air is automatically and permanently analysed for 5 or 6 pollutants (SO_2 , particulates, CO, oxidants, NO, NO_2), and also has a centre where the results of these analyses are immediately processed, stored, and publicly displayed. In addition, the most sophisticated networks monitor SO_2 emission at source in the main factories of the area. In some cases, computerized models can predict ground concentration levels a few hours in advance. In all cases, these networks are utilized as emergency systems. Whenever ground concentrations exceed (or are predicted to exceed) certain levels, the most important polluters are telephoned to reduce emissions by changing fuels or by reducing operations. These monitoring systems, which are more numerous and more sophisticated than anywhere else in the world, have benefited from Government subsidies and technical assistance.

IV. Major acts of general environmental legislation

19. The legislative foundations of Japanese environmental policies were laid in 1967 by the Basic Law for Environmental Pollution Control and its amendment in 1970. This Law establishes the framework within which the country's most significant environmental legislation has been enacted to "promote comprehensive policies to combat environmental pollution thereby ensuring the protection of people's health and the conservation of their living environment." The Basic Law defined seven categories of pollution: air pollution, water pollution, soil pollution, noise, vibration, ground subsidence and offensive odour. It laid down the basic principles guiding the implementation of pollution control measures by identifying the respective areas of responsibility of industries and national and local government. The Law provided for the comprehensive development of environmental policy including the establishment of environmental quality standards, the formulation of pollution control programmes geared to the particular conditions of each region, and measures for the compensation and relief for pollution-caused damages.

20. The Basic Law requires the Government and local authorities to prepare and implement fundamental policies for prevention of pollution harmful to human health or the living environment. The national Government has the responsibility for setting and enforcing environmental standards, as well as for promoting research in environmental protection, and also controls the establishment of polluting facilities in areas where pollution is extreme. Local authorities establish their own environmental protection plans in accordance with local circumstances and within the guidelines set by the national Government. Another responsibility assigned to the national Government is that of creating a system for settling pollution disputes and compensating victims of pollution. Industrial enterprises must bear all or part of the expenses required for pollution control measures prescribed by the Government or local authorities.

V. Implementation and enforcement of environmental laws and policies

21. Enforcement of environmental laws and regulations in Japan is mainly the responsibility of the prefectural governments. Prefectural governors are authorized to enforce national air and water standards or stricter prefectural standards. If regulations are violated, governors may issue administrative notices for improvement or, if the violations constitute a danger to human health, impose penal sanctions under the Law for the Punishment of Crimes relating to Environmental Pollution which Adversely Affects the Health of Persons of 25 December 1970. Extensive prefectural monitoring systems have been established to monitor air and water quality. All public water bodies for which environmental standards have been established are monitored by the prefectural governments. Surveillance of sea water is performed by the Maritime Safety Offices in Tokyo and other major cities, with particular attention to the Inland Sea.

22. The Environmental Disputes Co-ordination Committee, established by the Law of June 3, 1972, is an independent administrative body which, in addition to mediating and arbitrating disputes, advises local authorities, regarding the handling of pollution-related complaints. It is composed of a chairman and six other members, and is empowered to collect necessary data or technical information from other administrative agencies or business organizations. Moreover, each prefecture and city with a population of 200,000 or more has a counsellor who hears pollution-related complaints and is responsible for seeing that such problems are resolved. Counsellors are provided in smaller cities when the need arises.

23. Several national air pollution monitoring stations record the concentrations of various pollutants in the air, as well as meteorological conditions. There are also national monitoring stations for motor vehicle exhaust in Tokyo and other major cities. In addition, prefectural and municipal authorities enforce regulations regarding soot, smoke, and particulate-emitting facilities by on-site inspections, improvement orders, and recommendations or orders relative to fuel quality. Emergency measures are initiated when the concentration of one or more pollutants reaches dangerous levels. Prefectural governors are required to measure the concentration of pollutants in motor vehicle exhaust gases in areas where air pollution from mobile sources is critical. If emission standards are exceeded, governors must request the Prefectural Public Safety Commission to regulate traffic.

24. The Japanese court system is headed by a Supreme Court consisting of a Chief Justice and fourteen judges. Under the Supreme Court are eight regional higher courts, district courts in each prefecture, and local courts. The local courts have jurisdiction of the first instance in lawsuits pertaining to public nuisance crimes relative to the endangerment of human health. Many pollution-related disputes, however, are settled outside the court system by arbitration or mediation by the Environmental Disputes Co-ordination Committee or by mediation or reconciliation by the Prefectural Environmental Disputes Councils. Such administrative settlements are provided for under the Law concerning the Settlement of Environmental Pollution Disputes of 1 June 1970.

VI. Relationship between government, industry, non-governmental organizations and others

25. Private industrial enterprises in Japan work closely with the Government to reduce the harmful impact of industrial activities on the environment. Industrial expenditures for pollution control equipment have been greatly increased over the past years in an effort to meet government standards for air and water quality. Also, more and more enterprises have been adding anti-pollution researchers to their scientific staff. In 1971, the Law for the Establishment of Organizations for Pollution Control in Specified Factories was enacted with a view to promoting the establishment of organizations for pollution control in the private sector. The Law requires factories exceeding a certain size to assign technical experts for pollution control. As of 9 March, 1975, there were 12,600 such

factories and there are now 32,000 pollution control managers. These managers must take qualifying courses and pass a national examination before assuming their responsibilities. As of March 1975, 210,000 experts were qualified for such posts. Polluting establishments are also obligated to keep records of the amounts of emissions or effluents discharged.

26. Co-operation between industry and government is further characterized by the establishment of antipollution agreements between prefectural or municipal authorities and private industrial organizations. These agreements contain provisions pertaining to general pollution control measures and regulations on the discharge of air and water pollutants payment of damages to pollution victims, and on-the-spot inspection of polluting facilities. Similar agreements have also been established between commercial enterprises and local resident groups.

27. Polluting industries are assuming an ever-increasing portion of the financial burden of pollution control in Japan, while the Government contributes in the form of funds allocated to environmental protection programmes by various ministries and agencies and through tax incentives to private industry to stimulate investments in pollution-control equipment. The Pollution Control Works Cost Apportionment Law of 25 December 1970, requires industries to subsidize all or part of the costs involved in pollution control works undertaken by the Government or local authorities.

28. The responsibility of private industry for providing financial aid to pollution victims is also expanding. Under the Pollution-related Health Damage Compensation Law of 5 October 1973, polluting establishments are obliged to compensate for health damage due to marked air or water pollution over a considerable area resulting from their operations. Polluted areas in which such compensation is provided are designated by cabinet order, and victims of pollution-related illness are certified by prefectural governors or, in certain instances, by city mayors. (These certifications must be approved by prefectural or municipal Pollution-related Health Damage Certification Councils). The types of benefits provided under this programme are (1) medical care benefits and medical care expenses; (2) disability compensation ; (3) survivors compensation ; 4) lump survivors compensation ; (5) child compensation allowances; (6) medical care allowances; and (7) funeral expenses. The funds for these payments are collected from polluting establishments by the Pollution-related Health Damage Compensation Association, an administrative agency of the national Government, which in turn disburses the funds to prefectural or municipal governments for payment to certified victims.

VII. Citizen participation

29. Much of the major environmental legislation in Japan owes its origin to issues raised by voluntary groups of local residents, environmental protection movements started by non-governmental

organizations and court cases fought by those seriously affected by pollution. In a country like Japan where there is relatively little experience of public participation in the formulation and execution of Government policies, environmental issues became the very first area of public administration in which the voice of citizens began to be increasingly heard and even to be written into laws. Already a number of environmental laws provide for the right of the public to participate in and review administrative procedures and the right of access to information. With the expected enactment of a comprehensive environmental impact assessment law in the near future, public participation will become an established feature of all environmental policies of the Government and of local authorities.

KENYA

- Area: 1/ 582,646 sq km
- Terrain: 4/ Kenya is divided into 5 contrasting geographic regions, the Lake Victoria Basin, the central Rift Valley and its associated highlands, the eastern plateau, the semi-arid and arid areas of the north and south, and the coastal region. The nation's highest Mountain is Mount Kenya at 5,194 m.
- Natural resources: 2/ Agriculture, mining, forestry, fisheries, hydroelectrics. The most important mineral is sodium carbonate (soda ash). Others are salt, gold and limestone. Mineral production is likely to increase considerably with the discovery of 2 million tons of lead and silver at Kinangoni and other exploitation of a fluorospar ore deposit.
- Climate: 2/ Varies with altitude: the coastal zone is hot and humid, with temperatures averaging 21°C to 32°C, while inland above 1,500 m the average is between 8°C and 28°C. The highlands and western area receive ample rainfall, but most of the northern part is very dry.
- Population: 4/ 14,720,000 (mid-1978).
- Population density: 1/ 26 per sq km (1979).
- Annual population growth: 1/ 3.6 per cent (1970 - 1975).
- Population distribution: 3/ Regionally, there are marked inequalities. The northern half is sparsely inhabited. Most of the population is concentrated in the Lake Victoria basin, the Rift Highlands and the coastal belt. On the eastern plateau isolated settlements occupy the most elevated areas, leaving extensive stretches of relatively empty country between them.
- Life expectancy: 1/ 46.9 years male; 51.2 years female (1969).
- Gross national product: 4/ \$US 380 per capita (1979, preliminary); growth rate per capita (real): 2.5 per cent (1970 - 1978).

Employment: 2/

Total labour force: 4,570,000 (1978) including 3,753,000 people in agriculture (79 per cent); the total reported number of employees (all races) in 1978 was 911,600: agriculture and forestry: 243,000; manufacturing: 130,100; community, social and personal services: 325,900. These numbers refer to employment in urban areas and on large farms. Employment in other areas was estimated to be between 300,000 and 500,000.

Industrial and agricultural output: 2/

Agriculture accounted for 40 per cent of GDP in 1977 and over 34 per cent in 1978. Coffee and tea brought in nearly 60 per cent of foreign exchange earnings in 1977. Kenya is one of the few African countries with an important dairy industry. Manufacturing accounted for about 14 per cent of the GDP in 1979.

1/ United Nations Statistical Yearbook, 1979/80.

2/ Europa Yearbook, 1981.

3/ Encyclopedia Britannica, 1974.

4/ World Bank Atlas, 1980.

I. Background, history of environmental concerns, constitutional situation

1. Kenya, after several decades of British colonial rule, became independent on 12 December, 1963. During the colonial period, environmental concerns were reflected to the extent necessary and suitable in the circumstances in land management, water, health, etc..
2. Since independence, environmental concerns have intensified, especially during the preparations for the United Nations Conference on the Human Environment held at Stockholm in June 1972 and thereafter. In particular, the momentum generated at Stockholm has been greatly increased through the catalysis of the location of UNEP in Nairobi and its regular activities in Kenya.
3. Kenya has one of the highest birth rates in the world. The country is predominantly agricultural and has demonstrated a fast rate of economic and industrial development. It also has forestry, wildlife, fisheries and limited mineral resources.
4. Constitutionally, Kenya is a sovereign republic headed by an executive President who appoints the Ministers and is head of the cabinet; Parliament exercises legislative power and there is an independent judiciary.

II. Organization of national environmental administration and policy-making bodies

5. The organization of the Government of Kenya underscores its social, economic and environmental concerns, demonstrated by its determination to feed the population, raise their standard of living, rationally manage natural resources and develop these resources without undue impairment of the environment. A close look at the organization of Government shows that various ministries have a major economic, education, environmental, health and social content, and in order to co-ordinate their policies in the environmental field, the President, in his address to the nation on 20 October 1976, directed all Government departments to co-operate in this regard.
6. At the central government level, co-ordination in environmental matters is presently vested in the National Environment Secretariat (NES) in the Ministry of Environment and Natural Resources. The Secretariat has a number of technical committees which deliberate on various priority subject areas, e. g. natural resources, human settlements, etc. NES gives desired technical support to the diplomatic and political aspects of environmental concerns which are dealt with by relevant diplomatic missions, including the Permanent Mission to UNEP.
7. Besides ministries and departments, statutory bodies are linked with a relevant ministry with which they must consult and to which they are accountable. Thus the Industrial Commercial and Development Corporation (ICDC) is linked to the Ministry of Commerce and Industry, the Kenya Tourist Development Corporation (KTDC) to the Ministry of Tourism and Wildlife, the Agricultural Finance Corporation (AFC) to the Ministry of Agriculture, etc.. In dealing with a matter in which a given corporation has competence, the National Environment Secretariat consults the corporation and from time to time invites it along with the parent ministry to meetings on matters of mutual interest.

8. Bodies having a direct or indirect environmental role include the following:

(a) Government bodies:

- (i) National Science and Technology Council;
- (ii) National Research Council;
- (iii) Tana and Athi Rivers Development Authority;
- (iv) Kenya Ports Authority;
- (v) National Housing Corporation;
- (vi) Kenya Tourist Development Corporation;
- (vii) Industrial Commercial and Development Corporation;
- (viii) Kenya Bureau of Standards;
- (ix) Presidential Permanent Commission on Soil Conservation and Afforestation;
- (x) University of Nairobi;
- (xi) The Lake Basin Development Authority;
- (xii) The Kerio Valley Development Authority.

(b) Non-governmental bodies:

- (i) National Christian Council of Kenya;
- (ii) Freedom from Hunger Council;
- (iii) Council for Human Ecology (Kenya);
- (iv) Men of the Trees;
- (v) Maendeleo Ya Wanawake.

III. Relationship between national, regional and local levels of environmental administration

9. The local authorities, including those of municipalities, are elected (with some nominated members); where elected councils have been prematurely dissolved, commissions are appointed by the Minister of Local Government. Each council has district-wide responsibility. Nairobi City Council, municipalities and urban councils have responsibility in their defined areas. While they have policy-making and executing powers, they maintain close liaison with the Ministry of Local Government and in several respects are instructed by it. Along with local leadership, the Office of the President, through District Commissioners, District Officers and other central government officers at the district and divisional levels participates in local policy-making and execution. Local authorities and municipalities oversee the vast scope of environmental problems. At the very local the institution of chiefs, also under the Office of the President, supported by the Chiefs' Act, is a vital asset in the administration of environmental concerns.

IV. Major acts of general environmental legislation

10. Kenya does not have general umbrella legislation on the protection of the environment. However, there are numerous specific examples of environmental law, among them the following:

(a) Land management:

- (i) Government Lands Act (Cap. 280);
- (ii) Registered Land Act (Cap. 300);

- (iii) Land Control Act (Act No. 34 of 1967);
- (iv) Registration of Titles Act (Cap. 281);
- (v) Agriculture Act (Cap. 318);
- (vi) Forests Act (Cap. 378);
- (vii) Fish Industry Act (Cap. 318);
- (viii) Wildlife Conservation and Management Act (Cap. 376);
- (ix) Water Act (Cap. 372).

(b) Local administration:

Numerous laws dealing with specific aspects, e. g. health (sanitation); building standards, etc., are contained in the Local Government Regulations 1963 (L. N. 256 of 1963);

(c) Town Planning:

Town Planning Act (Cap. 134) (1948);

(d) Coastal Activities:

- (i) Territorial Waters Act (Act No. 2 of 1972);
- (ii) Continental Shelf Act (Cap. 312);
- (iii) Merchant Shipping Act (Act No. 35 of 1967);

11. It may also be noted that Kenya has accepted the following international instruments:

- (a) The 1958 Geneva Conventions on Territorial Sea, Fisheries, Continental Shelf and the High Seas;
- (b) The London Convention on Dumping;
- (c) The 1954 International Convention for the Prevention of Pollution on the Sea by Oil as amended;
- (d) The 1973 Convention for the Prevention of Pollution from Ships.

V. Implementation and enforcement of environmental laws and policies

12. Enforcement of environmental laws: While co-ordination aspects are dealt with by NES, and policy considerations at the cabinet level, there are many institutions or bodies which can initiate enforcement procedures in specific matters or responsibilities as assigned to them by a number of enabling legislations which establish particular regimes for particular problems.

13. Policy implementation: Provincial Administration is an asset in policy implementation since it stretches from the very local level to the province level in this order: Sub-Chief - Chief District Officer, District Commissioner - Provincial Commissioner. Thus when policy is made by the President or the Cabinet, implementation machinery is already available to implement the policy. The Chiefs' Act, which is broad, permits the authorities to enforce policy and punish those who act contrary to efforts in that direction.

VI. Relationship between government, industry, non-governmental organizations and others

14. The Government has increasingly become involved in aspect of national life, whether directly, in legislation stipulating obligations and requirements in a given area, or through specialized statutory bodies, e. g. ICDC. The presence of government is therefore evident in agriculture, in commerce and industry, in marketing, and certainly in regulating such activities as affect national interests. Certain of these activities require licensing, which is a government prerogative. Issuing of licences may also be subject to other requirements, e. g. meeting health standards laid down by law.

15. The Government keeps watch over business, and industrial establishments and through the relevant ministries will call on the owners of such establishments to ensure that appropriate health and safety standards are kept and that the activities undertaken by the establishments do not unduly adversely affect the surrounding environment. In municipalities, the approval mechanism is a first check, the Commissioner of Lands the second check, and the reaction of the public and of non-governmental organizations the third check.

LUXEMBOURG

Area: <u>1/</u>	2,586 sq km
Terrain: <u>2/</u>	Luxembourg is situated between Belgium, France and the Federal Republic of Germany (Rhine-Palatinate). Almost all of the country is drained by branches of the Mosel River, which discharges into the Rhine. The northern third of Luxembourg comprises the heavily wooded Ardennes Mountains, a region of broad vistas and rocky valleys. In contrast, the south has rich pasture-lands and few forests.
Natural resources: <u>4/</u>	Small amounts of iron ore.
Climate: <u>4/</u>	The climate is temperate.
Population: <u>3/</u>	354,000 (mid-1979)
Population density: <u>1/</u>	140 per sq km (1979).
Annual population growth: <u>1/</u>	0.3 per cent (1975-1979).
Population distribution: <u>2/</u>	There has been a continued trend away from the countryside to urban areas.
Life expectancy: <u>1/</u>	67.0 years male; 73.9 years female; (1971-1973)
Gross national product: <u>3/</u>	\$US 12,820 <u>per capita</u> (1979); growth rate <u>per capita</u> (real): 4.1 per cent (1970-1978).
Employment: <u>4/</u>	Economically active population: 128,235 (1970 census) including agriculture, hunting, forestry, fishing: 9,641; mining, quarrying, manufacturing: 43,526; construction: 11,770; trade, restaurant, hotels: 23,561; community, social and personal services: 24,939.

Industrial and agricultural
output: 4/

In recent years industrial output has
decreased. The main industries are iron
and steel.

1/ United Nations Statistical Yearbook, 1979/80.

2/ Encyclopedia Britannica, 1974.

3/ World Bank Atlas, 1980.

4/ Europa Yearbook, 1981.

I. Background, history of environmental concerns, constitutional situation

1. Luxembourg is a constitutional monarchy, the sovereign being a Grand Duke. While the powers of the Grand Duke are strictly limited by the Constitution, the major responsibility for governing the country lies with the Cabinet of Ministers (Government), presided over by the Prime Minister, who is named by the Grand Duke. With the advice of the Grand Duke, the Prime Minister organizes the ministerial departments and names the ministers, several of whom have more than one portfolio. In addition to the ministers, the Grand Duke may designate other members of the Government as secretaries of state having limited attributions, as determined by the Grand Duke.

2. The legislative body in Luxembourg is a unicameral elected body, the Chamber of Deputies. The powers of both the executive and legislative branches of the Government are checked by the Council of State, whose members are named by the Grand Duke acting on the advice of the Cabinet, the Chamber of Deputies, and the Council of State itself. In its legislative capacity, the Council acts as an upper chamber with temporary veto power over the Chamber of Deputies. Also, the Council must be consulted by the Cabinet before a proposal of law is submitted by the Cabinet to the Chamber of Deputies.

II. Organization of national environmental administration and policy-making bodies

3. Environmental protection in Luxembourg is for the most part the responsibility of the Ministry of Environment. Programme areas dealt with by this Ministry include decontamination of air and water, the planning and control of purification stations, control of noise pollution, and destruction of refuse and industrial wastes. Within the Ministry there is a general bureau for water protection (Commissariat Général à la Protection des Eaux).

4. To the extent that other ministries are also involved in different aspects of environmental protection, the Ministry of Environment serves as the interministerial co-ordinator on environmental matters. The Administration of Water and Forests, an organ of the Ministry of the Interior, is concerned with the execution of regulations on the conservation of nature; the authorization of this Administration is required for all construction that may pose dangers to the environment.

The Ministry of Public Works supervises the construction and maintenance of purification stations, collectors and water mains, as well as participating in directing the control of water pollution in navigable waterways. Air and noise pollution regulations with regard to motor vehicles are executed by the Ministry of Transportation and Energy. All of the ministries involved in environmental protection participate in drafting legislation and in the execution of laws and regulations.

5. Among other national bodies, the Higher Council for Nature Conservation, organized by ministerial regulation of 9 December 1971, and the National Committee for the Protection of the Environment, created by ministerial regulation of 29 June 1981, have a strong advisory responsibility in the central Government. They are charged with providing advice on all questions regarding nature and the environment and also with drafting bills for Government action.

III. Relationship between national, regional and local level of environmental administration

6. The commune is the only territorial subdivision endowed with substantial powers. The Communal Council, which represents the commune, makes decisions on everything of purely communal interest (art. 107, para. 3 of the Constitution). Its executive body, the College of the Burgomaster and Aldermen, is responsible for the daily administration of the commune. The burgomaster is particularly concerned with the police.

7. Although the commune enjoys considerable autonomy in administering local affairs such as elementary education, health, etc., the national Government can exercise control over the commune to prevent it from acting against the national interest. This control is exercised by three district commissioners, appointed by the Grand Duke and representing the Ministry of the Interior as intermediaries between local and national Government.

8. In the interests of environmental protection, communal governments share powers with the national Government in granting required authorizations for the construction of certain establishments. Residents of a commune affected by a new construction may express their opinions on the matter prior to the communal council's decision regarding authorization.

9. In areas where national legislation is inadequate or nonexistent, communal governments may formulate their own regulations.

IV. Major acts of general environmental legislation

10. Luxembourg has a comprehensive code of environmental protection entitled: "Gestion et protection de l'environnement" (September 1981). The law of 16 April 1979 concerning dangerous, unhealthy or inconvenient installations covers environmental protection in that all plants, works, establishments, etc. need a licence, issued by the Minister of Labour after consultation with the Minister of the Environment; which sets conditions for the operation of the establishment in such a way as to protect public and occupational safety, and health as well as the environment.

11. Another general law on environmental protection was the Law regarding Conservation of Nature and Natural Resources of 29 July 1965, which stated that authorization from the Administration of Waters And Forests was required for any construction that may endanger the environment. In addition, the law prohibited depositing wastes of any kind on public roads and required that all dumps from industries, farming or other sources be hidden from view and emit no odour, and included provisions for the protection of flora and fauna. The 1965 Nature Protection Law is now incorporated in the Law for the Protection of Natural Environment of 27 July 1978.

12. The framework law on general land management of 20 March 1974 stipulates that decontamination of the environment is one of the objectives in land management, and states that the implementation of this requirement must include the removal and treatment of solid and liquid wastes.

13. In addition to these general laws, Luxembourg has a number of more sectoral laws and regulations, for instance the Law on the Cleaning, Maintenance and Improvement of Watercourses of 16 May 1929. The Law prohibits throwing, discharging or letting flow, directly or indirectly, into water-courses any material likely to endanger the free flow of water and its cleanliness, consumption by animals, or domestic, agricultural and industrial use. This Law is now being expanded into a general law on water pollution control.

14. Concerning waste management, the framework Waste Disposal Law of 26 June 1980 and its regulations set down basic principles designed to reduce environmental degradation arising from waste disposal, and encourage recycling. Administration of the Law is assigned to the Ministry of the Environment.

15. In the areas of pesticides and radiation control, Luxembourg has rather comprehensive legislation. The basic pesticides law is that of 20 February 1968 on the control of pesticides and phytopharmaceutical products. By virtue of this law, the Grand Duke is empowered to formulate regulations concerning the manufacture, possession, importation, sale, purchase, exchange, and utilization of pesticides and phytopharmaceutical products. The law prohibits the possession, manufacture, sale, etc. of any pesticides or phytopharmaceuticals which have not been approved by the Government.

16. The basic law on radiation control in Luxembourg is the Law for the Protection of the Population against Dangers Resulting from Ionizing Radiation of 25 March 1963. The Law establishes a general framework for radiation control, empowering the Minister of Public Health to order measures to be imposed on producers, transporters, sellers, holders, or users of apparatus or substances capable of emitting ionizing radiation when the health of the population becomes endangered.

17. The Air Pollution Control Law of 21 June 1976, with its regulations, provides authority to control the various sources of pollution from industrial, agricultural, domestic and mobile sources. The framework Noise Control Law of 21 June 1976 has been implemented by grand-ducal regulations. Administration of the Air Pollution and Noise Control Laws is the responsibility of the Ministry of the Environment.

V. Implementation and enforcement of environmental laws and policies

18. Generally, immediate enforcement of environmental laws and regulations is executed by agents of various governmental departments. The Administration of the Environment, created by a law of 27 November 1980, is responsible for the implementation of the laws and regulations concerning the human environment. However, under the general terms of article 107 of the Constitution, the communal authorities may take all legal instruments required to make up for deficiencies in private initiative when the exclusive interest of the local community is at stake. The communes also have special powers concerning the safeguarding of public health, enabling them to enforce certain sanitary measures by means of communal decrees.

19. The court system in Luxembourg consists of a hierarchy of three levels. The lowest courts, those of the justices of peace (juges de la paix), have jurisdiction over breaches of police regulations and minor civil offences. Judging more serious offences and hearing appeals from the juges de la paix are two tribunaux d'arrondissements. Finally, the highest court of appeal is the Cour superieure. This supreme court periodically appoints a cour d'assises of six judges to try major cases. The Grand Duke may annul or reduce penalties pronounced by judges.

20. Law enforcement is carried out in Luxembourg by a central police force, with commissioners in each of three police districts, as well as local commissioners in the communes.

VI. Relationship between government, industry, non-governmental organizations and others

21. In accordance with a 1929 law, the cost of the cleaning up watercourses is shared by the national Government, local governments and private individuals or enterprises using or polluting the water. However, as a member of the European Communities, Luxembourg is likely to adopt the procedures of the "polluter pays" principle formulated by the Communities.

THAILAND

Area: <u>1/</u>	514,000 sq km
Terrain: <u>4/</u>	Three main geological regions cover most of Thailand's land area; the folded mountains in the north, the Khorat uplift in the east and the Chao Phraya depression which comprises much of the central plains.
Natural resources: <u>4/</u>	Forestry, agriculture and fishery. Minerals include tin, iron ore, gypsum, fluorite, tungsten, limestone and marble, the most important being tin.
Climate: <u>2/</u>	Tropical and humid with an average temperature ranging between 24° and 30 C. At the beginning of May warm humid air masses flow north-eastwards over the region from the Indian Ocean, depositing great quantities of rain that reach a maximum in September. Between October and February wind currents bring cold, dry air masses.
Population: <u>3/</u>	44,517,000 (mid-1978).
Population density: <u>1/</u>	90 per sq km (1979).
Annual population growth: <u>1/</u>	2,5 per cent (1975-1979).
Population distribution: <u>4/</u>	The municipality of Bangkok-Thonburi alone had a population of about 3,200,000 persons in 1970. Population centres in the north and north-east generally follow the rivers. The southern population is concentrated along the eastern coast. Phuket Island is the most densely populated province in the south. The south-east is also another heavily populated area.
Life expectancy: <u>1/</u>	57.6 years male; 63.6 years female; (1974-1975).
Gross national product: <u>3/</u>	\$US 590 (1979, preliminary) <u>per capita</u> ; growth rate <u>per capita</u> (real): 4,5 per cent (1970-78).

Employment: 2/

Economically active population:
16,693,900 (1978, persons aged 11 and
over); unemployed: 189,900; agriculture,
fishing, forestry and hunting:
10,475,500; manufacturing: 1,749,100;
commerce: 1,730,900; services:
1,807,500; transport, storage,
communications: 429,600; construction:
403,600.

**Industrial and agricultural
output: 2/**

Agriculture accounted for 25 per cent of
GDP in 1979. The principal crop is rice,
of which Thailand is one of the world's
leading exporters. The manufacturing
sector accounted for about 19 per cent
of GDP in 1979. The principal industries
are textiles, sugar and petroleum
refining.

1/ United Nations Statistical Yearbook, 1979/80.

2/ Europa Yearbook, 1981.

3/ World Bank Atlas, 1980.

4/ Encyclopedia Britannica, 1974.

I. Background history of environmental concern, constitutional situation

1. Since the beginning of the 1970s, there has been growing concern over the degradation of the environment, leading to the passage of the Promotion and Enhancement of Environmental Quality Act of 1975 by which a National Environment Board (NEB) was created. In the Fourth Five-Year National Development Plan (1977-1981), the Government had a definite policy of improving the management of basic resources, rehabilitating environmental conditions, with particular emphasis on the allocation and rehabilitation of land, forest, water and marine resources for optimum economic efficiency, and introducing measures to check and limit the deterioration of these resources.

2. Thailand is a constitutional monarchy. Legislative power is vested in the Central Assembly; judicial power is exercised by the courts of first instance, the court of appeal, and the supreme court.

II. Organization of national environmental administration and policy making bodies

3. At the national level, there is a National Environment Committee chaired by a Deputy Prime Minister. The members of the Committee can be divided into three groups: exofficio members from various governmental ministries directly concerned with the environment, prominent environmentalists, and those from the private sector. The Committee is served by the National Environment Board (NEB). NEB's main role consists in advising the Government on environmental issues, in policy formulation and in coordination of environmental activities among governmental departments. In addition, NEB is responsible for setting up standards and for submitting an environmental impact evaluation. It has a technical staff of about 100. Although NEB has no direct authority over other Government departments, it relies on collaborative efforts through its various inter-departmental committees on different aspects of the environment, such as water, air and land use.

III. Relationship between national, regional and local levels of environmental administration

4. Thailand is divided into 72 provinces, each under the control of a governor who is appointed by the central Government. The provinces are subdivided into 575 districts and 98 sub-districts, 5,633 communes and 50,810 villages. The local government has limited legislative and executive powers.

5. The governmental system in Thailand is highly centralized. Most Government departments have their headquarter in Bangkok. Technical guidance and policy are thus formulated and approved in the capital city. However, each department depends on its various extension services and provincial offices where input and feedback reflect rural situations.

IV. Major acts of general environmental legislation

6. Aside from the Promotion and Enhancement of National Environmental Quality Act of 1975, which is the country's principal enactment creating NEB, there are quite a few statutory legislations on environment:

- The Public Health Act, 1941 empowers local authorities to regulate activities which have a potential impact on public health and welfare;
- The Factories Act, 1969 and the Factories Act (No. 2) 1975 empower the Ministry of Industry to consider the discharge of pollutants in the implementation of its factory licensing function;
- The City Planning Act, 1975 establishes an interagency City Planning Committee responsible for comprehensive planning of cities and other urban areas;
- The Forest Act, 1941 and the National Forest Reserves Act, 1964 are the main statutes for forest conservation management;
- The Wild Animals Reservation and Protection Act, 1960 protects wildlife habitat and regulates markets for wildlife and wildlife products;
- The Penal Code, 1908 and the Penal Code Amended, 1956 specify penalties for environmental offences including water pollution and noise pollution;
- The Act for Cleanliness and Orderliness of the Country, 1960 contains miscellaneous provisions on environmental offences, including authority for removal of dilapidated buildings;
- The Social Justice Land Reform Act, 1953 and the Land for Livelihood Act, 1968 contain provisions for stabilizing landless/nomadic populations and thereby reducing forest destruction;
- The Poisonous Substances Act, 1967 regulates the importation, manufacture, sale, storage and price of agricultural chemicals, with some attention to health and safety with respect to pesticides;
- The Minerals Act, 1967 authorizes the Royal Thai Government to attach conditions to leases and licences for mining, including pollution and environmental controls (but without any clear statement of policy on these matters).

V. Implementation and enforcement of environmental laws and policies

7. The implementation and enforcement of the above legislation are under the jurisdiction of implementing agencies, such as the Forestry Department, the Fisheries Department, the Industry Works Department etc. In some cases, direct regulation through the police is employed, for example as regards the protection of national forest reserves. In other cases, the Factories Act has been invoked by the Industry Works Department to close down plants which were pollution sources. However, the normal approach in the country is through consultation with industries, which usually results in co-operative action to safeguard the environment.

IV. Relationship between government, industry, non-governmental organizations and others

8. In industry and business there is growing concern regarding the local situation of the environment. In fact, the oil industry has already formed a Working Group to Safeguard against Marine Pollution from Oil Spills, while others have supported governmental programmes in public education and the promotion of public awareness of environmental issues. Technical research and investigation have also received financial support from private sectors.

9. Throughout the years, there have been some NGO groups, but their activities are intermittent, depending mainly on the motivation and the availability of their members. The NGO activities are normally centred in urban areas and in cities.

VII. Citizens' participation

10. Except in Bangkok, where public concerns over environmental issues are often reflected through the news media, the role of citizens is limited. In rural areas, activities involving public participation in environmental programmes have yet to be fully promoted.

SINGAPORE

Area: <u>5/</u>	617.8 sq km
Terrain: <u>2/</u>	The Republic of Singapore consists of Singapore Island and 50 other islets. Nearly twothirds of the main island is less than 15 m in altitude. To the west and south are lower scarps with marked north-west-southwest trends. The eastern part of the island is a low plateau cut by erosion into an intricate pattern of hills and valleys.
Natural resources: <u>2/</u>	Singapore has few resources, apart from small amounts of brick clays, rock aggregates, and building sand.
Climate: <u>2/</u>	Singapore, being in an equatorial region, experiences uniformly high temperatures throughout the year, with temperatures varying from about 27°C in June to 25°C in January. The annual rainfall averages about 2,500 mm.
Population: <u>5/</u>	2,413,945 (1980 census).
Population density: <u>5/</u>	2,907 per sq km (1980).
Annual population growth: <u>1/</u>	1.2 per cent (1975-1979).
Population distribution: <u>2/</u>	Singapore is an urban State. Urbanization has reduced differences between city and country. Singapore city had about 1,250,000 inhabitants (1970 census).
Life expectancy: <u>1/</u>	67.3 years male; 75.0 years female;(1975-76)
Gross national product: <u>3/ 5/</u>	\$ US 3,820 <u>per capita</u> (1979, preliminary); growth rate <u>per capita</u> (real): 6.6 per cent (1970-1978). <u>3/</u> \$ US 3,424 <u>per capita</u> (1980, preliminary); growth rate <u>per capita</u> (real): 11.7 per cent (1979-1980). <u>5/</u>
Employment: <u>5/</u>	Total labour force: 1,068,932 (June 1980); comprising manufacturing: 312,641; services: 222,783; commerce: 244,696; transport, storage, communications: 122, 420.

Industrial and agricultural
output: 4/ 5/

The principal industries are petroleum refining, shipbuilding and repairing, textiles, electronics and sawmilling. Singapore has the third largest refining complex in the world. Oil products are the main export. In 1980 petroleum products contributed more than 28.5 per cent to total export earnings. Manufacturing accounted for 25 per cent of total GDP growth in 1980. The second largest source of growth was the finance and business sector which expanded by 17 per cent, contributing 23 per cent of the economic growth.

- 1/ United Nations Statistical Yearbook, 1979/80.
- 2/ Encyclopedia Britannica, 1974.
- 3/ World Bank Atlas, 1980.
- 4/ Europa Yearbook, 1981.
- 5/ Singapore Facts and Pictures, 1981.

I. Background, history of environmental concerns, constitutional situation

1. The Republic of Singapore is a city state; it is the second most densely populated amongst the South East Asia countries, Hong Kong ranking first. Among the ASEAN countries, Singapore has the highest per capita GNP.
2. With almost no natural resources and hinterland, Singapore's economy is primarily dependent on its traditional entrepôt trade, its recently established manufacturing industry, tourism and the service sectors.
3. The Constitution of Singapore does not set forth any environmental policy. However, environmental considerations are taken into account in broad national planning. Since Singapore is a small State with almost no natural resources, the main environmental concern is to safeguard against pollution.
4. Singapore is a parliamentary republic headed by a President, with legislative power exercised by a unicameral Parliament, and the executive power in the Cabinet, headed by the Prime Minister. The Cabinet is appointed by the President and responsible to Parliament.

II. Organization of national environmental administration and policy-making bodies

5. Singapore has a relatively compact bureaucratic structure. Environmental responsibilities are principally handled by:
 - (a) The Ministry of the Environment;
 - (b) The Anti-Pollution Unit in the Prime Minister's Office;
 - (c) The Housing and Development Board for public housing programmes;
 - (d) The Public Works Department, Ministry of National Development, for roads maintenance, traffic regulation and control; and
 - (e) The Primary Production Department, Ministry of National Development, for animal husbandry, agriculture and the control of trade in wildlife.

(a) Ministry of the Environment

6. The Ministry of the Environment, formed in September 1972, is the central agency entrusted with enforcement power, policy review and coordinating responsibility. It consists of two substantive divisions, the Environmental Engineering Division which is responsible for water pollution control, sewerage and drainage systems and solid waste disposal; and the Division of Environmental Public Health which deals with the general public health and sanitation of the Republic.

7. The Ministry is also charged with the task of reviewing and recommending improvements in environmental legislation, when and where necessary. Ideas for new legislation, therefore, originate from the Ministry of Environment, before the Bills are drafted with the assistance of the law officers. The bills are then passed by the Parliament and assented to by the President.

(b) The Anti-Pollution Unit, Prime Minister's Office

8. The Anti-Pollution Unit concentrates its work mainly on air pollution control. The policy of the Singapore government is to control pollution at its source. Under the Clean Air Act, the Anti-Pollution Unit has carried out air monitoring programmes on industrial premises. It also assists other relevant agencies in evaluating applications for industrial sites, with special emphasis on prevention of air pollution.

(c) Housing and Development Board

9. Singapore has met with great success in its public housing programme. In the 1971-1975 period, it constructed a total number of 113,819 units of flats and shops. At present, more than 50 per cent of the total population in Singapore are housed in government-constructed flats.

(d) The Public Works Department, Ministry of National Development

10. The Public Works Department is the agency responsible for traffic regulation and control. It has successfully implemented an area-licensing scheme which covers an area of 620 hectares of the main commercial area of Singapore. Car parks are provided at the fringe of the restricted area, and disincentive fees are levied against private transportation within the restricted zone from 7.30 a. m. to 10.15 a. m. The number of motor vehicles entering the zone was reduced by 45 per cent as a result of this scheme. The programme does not require intensive investment, and is easy to administer, needing only 35 policemen at entry points.

(e) Primary Production Department, Ministry of National Development

11. The Primary Production Department deals with animal husbandry, rural development and agriculture. The Department is concerned with the problem of disposal of residues from animal husbandry, especially from piggeries. Pig and poultry are the two main domestic animals, with about 800,000 pigs and 12 - 13 million poultry at any one time. There are as many as 1,000 pigs on one acre of land. With limited land space, the treatment of piggery residue has become a problem.

12. The other area of responsibility of the Primary Production Department is the regulation of trade in endangered species. Singapore has not joined the Convention on International Trade in Endangered Species of Wild Fauna and Flora, but it is doing its utmost to control illegal trade.

13. The Registry of Vehicles which is under the Ministry of Communications is responsible for the control of excessive emissions from vehicles. Enforcement is carried out under the Road Traffic Act by the Registry with the assistance of the Traffic Police. Under the Road Traffic Act, all vehicles are required to undergo roadworthiness inspections.

III. Relationship between national, regional and local levels of environmental administration

14. Not applicable, Singapore being a city State with a sole central Government.

IV. Major acts of general environmental legislation

15. Singapore does not have a comprehensive law for the protection of the environment. However, for the purpose of environmental preservation and management, a full array of acts, rules and regulations have been promulgated by the Singapore Government. The main ones are:

- The Planning Act (1958) which provides for comprehensive landuse planning. The Act requires that the Singapore Statutory Master Plan, which is a land zoning plan, be reviewed at least once every five years. It serves as a guide for policy-makers, planners and developers;

- The Water Pollution Control and Drainage Act (1975) and the Trade Effluent Regulations (1976) which require industries to treat their trade effluents to the stipulated standards prior to their discharge to sewers or water courses;

- The Clean Air Act (1971) and the Clean Air (Standards) Regulations (1972) which were introduced for the control of air pollution caused by industrial discharge of pollutant into the atmosphere;

- The Environment Public Health (Amendment) Act, 1974 which contains provisions for the sanitary control of public buildings and facilities, for the abatement of any source of public nuisance. It also prescribes regulations for solid waste disposal;

- The Prevention of Pollution of the Sea (Amendment) Act 1976 and the Civil Liability (Oil Pollution) Act (1973) which seek to implement the provisions of the International Convention for the Prevention of the Sea by Oil, 1954. The Act imposes strict liability for oil pollution damage resulting from the discharge or escape of any oil on the territory of Singapore;

- The Radiation Protection Act (1973) and Regulations (1974) which establish provisions governing handling, utilization and disposal of radioactive materials;

- The Parks and Trees Act, 1975, which provides rules to control activities in public parks, and the Nature Reserves Act, which protects water catchment areas and ensures the preservation of flora and fauna on nature reserves;

- The Road Traffic Act, 1970, which sets standards for the control of excessive emissions from vehicles.

V. Implementation and enforcement of environmental laws and policies

16. The Ministry of the Environment is the Government's main agency responsible for the implementation and enforcement of environmental laws and policies.

17. All enacted legislative provisions, including those concerning the environment, are enforced with proper punitive measures for violations. There are six government lawyers who deal with issues relating to environmental management. All are attached to the Attorney-General's Chambers, except for one who is permanently posted in the Ministry of the Environment.

18. Charged with the over-all responsibility of implementing and enforcing Singapore's environmental policies and laws, the Ministry of the Environment effectively carries out its functions by sharing this responsibility with other relevant agencies and co-ordinating the various activities involved. Annex II shows the implementing agencies with their specific areas of concern and the respective legislative provisions they are responsible for enforcing.

VI. Relationship between government, industry, non-governmental organizations and others

19. There is strong co-operation between Government and industry in pollution abatement. Rules and regulations set by the Government are followed by industry. Normally, industry looks to the Government for guidelines on technical matters. Regarding public participation, the activities of non-governmental organizations are rather marginal.

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Area: <u>1/</u>	244,046 sq km
Terrain: <u>2/</u>	The United Kingdom comprises Great Britain (an island consisting of England, Scotland and Wales) and Northern Ireland, together with numerous small islands. These form an irregular archipelago. Altitudes, compared with European equivalents, are low, with the highest summit, Ben Nevis, only 1,342 metres above sea level.
Natural resources:	Oil and natural gas. Some minerals, the most important of which is coal. Also, arable land and fishing.
Climate: <u>2/</u>	Temperate and variable with temperatures ranging from 0 ° C to heatwaves of more than 32 ° C. Rainfall can be as much as 5680 mm per annum in the highlands and East Anglia can expect as little as 508 mm.
Population: <u>3/</u>	55,944,900 (mid-1980) <u>3/</u> .
Population density: <u>3/</u>	229 per sq. km (1977) <u>1/</u> (1980) <u>3/</u> .
Annual population growth: <u>3/</u>	0,5 per cent (1971 - 1980).
Population distribution: <u>2/</u>	One of the most urban of countries since the industrial revolution. Of every 10 people in the United Kingdom almost 8 now live in towns, 4 of them in one of the 8 major urban agglomerations.
Life expectancy: <u>3/</u>	70,0 years, (male); 76,1 years, (female) (1978).
Gross national product: <u>4/</u>	US \$ 6.551 per capita (1981, preliminary).
Employment: <u>4/</u>	Total working population: 26,255,000 (1981). Total engaged in civil employment: 22,921 million, including agriculture, forests and fisheries 371,000; mining and quarrying 332,000; metal manufacture 604,000; national and local government service: 1,579 million; transport and communications: 1,440 million; construction: 1,132 million;

distributive trades: 2,635 million, insurance, banking business: 1,233 million professional and scientific services: 3,532 million.

Industrial and agricultural output: 4/ 5/

Manufacturing employs 6,038 million people, (1981 provisional), i. e. 23 per cent of the total labour force. It contributes about 24 per cent of the total GNP. Agriculture still supplies over half the nation's food requirements, despite land scarcity, and accounts for nearly 2.2 per cent of the total GNP. Only about 1.4 per cent of the total population is engaged in agriculture owing to an advanced degree of mechanization and a widespread use of intensive farming techniques.

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- 1/ United Nations Statistical Yearbook, 1979/80.
 - 2/ Encyclopedia Britannica, 1974.
 - 3/ Office of Population Censuses and Surveys (London).
 - 4/ Central Statistical Office (London).
 - 5/ Department of Employment (London).

I. Background, history of environmental concerns, constitutional situation

1. Britain was the cradle of modern industry. Because the industrial revolution began in Britain during the eighteenth century, the country has experienced longer than any other country of the world the environmental effects of industrialization. Similarly, the United Kingdom was one of the first countries to respond to the environmental challenges connected with rapid and often uncontrolled industrialization.

2. The United Kingdom's involvement in the environment has three intertwined strands: land use, resource management and pollution control. Land-use planning was first introduced in 1919 and a comprehensive system, involving the making of plans and control of development throughout in 1947. Resource management is partly private, e. g. agriculture, some forestry, some minerals, and partly organized by local authorities or by the State, e. g. energy, most forestry and water. Pollution control has a long history but comprehensive pollution control policies and legislation have only emerged in the last decade.

II. Organization of national environmental administration and policy making bodies

3. In November 1970, The United Kingdom became the first country in the world to establish a Department of the Environment (DOE). The creation of DOE was a recognition of the close links between land use planning, transport and housing; between housing and the construction industry; and between all these and environmental conservation. Before November 1970 various liaison arrangements for policy formulation and the management of expenditure programmes (often very large) already existed between the three departments most concerned in these fields - the Ministry of Transport, the Ministry of Housing and Local Government, and the Ministry of Public Buildings and Works. Their amalgamation in the Department of the Environment was designed to achieve more fully integrated working, under a single Secretary of State. Recently the Department of Transport has been recreated as a separate Department, but DOE retains central government responsibility for many aspects of environmental policy, such as housing, building codes, new towns, management of Government and crown property including historic monuments, land-use planning, countryside protection, water, sewerage and waste disposal and liaison with local government (though many of these functions are discharged by the Scottish and Welsh offices in their respective countries).

4. In determining pollution policy, DOE is advised by the standing Royal Commission on Environmental Pollution. Other official bodies which work closely with DOE in the pollution and other environmental fields are: The National Water Council, which advises on national water policy, the Noise Advisory Council, the Waste Management Advisory Council, the Standing Committee on Energy and the Environment and the Radioactive Waste Management Advisory Committee.

5. Other Government departments have important environmental responsibilities. The Ministry of Agriculture, Fisheries and Food is responsible for farming and fishing, the control of pesticides used on land, the disposal of farm wastes and monitoring food contaminants; the Forestry Commission is the government body charged with management of state forests and forestry policy generally. The Departments of Trade, Industry, Education and Science, Employment, Energy, Health and Social Security, and Transport all work closely with DOE in relevant areas, i. e. industrial pollution, offshore pollution, the working environment, energy and the environment, environmental education and university research, environmental health, and transport and the environment. Co-ordination of United Kingdom pollution policy is DOE's task.

6. Predominantly advisory bodies dealing with other aspects of environmental policy - and for which DOE is the "parent" Department - include the Countryside Commission (countryside conservation, including national parks), the Nature Conservancy Council (nature conservation, including management of nature reserves), and the Development Commission (rural development).

III. Relationship between the national, regional and local levels of environmental administration

7. Most of DOE's functions, as well as some duties of other departments, for example, those of the Department of Transport, are undertaken, within their respective territories, by the Scottish and Welsh Offices. Furthermore, both countries, and Scotland in particular, have a number of bodies which advise on aspects of environmental policy, e.g. the Scottish Countryside Commission, the Highland and Islands Development Board and the Welsh National Water Council.

8. The Department of the Environment (NI), under the Secretary of State for Northern Ireland, has broadly the same responsibilities in the environmental protection field as DOE has in Britain. The protection of scenic beauty, scientific and nature interest, and wildlife is fostered under the Amenity Lands Act (NI) 1965 and the Wild Birds Protection Acts (NI) of 1931 and 1968 by the Department of Housing, Local Government and Planning which is advised by the Ulster Countryside Committee, the Nature Reserves Committee, the Wild Bird Advisory Committee and the Historic Monuments Council.

9. In general, the Department of the Environment does not have direct responsibility for the operation of pollution controls - broadly speaking, this rests with local authorities and regional water authorities. The Department's concern is with overall strategy, and with setting the framework within which these authorities operate. Most local government activities are carried out at two elected levels: counties which are responsible for broad strategy, and smaller districts, which are responsible for local aspects of environmental policies. (Environmental administration by local government differs slightly between England, Scotland and Wales, and the names of administering bodies are not identical). For example, in the area of physical planning, the counties prepare structure plans as a broad guide to intended patterns of development, and the districts prepare more detailed local plans and operate development control and enforcement procedures to secure compliance with plans. Moreover, the district authorities are generally responsible for enforcing pollution controls.

IV Major acts of general environmental legislation

10. As a consequence of its long history of environmental protection and management, the United Kingdom has a large number of individual pieces of legislation covering various aspects of environmental protection. However, legislation in the four fields of air, water, noise and waste has now been largely consolidated in a single statute, the Control of Pollution Act, 1974.

V. Implementation and enforcement of environmental laws and policies

11. Generally, British preference in relation to enforcement of environmental laws is to seek co-operation rather than coercion. For this reason, the Government attaches considerable importance to the advisory and persuasive role undertaken by, for example, the Alkali and Clean Air Inspectorate, which gives emphasis to securing co-operation of industry in controlling air pollution when it enforces standard. Similarly, the Regional Water Authorities, whose responsibility it is to control water pollution, endeavour to persuade industry and commerce to adopt good standards of emission control before they resort to taking corrective legal action.

12. Land-use planning is one mechanism which is widely used to secure good standards of environmental protection. Though planning control is operated by local government under subordinate legislation, there is access to the courts should enforcement procedures fail. Thus the nation-wide system of controlling and guiding development has the full backing of law.

13. In the final analysis, of course, there is always the sanction of judicial proceedings to achieve enforcement of the United Kingdom's environmental laws. These can, according to the circumstances, be of a civil or a criminal character. Civil liability proceedings, insofar as the environment is concerned, occur under four separate heads of the common law of torts (trespass on land, nuisance, negligence and the so-called rule in the case Rylands v. Fletcher) or under special statutory provisions. For the most part, penal proceedings are reserved for reinforcing the application of administrative measures.

VI. Relationship between Government, industry, non-governmental organizations and others

14. Generally speaking, the relationship between Government and industry in the environmental sector is constructive. There is, for example, frequent contact between government and local government inspectors (for example, those of the Alkali and Clean Air Inspectorate), and industry, through attendance at conferences, through informal meetings and so on. As a result, many industrialists are already convinced of their own responsibilities to limit the emission of pollutants. Indeed, upon the urging of the alkali inspectors, many industries have appointed their own environmental control officers. These company officers have the duty of ensuring that regulations are being met and of acting as a public information conduit.

15. Environmental policy in the United Kingdom is much influenced by the efforts of environmental pressure groups. Some of these are national in their outlook, active in promoting environmental concerns generally, e.g. the Conservation Society or Friends of the Earth (UK), or in safeguarding a particular environmental resource e.g. the Council for the Protection of Rural England. Others are essentially local amenity groups established to protect or improve environmental quality in a particular town or even a village. One especially important institution is the National Trust, which acquires and manages property, fine coastline or countryside or historic houses, for public use, and is helped to do this through certain tax and other privileges.

