



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

November 14, 1975

MEMORANDUM

TO: EPA Staff

FROM: Division of Visitors and Information Exchange  
Office of International Activities

SUBJECT: Attached Report on Japan

Attached is a report on Japan, first in a series of background country papers for EPA staff involved in international activities. Other reports which will be available soon include:

ASIA

Australia

EUROPE

Austria	Italy
Belgium	Luxemburg
Denmark	Netherlands
France	Spain
Germany (Federal Republic)	Sweden
Great Britain	Switzerland
Ireland	

NORTH AMERICA

Canada

The country profiles, together with our monthly bulletin -- "Summaries of Foreign Government Environmental Reports", are to inform EPA staff about national environmental efforts abroad. Suggestions on improving the format or contents of the reports are welcome. Please call Dolores Gregory (202-755-0560).

Attachment

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Office of International Activities  
Environmental Protection Agency  
November, 1975

## PREFACE

This is a brief report on the organization and management of environmental activities on the national level in Japan. Similar reports on other countries will be available soon. These reports, which are background papers for EPA staff involved in international activities, are not for distribution outside the Agency.

Emphasis is on policy and regulatory functions of national environmental agencies. Research and development, often under the auspices of other departments, for example, Ministry of Science and Technology, are not covered in these reports.

Source documents for the reports, received under the International Documents Exchange, are available in the EPA Headquarters Library. English summaries of the foreign documents are published in the monthly bulletin "Summaries of Foreign Government Environmental Reports."

Office of International Activities  
November, 1975

## TABLE OF CONTENTS

	<u>Page</u>
I. National Organization for Environmental Control	1
II. Environmental Laws	6
III. Standards	13
IV. Enforcement Procedures	17
V. Interrelationships Between Government and Industry	21
VI. Case Histories	25
Reference Notes	27
Bibliography	29

# E N V I R O N M E N T A L   C O N T R O L   I N   J A P A N

## 1. National Organization for Environmental Control

### government structure

Japan is a constitutional democracy, based on the constitution of 1947. Although the Emperor still performs ceremonial functions, such as promulgating laws and treaties and convening the legislature, executive power is vested in the Cabinet, headed by the Prime Minister and including other Ministers of State, all of whom must be civilians. The Cabinet, in the exercise of executive power, is collectively responsible to the Diet.

The National Diet of Japan is the highest organ of state power and the sole law-making body of the State. It consists of two Houses, namely the House of Representatives (lower House) and the House of Councillors (upper House), both consisting of elected members, representing all of the people.

The Prime Minister is designated from among the members of the Diet by resolution of the Diet. He, in turn, appoints the Ministers of State, the majority of whom must be chosen from among the members of the Diet. Directly subordinate to the Prime Minister is the Office of the Prime Minister which serves as a coordinating body, administering various commissions and agencies, including the Environment Agency.

There is a hierarchy of courts, headed by the Supreme Court, which comprises the judicial branch of the government. The courts act independently of the executive and legislative bodies.

### national environmental organization

Environmental protection in Japan is administered by the Environment Agency. Founded on July 1, 1971,<sup>1\*</sup> this extraministerial agency is directly under

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\*All reference notes will be found beginning on page 27.

the Office of the Prime Minister and headed by a Director General, who is the Minister of State for Environmental Affairs. The agency developed from the Headquarters for Countermeasures for Environmental Pollution, which was established in July 1970 and headed by the Prime Minister. Prior to July 1970, environmental protection responsibilities had been distributed among various ministries and agencies.

#### structure and functions

The Environment Agency is composed of the Minister's Secretariat, bureaus for planning and coordination, water quality, air quality, nature conservation, and the Environmental Health Department,<sup>2</sup> all directly subordinate to the Director General and his Parliamentary and Administrative Vice Ministers. (See organizational chart, page 3a.) The Minister's Secretariat is responsible for personnel administration, accounting, public information, and matters regarding international cooperation in environmental protection.

Among the duties of the Planning and Coordination Bureau are the planning and promotion of basic environmental protection policies and the coordination of environmental protection functions performed by other agencies. The Bureau's Research Coordination Division supervises the distribution of funds for environmental programs to related ministries and agencies.

Water pollution control administration is exercised by the Water Quality Bureau which is charged with the enforcement of water quality standards and the treatment of industrial and domestic wastes. The Planning Division of this bureau sets standards for methods of waste discharge and the treatment of sludge in sewers.

The Air Quality Bureau establishes environmental quality standards and enforces laws regulating air, noise, and offensive odor pollution. Standards regarding emission of pollutants into the air and the proper use of fuels are set

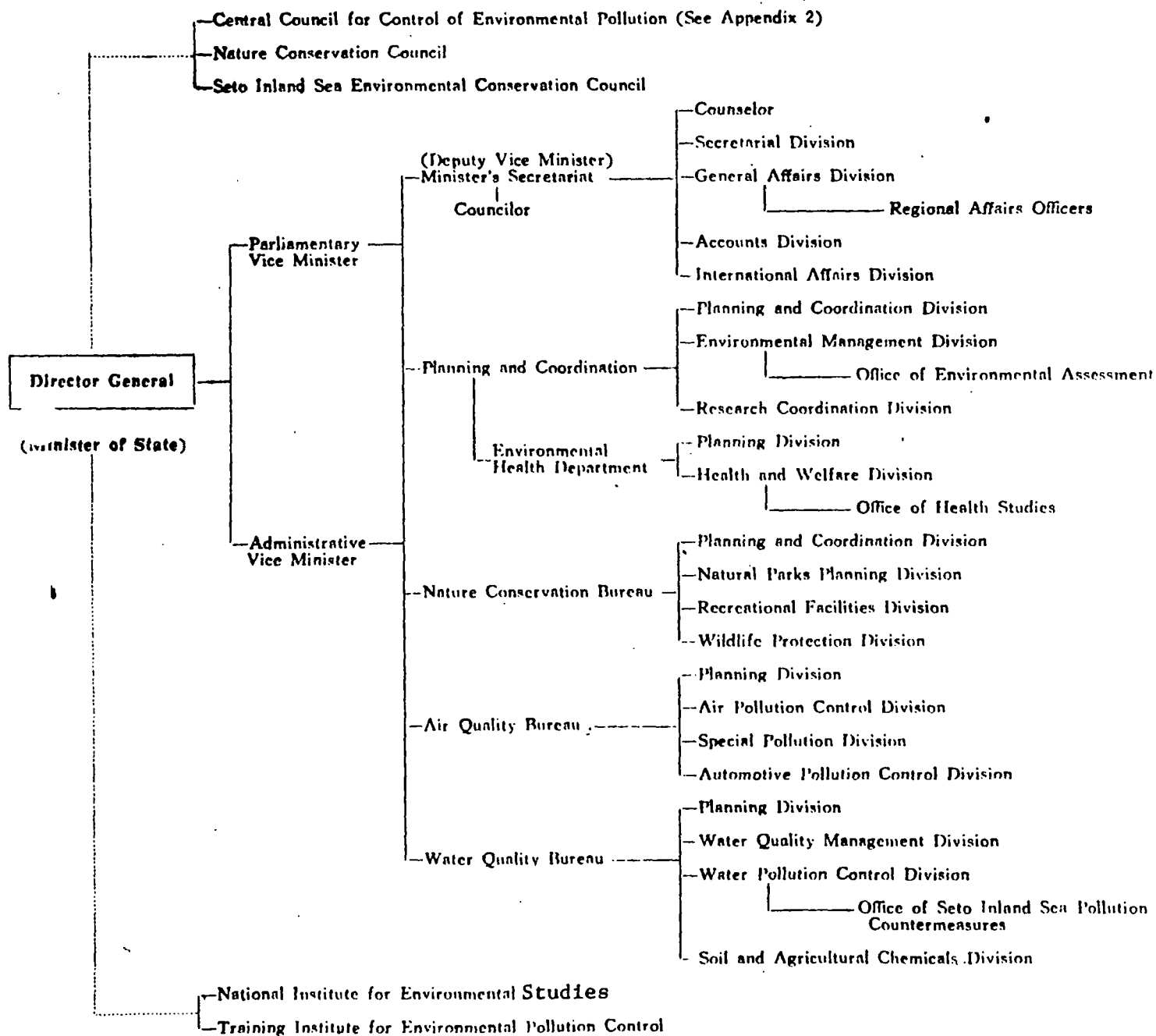
by the Air Pollution Control Division. The Bureau also contains a Noise and Odor Control Division and an Automotive Pollution Control Division.

The functions of the Environmental Health Department include the promotion and coordination of scientific study on pollution-caused health damage and the enforcement of the Pollution-Related Health Damage Compensation Law. The Department contains a Planning Division, which supervises the extra-departmental Pollution-Related Health Damage Compensation Association and a Health and Welfare Division, which coordinates compensation payments to pollution victims and scientific research on the causes of health damage from pollution.

The responsibilities of the Nature Conservation Bureau include the planning and promoting of policies relative to the conservation of nature and the coordination of work in this area by other agencies.

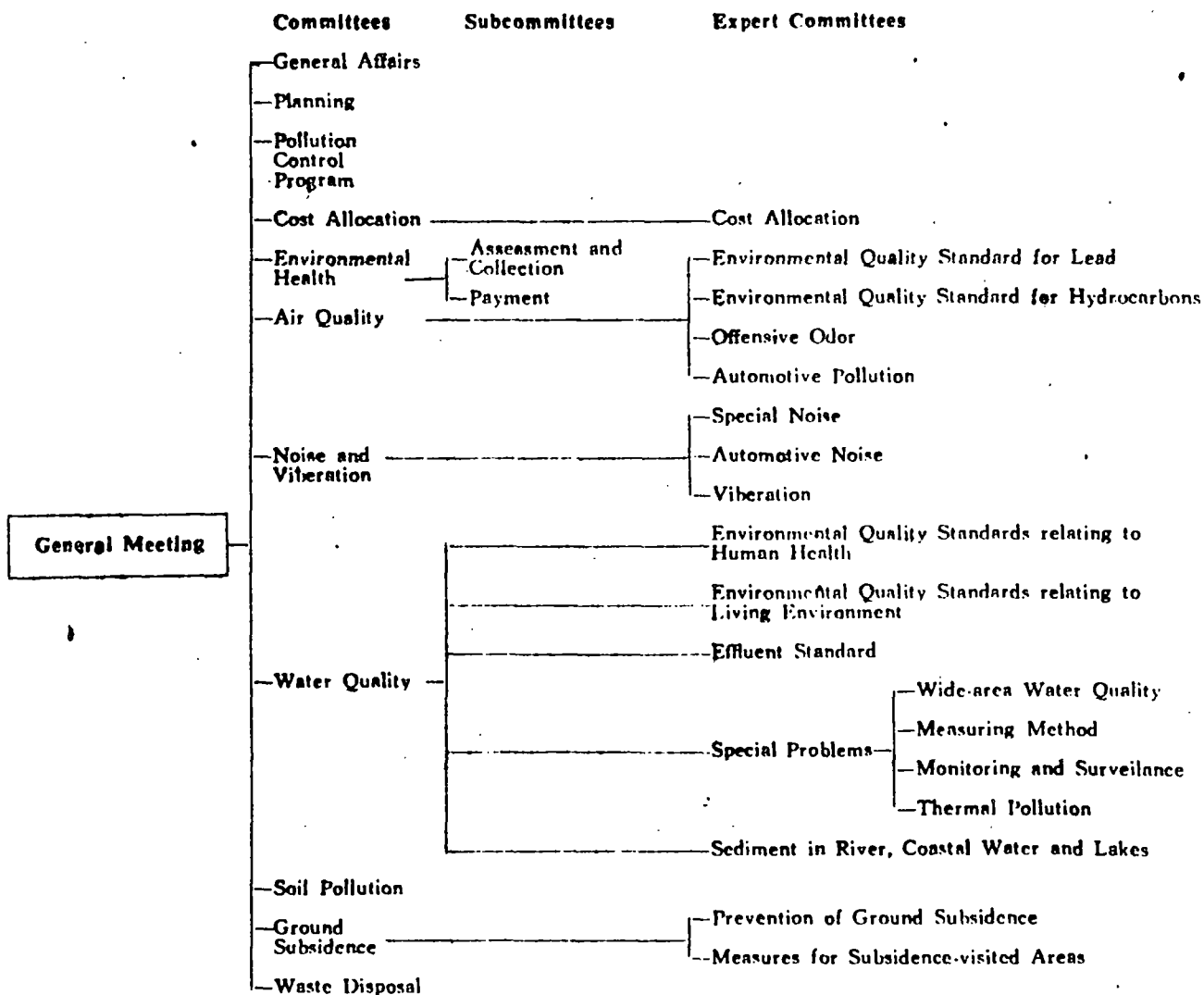
Attached to the Environment Agency are five subsidiary bodies all of which are accountable to the Director General: the Central Council for Control of Environmental Pollution, the Nature Conservation Council, the Seto Inland Sea Environmental Conservation Council, the National Institute for Environmental Studies, and the Training Institute for Environmental Pollution Control. The Central Council for the Control of Environmental Pollution 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. (See organizational chart, page 3b.) The National Institute for Environmental Studies carries out interdisciplinary studies on the effects of environmental disruption, 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.

## ORGANIZATION OF THE ENVIRONMENT AGENCY





# **ORGANIZATION OF THE CENTRAL COUNCIL FOR CONTROL OF ENVIRONMENTAL POLLUTION**



### other agencies with environmental responsibilities

Supplementing the work of the Environment Agency are several other government ministries and public bodies. For example, the Regional Administrative Inspection Bureaus of the Administrative Management Agency assist the Environment Agency by carrying out surveys and collecting pollution data throughout the country.<sup>3</sup>

In April 1972, the Japanese Government established an interministerial council to develop and enforce countermeasures against pollution by polychlorinated biphenyls (PCB's), and in June 1973, a similar council was created for mercury and other chemicals. Composed of representatives of the Ministries of Health and Welfare, International Trade and Industry, Transport, Construction and Labor, as well as of the Environment and Fishery Agencies, the council's activities include the establishment of tolerance levels of pollution in fish, nationwide inspections of factories, and surveys of highly polluted bodies of water.<sup>4</sup>

A variety of pollution control services is rendered by the Pollution Control Service Corporation, established in 1970.<sup>5</sup> This public corporation 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 extension of loans for antipollution programs. 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.

### national-local relationships

Japan is administratively divided into 47 prefectures, including the metropolis of Tokyo, each of which is governed by an elected governor and a uni-

cameral assembly. Prefectures are subdivided into cities, towns or villages governed by a mayor and assembly, both elected by popular vote. The Local Autonomy Law of 1947 increased the power of prefectural and local governments.

All prefectural governments and many local governments 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 centers.<sup>6</sup> In addition, the Environment Agency has set up departments and organizations responsible for pollution control in every prefecture.<sup>7</sup>

Prefectural and local governments 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 programs through the surveillance of polluting sources, the enforcement of regulations, and the promotion of pollution control projects.

## II. Environmental Laws legislative system

The Diet is the national legislative organ of Japan; however, most of the country's significant legislation originates in the Cabinet. Bills introduced by members of the House of Representatives must be endorsed by at least twenty other members; those introduced in the House of Councillors require endorsement by ten or more members. Legislation is debated by the committees of each house of the Diet before a vote is taken. Pursuant to the issuance of the law, Cabinet Orders may be enacted providing regulations for implementation of the law.

### highlights of environmental laws

The basic environmental legislation in Japan is the August 3, 1967 Public Nuisance Countermeasures Basic Law no. 132.<sup>8</sup> This law is of general nature and establishes the framework within which the country's most significant environmental legislation has been enacted. According to this law, the national and local governments are required to prepare and implement fundamental policies for prevention of public nuisances harmful to human health or the living environment.

The law assigns to the national government the responsibility for setting and enforcing environmental standards, as well as of promoting research in environmental protection. The government also controls the establishment of polluting facilities in areas where pollution is extreme. Local governments are to establish their own environmental protection plans in accordance with local circumstances and within the guidelines set by the national government.

Another stipulation of the law is that the national government create a system for settling public nuisance disputes and for compensating victims of

public nuisances. Industrial enterprises must bear all or part of the expenses required for pollution control measures prescribed by the national or local governments.

#### water pollution

Water pollution in Japan is regulated mainly by the December 25, 1970 Water Pollution Control Law no. 138.<sup>9</sup> This law applies to "specified facilities," which are defined as those facilities discharging polluted water or waste liquid containing cadmium or other substances which might be harmful to human health<sup>10</sup> into any public-use water area. At the time of the establishment or alteration of such facilities, a report must be submitted to the prefectural governor describing the facility and providing information such as planned treatment methods for effluents. If the governor determines that effluent standards would be exceeded by a planned facility, he may order that plans for the facility be changed or abandoned.

The law further stipulates that discharging enterprises keep records of the pollution level of effluents. Governors are required to constantly supervise the effect of water pollution in public-use water areas of their prefectures. In cases of dangerous water pollution, they are empowered to order the reduction of harmful discharges for a specified period of time or they may order that other measures be undertaken. The creation of Prefectural Water Quality Councils to investigate water protection measures is another condition of the law.

In order that specified polluting establishments may meet effluent standards, the national government shall, by virtue of the Water Pollution Control Law, provide financial or technical assistance, with special consideration for small and medium-sized enterprises.

Implementation measures for the Water Pollution Control Law are set forth in the June 17, 1971 Cabinet Order no. 188.<sup>11</sup> Articles 1, 2 and 3 of this order list those discharging establishments and polluting substances subject to the control of the Prefectural Water Quality Councils, whose membership includes the chiefs of the Local Bureau of Agricultural Administration, the Regional Bureau of International Trade and Industry, the Local Bureau of Construction, and other local officials. Moreover, those city, town or village officials controlling public-use water areas may advise the prefectural governor on countermeasures against pollution of waters under their jurisdictions.

Pollution of sea water by oil discharged from ships and marine facilities is controlled by the December 25, 1970 Marine Pollution Prevention Law no. 136.<sup>12</sup> Designed to promote the preservation of the marine environment through preventive measures, this law prohibits the discharge of oil and solid waste into the sea from Japanese ships or marine facilities. The law further requires that, in the event of water pollution due to oil discharge, the responsible party take immediate remedial action, after having reported the event to the Marine Safety Board.

In implementing the Marine Pollution Prevention Law, the Ministry of Transportation issued the June 23, 1971 Ordinance no. 38 which provides enforcement regulations. The ordinance enumerates standards for the discharge of oil from ships, stipulates emergency control measures, and describes the obligatory reporting procedure for enterprises involved in waste oil treatment.

The methods and standards for the disposal of solid wastes into sea areas are outlined in the June 22, 1971 Enforcement Order no. 201 of the Marine Pollution Prevention Law.<sup>13</sup>

Water pollution emanating from sewerage systems is regulated by the

April 1958 Sewerage Law.<sup>14</sup> According to this law, public sewerage systems must set up programs which include the establishment of terminal treatment plants and regulations controlling sewerage systems.

#### air pollution

Air pollution control legislation is based on the June 10, 1968 Air Pollution Control Law no. 97,<sup>15</sup> which regulates the emission into the air of pollutants from industrial plants or business establishments and motor vehicles. This law requires the Prime Minister's Office to set emission standards for sulfur oxides, soot and dust, and toxic substances from stationary sources, within the framework of which the Prime Minister's Office and prefectural governors may issue stricter standards for soot and dust and toxic substances in areas of serious air pollution. In the case of sulfur oxides, prefectural governors are to prescribe total mass emission control standards in the designated area by Cabinet Order. Establishments installing facilities likely to emit soot, smoke or particulate matter must submit a report to the prefectural governor describing the plans for the facility and proposed methods of disposal of pollutants. The governor may then order changing or abandoning of plans for any facility whose emissions would exceed the prescribed standards.

The setting of standards for fuels used in facilities emitting soot and smoke containing sulfur-oxides is the responsibility of the prefectural governor, working within guidelines established by the Director General of the Environment Agency and the Prime Minister's Office. Industrial establishments are obligated to keep records of the volume and density of emitted soot and smoke.

With regard to motor vehicle emissions, the Air Pollution Control Law states that the Director General of the Environment Agency shall establish maximum permissible limits for motor vehicle exhaust gases. In order to maintain ambient

air quality standards, governors are required to monitor the degree of air pollution in their prefectures and, in the event that air pollution reaches dangerous levels, they must order a reduction of emissions from soot and smoke emitting facilities or order the Prefectural Public Safety Commission to take measures to reduce motor vehicle traffic.

The Air Pollution Control Law provides that the national government shall render necessary technical or financial assistance to private enterprises for the improvement of methods for disposing of soot and smoke and shall promote research on air pollution control. Administrative duties belonging to prefectural governors under this law may be delegated to the municipal governments.

Pursuant to the Air Pollution Control Law, Cabinet Order no. 329, dated November 30, 1968<sup>16</sup> (Enforcement Order of the Air Pollution Control Law) lists additional substances regarded as harmful within the context of the law and designates facilities which require regulation by virtue of their smoke or dust emitting character. The order names control areas where fuel utilization must be regulated and establishes emission standards for smog emergency situations.

Air pollution caused by offensive odors from industrial installations is controlled by the June 1, 1971 Offensive-Odor Prevention Law no. 91. This law lists malodorous substances and empowers prefectural governors to designate areas in which control standards will apply. Governors may request reports from odor-producing establishments detailing their deodorizing efforts, and they may order inspections of such establishments. Finally, the law prohibits the outdoor incineration of rubber, leather, plastic materials, or waste oils in residential areas.

Emission standards for several substances designated as malodorous are provided in the May 30, 1972 Ordinance of the Prime Minister's Office no. 39 (Implementing Regulations for the Offensive Odor Control Law). In addition, the 1972



Cabinet Order no. 207 assigns administrative functions for implementation of the Offensive-Odor Prevention Law to prefectural governors and certain mayors and lists the types of businesses and facilities to which the order applies.

other environmental program areas

Noise pollution from industrial installations, construction works and motor vehicles in Japan is regulated by the Noise Abatement Law no. 98 of June 10, 1968. The pursuant Enforcement Order no. 324 of November 27, 1968 lists types of industrial installations and construction works subject to control. Mufflers are required on all motor vehicles and certain motor bicycles under the June 1, 1951 Law no. 185 Concerning Vehicles for Road Transportation. Environmental quality standards for noise were established in May 1971 for various categories of areas. A separate set of standards has been issued for aircraft noise, in addition to the August 1, 1967 Law no. 110 and the September 7, 1967 Cabinet Order no. 284 on Noise Abatement in the Vicinity of Public Airports.

The quality and safe use of agricultural germicides, insecticides and rodent killers is controlled by the Agricultural Chemicals (Pesticides) Control Law no. 82 of July 1, 1948 and its ensuing enforcement regulations. In addition, the Agricultural Land Pollution Control Law no. 139 of December 25, 1970 endeavors to prevent the production of crops and livestock that could endanger human health and to remove impediments to the growth of crops by controlling the pollution of agricultural land by certain harmful substances.

Japan has various laws concerning radiation, among which are the Atomic Energy Basic Law (no. 186 of December 19, 1955); the Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors (no. 166 of June 10, 1957); and the Law Concerning Prevention of Radiation Hazards Due to Radioisotopes, etc. (no. 167 of June 10, 1957).

The appropriate disposal of industrial and municipal wastes is controlled by the December 25, 1970 Waste Disposal and Cleaning Law no. 137 and its enforcement regulations. The December 28, 1950 Law for the Control of Poisonous and Potent Agents prohibits the disposal of certain poisonous agents without previous neutralization of their toxicity.

promulgation

Laws and their ensuing enforcement orders and regulations are published in the Kogai Kankei Horei Kaisetsu Shu.

### III. Standards

There are two groups of water quality standards in Japan--those relating to human health, which are applicable to all public water areas, and those relating to the living environment, which are set for different types and uses of water areas. There are nine controlled substances relative to human health. The presence in water areas of four of these substances--cyanide, alkyl mercury, organic phosphorus and PCB's--must not be detectable by the examining methods prescribed by the Director General of the Environment Agency. The concentrations of total mercury may not exceed 0.0005 ppm and the concentrations of hexavalent chromium and arsenic may not exceed 0.05 ppm, while the concentration of cadmium may not exceed 0.01 ppm and that of lead must be 0.1 ppm or less.

With regard to protection of the living environment, five items are regulated by standards: pH, biochemical oxygen demand, suspended solids, dissolved oxygen and a number of coliform groups. There are six sets of standards for rivers which vary according to the use of the river water. Likewise, there are four sets of standards for lakes (including reservoirs and marshes) and three sets of standards for coastal waters.

In addition, research is being carried out by the Environment Agency on setting water quality standards for total chromium, antimony and alkyl benzene sulfonate.<sup>17</sup>

In order to achieve these ambient water quality standards, national effluent standards, also varying somewhat depending on whether the protection of human health or of the living environment is involved, have been established by the Prime Minister's Office. Since these standards specify only the minimum values required for achieving the national water quality standards, it is stipulated that stricter standards are to be issued by prefectural ordinances for those areas with more serious water pollution problems.

Those effluent standards designed to protect human health stipulate that the presence of alkyl mercury compounds in effluents must not be detectable, while the amount of total mercury may not exceed 0.005 mg/l, and the amounts of hexi-valent chrome compounds and arsenic and its compounds may not exceed 0.5 mg/l. The maximum permissible limits of cyanide compounds, organic phosphorus compounds and lead and its compounds is 1 mg/l. The effluent concentration of cadmium and its compounds may not exceed 0.1 mg/l, and that of PCB's may not exceed 0.003 mg/l.

Twelve items are regulated by one set of effluent standards with regard to safeguarding the living environment. The maximum permissible values of these items range from 2 mg/l for chrome and 3 mg/l for copper to 160 mg/l for biochemical oxygen demand<sup>18</sup> and 200 mg/l for suspended solids.<sup>19</sup> Permissible pH values are between 5.0 and 9.0 for effluent discharged into other public water bodies. These effluent standards are applicable to establishments whose daily effluent volume is 50 m<sup>3</sup> or more.

Ambient air quality standards have been established in Japan for sulfur dioxide, carbon monoxide, suspended particulate matter, nitrogen dioxide and photo-chemical oxidants. The daily average hourly concentration of sulfur dioxide in the air may not exceed 0.04 ppm, with hourly values not exceeding 0.1 ppm. As for carbon monoxide, the average hourly value may not be greater than 20 ppm as measured in eight consecutive hours or greater than 10 ppm when measured as the daily average of hourly values. Standards for suspended particulate matter apply to air-borne particulates having a diameter of 10 microns or less. The daily average hourly concentrations of suspended particulates must be less than 0.10 mg/m<sup>3</sup>, with hourly concentration being less than 0.20 mg/m<sup>3</sup>. The daily average of hourly values for nitrogen dioxide in the air may not exceed 0.02 ppm and the hourly values of photo-chemical oxidants may not be greater than 0.06 ppm.

In order to attain these air quality standards, the Japanese government has issued emission standards for various harmful substances. In many cases, these standards vary according to the type of emitting facility, the amount of pollution caused and the level of available pollution-control technology. With the exception of sulfur oxide standards, prefectural governments may set stricter standards if necessary to obtain the required ambient air quality.

The sulfur oxide emission standard is expressed by the equation  $q = K \times 10^{-3} H_e^2$ , where  $q$  is the hourly volume of sulfur oxides emitted and  $H_e$  is the height of the smokestack (the sum of the heights of the stack and ascent of smoke). There are eight different values for  $K$ , ranging from 3.0 to 17.5 and dependent on the location of a sulfur-oxide emitting installation, which determine the degree of regulation, with a smaller  $K$  value signifying a stricter control standard.

In areas where factories and industrial establishments are concentrated, and it is considered to be difficult to attain air quality standards for sulfur dioxide by means of this sulfur oxide emission standard, the governor of the prefecture is to formulate a total mass reduction plan for sulfur oxides and prescribe the total mass emission control standard on the basis of such a plan.

National emission standards for soot and dust, which are uniform throughout the country for each particular type and size of emitting facility, range from 0.10 - 0.80 g/Nm<sup>3</sup> (grams per normal cubic meter at 0°C and 1 atmospheric pressure). However, in areas suffering serious air pollution problems, newly constructed soot and smoke emitting installations may not discharge more than 0.05 - 0.50 g/Nm<sup>3</sup> of those substances. Maximum limits have also been established for the emission of cadmium (1.0 mg/Nm<sup>3</sup>); chlorine (30 mg/Nm<sup>3</sup>); hydrogen chloride (80 mg/Nm<sup>3</sup>); fluorine, hydrogen fluoride and silicon fluoride (1.0 - 20 mg/Nm<sup>3</sup>), depending on the emitting

facility; and lead and its compounds (10 - 30 mg/Nm<sup>3</sup>).

Nitrogen oxide emission standards, which vary according to the type of emitting facility, range from 130 to 480 ppm for newly constructed facilities and from 170 to 750 ppm for facilities already in existence. A provisional maximum limit for the amount of PCB's emitted in incineration gases has been established at 0.25 mg/m<sup>3</sup>, with the average value not exceeding 0.15 mg/m<sup>3</sup>.

Certain areas in Japan have been designated as fuel standard areas, where air pollution aggravated by the seasonal use of petroleum fuels is serious. In these areas, the sulfur content of fuels may not exceed 0.5 - 1.2 % within a prescribed period.

With regard to controlling air pollution caused by motor vehicle exhaust gases, the Japanese government has established standards for carbon monoxide, hydrocarbon and nitrogen oxide emissions from new cars. In accordance with these standards, vehicles produced after April 1, 1975 must not at cruising speed exceed an average of 2.1 g/km of carbon monoxide, 0.25 g/km of hydrocarbons, and 1.2 g/km of nitrogen oxides. For vehicles produced after April 1, 1976, nitrogen oxide emissions are required to average 0.6 g/km for cars with equivalent internal weight (EIW) of 1,000 kg or less and 0.85 g/km for cars with EIW of more than 1,000 kg. Regulations also require that vehicles already in use acquire ignition timing retards or catalyst exhaust purifying devices approved by the Minister of Transport within specified time periods.

Another area of air pollution control in Japan is malodorous substances. Five such substances--ammonia, methyl mercaptan, hydrogen sulfide, dimethyl sulfide, and trimethylamine--are regulated by standards in certain designated control areas. The national government has established a range of tolerance levels for each of the five substances within which prefectural governments may set their own standards.

#### IV. Enforcement Procedures

##### court system

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.<sup>20</sup> Many pollution-related disputes, however, are settled outside the court system by arbitration or mediation by the Pollution Coordination Committee or by mediation or reconciliation by the Prefectural Pollution Examination Boards. Such administrative settlements are provided for under the June 1, 1970 Law no. 108 on the Settlement of Pollution Disputes.

The Pollution Coordination Committee, established by Law no. 52 of June 3, 1972, is an independent administrative committee which, in addition to mediating and arbitrating disputes, renders guidance to local governments with regard to handling 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 250,000 or more is provided with a counselor to whom pollution-related complaints are brought and who is responsible for seeing that such problems are resolved. Counselors are provided in smaller cities when the need arises.

##### enforcement mechanisms

Enforcement of air and water pollution control 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 impose administrative notices for improvement. If violations constitute a danger to human health, governors may impose penal punishment under the December 25, 1970 Law no. 142 Concerning Punishment of Public Nuisance Crimes Pertaining to Human Health.

Extensive prefectural monitoring systems have been established to constantly survey air and water quality. Many prefectural governments have set up networks of stations that automatically transmit a continual flow of data to a monitoring center.

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 Research Center, the Marine Pollution Surveillance Center and inspectors of the Maritime Safety Offices in Tokyo and other major cities. Particular attention is given to the Inland Sea, where regular rounds are made by patrol craft in areas where the danger of pollution is serious.

For the surveillance of air quality, there are several national air pollution monitoring stations which record the concentrations of various pollutants in the air as well as meteorological conditions. There are also national monitoring stations for motor vehicle exhausts in Tokyo. 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.

With regard to motor vehicle emissions, prefectural governors are obligated to measure the concentration of pollutants in 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.



### penalties

Both the Water Pollution Control Law and the Air Pollution Control Law contain provisions for penalties to be imposed on violators of the various sections of the laws. Under the Water Pollution Control Law, penalties range from a fine of up to 30,000 yen for failure to report to the prefectural governor any changes in name or address of a specified discharging establishment to a fine of up to 200,000 yen or up to one year imprisonment for failure of a discharging facility to comply with improvement orders or changes requested by the governor. The violation of effluent standards or non-compliance with an order of the governor to reduce effluents in situations of critical pollution are punishable by imprisonment not exceeding six months or a fine of up to 100,000 yen. If effluent standards are violated through negligence, rather than intentionally, penalties imposed may be no more than three months imprisonment or a fine of no more than 50,000 yen. A fine not exceeding 50,000 yen or a prison term of up to three months may be levied against proprietors of specified discharging facilities in cases where installations or alterations are not reported to the governor.

The penal provisions of the Air Pollution Control Law are similar to those of the Water Pollution Control Law. The emission of soot, smoke or other specified harmful substances in excess of the permissible limits is punishable by up to six months imprisonment or a fine of up to 100,000 yen. If such violations occur through negligence, however, penalties may be a prison term not exceeding three months or a fine not exceeding 50,000 yen. Failure to report the installation or modification of a smoke, soot or particulate-emitting facility to the prefectural governor, or non-compliance with fuel standards, may elicit a prison term of up to three months or a fine of up to 50,000 yen. Failure to comply with a governor's order to modify or temporarily suspend activities of an emitting facility is punish-

able by imprisonment of up to one year or a fine of not more than 200,000 yen.

Infractions of pollution control regulations which constitute damage to human health are punishable according to the penal provisions contained in the Law Concerning Punishment of Public Nuisance Crimes Pertaining to Human Health. Article 2 of this law states that anyone who has, in the course of business activities, knowingly discharged into the environment materials which are dangerous to human health shall be punished by imprisonment not exceeding three years or a fine not exceeding 3,000,000 yen. When dangerous substances are discharged through negligence, penalties are imprisonment of up to two years or a fine of up to 2,000,000 yen. If such activities cause illness or death of any person, a prison term of up to seven years or a fine of up to 5,000,000 yen is elicited, unless this occurs through negligence, in which case the penalty is a prison term not exceeding five years or a fine not exceeding 3,000,000 yen.

V. Interrelationships Between Government and Industry  
overall relationship

Private industrial enterprises in Japan have been working 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 few 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 staffs.

Cooperation between industry and government is further characterized by the establishment of antipollution agreements between prefectural or municipal governments and private industrial organizations. These agreements contain provisions pertaining to general pollution control measures, 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.<sup>21</sup>

An important part of the government-industry relationship is the Japan Federation of Economic Organizations (Keidanren). The chief function of Keidanren, whose membership represents practically all phases of economic activity in the country, is to make the views of business and industrial organizations known to the national government, thereby stimulating a united effort for the resolution of problems such as environmental pollution.

who pays?

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 programs by various ministries and agencies and through tax incentives to private industry to stimulate invest-

ments in pollution-control equipment. The December 25, 1970 Law no. 133 on Enterprises Bearing the Cost of Pollution Control Works obligates industries to subsidize all or part of the costs involved in pollution control works undertaken by the national or local governments.

The responsibility of private industry for providing financial aid to pollution victims is also expanding. Under the October 5, 1973 Law no. 111 on Pollution-Related Health Damage Compensation, polluting establishments are obligated 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 program are 1) medical care benefits and medical care expenses; 2) compensation for handicaps; 3) compensation for survivors; 4) lump compensation payments for survivors; 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.

The Association collects funds from polluting enterprises by means of pollution load levies and special levies. Pollution load levies are collected in polluted areas designated by cabinet order as "class 1 regions," in which air pollution causes aggravation of certain illnesses. Every fiscal year, a pollution load levy is paid by enterprises whose maximum amount of polluting emissions exceeds

the limits set by cabinet order. The amounts of these payments is proportional to the amount of excess emissions. Special levies, also collected every fiscal year, are paid by establishments emitting air or water pollutants causing certain illnesses in areas designated by cabinet order as "class 2 regions."

In addition to the above-mentioned benefits, the health damage compensation law provides for the establishment of pollution-related health welfare programs in prefectures or cities, which would include rehabilitation programs for pollution victims, as well as health damage prevention programs. Such projects are also to be subsidized by funds collected from polluting enterprises.

#### major industries

Japan suffers serious pollution problems largely resulting from the high concentration of industry in certain areas. The major polluting industries in the country are iron and steel, ceramics and cement, paper and pulp, food processing, and chemicals.<sup>22</sup> In the past few years, however, several policies have been initiated with the purpose of relocating industries to areas of lesser industrial concentration. Under the Law Concerning Promotion of Industrial Relocation, a public corporation has been set up to finance industrial relocation and building sites for major industrial establishments.<sup>23</sup> In addition, the Law Concerning Restriction of Industry in Existing Residential and Business Zones in the Tokyo Metropolitan Area and the Law Concerning Restriction of Factories, Plants, Etc. in the Kinki Region has sought to reduce industrial pollution in those areas. Relocation measures are also being undertaken in accordance with the Law Concerning Promotion of Introduction of Industry into Rural Areas.

#### industrial monitoring

The June 10, 1971 Law no. 107 on the Establishment of an Organization for Pollution Control in Specified Factories requires that any factory containing

a device which discharges smoke, dust, polluted water or which creates noise, appoint a manager and an engineer to direct pollution-control duties. These managers must take qualifying courses and pass a national examination before assuming their responsibilities.<sup>24</sup> Polluting establishments are also obligated to keep records of the amounts of emissions or effluents discharged.

## VI. Case Histories

Within the past few years, many industrial enterprises have been brought to court for causing damage by air and water pollution. The judicial decisions arising from four of these trials were most significant in affirming the responsibility of polluting industrial enterprises for pollution control and in asserting that, with the technology available, there is no reason that persons should become victims of pollution.<sup>25</sup> In all four cases, the defendant companies were required to pay rather large compensation to the victims, many of whom had been injured fatally.

The Itai-itai disease case, between the residents of the Jinzu River basin in Toyama Prefecture and the Kamioka Works of the Mitsui Mining and Smelting Company, concerned chronic poisoning from cadmium contained in effluent discharged from that enterprise. This disease was first reported in 1955 in the Jinzu River basin area; in 1959 a large concentration of cadmium was found in river and well water in that area. In order to research the problem further, the Toyama Prefecture Regional Special Disease Countermeasures Committee was set up in 1961, followed in 1963 by the establishment of the Itai-itai Disease Research Committee and Research Team. In 1969, with the passage of the Law on Special Measures for the Relief from Damage due to Environmental Hazards, 96 victims of the disease were certified. The court decision handed down in June 1971 confirmed a causal relation between the disease of the plaintiffs and the wastewater discharged from the Kamioka Works.

Two other major trials, the Niigata Minamata disease case and the Minamata disease case of Kumamoto Prefecture, concerned illness caused by the discharge of organic mercury compounds in wastewater by Showa Denko, Ltd. and the Chisso Corporation, respectively. The residents of those areas were poisoned by seafood

contaminated by the mercury discharges.

The fourth major pollution trial, concluded in July 1972, involved illnesses caused by soot and smoke emissions from the six companies of the Yokkaichi Industrial Complex in Yokkaichi City. As in the three other cases, the plaintiffs were awarded compensation and it was asserted that the defendant companies were negligent in failing to recognize the harmful effects of their activities on human health.



## Reference Notes

Numbers in brackets following entries are the identification numbers assigned to documents which have been abstracted for the Foreign Exchange Documents Program of the E.P.A. Office of International Activities. Copies of documents are filed under these numbers at the E.P.A. Headquarters Library in Washington, D.C.

1. May 31, 1971 Law no. 88 Establishing the Environment Agency. [#00861A]
2. This department was created in 1974.
3. Japan, Environment Agency, "Reorganization of Environment Agency," Japan Environment Summary, v. 2, no. 7, July 10, 1974, p. 4. [#02343A]
4. "Antipollution Council Holds First Meeting," The Japan Times (Tokyo), June 15, 1973, p. 2.
5. June 1, 1965 Law no. 95 Establishing the Pollution Control Service Corporation, as amended by May 31, 1971 Law no. 88. [#00863A]
6. ibid., p. 204.
7. Japan, Environment Agency, Quality of the Environment in Japan, (Tokyo: 1973) p. 41. [#02048A]
8. As amended by December 25, 1970 Law no. 132 and May 31, 1971 Law no. 88. [#00860A]
9. As amended by May 31, 1971 Law no. 88 and June 22, 1972 Law no. 84. [#00533A]
10. A listing of these substances, as well as a listing of the "specified facilities" is provided in the June 17, 1971 Cabinet Order no. 188, implementing the Water Pollution Control Law. [#00534A]
11. As amended by Cabinet Orders no. 219 of June 30, 1971 and no. 346 of 1972. [#00534A]
12. As amended by December 25, 1970 Law no. 137. [#00537A]
13. As amended by June 15, 1972 Cabinet Order no. 225. [#00537C]
14. As amended in 1970. [#00539A]
15. As amended by Law no. 18 of April 13, 1970; Law no. 108 of June 1, 1970; Law no. 134 of December 25, 1970; Law no. 88 of May 31, 1971; Law no. 84 of 1972. [#00393A]
16. As amended by Cabinet Order no. 219 of June 30, 1971. [#00393C]
17. Quality of the Environment in Japan, op. cit., p. 218.

18. Daily average may not exceed 120 mg/l.
19. Daily average may not exceed 150 mg/l.
20. December 25, 1970 Law no. 142 Concerning Punishment of Public Nuisance Crimes Pertaining to Human Health. [#00866A]
21. Quality of the Environment in Japan, op. cit., pp. 206-208.
22. Quality of the Environment in Japan, op. cit., p. 31.
23. ibid., p. 202.
24. ibid., p. 201.
25. ibid., p. 21.

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Publications that proved helpful in the research for this study and are recommended for those undertaking similar research include:

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Tokyo: 1973, 1974. [#02048A]

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\_\_\_\_\_. Japan External Trade Organization. "The Environmental Situation Today." Focus Japan/Now in Japan. May 1974, no. 12. [#02167A]

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Tokyo: 1973. [#02492A]

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