Papers on the Local Governance System and its Implementation
in Selected Fields in Japan No.7

Environmental Administration in Japan and the Role of Local Governments

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Foreword

The Council of Local Authorities for International Relations (CLAIR) and the National Graduate Institute for Policy Studies (GRIPS) have been working since 2005 on a "Project on the overseas dissemination of information on the local governance system of Japan and its operation". On the basis of the recognition that the dissemination to overseas countries of information on the Japanese local governance system and its operation was insufficient, the objective of this project was defined as the pursuit of comparative studies on local governance by means of compiling in foreign languages materials on the Japanese local governance system and its implementation as well as by accumulating literature and reference materials on local governance in Japan and foreign countries.

In 2007, as a continuation of projects which were begun in 2005, we continued to compile "Statistics on Local Governance (Japanese/English)" and to conduct a search for literature and reference materials concerned with local governance in Japan and overseas to be stored in the Institute for Comparative Studies in Local Governance (COSLOG). We also compiled a "Glossary on Local Governance Used in Japanese Official Gazettes (Japanese/English) (FY 2007 Edition)". In addition, continuing from the previous year, we finished compiling "Up-to-date Documents on Local Autonomy in Japan" on two themes and "Papers on the Local Governance System and its Implementation in Selected Fields in Japan", for which we took up 6 themes.

This project is to be continued in 2008, and we aim to improve the materials so that they will be of real use and benefit to those who are working in the field of local governance.

If you have any comments, suggestions or inquiries regarding our project, please feel free to contact the Council of Local Authorities for International Relations (CLAIR) or the Institute for Comparative Studies in Local Governance (COSLOG) of the National Graduate Institute for Policy Studies (GRIPS).

October 2008

Michihiro Kayama
Chairman of the Board of Directors
Council of Local Authorities for International Relations (CLAIR)
Tatsuo Hatta
President
National Graduate Institute for Policy Studies

Preface

This booklet is one of the results of research activities conducted by the Institute for Comparative Studies in Local Governance (COSLOG) in collaboration with the Council of Local Authorities for International Relations (CLAIR) in FY 2007. This is part of a 5-year project that started in 2005 entitled "Project on the overseas dissemination of information on the local governance system of Japan and its operation". For the purpose of implementing this project, a "Research committee for the project on the overseas dissemination of information on the local governance system of Japan and its operation" has been set up, and a chief and deputy chiefs with responsibility for the project have been designated from among the members concerned with each research subject.

"Papers on the Local Governance System and its Implementation in Selected Fields in Japan" (Volumes 5-10) were written under the responsibility of the following six members (The official positions are as of March 2008).

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This booklet, the seventh volume in the series, is about environmental administration in Japan and the role of local governments, and was written by Mr. Ogata. In local governments in Japan, environmental administration is promoted against a variety of different characteristics displayed by each local government. This booklet gives an overview of the entire picture, incorporating the relationship with central government, historical flow over time, budgetary factors, organization, etc.

We will continue to take up new topics, and add to the series.

Finally, I would like to express my appreciation to Mr. Ogata, and also to other members of the research committee for their expert opinions and advice.

October 2008

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Introduction

Environmental administration in Japan today is centered at central government level on the Ministry of the Environment. At local government level, it is carried on by prefectures and municipalities respectively on the basis of continuing liaison with central government. In each field of environmental administration, projects are carried out in every fiscal year on the basis of having secured a fixed budget, and at the same time, the legal structure in the form of laws and bylaws is strengthened.

Environmental administration in Japan as referred to here has been formed within the framework of responses to pollution and environmental collapse that have occurred in the context of economic development. In the initial stages of formulating responses, local governments played a leading role.

Environmental problems faced by Japan today comprise a broadening scenario, ranging from industrial pollution caused by factories and industries, to traffic pollution in the form of exhaust gas emissions from cars and trucks and noise pollution on the roads, to urban daily life pollution in such forms as an increase in waste products and the problem of domestic sewage, through to global environmental problems that transcend national boundaries. The environmental problems as described here represent an expansion of the area of environmental pollution and can be seen as something that steadily accumulates in the form of an environmental debit balance, arising from people's everyday lives and their commonplace working activities. It follows that for a solution to be found, there is a need for people's lifestyle and their business and working activities to change in the direction of moving toward more sustainable ones and reducing the environmental debit balance .

In the context of taking action aimed at finding a solution to the kind of environmental problems described here, the role played by local governments, as the form of government close to citizens' lives, is steadily increasing.

On the basis of the above points, this paper aims to provide an overview of environmental administration as it is being taken forward by local governments throughout Japan.

1. Current state of the structure and budget for promoting environmental administration

Like many other administrative areas, the area of environmental administration in Japan is taken forward by central government and local governments (prefectures and municipalities). The paper will describe first the present state of central government and then that of local governments from an organizational and budgetary point of view.

1–1 Organization and budget at central government level

1–1–1 Organization

(1) Ministry of the Environment

The central role in environmental administration is that of the Ministry of the Environment, which is responsible for efforts to conserve the environment, including the creation of a pleasant environment in which to live, in such ways as preserving the global environment, preventing pollution, and protecting and conserving the natural environment. The Ministry of the Environment was established in 2001, and at that point, responsibility for the administration of waste management and recycling was transferred to it, and a new section was created to deal with it. The Environmental Agency, the predecessor of the Ministry of the Environment, was established in 1971 as an organization which would be responsible in a unified way for environmental administration, responsibility for which had previously been divided between a number of different ministries.

The fixed number of staff in the Ministry of the Environment was 1,185 at the end of fiscal year 2007 (0.4% of the total number of 328,403 staff in national administrative organizations (**Note 1**)).

The internal structure of the Ministry of the Environment comprises the following bureaus and departments: Minister's Secretariat, Waste Management and Recycling Department, Environmental Policy Bureau, Global Environment Bureau, Environmental Management Bureau and Nature Conservation Bureau. Apart from these bureaus and departments there are the National Environmental Research and Training Institute and 7 Regional Environment Offices., and the National Institute for Environmental Studies, the national environmental organization with responsibility for research, which recently became an independent administrative institution (**Note 2**).

(2) Other organizations which are responsible for environmental administration

Apart from the Ministry of the Environment, environmental administration is handled by 19 organizations at national government level (**Note 3**). The main ones are as follows.

Ministry for Foreign Affairs: planning and drafting of diplomatic policy in the area of the global environment.

Ministry of Agriculture, Forestry and Fisheries: planning and drafting of agricultural policy aimed at conservation of the environment, environmental conservation related to livestock, prevention of the pollution of soil used as agricultural land, etc.
Forestry Agency: conservation of forests.
Ministry of Economy, Trade and Industry: prevention of industrial pollution, recycling of waste generated by industrial activities, etc.
Ministry of Land, Infrastructure, Transport and Tourism: environmental conservation as linked to social capital provision, sewerage installation and maintenance , prevention of automobile pollution, prevention of marine pollution, measures to counter aircraft noise, etc.
Japan Meteorological Agency: observation of the ozone layer, collection of data on greenhouse gases, etc.

1–1–2 Environmental conservation expenses

With a view to ensuring that environmental policy as a whole is developed efficiently and effectively, the Ministry of the Environment compiles, and adjusts in every fiscal year at the budgetary planning stage future estimated costs. These costs are environmental conservation expenses.

The total of environmental conservation expenses in fiscal year 2007 amounted to 2094.9 billion yen. The expenses are itemized by type of activity and by government ministry in **Table 1** and **Table 2**. The total of environmental conservation expenses has shown a declining trend after reaching a peak of 3048.4 billion yen in fiscal year 2001. This figure includes not only the expenses of work undertaken directly by central government organizations, but also money allocated as grants to local governments, in which case, the work concerned is actually implemented by local governments.

If we take a look at the itemized headings in **Table 1**, we see that the largest expenditure (39.1% of the total) is for item 3, concerned with “conservation of the water, soil and ground environment”, followed by item 1 (23.4%) for “global environmental conservation”, and item 6 (13.6%) for “preservation of the natural environment and promotion of contact with nature”.

By allocation to government ministries (**Table 2**), the largest allocation goes to the Ministry of Land, Infrastructure, Transport and Tourism (53.8% of the total), followed by the Ministry of Agriculture, Forestry and Fisheries (18.2%) and the Ministry of the Environment (10.6%).

Table 1 Itemized list of environmental conservation expenses
(Initial budget for Fiscal 2007)

(Unit : Million yen)

Itemized headings	Budget
1. Conservation of the geo-environment	491,158
2. Conservation of the atmospheric environment	279,711
3. Conservation of the water, soil and ground environment	819,504
4. Measures for appropriate waste treatment and recycling	132,112
5. Countermeasures against chemical substances	9,819
6. Conservation of the natural environment and promotion of contact with nature	285,056
7・Supporting programs that underlie respective policy measures	77,575
Total	2,094,935

Notes) 1 : The totals in the above table are included in the special accounts category.

2 : Expenses in respect of which distribution was not decided when the estimate was made are excluded.

3 : Because figures of 5 and over are rounded up and figures under 5 are rounded down, individual totals do not add up to the grand total.

Source) Annual Report on the Environment and the Sound Material-Cycle Society in Japan (2007 edition)

Table 2 Allocation of environmental conservation expenses by ministry
(Initial budget for Fiscal 2007)

(Unit : Million yen)

Ministry	Budget
Cabinet Office	44,828
Ministry of Internal Affairs and Communications	662
Ministry of Justice	151
Ministry for Foreign Affairs	6,706
Ministry of Finance	5
Ministry of Education, Culture, Sports, Science and Technology	62,130
Ministry of Health, Labour and Welfare	3,603

Ministry	Budget
Ministry of Agriculture, Forestry and Fisheries	381,857
Ministry of Economy, Trade and Industry	183,924
Ministry of Land, Infrastructure, Transport and Tourism	1,126,654
Ministry of the Environment	221,509
Ministry of Defense	62,905
Total	2,094,935

Notes) As for Table 1

Source) Annual Report on the Environment and the Sound Material-Cycle Society in Japan (2007 edition)

1–2 Organizations and Settlement of accounts at local government level

1–2–1 Organization

(1) Number of employees

The number of employees engaged in environmental administration in local governments stood at a national total of 81,427 as of April 1, 2006, comprising 3.1% of the number of employees engaged in the general administrative department, a generic title including a number of specialist departments (refer to **Table 3**). Within the context of local administrative reform movements in recent years, the overall number of employees engaged in the general administrative department has been decreasing year by year, but the combined number of employees in pollution preventing sections and in environmental conservation sections shows an increasing trend (refer to **Diagram 1**). The prioritization of environmental administration within local government administration is reflected in this data. Municipalities are responsible for the collection and disposal of waste and sewage, and these works have come to be entrusted to private sector companies, so the annual decrease of this section is a result of this.

Table 3 Number of employees working in environmental sections (As of April 1, 2006)

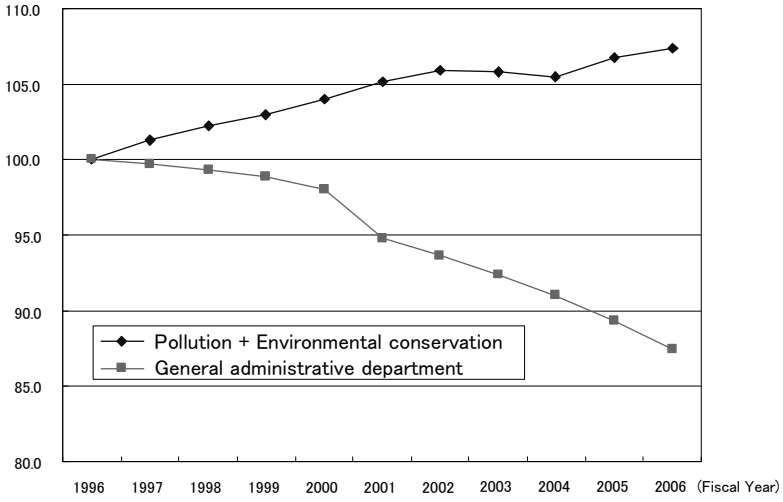
(Units : persons, %)

	Total	Prefectures	Municipalities
Pollution	7,993	4,085	3,908
Environmental conservation	6,787	2,555	4,232
Collection and disposal of waste and sewage	66,647	190	66,457
Total of the above 3 items (a)	81,427	6,830	74,597
(a) as a percentage of (b)	3.1	0.5	6.9
General administrative department (b)	2,586,701	1,502,727	1,083,974

Note) "General administrative department" denotes the total of employees in local governments, excluding employees covered by the accounts of publicly managed firms.

Source) "Results of Surveys on the Fixed Number of Employees in local governments in Fiscal 2006" (Ministry of Internal Affairs and Communications).

Diagram 1 Changes over time in numbers of employees in local governments (general administrative department, pollution + environmental conservation) (Fiscal 1996=100)



Source) Compiled by author of this paper on the basis of the "Results of Surveys on the Fixed Number of Employees in Local Governments" from fiscal 1996 to fiscal 2000

(2) Organization

(i) Prefectures

In prefectures, the establishment of specialist organizations concerned with pollution prevention was first seen in 1960 (1 organization), and subsequently, as the pollution problem expanded, the number of organizations established to cope with it also increased, so that as of October 1972, a specialist department or section had been established in every prefecture in Japan (**Note 4**). Further expansion and strengthening followed, and that process has continued up to the present day.

It is customary for organizational structures in prefectures to be formed by establishing multiple departments, and then, by establishing multiple divisions within each department. As of April 1, 2005, departments responsible for environmental administration were established in every prefecture, and multiple sections are established within those departments. In prefectures with large populations and strong financial resources, free-standing environmental departments, not attached to other administrative areas, have been established (4 prefectures), but in many prefectures, environmental administrative areas are merged with other administrative areas to form one department. For example, in 29 prefectures, environmental administration is merged with general livelihood administration, while in 9 prefectures it is merged with forestry conservation to form one department.

Because of the need to carry out in an appropriate manner the individual duties involved

in environmental administration (entry into factories or offices to carry out inspections or give guidance), local environmental administration branch offices have been established within the prefecture in the case of many prefectures..

In addition to the above, survey and research centers have also been established. They take forward research investigations concerned with environmental conservation and pollution such as atmospheric pollution or water quality pollution, through a process of liaison between sections concerned with planning and drafting environmental legislation and sections concerned with project implementation.

(ii) Municipalities

In municipalities too, in the same way as in prefectures, specialist anti-pollution structures are being strengthened to counter the growing problem of pollution (**Note 5**).

Comparing the structures in municipalities with those in prefectures, a characteristic of the former is that they include responsibility for the collection and disposal of waste and sewage (including garbage incineration) (**Table 3** refers).

In designated cities, along with a bureau with responsibility for environmental administration, we can also find, on the next level down from the bureau, multiple departments, and on the next level down, multiple sections with responsibility for environmental administration. Survey and research centers are also found in such cities.

As far as other cities, apart from designated cities, are concerned, it is impossible to make a single generalization about all cities because of the big disparity in size, but there are a large number of cities where a department responsible for environmental matters has been established. In towns and villages, it is possible to find cases where a section dealing with environmental matters has been established, but on the other hand, in 89.5% of towns and villages with populations of less than 10,000, and in 65.6% of towns and villages with populations of more than 10,000 and less than 30,000, the data shows that, leaving the collection and disposal of waste and sewage to one side, there is no specialist responsible for environmental administration (**Note 6**). In this situation, how to take forward environmental administration in local towns and villages has become a major issue of concern.

There are also a significant number of cases where several cities, towns and villages have joined together to establish an association to manage the collection and disposal of waste and sewage. In such cases, it has to be noted that the size of sections with responsibility for environmental administration within the organizational structures of individual cities, towns and villages, becomes smaller.

In addition to the above, depending on the size of the city concerned, there are cases where a part of the work implemented by prefectures is delegated to the city, and this becomes an additional factor influencing the size of organizational structures in the city.

1–2–2 Settlement of accounts

In every fiscal year, the Ministry of the Environment publishes a "Settlement of Accounts for Anti-pollution Measures by Local Public Organizations", giving details of environment-related expenses at local government level. According to this document, local governments expended a total of 3219.8 billion yen on anti-pollution policies in fiscal 2005. Of this sum, the highest percentage went on pollution prevention work, and a detailed breakdown shows that a large percentage was taken up by sewerage maintenance work (**Table 4** refers).

Comparing expenditure at prefectural and municipal level, we find that the latter is more than 3 times larger than the former. This is because pollution prevention work such as sewerage maintenance work and garbage disposal facility work is implemented mainly by municipalities.

By means of the breakdown in **Table 4**, **Diagram 2** shows a comparison of the final accounting figures for fiscal 1995, 2000 and 2005. Over the 10-year period between 1995 and 2005, the total figure decreased by about half. A very large factor affecting the decrease was the heavy weighting put on "III Pollution prevention work". The detailed breakdown shows that expenses for sewerage maintenance work decreased by about half, and expenses for garbage disposal facility work by about 60% (**Table 4** refers). In recent years, the continuing pressure to keep expenses down, including public investment, in the context of a severe financial situation, has also been a factor, and it is clear that there has also been general pressure on other expenditure items.

Table 4 Budgetary breakdown of pollution countermeasures by local governments (Fiscal 2005 and Fiscal 1995)

(Units: '00 million yen, %)

Itemized breakdown	Fiscal 2005						Fiscal 1995						Increase or decrease (A)−(B)
	Prefectures		Municipalities		Total(A)		Prefectures		Municipalities		Total(B)		
		Constituent percentage		Constituent percentage		Constituent percentage		Constituent percentage		Constituent percentage		Constituent percentage	
1 General expenses	889	12.5	946	3.8	1,835	5.7	831	5.8	857	1.8	1,688	2.7	147
2 Pollution regulations and survey research costs	200	2.8	206	0.8	406	1.3	265	1.8	206	0.5	471	0.8	△ 65
3 Public works expenses on pollution prevention	5,651	79.3	23,021	91.8	28,672	89.0	12,335	85.3	44,447	95.1	56,782	92.8	△ 28,110
Main constituents of 3) sewerage maintenance expenses	4,340	60.9	18,750	74.8	23,089	71.7	9,241	63.9	34,636	74.1	43,877	71.7	△ 20,788
garbage disposal facility work	505	7.1	3,787	15.1	4,292	13.3	1,187	8.2	8,625	18.5	9,817	16.0	△ 5,525
4 Expenses concerning pollution-related health damage compensation	60	0.8	630	2.5	690	2.1	55	0.4	907	1.9	962	1.6	△ 272
5 Other	328	4.6	267	1.1	595	1.8	972	6.7	321	0.7	1,293	2.1	△ 698
Total	7,128	100.0	25,070	100.0	32,198	100.0	14,458	100.0	46,738	100.0	61,196	100.0	△ 28,998

Sources) The figures in the table above were extracted by the author from the Annual Report on the Environment and the Sound Material-Cycle Society in Japan (2007 edition) and the Annual Report on the Environment (2003 edition)

Diagram 2 Breakdown of final accounting figures, and changes over time, for anti-pollution measures by local governments

Taking levels in fiscal 1995 as 100, the figures show changes in levels for fiscal 2000 and 2005.

Divisions I to V in the diagram are the following (the same as the divisions in **Table 4**).

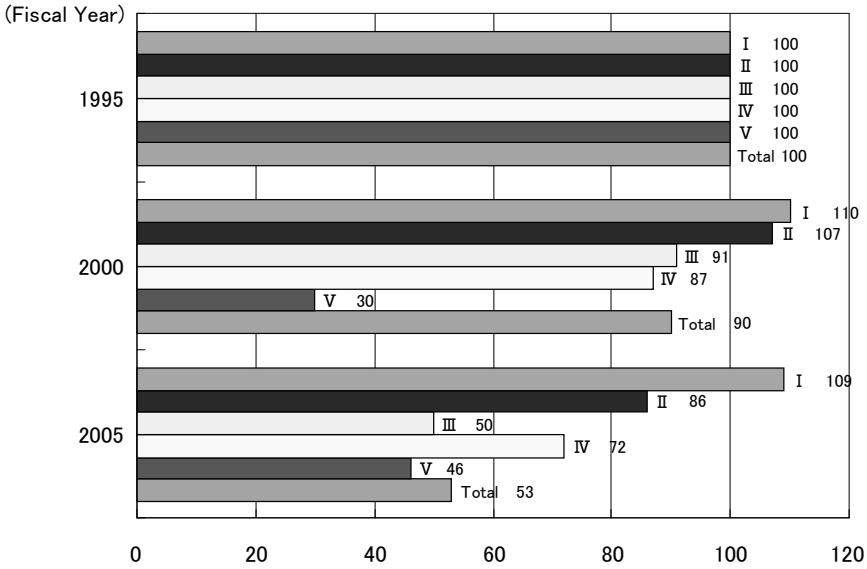
I General expenses

II Pollution regulations and survey research expenses

III Public works expenses on pollution prevention

IV Expenses concerning pollution-related health damage compensation

V Other



Sources) The figures in the diagram were extracted by the author from the Annual Report on the Environment and the Sound Material-Cycle Society in Japan (2007 edition) and the Annual Report on the Environment (1997 edition, 2002 edition).

2. The historical progression of environmental administration

2–1 Pre-war period

Modernization in Japan was taken rapidly forward after the Meiji Restoration. In the field of industry, Western technology was enthusiastically introduced against the background of the slogan, "Increase Productivity and Popularize Industry". In this period, pollution problems acquired increasing prominence, including pollution from coal mines in coal-mining districts, atmospheric and water quality pollution in urban areas where the construction of factories was promoted , and so on. However, this was an age when maximum weight was put on increasing of productivity and the strength of the nation. In cases of serious damage, individual countermeasures were taken, but overall the age was one in which insufficient countermeasures were adopted (**Note 7**).

2–2 Postwar to the mid-1970s (Note 8)

After the end of World War II, with Japan's economic recovery as the main aim, the strength of Japan as a whole was poured into establishing an industrial base and infrastructure. From around the mid-1950s, Japan entered a period of high economic growth, and the economy expanded by leaps and bounds. The development of the heavy chemicals industry proceeded apace, and when the inequality of development between different regions became a problem, the regional dispersal of industries was promoted as a countermeasure. In this kind of context, many different kinds of pollution problems, including air pollution, water pollution, and ground subsidence, occurred, and the affected areas spread to the whole country. This was the period when the emergence of Minamata disease, Itai-itai disease and Yokkaichi asthma was recognized. Movements by residents against pollution in their areas became very active in different parts of Japan.

Local governments at the time were faced with pollution problems in their own locality, and countermeasures against pollution, pushed by developing movements of residents in the affected areas, were taken forward in advance of action by central government.

In 1949, Tokyo Metropolitan Government (hereafter, TMG) enacted the "TMG Industrial Pollution Control Bylaw". This was the first bylaw designed to curb pollution in the postwar period, and the measures incorporated into the bylaw were as follows: the imposition of a duty on industries to prevent pollution and authorization of the right of entry to premises where there were grounds to suspect pollution. Subsequently in 1969, TMG enacted a comprehensive bylaw, entitled, "TMG Pollution Control Bylaw, which brought together the various anti-pollution measures that had been implemented up to that time. The same kind of movement to enact local bylaws spread to other local governments, and by 1971 a comparable bylaw to prevent pollution had been enacted in every prefecture in Japan.

A separate development that spread throughout the country was a movement to curb pollution outbreaks by means of an agreement between local governments and manufacturers (Pollution Control Agreement). The first example was an agreement concluded between Shimane Prefecture and manufacturers on the occasion of a move into the prefecture in 1952 by a pulp factory and a spinning factory. By 1970, Pollution Control Agreements had been concluded between 106 local governments (27 prefectures and 79 municipalities) and 496 companies (**Note 9**).

Throughout the period of high economic growth, developments were taken forward in areas of abundant natural surroundings, and a response to the destruction of the natural environment through these developments was the growth and spread of efforts to protect this natural environment. A "Nature Protection Bylaw" was enacted in Hokkaido in 1970, and similar movements developed in other local governments.

It was also possible to identify, at central government level, movements to counter pollution problems such as the enactment of a law to conserve water quality in the late 1950s, but there were few attempts to get to grips with the problem as a whole. As reasons for this, the following can be cited. Within the government at the time, there was a strong emphasis on thinking that prioritized the economy. As a result, there was conflict among the opinions held by different government ministries and agencies on the implementation of restrictions on firms with the aim of preventing pollution. The result of this was that it took a long time to carry out coordination and adjustment.

Movement in the form of serious countermeasures against pollution in central government dates from the enactment in 1967 of the Basic Law for Environmental Pollution Control. This law provides a definition of "pollution" and sets out the basic direction for countermeasures. On the basis of this law, several other laws and regulatory measures were enacted, such as the Air Pollution Control Law of 1968.

And in November 1970, a special session of the Diet was convoked with the primary objective of putting in place a radical legislative program concerned with pollution; the result was that a total of 14 law concerned with pollution were enacted. Through the enactment of these laws, strengthening and expansion of pollution countermeasures was promoted, and a basic foundation for pollution control was established (**Note 10**).

In 1972, the Natural Conservation Law was enacted with the aim of providing a framework for comprehensive conservation of the natural environment.

A year earlier, in 1971, the Environment Agency was established as the main organization within central government responsible for environmental policies. Since then, the environmental policies of central government have been taken forward with the Environment Agency (since 2001, the Ministry of the Environment) at the center.

2–3 From the mid-1970s to the 1980s

Under the influence of the oil shock in the 1970s, the Japanese economy moved into a period of low growth. As for industrial pollution, with factories seen as the source of pollution, results were achieved and improvements were seen to have been reached as a result of efforts to get to grips with this problem. However, on the other hand, urban lifestyle pollution became an increasing problem. For example, there was an increase in car exhaust gases resulting from an increase in the number of cars. The increase in the number of cars was brought about by the concentration of population in urban areas, which accompanied a rise in people's incomes. Another example is water quality pollution resulting from domestic waste. Another trend was the rising desire for an amenity-rich environment, driven by a feeling of need for spiritual abundance. From the mid-1980s, global environmental problems gradually became a rising focus of attention.

National environmental policy during this period has been said to be characterized by stagnation or retreat (Note 11), trends were demonstrated in such ways as the fact that environmental standards for the permitted level of CO_2 were relaxed to two or three times the level of what they had been, and the fact that the proposed law on environmental impact assessment (Note 12), from which much had been expected in terms of putting a high priority on prior prevention of environmental damage, was abandoned. Background factors here are that after the period of the oil shock, rebuilding the economy became the critical issue, and that voices demanding the prioritization of economic restoration increased in strength (Note 13). That said, there were areas in which positive developments could be identified, such as the enactment of a law designed to provide countermeasures against water pollution problems like those found in the Japan Inland Sea and in other lakes and marshes. It was also in this period that it became possible to see the start of attempts to tackle the issues of environmental education and environmental learning as well as to raise the quality of amenity-oriented environments in regional areas. Countermeasures to tackle global environmental problems date from the late 1980s.

With regard to environmental administration in local governments there are views that as the issues of pollution and environmental collapse settled down in this period, the level of interest in environmental conservation became lower (Note 14). However, it should also be noted that new problems emerged that exceeded the limits of existing countermeasures, and it was possible to identify local governments which made positive efforts to tackle these problems.

A trigger for radical action to prevent water pollution in Shiga Prefecture was the large-scale emergence of red tide in Lake Biwa. This was found to be caused by synthetic detergent containing phosphorus, and as a reaction against this, a citizens' movement emerged with the slogan: "Let's use soap" in 1978. In 1979, Shiga Prefecture passed the "Bylaw Concerning the Prevention of the Eutrophication of Lake Biwa". This was the first such bylaw to be passed in Japan.

Turning to the issue of frozen roads, in order that cars could drive safely on such roads, it became usual for them to be fitted with spiked tires in cold regions. However, the spiked tires pulverized the asphalt on the roads, causing very fine powder to be dispersed into the air, which in turn became a major social problem. As a result, Miyagi Prefecture passed a bylaw in 1985 curtailing the use of spiked tires.

And in another example, with the aim of ensuring that people would be able to continue gazing at a beautiful starry sky, Bisei Town in Okayama Prefecture passed in 1989 a Bylaw to Prevent Light Pollution, restricting the use of illuminations at night.

As shown here, local governments at this time exhibit several examples of positive action

aimed at countering environmental problems, and it is significant that these kinds of positive action spread to other local governments and at the same time, were incorporated into central government policies.

Furthermore, while central government experienced difficulties in enacting the Environmental Impact Assessment Law, in 1976, Kawasaki City incorporated environmental impact assessment procedures into a bylaw, and this practice spread to other local governments (at the present time, environmental impact assessment bylaws have been enacted in almost all prefectures and designated cities).

2–4 From the 1990s to the present day

In this period, on the one hand, pollution resulting from urban lifestyles became more widespread, while on the other hand, the boundaries of environmental problems expanded. The latter encompassed the following: 1) global environmental problems such as global warming and destruction of the ozone layer, 2) waste disposal and recycling problems resulting from the expansion of a socio-economic system based on the three main principles of mass production, mass consumption and mass disposal, 3) problems with chemical substances such as endocrinal confusion caused by such substances, and 4) the conservation of biodiversity in the natural world. And at the present time, there is a growing awareness that there is a need for autonomous responses on the part of various bodies, including manufacturers and residents, which are aimed at seeking solutions to the kind of problems described here, and that at the same time we are required to re-evaluate our mode of behavior and the desirable pattern of our socio-economic system.

At central government level, with a view to responding to the spread of environmental problems, the Basic Law for Environmental Pollution Control, which focused mainly on dealing with industrial pollution, was annulled, and in its place, the Basic Environmental Law was enacted (1993) as a new framework for environmental policy. On the basis of this law, the Basic Environmental Plan was drawn up, and on the basis of the plan, comprehensive measures to tackle environmental problems are being taken forward. The first stage of the plan ran from 1994 to 2000, the second stage from 2000 to 2006, and in the third stage, which began in 2006, a variety of measures are being implemented.

Furthermore, in order to counter the expanded range of environmental problems, the enactment of laws to serve as countermeasures was enthusiastically taken forward. in the period between the 1990s and the present day, new laws were enacted in a very wide range of areas, including global environmental problems, pollution caused by urban lifestyles, groundwater and soil pollution, wastes and recycling problems, biodiversity, environmental learning, and chemical substances. In 1997, the Environmental Impact Assessment Law, which had long been pending, was enacted, and thinking that reflected the need to give due

consideration to the environment was also incorporated into laws such as the River Law and other laws, originally enacted for the purpose of promoting development.

In June 2007, Japan launched its "Strategy for Becoming a Leading Environmental Country in the 21st Century". The document set out clearly the directions in which environmental policies should be pursued both domestically and externally, and concrete measures based on these policies are expected to be implemented in the future.

In local governments too, efforts continued to tackle the growing spread of environmental problems. Keeping in step with central government trends a growing number of local governments set out to tackle the problems by enacting bylaws setting out basic environmental policies (Basic Environmental Bylaw), and on the basis of these bylaws, formulating comprehensive environmental plans (Basic Environmental Plan). Efforts to counter environmental problems that were specific to particular areas were also taken forward.

The following section will show in more detail specific examples of how environmental problems have been tackled by local governments.

3. The structure of environmental administration in local governments

This section will examine the initiatives being taken forward by local governments to cope with environmental problems today.

3–1 A framework and initiatives in environmental administration

3–1–1 The framework of environmental administration

In many local governments at the present time, the enactment of a Basic Environmental Bylaw (a bylaw that determines the basis of environmental strategy in a local area) is being promoted as the framework for taking environmental administration forward. The trigger that sparked off the spread of such bylaws was the enactment of the Basic Environmental Law in 1992, and as of April 1, 2006, bylaws had been enacted in 831 local governments (**Note 15**). According to a questionnaire survey implemented by the Ministry of the Environment in fiscal year 2006 (**Note 16**) (hereafter, Ministry of the Environment survey), a bylaw was found to have been enacted in almost all prefectures and designated cities, and in other cities, towns and villages too, it was found to have been enacted in 43.2% of the total. Special characteristics can be identified in individual bylaws depending on the local government concerned, but broadly speaking, common headings found in the various bylaws are the following: basic concepts of environmental administration, responsibilities of local governments, manufacturers and residents, policy for a basic environmental plan,

procedures and systems for promoting environmental administration, and the preparation and publication of an Environmental White Paper. In plans drawn up on the basis of the bylaws (Basic Environmental Plan), points that are incorporated include the following: objectives of the plan, policies to be prioritized for the duration of the plan, action programs by field, procedures for managing implementation of the plan, etc. The implementation of the plan is carried out on the basis of specific numbered targets.

3–1–2 Local government initiatives

In the course of their activities, local governments carry out public works and also purchase many kinds of services. Possessing as they do this dual character of both undertaking work directly and consuming products, local governments also take the initiative in promoting projects that reduce the burden on the environment.

As a representative action of this kind, one can cite the introduction of environmental management systems (ISO14001, etc., (**Note 17**)). As of April 1, 2006, this system was introduced in 97.4% of prefectures, 100% of designated cities, and 27.5% of other cities, towns and villages (Ministry of Environment survey). In many local governments, the introduction of the system is targeted on the main office headquarters, but there are also local governments , in which the range is extended to cover research institutions, garbage disposal sites, etc.

Other examples of tackling environmental problems are shown in **Table 5**. The left-hand column contains examples of environmentally considerate actions which can be implemented in offices at an individual level. The right-hand column shows environmentally considerate actions that require the construction of a structure or a system in order to be implemented. Among these actions, those that can be found in over 60% of local governments are as follows: “No-overtime day” (a system in which it is decided that in each week, one day or more will be designed as a “no-overtime day” and that employees will be allowed to leave the building collectively at set times), a system of placing orders for environmentally friendly products, and the introduction of low-pollution cars. All of these actions are now implemented in almost all prefectures and ordinance-designated cities.

Table 5 Initiatives by firms and consumers aimed at environmental conservation

(Actions that show consideration for the environment and that can be implemented at individual employee level: implementation percentage)

(%)

Itemized initiatives	Fiscal 2006
1 Double-sided copying	89.5
2 Economizing on water use	76.9
3 Appropriate adjustment of thermostat for heating and cooling rooms	93.1
4 Turning off lights during lunch break	94.7
5 Wearing light clothing in the summer season	93.2
6 Paying attention to OA equipment power supplies	82.8
7 Use of stairs	77.4
8 Separating types of garbage for differentiated disposal	93.1

Source) Ministry of the Environment survey

(Actions that show consideration for the environment and that require the construction of a structure or system to be implemented: implementation percentage)

(%)

Itemized initiatives	Fiscal 2006
1 Establishing an initiative implementation plan	38.2
2 Ordering environment-friendly products	63.0
3 Promoting environmental conservation movements	28.8
4 Introduction of Energy Service Company at head offices	4.7
5 Introduction of natural energy	31.6
6 No-overtime-day system	64.9
7 Introduction of low-emission vehicles	60.3
8 Promoting use of public transport and bicycles	51.0
9 Evaluating environmental impact of public works	22.6
10 Study of the environment by employees	35.3
11 Introduction of environmental management systems	30.0

Source) Ministry of the Environment survey

3–2 Conservation of the everyday living environment

3–2–1 Responses to 7 typical types of pollution

In fiscal 2004, the number of complaints made about pollution to local government offices across the country numbered 94,321. In recent years, the figure has been increasing year by year, but in fiscal 2004, it declined for the first time in 5 years. The most frequent causes of complaint were the 7 typical types of pollution: air pollution, water pollution, noise, offensive smells, vibrations, ground subsidence and soil pollution. In fiscal 2004, complaints related to these 7 items added together numbered 65,535, about 70% of the entire total. Within the 7 items, the largest number of complaints received was in respect of air pollution with 24,741 complaints (37.8 % of the total for all 7 items), followed by noise with 15,689 (23.9%), offensive smells with 13,984 (21.3%) and water pollution with 8,909 (13.6%) (**Note 18**).

As a response to pollution problems of the kind referred to here, the government introduced Environmental Quality Standards (**Note 19**); the level of compliance with these is monitored by local governments (mainly prefectures). Looking at the situation with regard to air pollution, in almost all localities (99.9% of monitoring points in fiscal 2005), the level of

nitrogen oxide in the atmosphere satisfies the Environmental Quality Standards , but in the case of photochemical oxidants, which are a cause of photochemical smog, the levels at the monitoring points over almost the entire country were found to be in excess of the levels permitted by the Environmental Quality Standards . Furthermore, in the area of water quality, in fiscal 2005, the level at 99.1% of monitoring points did satisfy the Environmental Quality Standards , but in the case of BOD (biochemical oxygen demand) or COD (chemical oxygen demand), the level of compliance with the Environmental Quality Standards was found to be 83.4% at the monitoring points, and the level was particularly low in inland seas, lakes and marshes.

Regulatory measures to control environmental pollution include laws such as the Air Pollution Control Law and the Water Pollution Control Law. Within the framework of these laws, many different kinds of measures are prescribed, including reporting on installation of emission sources, setting permissible emission limits of pollutants from the emission source (discharge criteria), regular guidance and inspection visits to factories and manufacturers possessing sources of emission, and improvement orders being issued and sanctions imposed when the permissible limits are exceeded. Local governments (mainly prefectures) are responsible for the application of these measures. There are also cases where, reflecting actual conditions in particular localities, discharge standards imposed by bylaws are more severe than those set down in the law. There are also many cases where an agreement on pollution prevention is concluded between an individual local government and a particular manufacturer (31,028 cases as of April 1,2005).

In addition to the above, an important pillar of countermeasures against air pollution can be found in regulations on car exhaust emissions. Measures being taken forward include promotion of environment-friendly driving such as turning off the engine when the car is stopped, encouragement of low emission vehicles, and restrictions on diesel vehicle travel . In recent years, health damage from asbestos has become a problem all over Japan, and measures to prevent the scattering of asbestos are being implemented.

In terms of domestic wastewater countermeasures, the development of purification facilities like sewage treatment works, septic tanks, etc., is being taken forward. As a result of the spread of facilities, the diffusion rate for water purification facilities in terms of a percentage of the population is increasing year by year; at the end of fiscal 2006, the rate was 82.4% over the country as a whole. (However, the disparity between large cities and small and medium-sized municipalities has become an issue.) Furthermore, as countermeasures against water quality pollution problems, projects such as the following are currently being taken forward: 1) efforts to improve river banks by using plant-based and natural ingredients (aiming to tackle the problem by strengthening and enhancing the natural purification

function that rivers naturally possess), 2) appeals to farmers and cultivators to ensure the appropriate use of fertilizers on crops.

A recent problem in the context of our daily living environment is the heat island phenomenon found in large urban areas (the phenomenon of a temperature rise in urban areas caused by an increase in artificial heat emission and the spread of non-absorbent ground surfaces); measures that are being promoted to counter this problem include planting more greenery in city areas, sprinkling the ground with the cooperation of residents, and the technological development of water-retentive paving.

3–2–2 Countermeasures against chemical substances

As an example of countermeasures against chemical substances, on the basis of the Law Concerning Special Measures against Dioxins, measures such as the following are being carried out in prefectures all over Japan: guidance and inspection visits to related facilities, monitoring of the current state of affairs in respect of pollution by dioxins in the atmosphere, public water supplies and underground water (16,729 facilities notified in respect of the application of atmospheric and water quality standards (all-Japan database as of March 31, 2006)).

In addition, thanks to the PRTR Law (Pollutant Release and Transfer Register Law), which is concerned with getting a grasp of the extent of emissions of specially designated chemical substances into the environment as well as promoting the improvement of supervision, efforts are being made by prefectures in such ways as receiving notifications from manufacturers in respect of chemical substances which might harm people's health and ecological systems, as well as getting a firm grasp of the current situation with regard to harmful chemical substances in local areas (40,341 notifications received in fiscal 2004; all-Japan database). In addition, measures such as the promotion of the safe use of agricultural chemicals are being promoted.

3–3 Conservation of the natural environment

3–3–1 Conservation and regeneration of ecosystems

(1) Nature environment conservation areas and natural parks

Government and prefectures designate localities possessing an outstanding natural environment as "nature conservation areas", and regulations covering prohibited entry and various other measures, are being implemented in these areas. Furthermore, conservation of the natural environment is being advanced by such measures as the designation of areas with an outstanding natural environment as "national parks", "quasi-national parks" and "prefectural nature parks". In these areas, regulations on set procedures are being implemented, and at the same time, appropriate use is encouraged by such measures as putting footpaths and camp sites in place. The land area covered by the measures described

here is shown in **Table 6**.

Table 6 Nature conservation areas and nature parks

(As of March 31, 2007)

Type	Number	Area (ha)
Prefectural Nature Conservation Area	536	76,451.33
Wilderness Area (nationally designated)	5	5,631.00
Nature Conservation Area (nationally designated)	10	21,593.00
Total	15	103,675.33

(As of March 31, 2006)

Type	Number of parks	Area (ha)	Percentage of national land area (%)
Prefectural Nature Park	309	1,959,143	5.18
National Park (nationally designated)	28	2,065,156	5.46
Quasi-national park (nationally designated)	55	1,344,500	3.56
Total	392	5,368,799	14.21

Source) Ministry of the Environment, Japan Integrated Biodiversity Information System "Protected Nature Areas in Japan"

(2) Nature restoration

At the present time, with the aim of restoring the natural environment in areas in which the ecosystem was damaged in the past, measures for nature restoration are being taken forward. We can see that efforts are being made by local governments and local residents working together to restore tide lands and wetlands lost through land reclamation, and to enable them to recover their water purification function and their function as natural habitats.

Table 7 Changes over time in the total area of tide lands

	Fiscal 1978	Fiscal 1994	Fiscal 1998
Land area (ha)	53,856	51,443	49,573

Source) Statistical compilation, 2007 ed. (Ministry of the Environment)

3–3–2 Safeguarding biodiversity

With the aim of safeguarding biodiversity, prefectures have established wildlife protection areas (3,846 areas covering 7,744 acres as of March 31, 2006). Measures such as hunting prohibition regulations and strengthening of facilities to encourage wildlife propagation, are being put in place. And on the other hand, as a countermeasure against the damage caused to agricultural lands by wild boars and other creatures, measures for the planned regulation of the appropriate numbers of individual animals (including hunting) is also being implemented.

In many prefectures, a "red data book" has been compiled listing the rare species that are in danger of extinction that live within their respective localities, and their protection is further enhanced by the enactment of relevant bylaws.

In addition to the above, when public works are being planned or implemented, in order to show consideration for the biological environment, measures such as the creation of animal tracks or transplantation of valuable plants are implemented. Prevention of alien species influencing the environment if it is left as it is, has also become a recent issue for discussion.

With the aim of achieving a wider dissemination of the thinking underlying the protection of wildlife, measures aimed at residents are implemented including lecture meetings and poster competitions appealing to people's love of birds.

3–3–3 Creating greenery and enhancing amenities

Forests and other types of green space serve many different functions, including preservation of national land, purification of the atmosphere, and safeguarding a pleasant living environment. Conservation measures of this kind comprise important parts of environmental administration. In recent years, the degradation and lowering of the function of forests have become problems, and demands are increasingly being made for measures to be taken to promote appropriate measures such as increased thinning of forests. Initiatives that are now spreading throughout Japan include measures for the creation of a new tax and an increased burden on citizens so as to create a fund for appropriate thinning of forests, and support for the forests-thinning activities by volunteer organizations.

With a view to making people's living space more comfortable and introducing an element of moisture, initiatives being taken forward include creating riparian spaces in people's daily living areas, strengthening the infrastructure of urban parks and creating fine landscapes by such means as restricting outdoor advertisements. The Landscape Act was enacted in 2004, and movements have emerged with the aim of making landscapes still more attractive by making use of that legal device. Ways of preserving the historical and cultural legacy of local areas are also being taken forward.

3–4 Promoting the Establishment of a Sound Material-Cycle Society

In our present-day society, we are called upon to rethink our social habits and lifestyle based on mass production, mass consumption and mass disposal, and to establish a society that is sustainable and reduces the burdens on the environment. Measures based on thinking in terms of 3 key concepts (Reduce, Reuse, Recycle) or in more specific terms the following concepts (limiting the occurrence of waste materials; aiming as far as possible to reuse things before disposing of them; aiming as far as possible at reusing waste products as resources; in cases where turning waste products into resources is impossible, incinerating them and using the resultant heat; and disposing in an appropriate way of what remains) are being taken forward (**Note 20**).

3–4–1 General waste

Waste can be divided into general waste (non-industrial waste, domestic garbage, etc.) and industrial waste (waste generated by industrial activities, items specified in laws and regulations). According to the law, municipalities are responsible for the collection and disposal of general wastes, while manufacturers are responsible for the disposal of industrial waste .

The total quantity of general waste (= garbage) amounted in fiscal 2005 to 52,729,000 tons (equivalent to 1.131 grams per person per day), an amount that has declined continuously each year since fiscal 2000. Of the total amount, 38,495,000 tons (73% of the total) was directly incinerated. It is possible to find electricity generating stations or heat producing facilities attached to incineration facilities with a view to making use of the heat generated by the incineration process. Furthermore, if the amount of garbage treated in recycling plants is combined with the amount collected by voluntary organizations, the total is 10,026,000 tons. The recycling rate (amount of garbage turned into resource material/total amount of garbage) is 19%, and is increasing year by year. The amount of waste that is finally disposed of in landfills is 7,332,000 tons, and is decreasing year by year.

In municipalities, garbage is divided into different kinds of garbage so that it can be recycled into resource material. According to the actual situation in terms of the recycling rate of different types of garbage (figures are for fiscal 2005), the recycling rate for steel and aluminium cans was 99%, and for glass bottles and PET bottles, 95%. And from the point of view of providing incentives for residents to reduce the amount of garbage scheduled for disposal, the number of municipalities which impose charges for such disposal work is increasing.

In addition to the above, retailers are being asked to simplify packaging and to sell recycled goods, while appeals are made to residents to take shopping bags with them when they go shopping, and the number of local governments encouraging households to turn

kitchen garbage into fertilizer is increasing.

Efforts are also being made to get people to stop discarding cigarette butts and empty cans by the side of roads and rivers.

And on a separate point, what has become a politicized issue in a significant number of municipalities is the occurrence of protests by nearby householders when plans are made to establish what are known as “nuisance facilities”, i.e. incinerator plants and landfill garbage disposal sites.

3–4–2 Industrial waste

In fiscal 2004, the total discharge of industrial waste amounted to 417.16 million tons. Of this amount, 51% was recycled, and 43% could be reduced in size by intermediate processing, so that in the final outcome, 6% was disposed of in landfill sites. In the same way as in the case of general waste, the amount of recyclable waste shows an increasing trend, while the amount finally buried in landfill sites is steadily decreasing.

In the case of industrial waste, according to the law, matters concerned with licensing to the collection, transport and disposal of such waste as well as granting permission for the siting of disposal facilities, are the responsibility of prefectures, which also implement guidance and inspection visits to facilities in order to confirm the appropriateness of their activities.

Efforts to keep down the amount of industrial waste and recycle it into usable resource materials have become a very important issue, and initiatives to put pressure on manufacturers and to promote the use of recycled goods are continually being taken forward. Furthermore, the introduction of a tax levy on discarded waste as an incentive for manufacturers to reduce the amount of such waste is becoming more widespread **(Note 21)**. Movements started by manufacturers’ organizations to reduce or recycle wastes are also being taken forward.

On the subject of industrial waste, illegal dumping is a constant occurrence, and in fiscal 2005, 558 cases of illegal dumping of industrial waste amounting to 1.72 million tons (all Japan database), were newly confirmed. Strengthened patrols and observation systems are being implemented in cooperation with residents.

It is a frequent occurrence for industrial waste generated in large urban areas to be transported to local areas, and because cases of inappropriate disposal have been found in such waste, the number of local governments that have imposed inflow restriction measures is by no means insignificant. And because industrial waste disposal facilities are regarded as sources of annoyance by local residents, in many prefectures (cities), agreement is sought from residents when granting permission for the siting of such facilities.

As well as the above, various initiatives based on individual recycling laws and

harmonized with central government are being taken forward in such forms as recycling and appropriate disposal of used cars, recycling of construction material used in building, and creating fertilizer from livestock dung.

3–5 Safeguarding the global environment

3–5–1 Countermeasures against global warming

At the present time, an important issue all over Japan is how to achieve the 6% reduction in emissions of greenhouse gases **(Note 22)**, and local governments are getting to grips with global warming countermeasures in terms of formulating plans on the basis of the law (in the plans, local public bodies estimate the amount of gas discharged within their respective areas, and set numerical targets for reductions to be achieved). Specific examples put forward within the plans are encouragement of behavior aimed at saving energy in workplaces and homes, promotion of usage of public transport facilities, conservation and creation of forest areas, and dissemination of new types of energy.

As countermeasures aimed at the protection of the ozone layer, according to the law, prefectures are implementing inspection and guidance procedures targeted at manufacturers which are registered as collecting appliances using Freon gas.

Another movement that can be seen in a number of places, for reducing car use, consists of efforts to make positive use of bicycles.

3–5–2 Using energy usefully

At the level of local governments, with the aim of using energy usefully, campaigns aimed at enlightening manufacturers and householders about ways of using less energy in workplaces and households are being implemented, and at the same time, efforts to utilize the power of nature in developing and introducing new forms of energy are being taken forward. As examples of new energy, power generation using solar rays, use of solar heat, wind power generation, waste power generation, and biomass energy can be cited. With the aim of achieving the development and introduction of new energy that are appropriate for the characteristics of the locality, many local governments have produced a “new energy vision” and are implementing measures on the basis of specific numerical targets.

To promote the diffusion of solar power generation facilities to individual households, some local governments are giving subsidy grants for their introduction to individuals or providing support to solar power generation projects run by NPOs. In another development, we can find projects that use rape seed oil, derived from the seeds of the rape plant, as cooking oil, and then recycle the oil as bio-fuel.

3–6 Promotion of practical activities by manufacturers and residents that show consideration for the environment

3–6–1 Environmental education・environmental learning

In order to confront the environmental problems that face us today and to create a sustainable society, every one of us is called on to deepen our knowledge and understanding of the environment, and to act in a way that shows awareness of our roles and responsibilities. With these aims in mind, the promotion of environmental education and environmental learning is taken forward at schools , homes and local groups.

We can see a very wide range of projects including the following, each making use of the characteristics of an individual locality or community,: the creation of focal points where people can engage in environmental learning and exchange information with each other, the training of leaders who can plan environmental learning and coordinate activities, the strengthening of materials for environmental learning programs, the arranging of events concerned with observation of the stars and study of waterside areas, and the provision of information by means of websites and other means about environmental learning. Activities carried on in liaison with environmentally oriented NPOs have also become popular.

3–6–2 Encouragement of practical activities by manufacturers and residents, and of businesses that are in harmony with the environment

The core of environmental problems today is comprised of problems caused by environmental burdens that are generated by everyday living and everyday business activities. In order to lessen the extent of this environmental deficit, there is a need for everyone to alter their lifestyle and for manufacturers to alter their business style.

It is with the aim of achieving these objectives that a variety of different measures and initiatives are being implemented, including appealing to residents to take shopping bags with them when they go shopping, and introducing environment household eco-account books, a tool for checking the amount of CO_2 emitted by recording the amount of energy (electricity, gas, water, gasoline) used in the household. And in terms of initiatives aimed at manufacturers, one could cite encouragement of confirmation of the application of ISO 14001 (the basic environmental standard for any workplace) or of eco-friendly purchasing procedures, or appeals to adopt “cool business” styles (setting the air conditioner at 28° in the summer and wearing light clothing in the workplace so as to preserve a more amenable environment).

In addition, with the aim of encouraging businesses that harmonize with the environment, other initiatives being implemented include sample displays or discussion meetings about environmentally friendly products, and certification systems for agricultural products that have been grown within the framework of restrictions on chemical fertilizers or

agricultural chemicals.

3–7 The foundation of environmental administration

3–7–1 Environmental Impact Assessment

Movements concerned with getting to grips with the issue of determining in bylaws procedures for environmental impact assessment are also being taken forward. As of April 1, 2006. bylaws of this kind had been enacted in 97.4% of prefectures, 91.3% of designated cities, and 2.6% of other cities, and of towns and villages (Ministry of Environment survey). With regard to the content of the bylaws, there are cases in which, in line with the actual local situation, the parameters for the size and varieties of targets have been extended beyond those of the law. There are also local governments in which the procedures for strategic environmental assessment (at a preliminary stage implemented (the stage of making plans)) are incorporated into bylaws **(Note 23)**.

3–7–2 Providing information and collecting opinions

In the process of taking forward measures for conserving the environment through the participation of local residents, it is important for the local governments to provide residents with information about environmental conservation and to collect their opinions. In recent years, both of these procedures have been enthusiastically promoted.

As a means of providing environmental information to local residents, the distribution of information sheets and pamphlets is adopted by many local governments, and in recent years, there has been increase in methods that make use of the local government's own home page **(Table 8)**.

As for the contents of the information provided, the following are frequently found: "devices and behavior in everyday life" (49.6%); "portals for discussion of environmental problems" (47.7%); and "countermeasures to cope with environmental problems" (47.5%) (Ministry of the Environment survey).

Turning to methods of collecting information from residents, methods used by many local governments in decreasing order of frequency are the following: "formation of deliberative councils with the participation of residents" (47.3%), "listening to opinions from local autonomous bodies and neighborhood associations" (43.4%). A method has been in use for a considerable period of time is "questionnaire surveys" (33.2%), and in recent years, the number of local governments using "Public Comment Procedure" (23.1%) has shown an increase (Ministry of Environment survey).

Table 8 Methods used by local governments to provide environmental information to local residents

(%)

Methods of providing information	Fiscal 2006
Information sheets and pamphlets	76.0
Home page	47.6
"Environment days" or "Environment months"	46.3
Environment seminars and exhibitions	41.9
Annual Reports on the Environment	27.9
TV, radio	16.9
Dissemination of environmental activity evaluation programs	7.1

Source) Ministry of the Environment survey

3–7–3 Tackling international cooperation

Getting to grips with international cooperation in connection with environmental conservation is mainly taken forward by prefectures and designated cities. According to a Ministry of the Environment survey, many prefectures and designated cities are involved in receiving trainees from developing countries and in sending specialists as well as providing technical cooperation and guidance to these countries **(Table 9)**.

Table 9 International cooperation projects concerned with environmental conservation (participation percentage)

(%)

Itemized projects (Fiscal 2006)	Prefectures n=39	Designated cities n=12	Municipalities n=1,406
1 Receiving trainees from developing countries	66.7	83.3	2.6
2 Dispatch of human resources to developing countries and technical guidance and cooperation	56.4	41.7	0.9
3 Participation in international meetings on environmental conservation	41.0	58.3	1.9
4 Sponsoring international meetings on environmental conservation	28.2	58.3	1.1

Source) Ministry of the Environment survey

3–7–4 Other basic initiatives

In prefectures and designated cities, research institutions are established and survey research work aimed at environmental conservation is taken forward.

In addition, a wide range of policy methods aimed at environmental conservation are actively implemented; a specific example would be the way in which devices that incorporate consideration for the environment are transformed into a system in the context of advancing development projects (large-scale urban development, forestry development, etc.).

Conclusion

Whether environmental administration is carried out in a prefecture, covering a wide land area, or in a municipality, the basic unit of local government, will of course make a difference in terms of its authority and its role. There will also be a wide variety in the environmental problems that emerge because of differences in population density between a city and a village, or differences in the natural geographical features between a local government adjoining the sea, one in an area of lakes and marshes, and one in a mountainous area. In each case, the aspect of the environmental administration that forms part of the work of the local government will be different, and the wide diversity of local characteristics will be reflected in the points to which priority has to be attached. Moreover, many of the environmental problems of today arise from people's everyday lifestyles or from everyday working practices, which is why environmental administration has to be taken forward by the local government in close liaison with the various other local actors, such as local residents, NPOs, and manufacturers. There will also be wide variations in the character of this liaison from one local government to another.

Given this wide diversity in environmental administration among local governments , this paper has tried to present an overview from the points of view of the budget, personnel, organization, and activities. For further details, and in order to grasp the content and the issues in individual fields, I recommend taking a look at the environmental "white papers" issued by individual local governments (recently, English versions can also be found). If this paper has served as an introduction to readers wishing to learn about environmental administration of local governments in Japan, it will have fulfilled its purpose.

Notes

(Note 1)

The following website, produced by the Ministry of Internal Affairs and Communications, provides information on government structures and the number of staff in national administrative organizations: http://www.soumu.go.jp/gyoukan/kanri/satei_f.htm (accessed on September 10, 2007).

(Note 2)

The following website, the English language home page of the Ministry of the Environment in Japan, will serve as a valuable source of reference for information about the Ministry and its activities: http://www.env.go.jp/en/aboutus/pamph/html/index.html (accessed on September 17, 2007).

(Note 3)

Taken from the "National Environment Handbook, 2005 edition", Ministry of the Environment, ed., 2005.

(Note 4)

See "Annual Report on Pollution," 1969 ed., "Annual Report on the Environment," 1972 ed., "Annual Report on the Environment," 1973 ed.

(Note 5)

In terms of municipalities which had such structures, there were 112 in 1968 (3% of all municipalities), a figure which had increased to 688 (21% of all municipalities) by October 1972. Data taken from the "Annual Report on Pollution," 1969 edition, and the "Annual Report on the Environment," 1973 edition.

(Note 6)

Distributed documents 2 to 4, comprising details of the 25th meeting of the Comprehensive Policy Sub-Committee of the Central Environment Council, which met on March 17, 2005, are documents based on data from 2004 concerning the situation in local public bodies.

(Note 7)

Refer to "Annual Report on Pollution," 1969 edition, and "Annual Report on the Environment," 1999 edition.

(Note 8)

Environmental conservation measures in Japan follow a pattern whereby local governments take the initiative in the first instance, and their initiatives are subsequently formalized as central government policy. The reason for this is that ① many pollution problems originate at local level, and local governments, with a comprehensive brief for local matters, are required to deal positively with the needs of local residents, and that ② there are differences in decision-making processes between central government and local governments. With specific reference to ②, there was a strong tendency at central government to put priority on industry, and it took time to settle differences between Ministries and Agencies regarding pollution problems, so that the reality was that it was not possible to take appropriate countermeasures in a timely fashion. In contrast to this, we can say that in the case of local governments, decisions can be made rapidly by the one person elected as the chief executive officer of the local government, and policies can be adopted.

Furthermore, it has also been pointed out that in the background to local governments taking the initiative in pollution prevention measures is the autonomous organization of environmental policy by local public bodies, as guaranteed by the section "Local Self-Government" in the Constitution of Japan, promulgated after the end of World War II. (Teranishi, Shun'ichi (2002), op. cit., p 6).

(Note 9)

Refer to "Annual Report on Pollution," 1971 edition.

(Note 10)

In the context of taking forward the process of putting government orders in place, the issue of bylaws which contained severer anti-pollution measures than those in government orders became a problem, with the result that government orders were amended and stronger controls implemented by means of clearly approved bylaws. (Air Pollution Control Law, Water Pollution Control Law).

(Note 11)

Tadashi Ohtsuka, 2006, Kankyou Hou, dai 2 ban, (Environmental Law, 2nd edition, Yuhikaku, p 14.

Hidefumi Kurasaka, 2004, Kankyou Seisaku Ron, (Theory of Environmental Policies, Shinzansha Publisher Co., Ltd., p. 40.

(Note 12)

"Environmental Impact Assessment provides for the environmental impacts of development projects to be surveyed, forecasted and evaluated by proponents in the process of designing the project. Those results are then opened to the public to obtain opinions, both from citizens and from local governments. The best project scheme can then be developed incorporating these various viewpoints and addressing the issue of environmental protection." (from the Ministry of Environment English-language home page).

(Note 13)

Hidefumi Kurasaka, 2004, Kankyou Seisaku Ron, (Theory of Environmental Policies, Shinzansha Publisher Co., Ltd., p. 40.

(Note 14)

Kentaro Inoue, 2006, Nihon Kankyou-shi Gaisetsu (An Overview of Environmental History in Japan, University Education Press, p. 191.

(Note 15)

Annual Report on the Environment and the Sound Material-Cycle Society in Japan（2007 edition）, p. 292.

(Note 16)

"Questionnaire survey targeted at local governments concerning expectations for them in the Basic Environmental Plan," 2006 ed., Ministry of the Environment.

(Note 17)

An Environmental Management System is a device for continuously taking forward a policy direction that takes consideration of the environment. By means of repeated application of the Plan-Do-Check-Act (PDCA) cycle, continuous self-improvement can be aimed at, and consideration for the environment can be promoted. (from the home page of the Ministry of the Environment).

(Note 18)

"Deta de Miru Kensei" (Japanese Prefectures seen through Data in 2007), Committee to Commemorate Kentaro Yano. The original data are taken from National Overview of Pollution Complaints, Committee to adjust pollution, etc, 2004.

(Note 19)

Standards are specified for water, ail, soil and noise (Ministry of the Environment English-language home page).

(Note 20)

Concepts shown in the Fundamental Law for Establishing a Sound Material-Cycle Society, enacted in 2000. At the present time, laws concerned with waste are being put in place on these concepts, and in many local governments, too, on the basis of this legal framework, efforts aimed at establishing a sound material-cycle society are being taken forward.

(Note 21)

Local governments that have introduced a tax levy on discarded industrial waste comprise 27 prefectures and 1 designated city. (Home page of the Ministry of Internal Affairs and Communications) (accessed on October 5, 2007).

(Note 22)

In December 1997, the Third Conference of the Parties on the Convention of Climate Change (CoP3) was held in Kyoto, resulting in the adoption of the Kyoto Protocol (it set targets for the reduction of the emission of greenhouse gases into the atmosphere). Japan ratified the protocol, and as a legal framework demonstrating the combined efforts of central government, local governments, manufacturers, and the Japanese people to get to grips with strategies to counter global warming, the Law Concerning the Promotion of the Measures to Cope with Global Warming was promulgated in 1998. The Kyoto Protocol came into effect on February 16, 2005.

(Note 23)

Annual Report on the Environment and the Sound Material-Cycle Society in Japan（2007 edition）, p. 283

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