

Part Two Current Environmental Issues and Environmental Conservation Measures by the Government

Part Two of the *Quality of the Environment in Japan 2005* (White Paper) introduces in the chapters below the environmental conservation policies and measures implemented in FY 2004 based on the state of environmental problems and in line with the Basic Environment Plan. Part Two of this booklet will report on the issues and current state of environmental problems in the major fields.

- Chapter One: Conservation of the Global Atmospheric Environment
- Chapter Two: Conservation of the Atmospheric Environment (not including the global atmospheric environment)
- Chapter Three: Conservation of the Water, Soil, and Ground Environments
- Chapter Four: Measures and Policies related to the Material Cycle, including Waste and Recycling Measures
- Chapter Five: Measures for Chemical Substances
- Chapter Six: Conservation of the Natural Environment and Promoting Contact with Nature
- Chapter Seven: Basis of Various Measures, and Measures Facilitating the Participation of Various Actors and International Cooperation

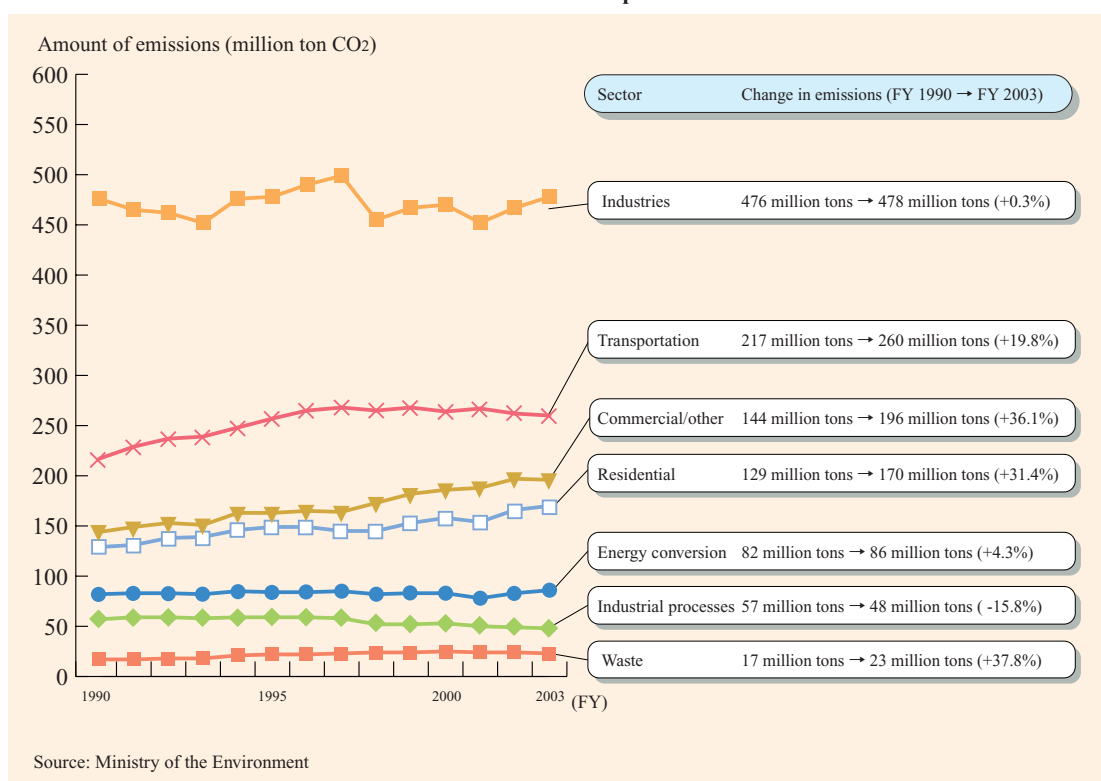
1. Conservation of the Global Atmospheric Environment

(1) Global Warming

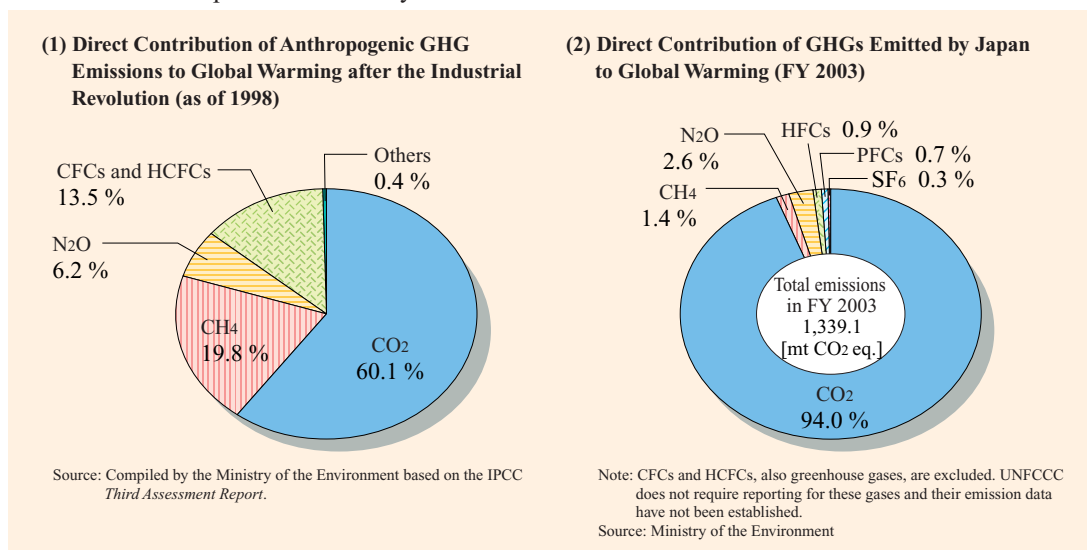
Expanding human activities have discharged vast quantities of carbon dioxide (CO₂), methane and other greenhouse gases (GHGs) into the atmosphere. In recent years, these gases have enhanced the greenhouse effect and given rise to the threat of global warming.

According to the *Third Assessment Report: Climate Change 2001* published by the Intergovernmental Panel on Climate Change (IPCC), the global mean surface temperature has increased by approximately 0.6°C over the 20th century, and consequently the mean global sea level has risen by approximately 10–20cm. The progress of global warming may have far-reaching and serious effects on the living environment of humans and the natural habitats of other living organisms.

CO₂ Emissions in Japan



Of the amounts of GHGs emitted in Japan in FY 2003, CO₂ emission was 1,259 million tons, with a per capita emission of 9.87 tons. Compared to the FY 1990 figures (the base year of the Kyoto Protocol), the total emission has increased by 12.2% and the per capita emission by 8.7%. A breakdown by sector shows that emission from the industries has increased by 0.3%, while that of the commercial and other sector has increased by 36.1%, the residential sector by 31.4% and the transportation sector by 19.8%.



In May 2002, Japan revised the “Climate Change Policy Law,” and ratified the Kyoto Protocol in June of the same year, which sets legally binding numerical targets for greenhouse gas emissions in developed nations. With the Russian ratification of the Protocol in November 2004, the conditions for the entry into force of the Protocol was fulfilled. Thus the Kyoto Protocol entered into force on February 16, 2005. One hundred and forty-nine countries and the EU ratified the Kyoto Protocol as of April, 2005.

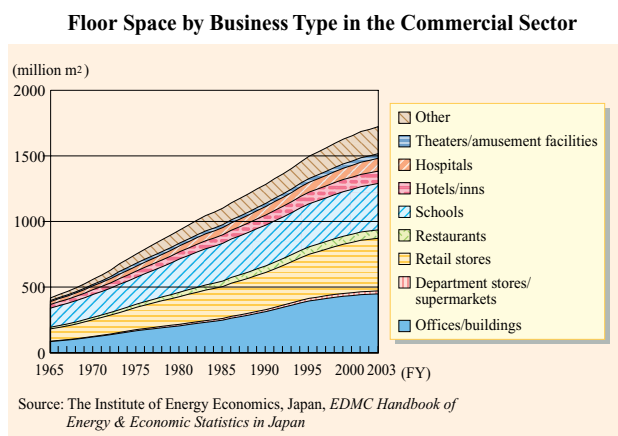
Because CO₂ arises from every aspect of human activities, curbing its emission requires collective efforts by all actors of society from national and local governments to business operators and each individual citizen. In pursuing measures against global warming, an effective mechanism for both economy and environment must be developed and established.

(2) Depletion of the Ozone Layer

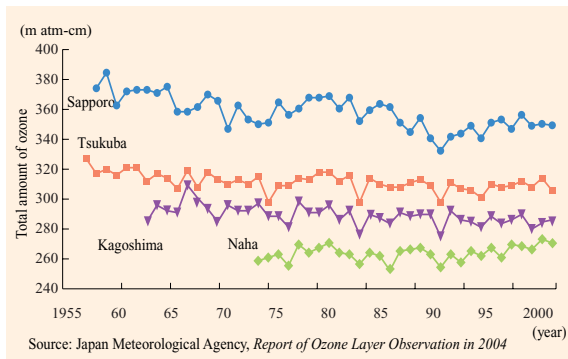
It has been known that the ozone layer is being destroyed by ozone-depleting substances such as chlorofluorocarbons (CFCs). There is concern that depletion of the ozone layer may increase the quantity of harmful ultraviolet radiation reaching the earth, causing growth impediment of organisms and health damages in humans such as skin cancer and cataracts.

The ozone layer is being depleted over almost the entire globe, except for the tropics. In Japan, a long-term depletion of the ozone layer has been observed above Sapporo, Tsukuba, and Kagoshima. The extent of decrease is especially notable above Sapporo. Over Antarctica, the largest scale of ozone depletion that ever appeared was recorded in 2003.

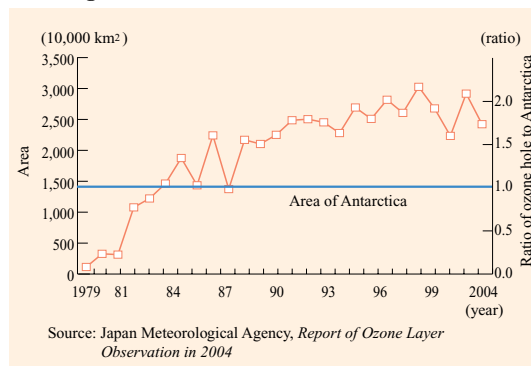
In Japan, in order to prevent further depletion of the ozone layer, the production of ozone-depleting substances is regulated pursuant to the Ozone Layer Protection Law. In addition, the recovery and destruction of fluorocarbons at the disposal stage of products are mandated by the Home Appliance Recycling Law, the Fluorocarbons Recovery and Destruction Law, and the End-of-Life Vehicle Recycling Law.



Changes in the Annual Average of Total Ozone Amount over Japan



Changes in the Size of Ozone Hole over Antarctica



2. Conservation of the Atmospheric Environment (not including the global atmospheric environment)

(1) Acid Deposition and Dust and Sandstorms

Acid deposition can produce various effects on the environment and living creatures such as trees or fish by increasing acidity in soil, lake water, etc. Buildings, artificial constructions and cultural assets can be affected by acid deposition. In the U.S. and Europe, acidification of lakes/reservoirs and the decline of forests caused by acid deposition have been reported.

In Japan, long-term monitoring of acid deposition is carried out to detect its effects as early as possible and to forecast the effects in the future.

The monitoring results of acid deposition suggest that rain and snow are still as acidic in Japan as in the U.S. and Europe. However, at present, there is little reason to believe that acid deposition has caused any widespread damage to vegetation. As it is generally believed that the impact of acid deposition may take a long time to become apparent, it may surface in the future if the current level of acid deposition continues.

The Acid Deposition Monitoring Network in East Asia (EANET) started its activities on a regular basis in January 2001 to share a common understanding of the state of the acid deposition problems in East Asia and to contribute to cooperation on various issues related to acid deposition.

Dust and sandstorms (DSS) have been increasing both in frequency and intensity in Northeast Asia in recent years. Measures against DSS are a common concern for China, Korea, Japan and other countries in the region. Inside Japan, the government has stepped up the system of DSS monitoring. An international effort is also being made to study effective DSS prevention and control measures for the future, with the cooperation of four countries (China, Mongolia, Korea and Japan) and four international organizations, e.g. the United Nations Environment Programme, co-financed by the Asian Development Bank and the Global Environment Facility.

As one of the measures to combat photochemical oxidants, the Air Pollution Control Law was revised in May 2004 to control VOC emissions from factories. Adequately combining VOC's emission regulations and voluntary efforts by business operators, the revised law will be effective in harnessing VOC emissions. In FY 2006, VOC emitters will be required to notify VOC-emitting facilities and to meet regulatory standard values. There is also great expectation for the voluntary efforts of businesses. To control VOC emissions from automobile exhaust gas, regulations have been in place and stepped up successively in accordance with the Air Pollution Control Law.

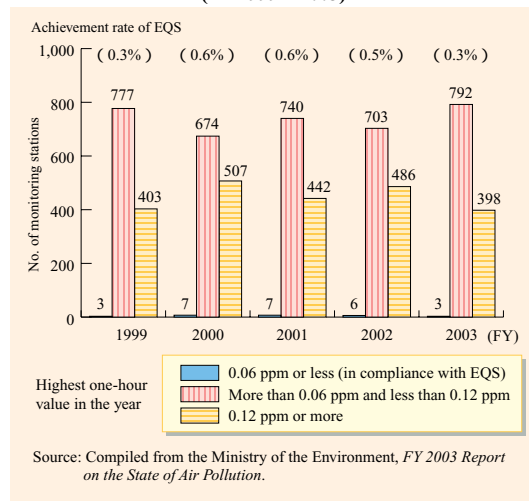
Through the Atmospheric Environmental Regional Observation System (nickname *Soramame-kun*), real-time data on the atmospheric environment is measured, and information concerning the issuance of photochemical oxidants alarms or warnings by local governments nationwide is collected and announced on the Internet.

(3) Nitrogen Oxides

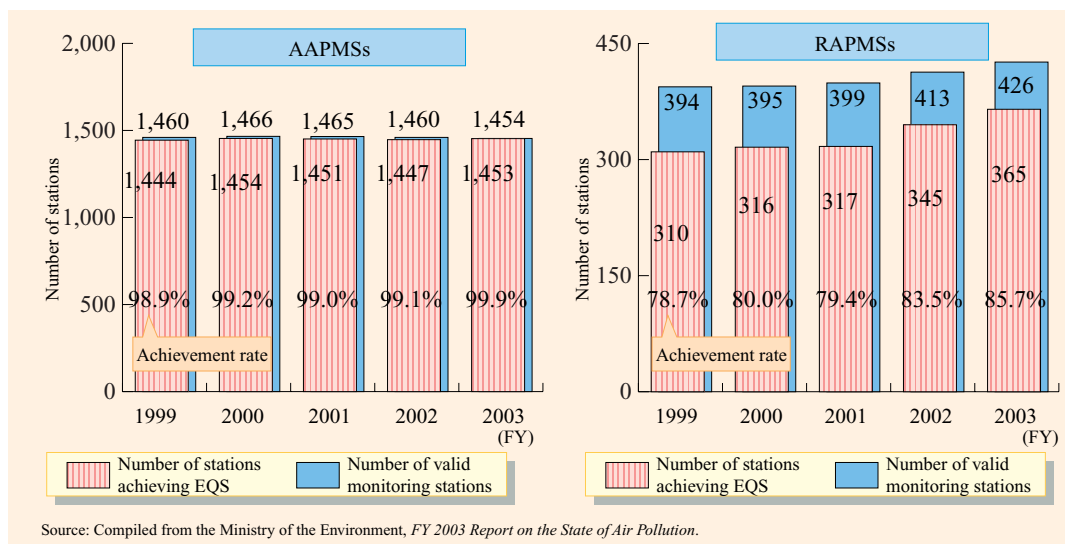
Nitrogen oxide (NO_x) is a by-product of combustion, generated mainly from stationary sources, such as factories, and mobile sources, such as motor vehicles. NO_x is a causal substance of photochemical oxidants, suspended particulate matter, and acid rain. Nitrogen dioxide (NO₂) at a high concentration may cause irritation to the respiratory organs and cause other harmful effects.

Compared to the previous year, the achievement rates of the EQSs for NO₂ in FY 2003 improved. The achievement rate of the ambient air pollution monitoring stations (AAPMSs) was 99.9%, and that of the roadside air pollution monitoring stations (RAPMSs) was 85.7%.

Changes in the Number of Monitoring Stations by Photochemical Oxidant Concentration Level (AAPMSs and RAPMSs) (FY 1999–2003)



Changes in the Attainment of the EQS for Nitrogen Dioxide (FY 1999 – 2003)



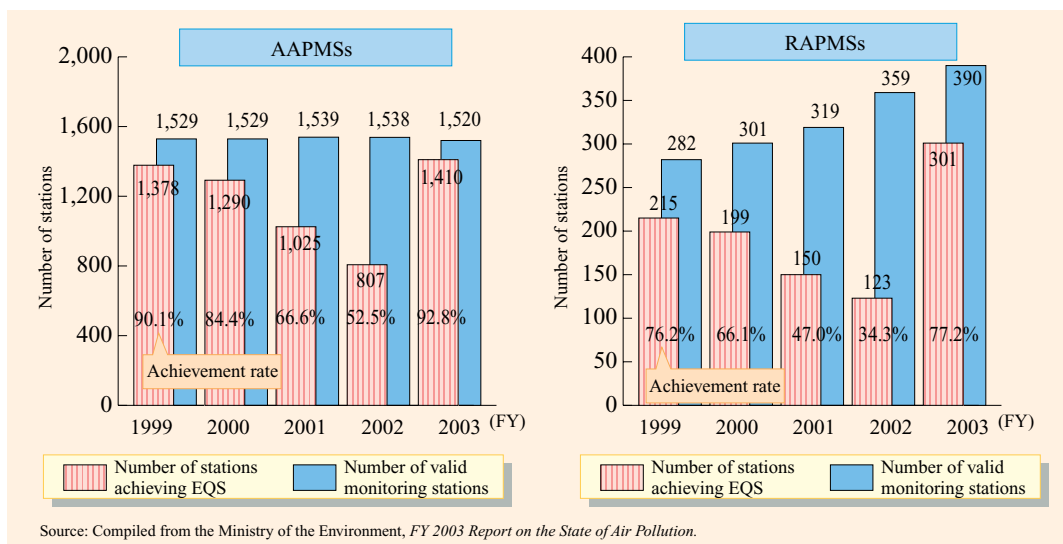
(4) Suspended Particulate Matter

Suspended particulate matter (SPM) in the air with a diameter of 10µm or less is classified into primary particles or secondary particles. Primary particles include soot and dust from factories, diesel exhaust particles (DEP) generated from diesel vehicles, and soil particles dispersed in the air. Secondary particles are those formed by chemical reaction

within the atmosphere from gaseous substances, such as nitrogen oxides (NO_x). Because SPM is of a minute size, it remains in the air for extended periods. An accumulation of SPM in high concentrations in the lungs or the trachea can have damaging effects on the respiratory system.

The achievement rates of the EQS for suspended particulate matter improved in FY 2003 compared to the previous year.

Changes in the Attainment of the EQS for Suspended Particulate Matter (FY 1999 – 2003)



Furthermore, studies are being conducted on fine particulate matter with a diameter of 2.5µm or less and diesel exhaust particles, because their impacts on human health have raised concerns in recent years.

(5) Hazardous Air Pollutants

Various chemical substances, though low in concentrations, have been detected in the atmosphere, raising concern about the health effects of long-term exposure to these substances. In FY 2003, the level of benzene exceeded the EQS at 33 monitoring points, 7.8% of the 424 total points.

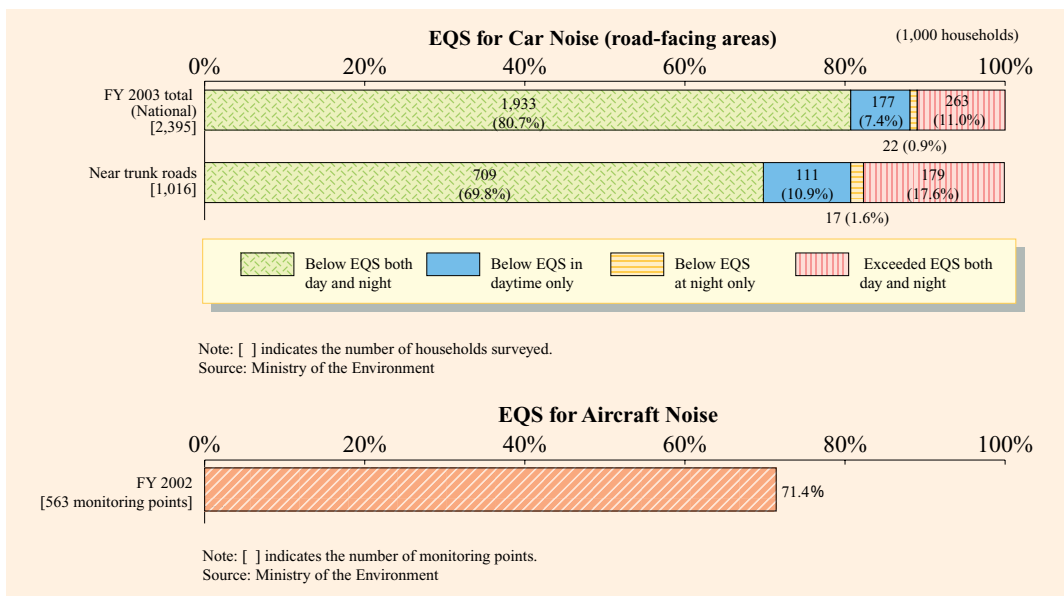
Pursuant to the Air Pollution Control Law, standards were set up to control the emissions of specified substances, such as benzene, and voluntary measures by businesses to control emissions were encouraged. Simple calculation of the total emissions of twelve substances that are targeted by the voluntary management plans in FY 2003 shows a substantial reduction rate of 57%, decreasing from approximately 38,000 tons in FY 1999 to 16,000 tons in FY 2003.

(6) Noise, Vibration, and Offensive Odors

Complaints about noise and vibration have increased gradually in the last few years, totaling 15,928 and 2,608 in FY 2003 respectively. Complaints about offensive odors, especially about open incineration, have increased drastically since FY 1997. The trend is on the rise in the last several years, reaching a record of 24,587 complaints in FY 2003.

For car noise in areas facing roads, the state of compliance with the EQS in FY 2003 was as follows: 1,933 thousand (80.7%) out of assessed 2,395 thousand households facing roads were within the satisfactory level stipulated by the EQS for both day and night. Among those household facing roads, 1,016 thousand households were near trunk roads, out of which 709 thousand households (69.8%) were within the EQS's satisfactory level. As for aircraft noise, 71.4% of households were within the satisfactory level the EQS in FY 2002.

Attainment of the EQS for Transportation Noise

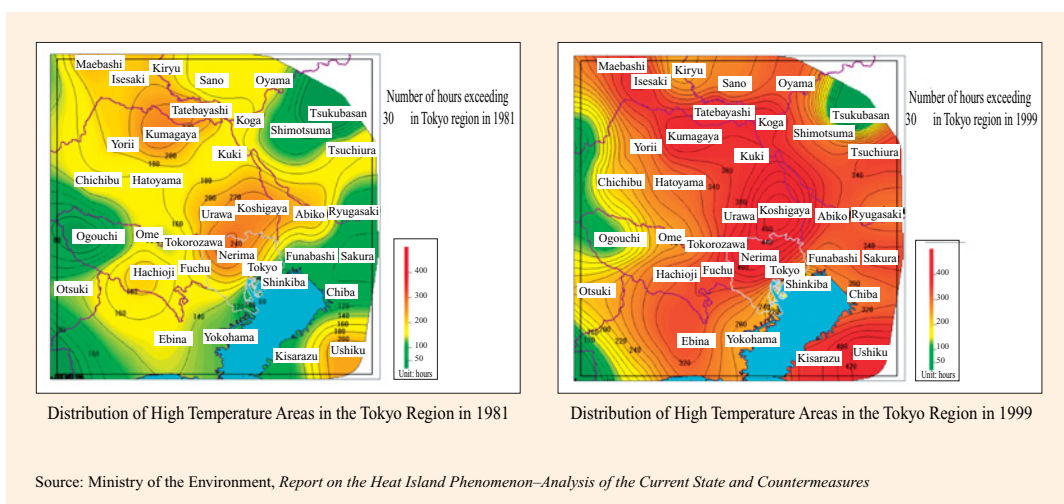


For noise and vibration coming from factories, business establishments, automobiles, and aircrafts, permissible limits and EQSs were set up pursuant to the Noise Regulation Law and the Vibration Regulation Law in order to impose restrictions.

(7) Heat Island Phenomenon

The heat island phenomenon occurs when the temperature rises more in urban areas than in surrounding suburban areas. This phenomenon results in an increase in the number of sultry nights in the summer. As waste heat from air conditioners raises the temperature, more energy is consumed as air conditioning works harder still, creating a vicious cycle.

Distribution of High Temperature Areas in the Tokyo Region (1981 and 1999)



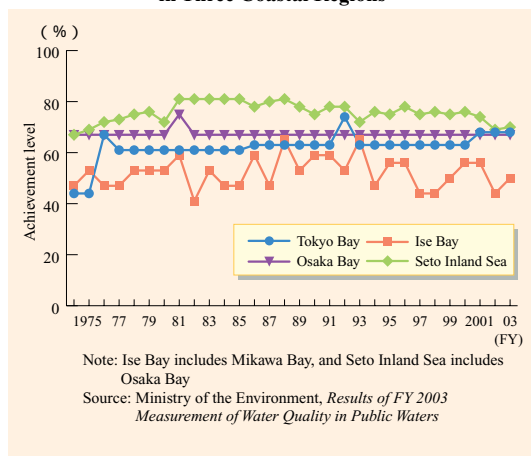
In March 2004, concerned ministries and agencies put together the “Outline of the Policy Framework to Reduce Urban Heat Island Effects” to facilitate policy implementation. The Outline consists of four pillars of measures, including the reduction of anthropogenic exhaust heat, improvement of urban surface, improvement of urban structure, and improvement of lifestyle.

3. Conservation of the Water, Soil, and Ground Environments

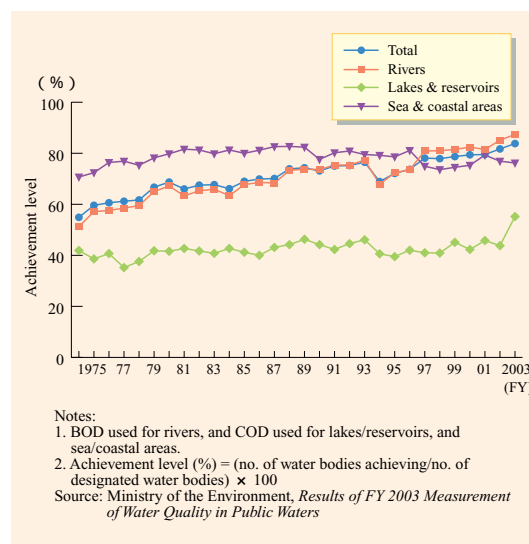
(1) Water Environment

According to the Results of FY 2003 Measurement of Water Quality in Public Waters, the achievement level of the EQS for the protection of human health from substances, such as cadmium, was 99.3%. Standards set for protecting the living environment were achieved at slightly lower rates. The BOD (or COD) level is an EQS for the conservation of the living environment and is a typical water-quality indicator for organic contamination. Its EQS achievement level remained at 83.8%. By water area, the achievement levels were 87.4% for rivers, 55.2% for lakes and reservoirs, and 76.2% for sea areas. In particular, the achievement rates for enclosed water areas, such as lakes, reservoirs, inner bays, and inland seas, were still low. In terms of COD, the achievement rates were 68% for Tokyo Bay, 50% for Ise Bay, and 70% for the Seto Inland Sea. Consequently a bill making a partial amendment to the Law concerning Special Measures for the Preservation of Lake Water Quality was submitted to the 162nd Diet in order to conserve the water quality of lakes and reservoirs further. It promotes measures to reduce the pollution load from urban districts and farmland in specified areas and to maintain the lakeshore water environment in a proper manner.

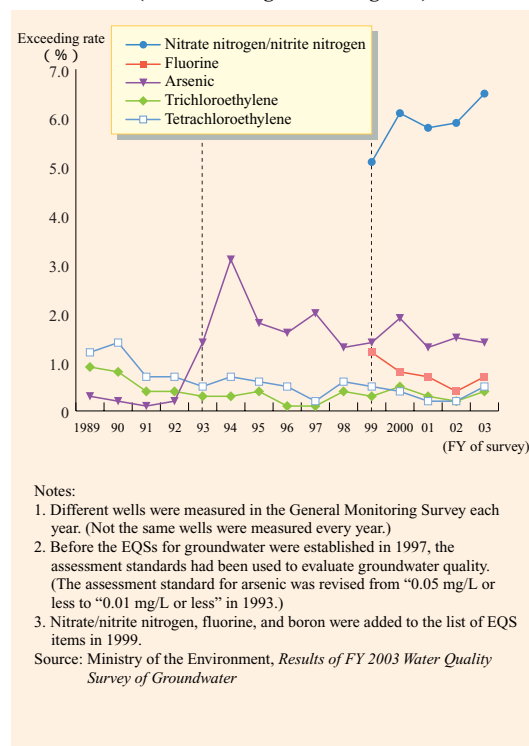
Trends in Rate of Achievement with EQS (COD) in Three Coastal Regions



Trends toward Achieving EQSs (BOD or COD)



Changes in Exceeding Rates to EQSs for Groundwater (Items with high exceeding rate)



According to the Results of the FY 2003 Water Quality Survey of Groundwater, the rate of exceeding the EQSs was 8.2% of the total wells surveyed. Especially, the rate of nitrate/nitrite nitrogen exceeding the EQS was 6.5%. The pollution was caused by farmland fertilization, domestic drainage, excreta of livestock, etc., and immediate measures are needed to deal with the groundwater pollution by nitrate/nitrite nitrogen.

The review of the Groundwater Management Methods for managing groundwater and supporting conservation plans, and the review of the Measures for Environmental Water Security for local waters that have experienced a decline in water flow are underway by the Inter-Ministry/Agency Coordination Committee for Building a Sound Water Cycle.

(2) Marine Pollution

For conservation of the marine environment, Japan has concluded the London Convention, which regulates the dumping of waste from ships at sea, and the MARPOL 73/78 Convention, which prevents marine pollution caused by ships. In response to these conventions, Japan has taken domestic measures to prevent marine pollution.

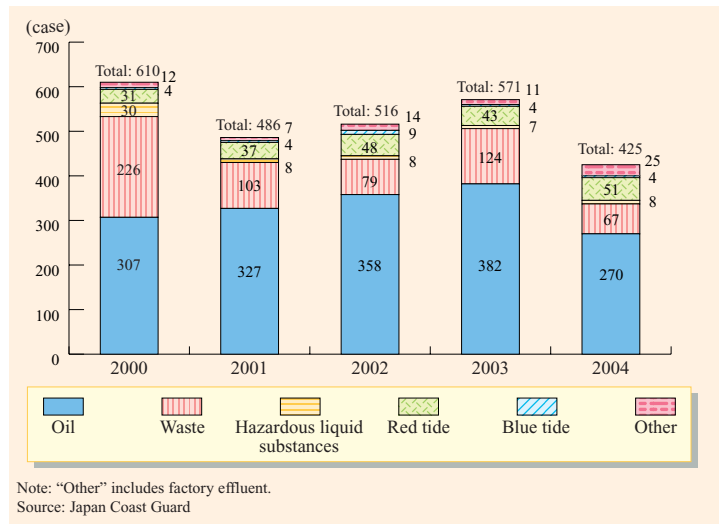
In order to assess and monitor the condition of the marine environment, data is being collected to determine the condition of water quality, bottom sediment, and aquatic organisms comprehensively and systematically.

In terms of pollution caused by oil, waste, and red tide, 425 cases were identified in 2004, a decrease of 146 cases from the 2003 total. Monitoring of drifting marine debris by sight indicated that most of such debris was petrochemical products such as foamed polystyrene and plastics. They were found in large quantities along the western coast of Kyushu.

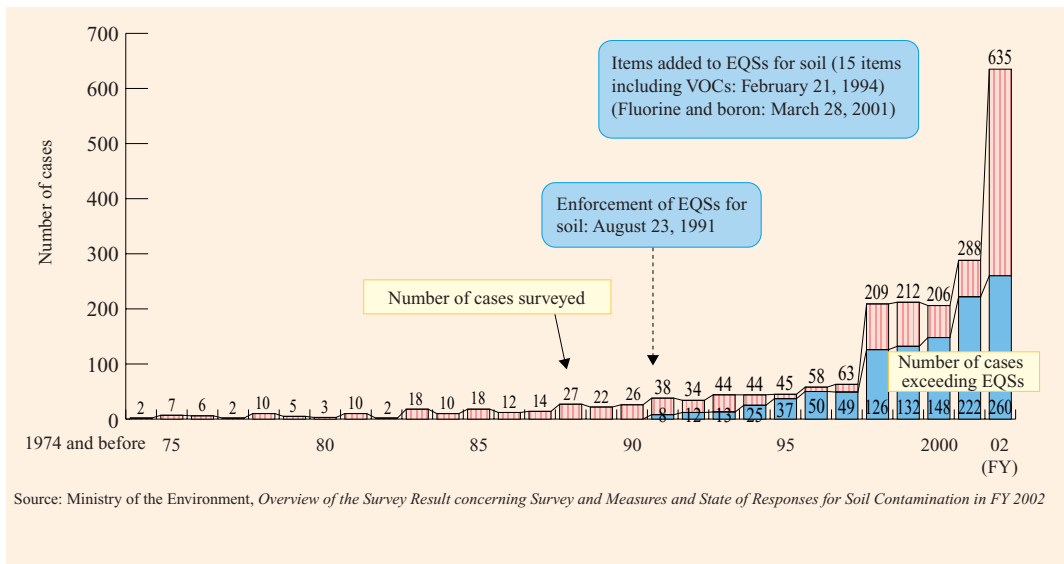
(3) Soil Contamination

Once soil is contaminated, it accumulates hazardous substances, perpetuating the state of pollution. In order to tackle such soil contamination, appropriate measures were sought based on the Soil Contamination Countermeasures Law. At the same time, studies were conducted to review the overall EQSs for soil, increasing targeted substances and exposure paths. In recent years, an increasing number of urban soil contamination cases have been found during the redevelopment of former factory sites. In FY 2002, 260 cases that failed to comply with the EQS for Soil Contamination were newly identified.

Changes in the Number of Identified Marine Pollution Cases



Number of Identified Soil Contamination Cases by Fiscal Year



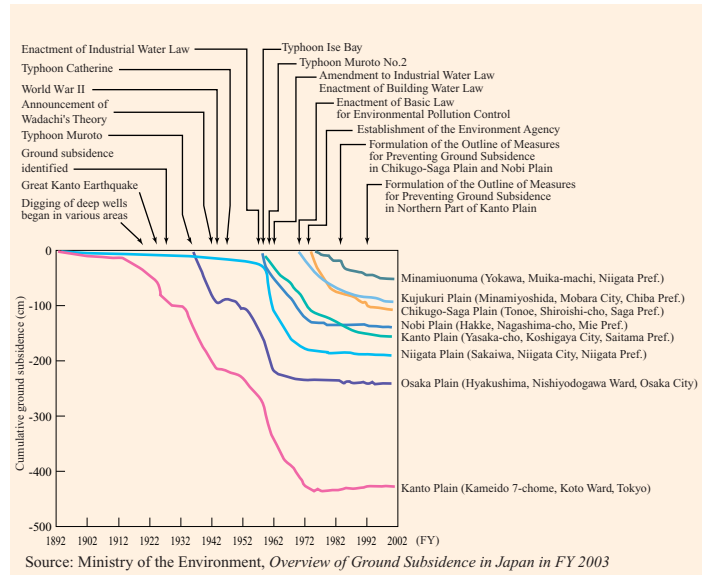
(4) Ground Subsidence

Ground subsidence is caused by excessive pumping of groundwater, which lowers the level of the groundwater and shrinks the clay layer. There were 61 areas in 37 prefectures that reported ground subsidence as of FY 2003. The restrictions on the pumping of groundwater and other measures have mitigated ground subsidence in the wards of Tokyo, Osaka City, and Nagoya City, where remarkable ground subsidence had occurred in the past.

However, ground subsidence has still occurred in certain areas such as the Kujukuri plain in Chiba Prefecture. Some areas that are lower than sea level due to ground subsidence may face the danger of

huge damages caused by high tides or floods. For this reason, besides imposing restrictions on the pumping of groundwater, measures are being taken to deal with high tides and to build facilities to protect the coastline.

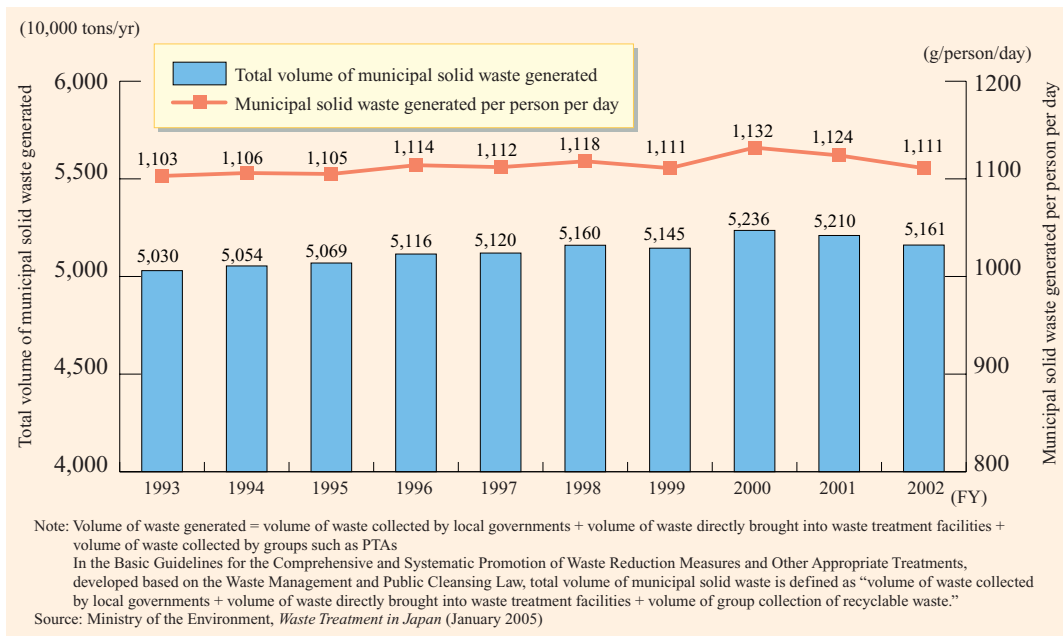
Changes in Ground Subsidence in Selected Areas



4. Measures and Policies related to the Material Cycle, including Waste and Recycling Measures

Since FY 1990, Japan has been generating municipal solid waste at an annual volume of approximately 50 million tons or more. These annual volumes have remained steady over the last several years. In FY 2002, of all municipal solid waste, direct incineration accounted for 78.4% and recycling accounted for 17.3%. The final volume disposed of at

Changes in the Total Volume of Municipal Solid Waste and Volume Generated per Person per Day



landfill sites was 9.03 million tons, a decrease of 920,000 tons from the previous year.

The total volume of industrial waste generated in Japan has also remained steady over the last several years. The volume in FY 2002 was approximately 393 million tons, a decrease of about 1.8 % from the previous fiscal year. Approximately 40 million tons were discarded at final disposal sites, a decrease of about 2 million tons from the previous fiscal year. Nationally, an average of 4.5 years of capacity in final disposal sites for industrial waste remained as of April 2003, presenting a serious situation.

To solve these problems, it is necessary to implement waste and recycling measures, taking into account the following priorities stipulated in the Fundamental Law for Establishing a Sound Material-Cycle Society: (i) reduce waste, (ii) reuse end-of-life products and parts, (iii) recycle as raw materials, (iv) recover heat, and (v) appropriately dispose as final waste. In line with this basic principle, the Waste Management and Public Cleansing Law and various recycling laws have been steadily enforced.

In terms of the illegal dumping of industrial waste in Japan, the number of cases with volume over 10 tons was 894 in FY 2003, showing a decline following the previous year. The total volume of illegal dumping, on the other hand, reached 745,000 tons, including about 567,000 tons found in Gifu City in March 2004. This volume set the record as the highest total since the survey started in FY 1993.

To tackle these issues, the government made a partial amendment to the Waste Management and Public Cleansing Law in 2004. The Law strengthens the government's role to help resolve cases of improper disposal of waste. It also establishes provisions to punish those who improperly dispose of specified hazardous waste (sulfate pitch) and those who collect and/or transport waste with the intention of illegal dumping. These various provisions of the Law were enforced in succession until all were in force by April, 2005. In March of the same year, a bill to make another partial amendment to the Waste Management and Public Cleansing Law and Other Laws was submitted to the 162nd Diet in order to step up measures to tackle improper disposal of waste, such as large-scale illegal dumping and unauthorized export, and to establish more effective administrative systems. The bill proposes streamlined administrative practices in cities with public health offices, a strengthened industrial waste manifest system, and harsher penalties for waste exports that have evaded mandatory authorization procedures.

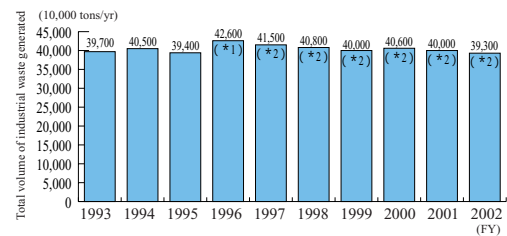
5. Measures for Tackling Environmental Risk from Chemical Substances

Among the more than several tens of thousands of chemical substances in circulation in Japan today, some may be harmful to human health and to ecosystems if they are not properly managed and may pollute the environment during the various stages of production, distribution, consumption, and disposal.

In order to prevent these harmful effects, the environmental risk (possible interference with environmental conservation) of these chemical substances must be assessed and appropriate measures must be taken.

The partial amendment to the Chemical Substances Control Law, which came into force in April 2004, introduced prior evaluation procedure and regulation of chemical substances from the viewpoint of eco-toxicity in addition to human health. It also introduced measures for persistent and highly bio-accumulative existing chemical substances and

Changes in the Volume of Industrial Waste Generated

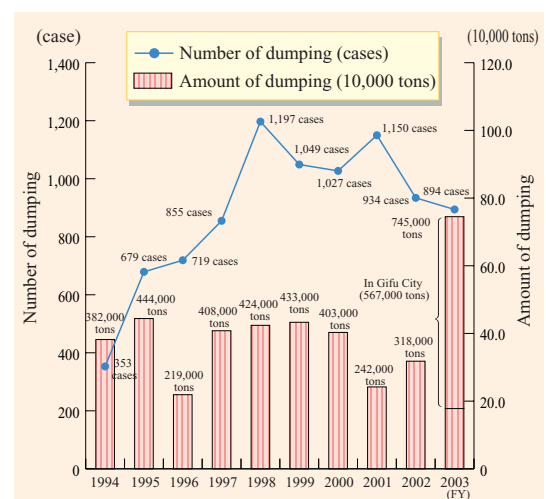


Notes:

- (*1) indicates the amount of waste generated in FY 1996, calculated based on the "Target of Waste Reduction" (government decision, September 28, 1999) - target for FY 2010-compiled pursuant to the Basic Policy for Dioxins Measures.
- (*2) The amount of waste after FY 1997 was calculated using the same calculation conditions as *1.

Source: Compiled from the Ministry of the Environment, *State of the Generation and Treatment of Industrial Waste (FY 2002 Results)*.

Changes in the Number of Cases and Amount of Illegal Dumping



Notes:

1. The number of dumping cases and the amount of dumping are derived by counting cases in which, from among the illegal dumping of industrial waste identified by prefectures and cities with public health offices, the amount of dumping is 10 tons or more. (Cases that involve specially controlled industrial waste are all included.)
2. For cases identified in the transboundary area between Aomori and Iwate prefectures, the totaled 16,000 tons are included in the FY 1999 data. The remaining 860,000 tons, identified during FY 2002 and FY 2003, were not included in the respective fiscal years. The case in Teshima, Kagawa Prefecture (510,000 tons) was identified in FY 1990, and therefore was not within the scope of the above Figure 2.
3. The amount of waste in the case in Gifu Prefecture was in fact 753,000 tons, as was determined by later studies conducted by Gifu municipal government in March 2005.

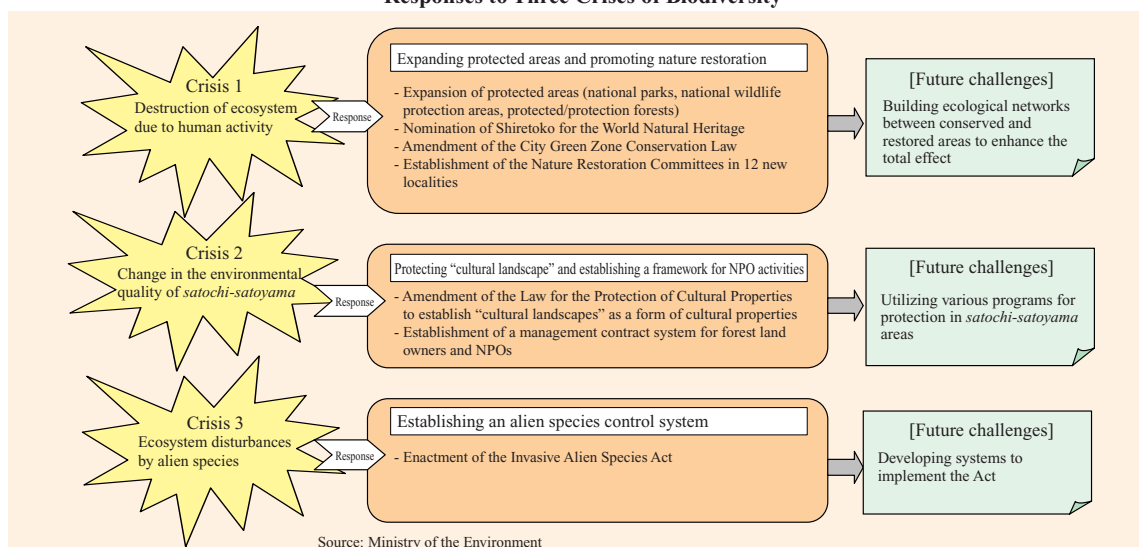
Source: Ministry of the Environment, *State of the Illegal Dumping of Industrial Waste, FY 2003*

6. Conservation of the Natural Environment and Promoting Contact with Nature

(1) Conservation of the Natural Environment and Promoting Contact with Nature

Pursuant to the new National Biodiversity Strategy in which all ministries work together to realize “a society in harmony with its natural environment,” the second review on its implementations was carried out in FY 2004. The result indicates a need to enhance efforts to disseminate the National Biodiversity Strategy and to set up measures to respond to increasing community activities for conserving the natural environment. These measures include creating a system to involve experts and nurturing human resources.

Responses to Three Crises of Biodiversity



The Red List provides the status of threatened wildlife species. Facing extinction, it reports, are a little more than 20% of mammals, amphibians, brackish water and freshwater fishes, and vascular plants (tracheophyte), a little less than 20% of reptiles, and a little more than 10% of bird species inhabiting Japan. Furthermore, 73 species have been designated as national endangered species of wild fauna and flora pursuant to the Law for the Conservation of Endangered Species of Wild Fauna and Flora, including four species of mammals and 39 species of birds.

A variety of measures are being taken to help conserve biological diversity in Japan.

To protect and increase the use of natural parks properly, Japan is conducting an overall review of park areas and park plans to meet changes in social and other conditions surrounding parks.

To promote the conservation of internationally important wetlands, Japan announced that it would aim at increasing its Ramsar sites to at least 22 by the 9th Meeting of the Conference of the Contracting Parties to the Ramsar Convention to be held in November 2005, and conducted scientific review on priority sites for such designation.

Under the Law for the Promotion of Nature Restoration, 12 new Nature Restoration Committees had been established as of January 2005, initiating efforts toward nature restoration.

The Invasive Alien Species Act was promulgated in June 2004 and entered into effect on June 1, 2005. The objectives of this act are to regulate various actions such as importing and raising invasive alien species (IAS) in addition to controlling IAS that already exist in Japan, thus preventing damages to ecosystem, human safety, agriculture, forestry and fisheries in Japan caused by IAS. Laying down the basic measures in support of damage prevention, the Basic Policy for Preventing Adverse Effects on Ecosystems Caused by Invasive Alien Species was established in October 2004. The basic policy is now being translated into specific measures; for example, 32 species, 4 genera, and 1 family of introduced organisms have been designated as IAS.

In addition, an emphasis is also being placed on people’s contact with nature. It is considered that nature helps develop a healthy mind, revitalize humanity, and learn more about coexistence with nature.

Threatened Wildlife of Japan (Species Listed in the Red List and the Red Data Book)

(as of March 2005)

	Taxonomical group	Species assessed (a)	Extinct	Extinct in the wild	Threatened species		Near threatened	Data deficient	Threatened local population	Number of threatened species (b)	b/a (approx.)
					Critically endangered + Endangered Category IA ; Category IB	Vulnerable					
Animals	Mammals	approx. 200	4	0	32 12 ; 20	16	16	9	12	48	24%
	Birds	approx. 700	13	1	42 17 ; 25	47	16	15	2	89	13%
	Reptiles	97	0	0	7 2 ; 5	11	9	1	2	18	19%
	Amphibians	64	0	0	5 1 ; 4	9	5	0	4	14	22%
	Brackish water and freshwater fish	approx. 300	3	0	58 29 ; 29	18	12	5	14	76	25%
	Insects	approx. 30,000	2	0	63	76	161	88	3	139	0.5%
	Land/freshwater molluscs	approx. 1,000	25	0	86	165	206	69	5	251	25%
	Spiders/crustaceans	approx. 4,200	0	1	10	23	31	36	0	33	0.8%
Subtotal for animals			47	2	303	365	456	223	42	668	
Plants	Vascular plants	approx. 7,000	20	5	1,044 564 ; 480	621	145	52	0	1,665	24%
	Bryophytes	approx. 1,800	0	0	110	70	4	54	0	180	10%
	Algae	approx. 5,500	5	1	35	6	24	0	0	41	0.7%
	Lichen	approx. 1,000	3	0	22	23	17	17	0	45	5%
	Fungi	approx. 16,500	27	1	53	10	0	0	0	63	0.4%
Subtotal for plants			55	7	1,264	730	190	123	0	1,994	
Total			102	9	1,567	1,095	646	346	42	2,662	

- (1) Data on the assessed animal species (including subspecies) were derived from the Environment Agency, *Checklist of Japanese Species of Wildlife* 1993, 1995, and 1998.
- (2) Data on the vascular plants (including subspecies) were gathered by the Japanese Society for Plants Systematics.
- (3) Data on the species of bryophytes, algae, lichen, and fungi (including subspecies) were derived from Ministry of the Environment surveys.
- (4) Data on the current state of threatened species (including subspecies) were derived from the Environment Agency, *Revised Red Data Book—Threatened Wildlife of Japan: Amphibians, Reptiles, Plants I, and Plants II* (2000), *Mammals and Birds* (2002); Ministry of the Environment, *Revised Red Data Book—Threatened Wildlife of Japan: Brackish Water and Freshwater Fish* (2003), *Land and Freshwater Mollusks* (2005); and the Environment Agency, *Red List on Invertebrates* (2000).
- The categories are considered as follows:
 Extinct: Species that are extinct in Japan
 Extinct in the wild: Species that are known only to survive in captivity or in cultivation
 Critically endangered + Endangered: Species in danger of extinction
 Vulnerable: Species facing increasing danger of extinction
 Near threatened: Species with weak foundation for survival
 Threatened local population: Population of a species that is isolated in an area and has high possibility of extinction.
- Source: Ministry of the Environment

List of Invasive Alien Species under the Invasive Alien Species Act

(as of June 1, 2005)

Class	Name of Species
Mammals	Taiwan macaque, crab-eating macaque, rhesus macaque, raccoon, crab-eating raccoon, Javan mongoose, Pallas's squirrel (including Taiwan squirrel), gray squirrel, coypu or nutria, brushtail possum, Reeves's muntjac
Birds	Laughing thrushes, masked laughingthrush, white-browed laughingthrush, red-billed mesia
Reptiles	Snapping turtle, green anole, brown anole, brown tree snake, Taiwan beauty snake, Taiwan pit vipers
Amphibians	Cane toad
Fish	Largemouth bass, smallmouth bass, bluegill, channel catfish
Insects	Red imported fire ant, fire ant, Argentine ant or tropical fire ant
Invertebrates	4 species of widow spiders, 3 species of the genus <i>Loxosceles</i> , any species of the genera <i>Atrax</i> and <i>Hadronyche</i> (family <i>Hexathelidae</i>), any species of the family <i>Buthidae</i>
Plants	Alligatorweed, floating marshpennywort or pennywort, Senegal tea plant

Source: Ministry of the Environment

To promote ecotourism, the Ecotourism Promotion Committee formulated a package of promotion measures in June, 2004. It includes the adoption of the Ecotourism Charter and implementation of model projects.

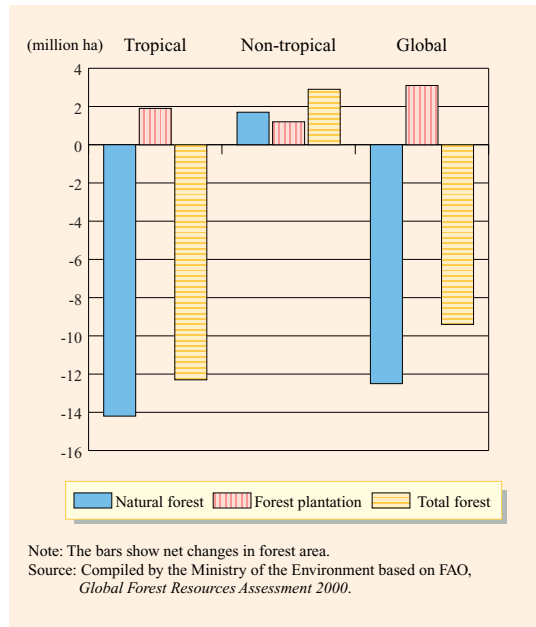
As a response to the urgent issue that needs to be addressed, specifically the state of mineral content displays by hot spring business operators, the enforcement regulation for the Hot Spring Law was revised in February 2005. It aims at improving the provision of information to hot spring users. Under the new regulation, items that may influence hot spring properties must be indicated, in addition to existing description items.

(2) Conservation of Natural Environment Outside Japan

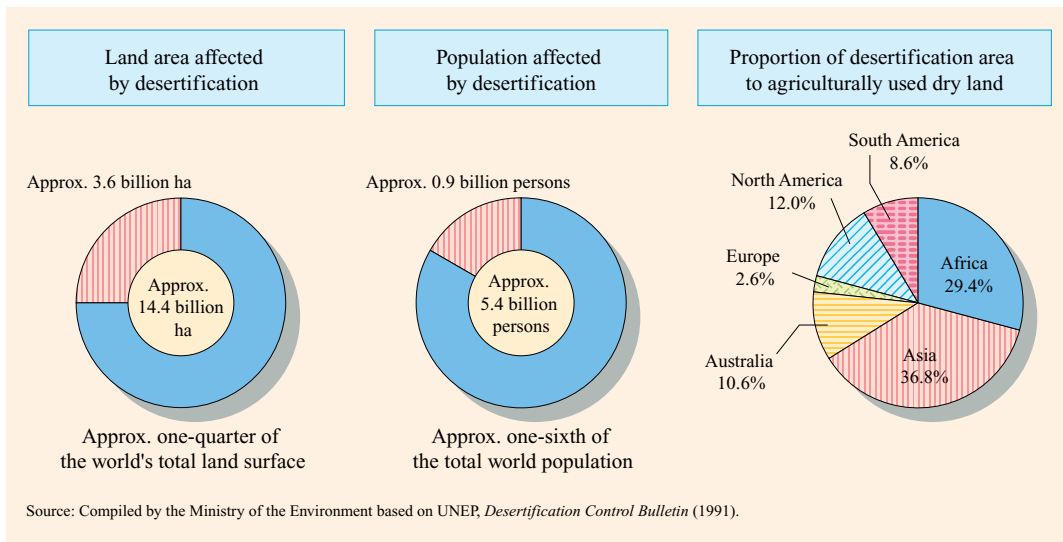
Forests in the world decreased at a rate of about 9.4 million hectares per year averagely from 1990 to 2000. It was mainly attributed to the conversion of forests to farmland, forest fire, and illegal logging. Therefore, efforts for the sustainable forest management in Asia are being promoted under Asia Forest Partnership (AFP), which was set up in 2002, and other initiatives.

About one-quarter of all land areas in the world and 900 million people, accounting for one-sixth of the world's population, are affected by desertification, which is defined as land degradation in arid and semi-arid areas etc. As background of this problem, there are factors such as poverty and population growth in developing countries. Therefore, international efforts are being made under the UN Convention to Combat Desertification (UNCCD).

Annual Forest Area Changes in the World (1990 - 2000)



Current State of Desertification



○ Environmental Conservation Measures to be Implemented in FY 2005

The *Quality of the Environment in Japan 2005* (White Paper) reports the environmental conservation policies and measures to be implemented in FY 2005 in line with the Basic Environment Plan in chapters as follows:

- Chapter One: Conservation of the Global Atmospheric Environment
- Chapter Two: Conservation of the Atmospheric Environment (not including the global atmospheric environment)
- Chapter Three: Conservation of the Water, Soil, and Ground Environments
- Chapter Four: Measures and Policies related to the Material Cycle, including Waste and Recycling Measures
- Chapter Five: Measures for Chemical Substances
- Chapter Six: Conservation of the Natural Environment and Promoting Contact with Nature
- Chapter Seven: Basis of Various Measures, and Measures Facilitating the Participation of Various Actors and International Cooperation