

Japan Environment Quarterly

News from the
Environment Agency

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Mr. Kenji Manabe, member of the House of Councillors, took over from Mr. Hiroshi Oki on 30 July as Minister of State and Director General of the Environment Agency, and Minister in Charge of Global Environmental Problems. Mr. Manabe was first elected to the House of Councillors in 1977 and has since served in a senior capacity in many committees of the House of Councillors including education and transport, and in the Liberal Democratic Party.

Environmental Endocrine Disrupters (SPEED '98)

The Environment Agency announced in May a set of programs to deal with an important new environmental issue, under the name of Strategic Programs on Environmental Endocrine Disrupters '98 (SPEED '98).

Exogenous endocrine disrupting chemicals have rapidly attracted worldwide attention recently, since they may threaten reproductive systems and cause malignant tumors, causing irreparable damage to humans, other living creatures, and ecosystems. These effects are of added concern because they may extend over generations. Concern about endocrine disrupters has grown since the publication of *Our Stolen Future* in 1996 by Colborn, Dumanoski and Myers.

Much is still unknown about man-made hormone disrupting chemicals, including the type and scale of effects from specific chemicals, exposure routes, accumulation in bodies, and the process of disruption of the normal functioning of hormones in humans and animals. So far about 70 chemicals have been identified as suspect, a majority of which are found in agricultural chemicals. They are also found in plastics, including those used in food containers, in emissions from incinerators, and in some metals used in industry. Possible adverse effects observed so far include abnormal reproductive functions such as decreased sperm levels and lower hatching success, abnormal reproductive behavior such as changes in the ratio of male to female births, birth defects, demasculinization, and malignant tumors.

There are 4 main elements in the SPEED '98 package of activities to be promoted by the Environment Agency.

(1) *Promotion of field investigations of the present state of environmental pollution and of the adverse effects on wildlife*

This work will also include studying sources and amounts of suspect chemicals, estimating exposure in humans and wildlife, and investigating exposure routes. Studies will investigate abnormal reproductive functions and behavior of wildlife (particularly aquatic animals) living in, brought to, or migrant to Japan in order to study the causal relationship between pollution and the occurrence of abnormalities. In addition, the Agency will continually study adverse effects on human health.

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Japan's Efforts to Prevent Global Warming


Lead Actions by Environment Agency Staff

On 19 June, the Outline of Measures for Promotion of Efforts to Prevent Global Warming — Measures Towards 2010 to Prevent Global Warming was announced by the Headquarters on Measures to Arrest Global Warming, a body which consists of ministries and agencies relating to climate change.

The Outline provides a detailed description of the activities which should be undertaken in order to reduce greenhouse gas (GHG) emissions (see box), which included a section on exemplary actions for the government. On 30

June the then Environment Minister Oki announced more detailed measures for the Environment Agency itself, and urged staff to set a leading example to other government ministries and the public, specifically by using both sides of pages when making copies, turning off the office lights during the lunch break, and wearing lighter clothing at the office and not wearing neckties during July and August.

Some other exemplary actions urged for all of the government were purchasing fuel-efficient and low-emission vehicles for official business; promoting the installation of solar power

generation in government buildings and public facilities; making the first Monday of every month a day to refrain from driving a car for public duties ('Kasumigaseki No Car Day'); not allowing air conditioning in government offices to be set cooler than 28 degrees C (76.8 degrees F) during the summer; promoting the improvement of environment-friendly government building facilities ('Green Government Buildings'); introducing bicycles for common use in Kasumigaseki (the main government area in Tokyo); fully recovering fluorocarbon refrigerants and purchasing or using strictly non-fluorocarbon aerosol products. 

OUTLINE OF MEASURES FOR PROMOTION OF EFFORTS TO PREVENT GLOBAL WARMING

The overall Outline provides guidance for all sectors of society on initiatives which should be conducted for Japan to achieve the 6% reduction in greenhouse gas (GHG) emissions from 1990 levels by the period 2008 to 2012 which it committed itself to in the Kyoto Protocol. The three main pillars of the Outline are:

- (1) Promoting and applying revolutionary technologies to reduce emissions of CO₂ and other GHGs, focusing on promoting energy saving, the introduction of new energy, and construction of nuclear power plants. This will include the world's first attempt to introduce the 'Top Runners Approach' in which the highest standard in a given industry will become the standard for the entire industry.
- (2) Promoting measures to prevent global warming by reviewing the daily lifestyles of citizens (such as introducing daylight saving time); and exemplary actions of government.
- (3) Strengthening the development of international frameworks such as emissions trading, joint implementation and the Clean Development Mechanism, and supporting the actions of developing countries.

Eighth Asia-Pacific Seminar on Climate Change

The Eighth Asia-Pacific Seminar on Climate Change was held from 22 to 25 June in Phuket, Thailand. The seminar was attended by experts from twenty-one countries, and eight relevant international and inter-governmental organizations.

The major objectives of the Seminar were to: (a) discuss the outcomes of the COP3, and consider their implications for regional cooperation on climate change; (b) identify issues that may be addressed by the countries of Asia and the Pacific, and work out a package of possible initiatives towards the COP4 and beyond; and (c) discuss possible regional mechanisms to facilitate the exchange of information and views on climate change among the countries of the region.

After reports on the outcomes of the historic Third Session of the Conference of the Parties (COP3) to the UN Framework Convention on Climate Change (UNFCCC) in December 1997, which resulted in the adoption of the Kyoto Protocol, participants agreed that efforts should be made to resolve the many remaining issues to be addressed before the Protocol can enter into force, including Joint Implementation, Clean Development Mechanism (CDM), and Emissions Trading.

It was noted that although the 1997 questionnaire survey by the Environment Agency of Japan and United Nations University had found that national greenhouse gas inventories had been prepared or were underway in many countries of the region, as of June 1998 only two developing countries in the region had

submitted initial communications to the UNFCCC Secretariat.

Some countries had taken steps for global warming mitigation and adaptation, with many preferring energy-related projects, such as improving energy efficiency or promoting renewable energy. Participants felt that the next step needed is to identify financial resources for such projects, including from the Global Environment Facility (GEF), multilateral and bilateral organizations. The importance of capacity building for these activities was recognized, as well as the need for countries in the region to share experiences for mutual benefit. A general list of recommended actions was agreed upon.

The participants endorsed a proposal by the Government of Japan to create the Asia-Pacific Network on Climate Change (AP NET), which will be primarily an Internet-based service for policy makers and government officials in particular. The AP NET will provide a 'gateway web site' administered by the Environment Agency in conjunction with ECO ASIA NET, and also link to the existing individual web sites of

participating countries. Countries are to manage their own web sites, providing information relating to climate change, climate-friendly technologies, and related programs and projects in their country, in a standardized format.

Finally, information from the International Council for Local Environmental Initiatives (ICLEI) about the Nagoya Declaration on climate change, the "Cities for Climate Protection (CCP) Asia and Pacific Campaign", and dissemination of "Guidelines for Local Action Plans for Climate Protection" led to a confirmation of the important role of local governments in combating global warming.

The seminar was organized by the Environment Agency of Japan, Ministry of Science, Technology and Environment of the Royal Thai Government, ESCAP, in cooperation with the Ministry of International Trade and Industry of Japan, the Embassy of Japan in Thailand, and the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). The ninth seminar will be held in Shiga Prefecture, Japan, during the summer of 1999. 



Mr. Hironori Hamanaka, Director-General of the Global Environment Department of the Environment Agency of Japan giving an opening address at the 8th Asia-Pacific Seminar on Climate Change

Dioxin Surveys

Concern about dioxins has grown dramatically in recent years. The Environment Agency is charged with the task of monitoring dioxin concentrations and working with other ministries and agencies to reduce the risk to human health and the environment. Here we provide the results of recent surveys of concentrations of dioxins in rivers, coastal waters and the atmosphere.

Survey on Dioxins in River and Sea Water

The Environment Agency has been conducting water quality surveys regarding dioxins since 1990, and has compiled survey results of fiscal 1997. The survey included 12 sites (see map) around Japan and detected dioxin concentrations ranging from 0.005 to 3.9 pg-TEQ/L, levels which are about the same as in recent years. This year the Agency will be conducting a more in-depth emergency nationwide survey of dioxins and continue monitoring.

Two of the 12 sites were rivers and 10 were sea waters. One sample at each site was analyzed per year for each polychlorodibenzodioxin (PCDD) and polychlorodibenzofuran (PCDF). The results of the FY1997 survey were as follows.

Results of FY 1997 Water Quality Survey

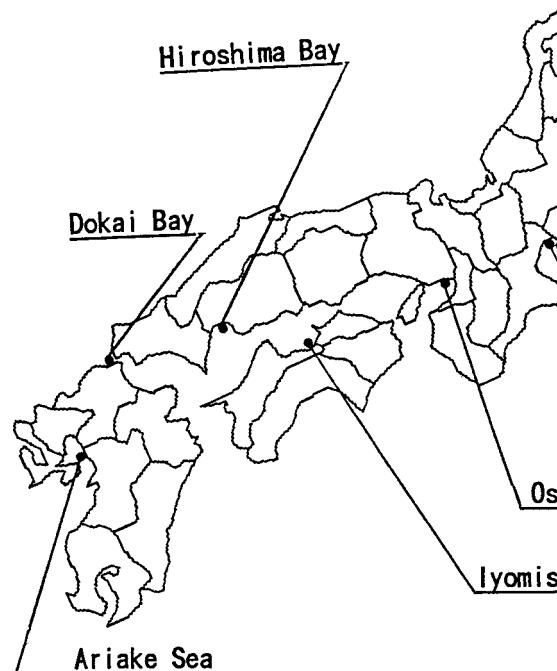
Prefecture	Site	Dioxin Concentration (pg-TEQ/L)
Hokkaido	mouth of Ishikari R.	0.094
Miyagi	Ishinomaki Bay	0.028
Chiba	Tokyo Bay	0.18
Kanagawa	Tokyo Bay	0.014
Niigata	Shinano R.	3.9
Shizuoka	Suruga Bay	0.014
Aichi	Nagoya Port	0.009
Hyogo	Osaka Bay	0.007
Hiroshima	Hiroshima Bay	0.009
Ehime	Iyomishima-Kawanoe Sea	0.10
Fukuoka	Dokai Bay	0.005
Kumamoto	Ariake Sea	0.048

Results of Past Surveys on Dioxins in Rivers and Seas (Units: pg-TEQ/l)

Fiscal Year	No. Sites	Maximum	Minimum	Average	Median
1990 (sea)	8	1	0	0	0
1991 (sea, rivers)	6	3	0	2	1
1992 (sea)	14	0	0	0	0
1995 (sea)	12	0.3	0.0	0.1	0.1
1996 (rivers)	7	0.1	0.0	0.0	0.0
1997 (sea, rivers)	12	3.9	0.005	0.37	0.021

Note: Dioxins in the environment are found in very small quantities, requiring measurements of picograms per liter (pg/L = one trillionth of a gram per liter). In addition, variants of dioxins are numerous (75 types of dioxin, 135 types of furan) and their toxicities also vary. Accordingly, toxicity is often measured in relation to 2,3,7,8-TCDD, with units of pg-TEQ/L (picograms—toxicity equivalency quantity per liter).

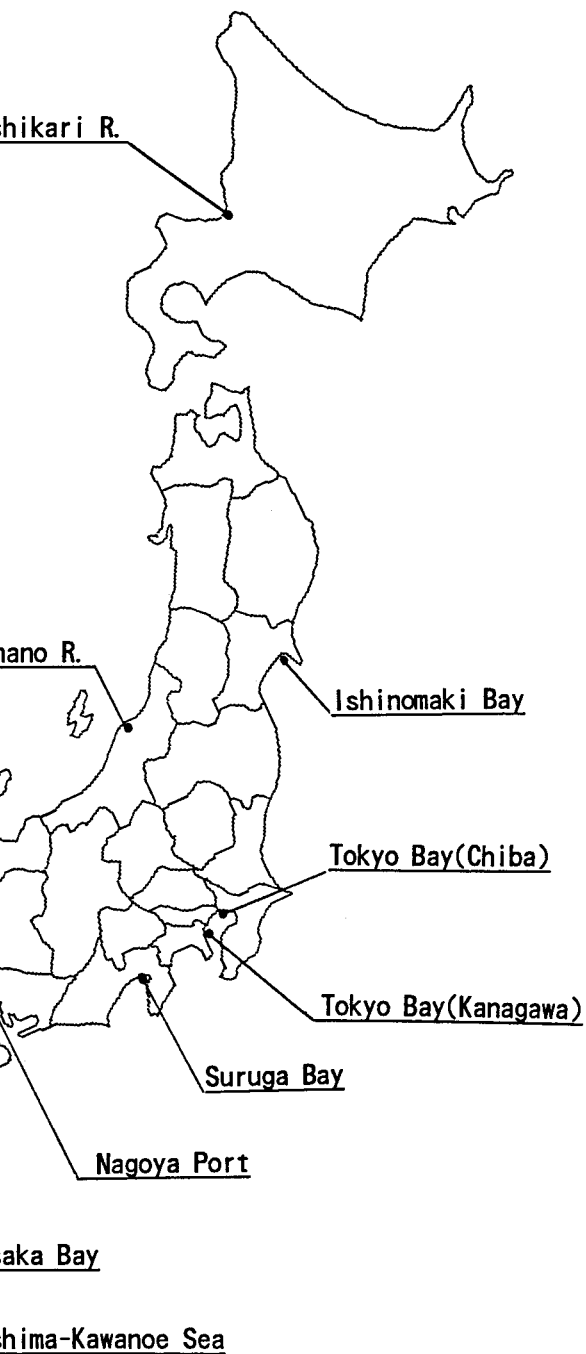
Sampling Points For Dioxin Survey in Rivers and Seas



Fiscal 1997 Study on Emissions of Dioxins

The Environment Agency conducted a survey of emissions of concentrations of dioxins from facilities in Japan for which this type of data was not yet available. The results of the survey are shown in these tables.

Future actions will include continuing surveys on facilities where data available on emissions of dioxins and coplanar PCBs is still inadequate, thus improving an emission inventory of these substances and following up with consideration of how to promote measures where necessary to control emissions.



Dioxin Concentrations in Emission Gases

(units: ng-TEQ/m³N)

Source	No. of Samples	Average Value	Minimum/Maximum Values
Sintering furnace	6	0.42	0.010-1.1
Aluminum smelting furnace	6	0.095	0.014-0.18
Unregulated small-scale waste incinerator	3	210	9.7-600
Domestic waste incinerator	3	11	1.5-28
Industrial waste incinerator	3	23	11-40
Cement kiln	3	0.16	0.031-0.41
Refuse derived fuel (RDF) incineration facility	1	(0.0019)	(0.0019)
Diesel-powered heavy-duty truck	2	0.00265	0.00234-0.00296

Coplanar PCBs Concentrations in Emission Gases

(units: ng-TEQ/m³N)

Source	No. of Samples	Average Value	Minimum/Maximum Values
Domestic waste incinerator	3	0.12	0.036-0.20
Industrial waste incinerator	3	1.2	0.74-1.7
Cement kiln	3	0.013	0.000068-0.036
RDF incineration facility	1	(0.000080)	(0.000080)

DIOXIN RISK STUDY GROUP MEETING

On 14 July the Environment Agency hosted a meeting of a Dioxin Risk Study Group in order to re-evaluate the health risks posed by dioxins as a follow-up of the revision of Tolerable Daily Intake (TDI) for dioxins by an expert meeting of the World Health Organization in May.

Newly Open: Biodiversity Center of Japan (BiodiC-J)

On 24 June the Biodiversity Center of Japan (BiodiC-J) was opened in Fujiyoshida, Yamanashi Prefecture, as an affiliate of the Nature Conservation Bureau of the Environment Agency. BiodiC-J aims to provide a comprehensive base to promote initiatives for the protection of biodiversity.

The following are the general activities of BiodiC-J:

- Implementation of the National Survey on the Natural Environmental (The Green Census)

BiodiC-J plans and carries out basic surveys of fauna, flora, surface water and coastal areas, in order to examine periodically the present status and changes of the natural environment in Japan.

- Collection and management of information concerning biodiversity, and public service


BiodiC-J constructs the Japan Integrated Biodiversity Information System (J-IBIS). Based on the results of the Green Census and other related information, it provides the database about the natural environment and biodiversity, which is to be shared widely through the Internet. Also it plays a role as a national focal point of the Clearinghouse Mechanism in Japan based on the Convention on Biological Diversity. The web page is in Japanese only at present, but the BiodiC-J plans to prepare an English page in the future.

- Collection and storage of biological specimens and documents

BiodiC-J collects documents concerning biodiversity, including the results of the Green Census. In

addition it preserves the biologically valuable specimens, such as endangered species in Japan.

- Publicity about the importance of biodiversity information

Various information concerning biodiversity is available at the library in BiodiC-J. Also the exhibition hall introduces the present status of the natural environment in Japan, and policies on biodiversity conservation, etc. 

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Yasuo Goto Joins UNEP Global 500

At an award ceremony on World Environment Day in Moscow on 5 June, the United Nations Environment Programme (UNEP) presented a Global 500 Roll of Honor award for Mr. Yasuo Goto of Japan. He was one of 23 persons from 19 countries recognized this year for outstanding contributions to protect the environment.

Yasuda Fire and Marine has been striving to reduce the use of resources by using practical schemes of environmental management systems. In November 1997 its computer center was the first to be certified in conformity with ISO14001 among financial institutions in Japan, and Yasuda is now providing enterprises and organizations with information and know-how based on its own experience in getting this certification. The company also has organized a series of environmental awareness courses.

In 1992, Mr. Goto led the delegation to the Earth Summit representing about 1,000 member companies of the Japan Federation of Economic

(cont'd pg.8, Global 500)

New Environmental Purchasing Data Books



In June the Green Purchasing Network (GPN), published two new editions of the Environment Data Book for Product Choice, one for toilet paper and tissue paper, and the other for personal computers. The Data Books are in Japanese and are based on the purchasing guidelines of the GPN, and depend on information received directly from product makers.

GPN, as introduced in the March issue of JEQ, is a loose network of Japanese companies, local governments and consumers established to promote the purchasing of environmentally friendly goods and services. The GPN membership rose to 1403 members in June (1,005 companies, 225 governmental bodies and 173 civic organizations) up from 1,205 in March.

A new data book for refrigerators is now being written, and guidelines for stationery, washing machines, and lighting appliances are expected in the

(cont'd pg.8, Data Books)


Annual Report on Ozone Layer

On 29 June the Air Quality Bureau of the Environment Agency reported the results of the annual monitoring of the ozone layer, atmospheric concentrations of ozone depleting chemicals such as CFCs and ultraviolet light (for the period up to March 1998). The observation points in Japan are in Sapporo, Tsukuba, Kagoshima and Naha. The main findings were


- The ozone hole which appeared over Antarctica has been about the same size as in the past 5 years, which is the largest ever recorded. Large scale ozone depletion was found over high latitudes of the northern hemisphere in March and April 1997.

- The long term trend shows a decrease in the amount of ozone; the depletion of ozone increases with latitude, except in lower latitudes. A statistically significant level of ozone depletion was confirmed in the atmosphere above Sapporo in northern Japan.

- Increases in concentrations of CFCs in the atmosphere have almost stopped in middle latitudes of the northern hemisphere. Concentrations of 1,1,1-trichloroethene have begun to decline, but those of HCFC and HFCs have recently begun to increase.

- It has been confirmed at the four monitoring stations that under a clear sky, with all other factors being equal, a decrease of ozone levels results in an increase of ultraviolet light at the earth's surface; however an increasing trend in ultraviolet light on the ground in Japan has not yet been clearly observed. 

Progress on Ratification of UN Convention to Combat Desertification

In May a meeting of senior officials of Japanese ministries and agencies agreed to call for national Diet approval for Japan to ratify the UN Convention to Combat Desertification. The Convention establishes the actions of signatory governments and international organizations to develop and implement action plans to assist countries facing serious desertification, especially those in Africa. Inter-governmental negotiations for the Convention started after the Earth Summit in 1992 based on Agenda 21. The Convention came into force in December 1996, and had attracted 128 signatory countries as of July this year. 

(from pg.1, Environmental)

(2) *Promotion of research, screening and testing method development*

Focusing on improving the research facilities at the National Institute for Environmental Studies (NIES), this work will include the promotion of laboratory studies, and developing methods to determine whether chemical substances have endocrine disrupting effects.

(3) *Promotion of environmental risk assessment, risk management, and information dissemination*

Risk assessment will be conducted based on the results of investigations noted above in items (1) and (2). Risk management will include re-examination of measures based on current laws and regulations in Japan; promotion of the proper disposal of PCBs that are being stored since their use has been prohibited, and progress on the 'anti-dioxin five-year plan' adopted by the Environment Agency; and introduction of a Pollutant Release and Transfer Register (PRTR) system. A number of laws in Japan deal partially with some of the potential endocrine disrupters, including the Chemical Substances Control Law, Air Pollution Control Law, Water Pollution Control Law and Waste Disposal and Public Cleansing Law.

(4) *Efforts to strengthen the international network*


This work will include active support of OECD activities and other international organizations, including joint studies and research, international symposia, and provision of information to developing countries. In addition, the Agency will strive for adoption of an international agreement on persistent organic pollutants (POPs), and Prior Informed Consent (PIC) for International Trade in Harmful Chemicals and Pesticides which are now being negotiated under the auspices of the United Nations Environment Programme (UNEP).

The Environment Agency established the Working Group on Endocrine Disrupters in June this year, consisting of 25 specialists in medical, veterinary, and environmental science, industry, local

(cont'd pg.8, Environmental)

(from pg.7, Environmental)

government authorities and non-governmental organizations. The Working Group will be responsible in particular for making research plans and evaluating the results of activities described above.

As a follow-up activity of "SPEED '98" the Environment Agency will hold the "International Symposium on Endocrine Disrupting Chemicals" from 11 to 13 December at the Kyoto International Conference Hall. In this symposium, administrators and researchers from Japan and overseas will be invited to exchange views and information on this topic. 

For more information on the above matters please contact:

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More information is available on the Environment Agency's Web site


<http://www.eic.or.jp/eanet/e/end/sp98.html>

(from pg.6, Global 500)

Organizations (KEIDANREN). Later, he was appointed Chairman of the Keidanren Nature Conservation Fund (KNCF) which has supported 71 conservation projects implemented by non-governmental organizations in 23 countries. He also serves as acting chairman of the Common Agenda Round Table of Japan, which provides the private sector perspective

to the U.S.-Japan Common Agenda for Cooperation in Global Perspective, a bilateral governmental forum dealing with a wide range of global issues including the global environment. In addition to these posts, Mr. Goto holds key positions with other environmental organizations, including The Association of National Trusts in Japan, National Parks Association of Japan, OISCA, Wild Bird Society of Japan, and the Institute for Global Environmental Strategies. 

(from pg.6, Data Books)

near future. The Environment Agency is a member and supporter of the GPN. 

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EVENTS IN 1998 AND 1999

September

- 9-11 OECD International Conference on PRTRs (Tokyo, Japan)
- 19-20 ECO ASIA '98 (Sendai, Japan)
- 20-21 APEC Symposium on Environmental Education toward Sustainable Cities (Sendai, Japan)

October

- 12-14 The 1st Meeting of the Interim Scientific Advisory Group for the Preparatory-Phase Activities of Acid Deposition Monitoring Network in East Asia (EANET) (Yokohama, Japan)
- 15-16 The 3rd Meeting of the Working Group on the EANET (Yokohama, Japan)
- 21-23 ESCAP Committee on Environment and Natural Resources Development (Bangkok, Thailand)

November

- 2-13 Fourth Session of the Conference of the Parties to the UNFCCC (Buenos Aires, Argentina)
- 3-6 Japanese-German Panel for Research and Development on Environment Protection Technology (Leipzig, Germany)
- 30-Dec. 11 Twenty-second Session of World Heritage Committee (Kyoto, Japan)

December

- 11-13 International Symposium on Endocrine Disrupting Chemicals (Kyoto, Japan)

March 1999

- The 4th Inter-Governmental Meeting of the Asia-Pacific Network for Global Change Research (APN) (Japan)