

# Japan Environment Quarterly

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## G8 Environment Ministers Meeting



G8 Environmental Ministers in front of the Schwerin Castle.

Minister Manabe of the Environment Agency attended the G8 Environment Ministers' Meeting at Schwerin, Germany, from 26 to 28 March. Ministers discussed issues of "Globalization and Environmental Protection," "Climate Change," and "Environment and Transport." The outcome of discussions on these topics was published as a communiqué at the end of the meeting. In addition, the main achievements of this meeting

will be reported by Mr. Trittin, Federal Minister for Environment, Nature Conservation and Reactor Safety of Germany, a host of this meeting, to Federal Chancellor Schroder who will serve as chairman of the Cologne Summit in June 1999.

At this meeting, Mr. Manabe emphasized a need for G8 countries to show their political will to aggressively take their domestic measures to cope with climate change. Mr. Manabe also suggested that, G8 countries should share their experiences on "best practices" in policies and measures in order to facilitate cooperation in this area and report to the G8 Environment Ministers Meeting in 2000. 

## Progress in Global Warming Measures

The Law Concerning the Promotion of Measures to Cope with Global Warming promulgated in last October came into force on 8 April 1999. Related to the enforcement of the new law, the Cabinet established a cabinet order for implementation of the law and "Basic Policies to Prevent Global Warming." The outline of them are as follows:

### I. Cabinet Order

The Cabinet Order designates 13 gases as hydrofluorocarbons (HFCs) that are widely used as alternatives for chlorofluorocarbons, which were banned to produce in view of

(cont'd pg.2, Global Warming)

(from pg.1, Global Warming)

ozone layer protection. It also designates 7 gases as perfluorocarbons (PFCs) used in producing electronics, devices and semiconductors. These HFCs and PFCs are listed in the second report of Intergovernmental Panel on Climate Change (IPCC) in 1995, and regarded as the target of the Kyoto Protocol.

The Cabinet Order also details how to calculate the amount of GHG emissions. The basic idea of calculation is to sum up the amount of each GHG emission taking their Global Warming Potentials (GWPs) into account. The amount of each GHG is sum of the emissions from each activity which are calculated by multiplying the emission factor (standard value of emissions per unit activity) by the amount of the activity (amount of fuel consumption, etc.). The emission factor, the kind of activities related to each GHG are stipulated by the Cabinet Order as well as values of GWPs.

The “GWPs” is a coefficient defined as a ratio of the potential of global warming effect of each GHG in comparison to that of carbon dioxide. The Cabinet Order provides GWP values based on the IPCC’s second report, for example, the value for methane is 21 and that of HFC-23 is 11700.

## II. Basic Policies to Prevent Global Warming

The Law also prescribes that the government should establish basic policies to prevent global warming in comprehensive and planned manner. Accordingly, the Central Environment Council

submitted a recommendation in March 1999. In response, the Cabinet agreed on the Basic Policies on Measures to Cope with Global Warming on 9 April 1999. The basic policy lines and basic items are stated below.

### (1) Basic Policy Lines

Japan should take countermeasures to reduce its total GHG emissions by changing GHG emissions trend from increase to decrease, so it can achieve the reduction target set by the Kyoto Protocol, and realize long-term and continued reduction of them. Promotion of domestic measures should be the basis in developing and implementing global warming countermeasures. As for the measures with financial barriers such as introducing solar power generation, policy measures with economic incentives should be given importance. Furthermore, the public and private sectors should cooperate to implement countermeasures to reduce GHG emissions.

The basic items concerning measures to be taken respectively by the national and local governments, businesses, and citizens are stipulated as follows.

#### (i) National Government

The national government should mainly take measures to reduce six GHGs, *i.e.* carbon dioxide, methane, nitrous oxide, HFCs, PFCs, and sulfur hexafluoride. It should also take measures to enhance increase sinks of CO<sub>2</sub> such as forests and urban green areas. Moreover, it is to promote research and

development, international cooperation, and environmental education for the mitigation of global warming. In addition, the national government should review the progress of implementation of measures stipulated in the Outline for Promotion of Efforts to Prevent Global Warming every year.

The national government should establish and publish a five-year action plan to reduce GHG emissions related to its business.

#### (ii) Local Governments

Local governments should take the initiative to improve infrastructures and social capital for the reduction of GHG emissions in their regions. Every local government has to make its action plan to reduce its own GHG emissions.

#### (iii) Businesses

Businesses should endeavor to make and publicize their action plans for preventing global warming and the state of their implementation. In doing so, they should take advantage of the new business opportunities presented by the drive to prevent global warming.

#### (iv) Citizens

Citizens are expected to consider the extent to which their lifestyles rely on mass production, mass consumption and mass disposal, and should try to reduce the ways in which GHG emissions might arise from their daily activities. 

# Report Released on Acid Deposition Survey

The Committee on Acid Deposition released a final report on the third surveillance of acid deposition in Japan. In order to investigate the status of acid deposition all over the country, mechanism of its occurrence, and its adverse effect on ecosystem, the long-term monitoring survey was conducted from 1993 to 1997 to reveal impacts of acid deposition on precipitation, aquatic inland environments, soil and vegetation.

The main points of the report are as follows:

## (1) Wet deposition monitoring

Measuring pH of rainfall on 48 sites throughout Japan, it was found that the annual averages of pH was 4.7-4.9, which was almost the same level of those of the second surveillance conducted from 1988 to 1992. The average annual ratio of N/S (nitrate versus non-seasalt sulfate), however, increased from 0.44 in 1993 to 0.53 in 1997. This tells us that the

contribution of nitrate is increasing these years. The area facing the Japan Sea recorded relatively high level of concentration and deposition of nitrate and sulfate ions in winter. This suggests that the supply of acidic substances are increased in this region due to the influence of the Asian Continent.

## (2) Inland aquatic environment monitoring

Three lakes with low alkalinity were found out of 29 natural lakes with little anthropogenic influence, Meike in Nagano Prefecture, Imagami-Oike in Yamagata Prefecture, and Yashagaike in Fukui Prefecture, where adverse effect of acid deposition was suspected because there were no human and natural causes found around them.

## (3) Soil and vegetation monitoring

No clear evidence was found to suggest major change caused by

acid deposition in the physicochemical properties of soils of 88 non-agricultural sites surveyed. However, tree declines were observed at 41 points, of which the causes could not be identified in 20 points.

## (4) Soil and limnological assessment

Computer model for simulating acidification of lake was developed. The result of the simulation of five lakes was that there is little possibility of acidification within 50 years, but this result largely depends on the buffer capacity of soil and the amount of acid deposition.

The Environment Agency takes measures for acid deposition through the ongoing fourth investigation (1998-2000) and promotes international collaboration through the Acid Deposition Monitoring Network in East Asia. 

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## Data Book of “ChoCO<sub>2</sub>” Updated

The Global Environment Information Center (GEIC), a joint project of the Environment Agency and the United Nations University, edited two editions of data book (“ChoCO<sub>2</sub>” or Choice by CO<sub>2</sub>) rating and ranking electrical appliances and automobiles according to carbon dioxide

emissions from them.

One edition, “ChoCO<sub>2</sub> '98,” ranks electrical appliances including refrigerators, air conditioners, TV sets, videos, CD players, stereo components, word processors, facsimile machines, laptop computers, and color printers. The other edition,

“ChoCO<sub>2</sub> '98 for cars,” ranks automobiles made and sold in Japan.

*\*These data books are available at the GEIC in Tokyo for free. For more information about ChoCO<sub>2</sub>, see the Internet web page at <http://www.geic.or.jp/choco2b.html>* 

# Ministerial Council on Dioxin Policy Established

Recognizing that more decisive measures against dioxins should be promoted to protect human health and the environment, the Ministerial Council on Dioxin Policy (established on 24 February 1999 and chaired by the Prime Minister Obuchi) issued the Fundamental Guidelines for the Promotion of Measures Against Dioxins on 30 March. Based upon the guidelines, the government is aiming to reduce the total volume of annual release of dioxins into the environment, within the next

four years, by 90% of the amount that was emitted in FY 1997.

The guidelines are composed of the following eight principal courses of action.

- (i) Reevaluating the tolerable daily intake (TDI) and establishing environmental quality standards.
- (ii) Promoting measures to reduce the release of dioxins.
- (iii) Improving inspection systems relating to dioxin measurement.

- (iv) Conducting monitoring to grasp the impacts of dioxins on human health and environment.
- (v) Promoting research and development.
- (vi) Promoting waste management and recycling.
- (vii) Promoting information disclosure.
- (viii) Contributing to the international community. 🌐

# New Water Environmental Quality Standards for Human Health

An addition to the water environmental quality standards regarding protection of human health was announced on 22 February by the Environment Agency in response to a report submitted on 2 February by the

Central Environment Council to the Director-General of the Environment Agency.

In summary, three items (*i.e.* nitrate and nitrite nitrogen, boron, and fluoride) have been added. The new standards for boron and

fluoride are not applicable to sea areas, because values of boron and fluoride surpass the standards under natural conditions of seawaters. 🌐

## Environmental Water Quality Standards for Human Health

Item	Standard Values
cadmium	0.01mg/liter or less
total cyanogen	not detectable
lead	0.01mg/liter or less
chromium(VI)	0.05mg/liter or less
arsenic	0.01mg/liter or less
total mercury	0.0005mg/liter or less
alkyl mercury	not detectable
PCBs	not detectable
dichloromethane	0.02mg/liter or less
carbon tetrachloride	0.002mg/liter or less
1, 2-dichloroethane	0.004mg/liter or less
1, 1-dichloroethylene	0.02mg/liter or less
<i>cis</i> -1, 2-dichloroethylene	0.04mg/liter or less

Item	Standard Values
1, 1, 1-trichloroethane	1mg/liter or less
1, 1, 2-trichloroethane	0.006mg/liter or less
trichloroethylene	0.03mg/liter or less
tetrachloroethylene	0.01mg/liter or less
1, 3-dichloropropene	0.002mg/liter or less
thiuram	0.006mg/liter or less
simazine	0.003mg/liter or less
thiobencarb	0.02mg/liter or less
benzene	0.01mg/liter or less
selenium	0.01mg/liter or less
nitrate nitrogen/nitrite nitrogen	10mg/liter or less
fluoride	0.8mg/liter or less
boron	1mg/liter or less

# PRTR Bill Submitted to the Diet

The Environment Agency and the Ministry of International Trade and Industry (MITI) have developed in a co-operative way a “Bill Concerning Reporting, etc. of Release to the Environment of Specific Chemical Substances and Promoting of the Improvements in Their Management.” After consultations in the government, the Bill was decided by the Cabinet and submitted to the Diet for deliberation on 16 March 1999.

Recognizing the rapid rise of public concern in preventing possible environmental pollution by chemical substances in recent years, the Environment Agency and MITI have been jointly considering necessary actions. MITI obtained an interim report from the Chemical Products Council in September 1998 entitled “Toward the Promotion of Management of Chemical

Substance by Businesses.” The Environment Agency received a report from the Central Environment Council in November 1998 entitled “Measures to be taken to Reinforce Environmental Risk Management Activities of Chemical Substances (an interim report)—Introduction of PRTR (Pollutant Release and Transfer Register) System to Japan.”

The Environment Agency and MITI agreed that it would be necessary to establish a new law in order to protect human health and the environment by improving and strengthening business’ management activities concerning chemical substances that are hazardous to human health and the environment, regardless of the level of the evidences showing causal relations. Two institutions have jointly developed a bill after consultations in the government.

The bill is entitled as “Bill concerning Reporting etc. of Release to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management.”

The purposes of the bill are to induce businesses to improve voluntary management of chemical substances and prevent any impediment of environmental protection. To achieve these goals, it is recognized that it is necessary to introduce a PRTR system that requires business to report quantity of release of chemical substances to the environment; and material safety data sheet (MSDS) system that requires business to provide information on the properties and proper handling methods of chemical substances when they trade such chemical substances to other businesses. 

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# Report on Environmental Impact Assessment of Biological Control Agents

As demand for organic farming products increases, farming technology using biological control agents has attracted public attention from the environmental concern. The Environment Agency released a report “Guidelines on Introduction of Environmental Impact Assessment of Biological Control Agents” to prevent undesirable impacts on the environment.

Biological control agents are natural enemies (mainly insects)

released for the purpose of repelling pests and weeds. Compared with chemicals and antibiotics, biological control agents are considered to be safer from the viewpoint of human health. In spite of their advantages, there are possible disadvantages that biological control agents may disturb ecosystem and the environment, in case they are exotic in particular, because those organisms reproduce and migrate by themselves.

The Environment Agency has been studying the impacts of biological control agents since 1996 by analyzing the situation of animals introduced in Japan and abroad in the past and the effects of them on the environment.

The Environment Agency now plans to establish an expert panel by collaborating with the Ministry of Agriculture, Forestry and Fisheries to commence environmental impact assessment of specific species hereafter. 

# Interim Report on Environmental Accounting

The Environment Agency published “A Draft Guideline for Evaluating Environmental Cost and Publicly Disclosing Environmental Accounting Information” on 25 March 1999. The main points of this guideline are:

- (i) the importance of understanding and disclosing environmental cost,
- (ii) environmental cost accounting definitions,
- (iii) definition of environmental conservation,
- (iv) basic idea for cost accounting methods,
- (v) relationship between environmental expenditures and environmental results, and
- (vi) environmental cost categories.

“Environmental accounting” signifies a new accounting procedure by which private

companies can evaluate the effects and costs of investments for environmental protection. So far, under the current accounting system, companies have had difficulty in evaluating the effects and costs of their investments. An investigation by the Environment Agency showed that more than half of the Japanese companies surveyed wanted a guideline for environmental accounting.

Considering that to establish and promote a guideline for environmental accounting is significant from the viewpoint of environmental conservation, the Agency established in 1996 a study group for grasping environmental cost accounting. Since this newly published guideline reflects the achievements of the investigations and arguments of the study group, the Agency expects that private companies will be able to evaluate

the costs of environmental protection by using this guideline. The guideline will facilitate the announcement of the companies’ costs for environmental protection in their environmental report.

Following the publication of this provisional version, the Environment Agency plans to listen to opinions from institutions concerned including companies, research organizations about the guideline through the rest of the current fiscal year. The Agency intends to publish the final report by the end of March 2000.

*\*An English version of the guideline is available. Please contact the Office of Policy Planning and Research, Planning and Coordination Division, Environment Agency.* 

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## NOWPAP Fourth Intergovernmental Meeting

The Fourth Intergovernmental Meeting of the Action Plan for the Protection, Management and Development of the Marine Coastal Environment of the Northwest Pacific Region (NOWPAP) was held from 6 to 7 April in Beijing, attended by representatives from Japan, China, Korea, and Russia. The meeting came to an agreement regarding establishment of Regional Activity Centres (RACs) with the aim of further promoting the activities to protect the marine environment in the Northwest Pacific region.

The following institutions will be designated as RACs of each activity area;

- i) Special Monitoring and

Coastal Environmental Assessment Regional Activity Centre (NOWPAP-CEA/RAC): North Pacific Regional Environment Cooperation Center in Toyama, Japan,

- ii) Data and Information Network Regional Activity Centre (NOWPAP-DIN/RAC): Information Centre of the State Environmental Protection Administration in Beijing, China,

- iii) Pollution Monitoring Regional Activity Centre (NOWPAP-POM/RAC): Pacific Geographical Institute, Far Eastern Branch

of Russian Academy of Sciences in Vladivostok, Russia, and

- iv) Marine Environmental Emergency Preparedness and Response Activity Centre (NOWPAP-MER/RAC): Korea Research Institute of Ships and Ocean Engineering of Korea Institute of Materials and Machinery in Taejon, Korea.

Matters concerning future establishment of a Regional Coordination Unit that will be in charge of administration of NOWPAP will be discussed and decided at the sixth meeting held in Japan in 2000. 

# The Japan-China Environmental Development Model City Plan

In the fall of 1997, the then Prime Minister Ryutaro Hashimoto and the then Chinese Premier Li Peng agreed on “The Japan-China Environmental Development Model City Plan” to resolve deteriorating environmental problems such as air pollution in China. In this plan, Japan and China will select three Chinese cities, Chongqing, Dalian, and Qiyong, as the model cities. China will strengthen environmental regulation and promote investments for environmental protection, and Japan will concentrate its fund and technologies as Official Development Assistance (ODA) onto environmental problems. This plan aims to demonstrate

successful examples that are achieved through the environmental protection measures against air pollution and acid deposition, etc.

In this process, (i) establishing recycling-oriented industries and social systems utilizing by-products of desulfurization for example gypsum as fertilizer, (ii) measures against global warming by improving energy efficiency will be implemented with intensity.

A special committee composed of Japanese and Chinese experts had studied a concrete action plan. Eventually, in April 1999 in Tokyo, the committee submitted its recommendation to both governments. In the recommendation, not only basic

principles, but also detailed projects in each of these three cities are included. Overseas Economic Cooperation Fund (OECF) and Japan International Cooperation Agency (JICA), which are the implementing agencies of Japan's ODA, will try to realize the plan in the future. At most, 40.5 billion in Japanese yen loans to China from 1999 to 2000 will be used for this plan.

The Environment Agency will work jointly with the Ministry of Foreign Affairs, the Ministry of International Trade and Industry, and two related agencies to implement the plan by dispatching experts and cooperating with the Japan-China Friendship Environmental Protection Center. 

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## Guidelines for Environmental Risk Assessment on Bioremediation

The Environment Agency issued guidelines for environmental risk assessment on bioremediation (bioaugmentation) to prefectural governments on 24 March. These guidelines were set up based on a report prepared by an expert panel on environmental risk assessment of bioremediation to clean up

groundwater contaminated by volatile organic compounds such as trichloroethylene.

*In situ* bioremediation is an innovative cleaning technology which conserves energy and reduces secondary waste because it uses biochemical process by microorganisms which decompose

pollutants in the groundwater. Since their impact from intended release of microorganisms and their substrate on ecosystems, water quality and human health is still unclear, this technology needs careful attention when it is applied. 

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## Japan Hosts ESCAP Environmental Ministers Meeting in 2000

During the 55th session of the Economic and Social Commission for Asia and the Pacific (ESCAP) in Bangkok from 22 to 28 April, the Commission agreed on Japan's hosting the fourth ESCAP Ministerial Conference on Environment and Development. The Commission welcomed a

proposal tabled by the Government of Japan for inviting the ESCAP Meeting in 2000 to Kitakyushu City, Fukuoka Prefecture, Japan.

The environment ministerial meeting of ESCAP has been held every five years since 1985 for the purpose of achieving sustainable development in the Asia-Pacific

region. The fourth meeting in Japan will provide opportunities to follow up on Agenda 21 and to discuss future visions for the environment and development in this region. The outcome of this meeting is expected to contribute to “Rio+10” in 2002 as an input from the Asia-Pacific region. 

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## Red List of Brackish and Fresh Water Fish Revised

The Red Data Book 1991 edition has been revised since 1995 to follow up changes in wildlife populations and habitats. Since then, each class, such as mammals, birds, and reptiles has been successively revised. As a result, all the lists of vertebrates have been finished this time by revising the list of brackish and fresh water fish. Seventy-six species including Miyako tanago (*Tanakia tanago*), Ryukyu sweetfish (*Plecoglossus altivelis ryukyuensis*), and cyprinodont (*Oryzias latipes*) were evaluated as being endangered or critically endangered and added to the Red List. The Environment Agency is going to revise the Red Data Book based on this list.

The Red List is a record listing threatened and endangered species in Japan. The Red Data Book compiles the current status of species listed in the Red List for the purpose of promoting of wildlife conservation. The Red List does not have binding force, although it defines what kinds of species are in danger and evaluates the risk of extinction status. 

**For more information about events and articles in JEQ please contact the Global Environment Department.**

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**June**

- 5 International World Environment Day Celebration (Tokyo)
- 5-6 Junior Eco-Club Asia-Pacific Conference (Tokyo)

**July**

- 6-7 International Symposium on Ambient Fine Particles and Health (Tokyo)
- 12-15 The 9<sup>th</sup> Asia-Pacific Seminar on Climate Change (Hikone, Japan)

**September**

- TBA Environment Congress for Asia and the Pacific (Eco ASIA '99) (Sapporo, Japan)

**October**

- 25-Nov. 5 The 5<sup>th</sup> Session of the Conference of the Parties to UNFCCC / the 11<sup>th</sup> Session of SBSTA/SBI of UNFCCC (Bonn)

**November**

- 15-26 The 3<sup>rd</sup> Session of the Conference of the Parties to CCD (Recife, Brasil)

**December**

- 9-11 International Symposium on Environmental Endocrine Disruptors '99 (Kobe, Japan)

TBA = To Be Announced