Basic Policies of NTT Group Global Environmental Charter

Compliance with laws and regulations and fulfillment of social responsibilities

To observe all laws and regulations regarding environmental protection issues and to carry out our responsibilities as global corporate citizens.

Reducing environmental loads

To establish action plans for energy conservation (reduction of greenhouse gas emissions), resource conservation (conservation of materials such as paper), waste reduction and to strive to make continuous improvements.

Establishing and maintaining environmental management systems

To establish an environmental management system enabling each business unit to pursue voluntary environmental protection activities.

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NTT (holding company) obtains and analyzes information on new domestic and international environmental laws and regulations to quickly prepare new measures in collaboration with each environmental committee. NTT swiftly gathers information on new environmental laws and gives its abstracts to all of the Group companies' departments in charge of environmental protection within the day of their proclamation.
Each NTT Group company exercises its responsibility as a corporate citizen by taking advantage of its strength as an information sharing company.

The NTT Group has established "Green Procurement Guidelines," "Green R&D Guidelines," and the "Green Design Guideline for Buildings" to reduce the environmental loads caused by its business activities.
Special committees and working groups have been established to deal with important environmental issues.

Long-Term Targets (2010)
■ Paper resource management: Reduce virgin pulp consumption by at least 20% of 1990 levels
■ Prevention of global warming: Reduce CO_2 emissions below 1990 levels
■ Waste management: Reduce the volume of waste by at least 85% of 1990 levels

The NTT Group is working to establish an environmental management system in compliance with ISO 14001. Each business unit establishes and employs an environmental management system suitable for its business.
In regard to risk management, our first priority is to reduce environmental loads on a daily basis. We are prepared to deal with unexpected events, which could have serious environmental impacts, in the most effective manner.
In 2000, environmental accounting was introduced to quantitatively grasp the effects of these environmental protection activities (material and economic effects), strengthening our environmental management.

Group Topics for 2001

No Fines or Penalties
In regard to environmental laws and regulations, the NTT Group received one warning from the government, but no fines, penalties, or improvement orders.

Donations
The NTT Group made contributions to a fund for the cleanup of illegal dumpsites, as requested by the Japan Federation of Economic Organizations (Keidanren).

Announcement of Support to "The Earth Charter"
In January 30, 2002, the NTT Group announced that it would support "The Earth Charter," which was expected to be endorsed at the "World Summit on Sustainable Development 2002" to be held in Johannesburg in August.

Establishment of an Environmental Information Sharing System
Environmental information sharing systems have been established and efficiently used among environmental sections in Group companies.

Management of Paper Resources
● Total virgin pulp consumption was reduced by approximately 50% from 1990 levels.
● Paper consumption for telephone directories was 120,000t, which is a 19% decrease from the previous year.
● 62,000t of old telephone directories were collected, a 6.9% increase from the previous year.

Prevention of Global Warming
The total amount of CO_2 emissions increased by approximately 55% over 1990 levels. However, our eco-efficiency (sales per CO_2 emission in tons) was 4.47 million yen/t-CO_2, an improved 20% compared to 1990 levels.
The above figure includes 26,000 t-CO_2 which is emitted by the energy consumption of customer facilities installed in the buildings of the Group companies (such as the data center). Also, it includes the emission of 10,000 t-CO_2 greenhouse gases, other than CO_2.

Waste Management
The amount of waste was 140,000t, reduced by approximately 71% from the 1990 level.

Development of Energy Conservation Facilities
● DC power supply system
The conversion loss of this power supply system has been significantly improved in comparison with the AC power system. [P13]

Introduction of Clean Energy Equipment
● 90 photovoltaic power generation system
● 1 wind power generation system
● 7 fuel battery system [P13]
● 7 hybrid power generation system (photovoltaic and wind power)

Number of Low Pollution Vehicles
● 288 hybrid vehicles
● 223 natural gas vehicles
● 17 electric vehicles

Implementation of Risk Management
The NTT Group has been committed to the proper storage of PCBs and has decided to entrust the detoxification process to a supra-regional facility. [P11]

Implementation of Environmental Accounting
The "NTT Group Environmental Accounting Guidelines (2002 Version)," in compliance with the "Guideline for the Introduction of an Environmental Accounting system (2002 Version)" issued by the Ministry of Environment, has been compiled for the 2002 accounting. The environmental costs were 14.1 billion yen in investments and 36.6 billion yen in expenses. [P12]

Implementation of Workshops
As a part of the "Project to Support Environmental Management," including environmental consulting, workshops were held in Tokyo and Osaka for the environmental protection departments of Group companies. [P11]

Introduction of a Database System for Environmental Information
The database system collects information on the amount of greenhouse gases emitted by each Group company.

Major Environmental Activities by Group Companies

● Besides the intensification of conventional internal inspection, we implemented preventive measures against the excessive levels regulated by the Sewage Law. (NTT Information Sharing Laboratory Group)
● A decision was made to eliminate contaminated soil in a parking lot which was discovered by a voluntary soil investigation. (NTT URBAN DEVELOPMENT)

● Revision of the publication method for Hello Pages (NTT EAST, NTT WEST)
● Development of Telephone Directory Closed Loop Recycling System (NTT EAST, NTT WEST, NTT DIRECTORY SERVICES)
● Services to provide telephone billing information via the Internet (NTT EAST, NTT WEST, NTT Communications, NTT DoCoMo) [P15]

● At the end of March 2002, an additional 21 facilities, now totaling 73 facilities (55 companies) have acquired ISO 14001 certification.

Basic Policies of NTT Group Global Environmental Charter

Developing environmental technologies

To contribute to the reduction of the environmental load through various areas of research and development, including multimedia services.

Social contribution efforts

To promote daily environmental protection efforts in coordination with citizens and government agencies.

Disclosure of environmental information

To enhance both internal and external communications through the disclosure of environmental information.

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"Research and Development of State-of-the-Art Environmental Technologies" is one of the three main themes proclaimed in the "NTT Group Ecology Program 21."
We are engaged in a wide range of research and development activities related to environmental protection technologies, including technology to prevent global warming, waste recycling technology, and IT-based technology to reduce environmental loads.

"Contributions to Local Communities in the Environmental Protection" is one of the three main themes proclaimed in the "NTT Group Ecology Program 21." To pursue this policy, we were actively involved in the environmental protection activities of each local community in 2001.

The NTT Group promotes internal and external communications by the disclosure of environmental information through the NTT Group Environmental Protection Activity Report (website version and booklet version) and other publications. Its 55 group companies also disclose their environmental information on their website.
In 2001 we conducted advertising activities to promote the concept of "ecommunication" proposed by the NTT Group.

Group Topics for 2001

Implementation of LCA (Life Cycle Assessment)
The environmental load of local calls (through the access-type fixed network) is assessed according to LCA. (NTT Lifestyle and Environmental Laboratories, NTT EAST) [P4]

Implementation of a Recycling System for Used Optical Cables
This enables the recycling of optical cables into, for example, construction materials. (NTT Access Network Service Systems Laboratories) [P14]

Development of a Plastic Identifier
Plastic materials can be identified with approximately 95% accuracy. (NTT Lifestyle and Environmental Laboratories) [P14]

Development of PRTR-GIS System and Roadway Environmental Assessment System
PRTR data management and tabulation system for local governments enables graphical tabulation and analysis on a map by GIS. And an assessment system for noise pollution on roadways was developed. (NTT Lifestyle and Environmental Laboratories) [P15]

Development of a Non-soil Discharge Mole Robot
A "mole robot" that can excavate without discharging waste soils out of the hole. (NTT Access Network Service Systems Laboratories) [P14]

Development of a Network Distribution Service
Technology for the on-line distribution of various content. (NTT Cyber Communications Laboratory Group) [P16]

Development of a Digital Testing System
A digital testing system with a client-server method. (NTT Cyber Communications Laboratory Group) [P16]

Development of a Electronic Voting System
A voting system using the Internet. (NTT Information Sharing Platform Laboratories) [P16]

Cooperation with Organizations in Japan
● Green Purchasing Network (GPN)
● Global Environmental Forum (GEF)
● Japan Environmental Education Forum (JEEF)
● Zero Emissions Forum (ZEF)
● Global Environmental Action (GEA)
● World Business Council for Sustainable Development (WBCSD)

Ecology Community Plaza
The NTT EAST Iwate Branch, Aomori Branch, and the NTT WEST Shiga Branch have set up an "Ecology Community Plaza." Its aim is to promote various environmental protection activities closely tied to the local community in collaboration with the local government and NPOs. [P8]
● The NTT WEST Operation Clean 2001 in Shiga
A volunteer activity to clean Lake Biwa. [P8]
● Biwako NPO Networks
This website was established in order to vitalize environmental NPO and NGOs. [P17]
● Workshop for Sharing of Environmental Information
Opinion exchange on environmental education took place, connecting four locations in Iwate prefecture. [P8]

Employee Awareness Survey
A survey on employees' environment awareness involving about 1,000 NTT Group employees was conducted.
● 95% of employees showed interest in the environment.
● Approximately 90% of employees want to participate in the environmental activities of a local community. [P18]

Publication of Environmental Reports and the Establishment of an Environmental website
● The NTT Group Environmental Protection Activity Report 2001 (website and booklet version) was published.
● "NTT Group employees discuss the environment" and "Cross Talking on The Earth," dialogues with distinguished environmental specialists, are shown on the website. [P18]

Environmental Advertising
To provide a wide range of people with information on our environmental protection activities and to encourage their understanding and participation, we have developed environmental advertisements.
● 7 magazine advertisements
● 8 banner advertisements [P18]

Public Survey
A public survey on the environmental protection activity report was conducted on the Internet.
● Approximately 90% of respondents appreciated NTT Group's disclosure of environmental information.
● Approximately 85% of respondents appreciated NTT Group's attitudes toward environmental issues.
● Approximately 60% of respondents were interested in knowing more information. [P18]

Major Environmental Activities by Group Companies

● Tamagawa River and Basin Museum (NTT-AT) [P15]
● Fuel reforming machine and disposal vehicles for sewage and sludge. (NTT AUTO LEASING) [P13]
● Ozone water generator (NTT-ME) [P14]
● Automatic remote-supervisory landslide monitoring system (NTT-ME CHUGOKU) [P15]
● Launch of Environmental Monitoring Consortium (NTT DATA, NTT DoCoMo, NTT DoCoMo KANSAI, NTT DATA INSTITUTE OF MANAGEMENT CONSULTING) [P15]

● Establishment of the Sapporo EMS Network (NTT DoCoMo HOKKAIDO) [P17]
● The "7th NTT-ME World Bird Count" (NTT-ME) [P17]
● Workshop on local currency (NTT EAST Iwate Branch)
● Support to NPO search database NPO Hiroba (NTT Communications)
● The 5th "DoCoMo Woods" Tree-planting project (NTT DoCoMo)

● Establishment of a program to award individuals or groups who have achieved remarkable results. (NTT, NTT EAST, NTT WEST, NTT DATA) [P18]
● NTT-AT TECHNO FAIR 2001 TOKYO (NTT-AT) [P17]
● Received a grand award by the Minister of Environment and grand award for environmental advertisement in the poster section of 11th Environmental Advertisement Contest. (NTT DoCoMo TOKAI)
● Hosted a "Global Environmental Forum" (NTT DoCoMo SHIKOKU, NTT DoCoMo, NTT DoCoMo CHUGOKU, NTT DoCoMo KYUSHU) [P17]
● Organized Energy Solution Seminar (NTT FACILITIES)
● *Kankyo-goo* Grand Prize (NTT-X) [P17]