Guidelines Used to Edit This Report:

■The 2001 Environmental Report has been made based on data collected from 2000. (The report includes one section on our activities after April 1, 2001 and one section on future trends).

■The NTT Group's 2001 Environmental Report amalgamates the 2000 data collected mainly from NTT(holding company), NTT EAST and NTT WEST, NTT Communications, NTT DoCoMo's companies, NTT DATA, NTT FACILITIES, and NTT COMWARE. Furthermore, the data before 1998 was collected from the NTT Group before its restructuring. The details of this are included at the end of the report.

■The NTT Group made unique report guidelines based on various environmental reports from 2000. This year, we made our guidelines based on the Environmental Ministry and GRI guidelines which are international standards. We include the social and economic aspects in our report.

This year, there are only a few items from the GRI guidelines. However, for future activities we plan to include the GRI guidelines in these sections.

■As a report which pursues corporate sustainability (sustainability report), we have only just begin to include these guidelines into our reports. With your opinions we will continuously seek to improve the standards of our reports and the guidelines which we base them on.

■NTT Group uses a web site (http://www.ntt.co.jp/kankyo/index.html) for environmental information. Please use the report and web site together.

August 2001

*GRI
Abbreviation of "Global Reporting Initiative".
This is an international organization, established in 1997, whose goals are to create worldwide guidelines for corporations in a sustainability report.

Cover Page Notes:
As a corporation in the information sharing industry, we would like to be the strongest in providing information about the environment.
In this way, we understand ourselves to be like a ripple on the surface of the information pool with the latest movement and trends in the industry.The environmental activity wire frame symbolizes the NTT Group encompasses the entire group and is to bring the details together as a whole. The Three leaves are the symbol of "NTT Group's Ecology Program 21".

Targeting a Society of Sustainable Development

It is said that the keyword for the 21st century is "sustainable development." In the 20th century, we pursued affluence and convenience, which produced technology and culture. The technologies and cultures we created certainly achieved wealthy consumer lifestyles, but at the same time, there were by-products which are the seeds of future calamity, such as air pollution, global warming, and the destruction of the ozone layer.

With regret over those by-products, nations the world over are looking to create new social systems, which better balance comfort, lifestyle and sustaining the blessings of our natural environment in perpetuity.

Our unit of NTT has a slogan "Global Information Sharing Group." We use this as the guiding principle of our business activities — to create a wealthy market through "information sharing," the flow of which creates value. The NTT Group has been considering how to deal with creating opportunities of various "informational sharing" businesses as a group, not only in the standard electronic communications field, but also by building a platform to safely and efficiently circulate such content as pictures.

From the view of the impact on the world's environment, there are two aspects of the IT revolution. One is the burden on the environment it creates, from use of energy and resources for networking, servers and information terminals. The other aspect is how IT can ultimately alleviate the burdens on the environment. Taking advantage of the IT revolution, we can share and produce activities more efficiently and control usage of energy and resources. Also, by sharing information about the environment through education and activities, we can enhance a common understanding of the environment.

To solve our environmental problems, it is necessary for all society to have a common understanding of the issues. We believe that as an information sharing group, and not strictly as a business, we bear a social responsibility to contribute to the sharing of environmental information.

We have been working incrementally but actively. We recognize a corporation's social responsibility is not only obeying laws and regulations, but also making efforts in independent social activities.

We would thus like to report that we have completed our outline of activities as an "Environmental Protection Activity Report, 2001," in succession of last year. We consider this report a very important tool to communicate the NTT Group's environmental activities.

I hope this report will help you to understand our activities, and you, in turn, will favor us with your opinion and advice on our activities. We will actively make the best use of your highly-valued ideas for our future business activities.

President, NIPPON TELEGRAPH
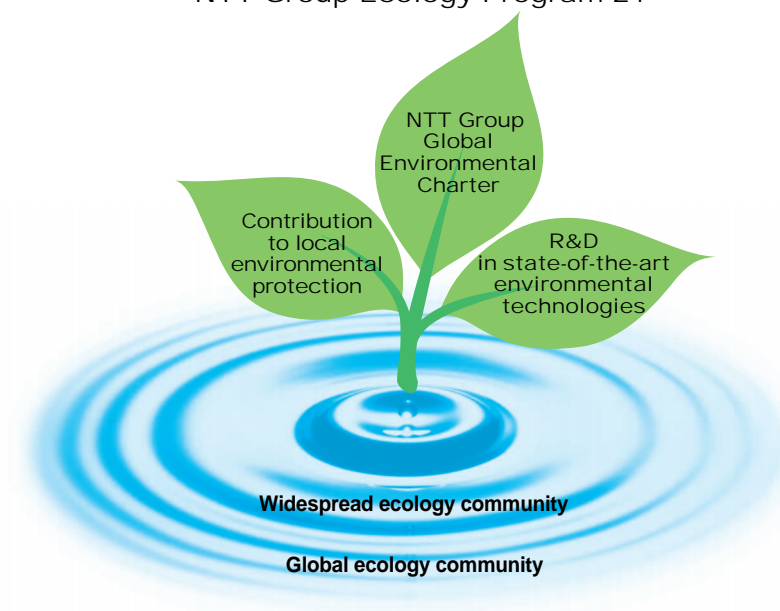AND TELEPHONE CORPORATION

NTT Group's Environmental Conservation Plans

http://www.ntt.co.jp/kankyo/e/2001report/0/021.html

The NTT Group has been actively working on global environmental problems as an entire group company. We established the "NTT Global Environmental Charter" ten years ago (in 1991) and since then dedicated serious thought about counter-measures for paper resources and CO_2. Also in July, 1997, taking the opportunity of the NTT Group's reorganization, we established "NTT Group Ecology Program 21," with the basic concept promoting conservation.

NTT Group Ecology Program 21

NTT Group Global Environmental Charter

Contribution to local environmental protection

R&D in state-of-the-art environmental technologies

Widespread ecology community

Global ecology community

1) With the NTT Global Environmental Charter, We Will Unify Awareness Within the Group

The NTT Group has been contributing to the reform of the economy and society as an information sharing company. However, it is a fact that higher speed, lower cost and diverse service networks also assault the environment, as it takes natural resources to build these things.

It is a necessary responsibility as a company trusted by society to make an effort to co-exist with the global environment in the 21st century. To be a trusted company, it is important that the NTT Group take an environmentally conservative approach in all our business activities, and show the basic attitude of respect in all we do. The "NTT Global Environmental Charter" was born from those reasons.

2) We Will Contribute to Local Communities Through a Variety of Environmental Activities

We have established the "Contribution to Local Community in the Environmental Protection" as a second theme in the "NTT Group Ecology Program 21."

NTT Group has created a model branch such as NTT EAST Iwate branch and NTT WEST Shiga branch and set up an "Ecology Community Plaza." In the plaza, they build a network to think about global environmental conservation and to provide and exchange information with the people in the community. Reflecting the results brought by those model cases, we will gradually expand the program to every branch office nationwide.

In addition, we have witnessed some of our group companies contributing to our society by

voluntarily working on environmental protection activities or collecting donations for these specific activities.

Though these activities are still small in scale, we strongly believe they are the first steps that could bring about big changes.

3) We Believe State-of-the-Art Information Sharing Technology Will Reduce Environmental Loads

We are conducting various research and development activities in search of a new way of life. This is our third theme proclaimed in the "NTT Group Ecology Program 21," and that is "Research and Develop-ment in state-of-the-art environmental technologies."

NTT Lifestyle and Environmental Technology Laboratories and NTT Telecommunications Energy Laboratories (both founded in January 1999) are core research bodies taking initiatives in our group companies and local branch offices. We are conducting two kinds of environmental R&D. First is structuring a system to achieve a society of sustained development by utilizing information technology.

Our efforts include building ecology networks, R&D on a nitrogen dioxide monitoring system*, environmental lord simulations using videoconferencing and network services, e-commerce transaction* model experiments and development of intelligent transport systems*. Examples of our developments include the long life nickel metal hydride battery*, a stand-alone photovoltaic power system*, plastic recycling technology using super critical water*, and energy reforming machines*.

*Long life nickel metal hydride battery
This type of battery lasts 8 years.

*Stand-alone photovoltaic power system
Power generating system with a solar battery.

*Plastic recycling technology using super critical water
This is to decompose and recycle plastics by using super critical water as an excellent medium for chemical reaction.

*Developing energy reforming machines
This improves fuel quality so that diesel engines can eliminate smoky gas or CO_2 emissions.

NTT Group Global Environmental Charter

We need to recognize the extent and gravity of current environmental issues, including global warming, ozone layer depletion, destruction of the tropical rain forests, desertification, acid rain, and contamination of the oceans. We must also recognize the degree to which these issues are the direct result of current societal systems, which are intimately linked to corporate activities.
As a business enterprise, we have a responsibility to dedicate ourselves to harmonizing our business activities with global efforts to protect the environment in order to realize sustainable growth and to eliminate problems for future generations. Based on this fundamental recognition, we here establish the NTT Group Global Environmental Charter to clarify our basic policies and actions taken concerning these issues.

【Basic Principle】

To ensure the harmonious co-existence of people with nature and to achieve sustainable growth, the NTT Group will do our utmost to protect the global environment in all our corporate activities.

【Basic Policies】

1. 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.

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

3. Establishing and maintaining environmental management systems
To establish an environmental management system enabling each business unit to pursue voluntary environmental protection activities.

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

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

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

For the target of our major action plans, see p.5.

Achievement in the Year 2000 and the Vision for the Future

http://www.ntt.co.jp/kankyo/e/2001report/0/031.html

Throughout the Year 2000, We Made Every Effort to Achieve Our Objectives

It's the time of IT revolution*. As this key term indicates, our society and industry are going through a rapid change today. Circumstances surrounding the information sharing market, in particular, are altering every moment. More and more people use mobile communication devises and services, and the use of the Internet has diffused rapidly. The speed of its development is far beyond our expectation.

The NTT Group will contribute aggressively to a social and economic revolution, by increasing the speed, cutting the cost, and maintaining more diversity to our service network (wired and wireless) based on IP.*

However, by pursuing our economic goals, we are consuming a tremendous amount of paper and energy, while producing tons of waste.

That's why we have hammered out our action plan and target objectives. We here present the year 2000 targets (set in 1991) and how much we have achieved. "Paper resource management," "Prevention of global warming," and "Waste management" are the three activity categories we chose. (Chart 1)

As for paper resources and waste, we have decreased enough to meet our targets. (Fig.1,2) Regarding CO_2 emissions, however, we haven't; the total amount of CO_2 emission is already exceeding the year 2000 target level set in 1990. (Fig. 3)

One reason is the expansion of our business activities that could have caused this increase in

Chart 1 Targets for action plans

Item	Targets for action plans (set in 1991)	Results in 2000	Page
Paper resource management	To reduce total virgin pulp consumption to 1990 levels after 2000	Total virgin pulp consumption is reduced by approx. 23% from 1990.	24
Prevention of global warming	To reduce CO2 emissions to 1990 levels after 2000	Total volume of emissions increased by approx. 53% from 1990, however, steadily improving eco-efficiency has resulted in stabilization.	26
Waste management	To reduce the amount of waste to 1990 levels after 2000	The amount was reduced by approx. 65% from 1990 level.	30
Protection of ozonelayer	Use of CFCs to be totally banned in1995.	Completed in 1995.	31

Regarding protection of the oozone layer, the use of CFCs in new equipment was completely banned in 1995.
Regarding paper resource management, prevention of global warming and waste management, target figures have been reviewed and revised targets were included in the 1999 NTT Group targets for major action plans to demonstrate our continuing efforts.

Chart 2 Setting new targets for 2010

Item	Targets for action plans (set in 1999)
Paper resource management	Total virgin pulp consumption to be reduced by more than 20% from 1990 levels by 2010.
Prevention of global warming	CO2 emissions to be reduced below 1990 levels by 2010.
Waste management	Volume of waste to be reduced by more than 85% of 1990 levels by 2010.

CO_2 emission. However, when one looks at eco-efficiency*, revenue per CO_2, it has always stayed around an average of 4.7 million yen/CO_2 emissions in tons since 1996. (Fig. 4) This stability in ecoefficiency may show how we have continuously tried to eliminate the amount of CO_2 emission since 1991.

Towards 2010, We Continue to Set New Targets and Goals for Sustainable Business Activities

In March 2000, the NTT Group revised the targets for our major environmental action plans. (Chart 2) Reviewing the past ten years, it is clear we must continue our efforts to support a sustainable society.

When we say "aiming at sustainable society", we seek to develop business activities that coexist with sustaining our eco-system. Each individual business unit must make their roles clear and accurate in sustaining our environment. All employees must deal with environmental issues as a matter of daily life. As a corporation, and as individuals, we should work on global environmental activities locally.

Without considering the wisest approach, we may not solve the macro issue of managing the eco-system.

Now, we are developing an accurate understanding of how the NTT Group's business activities affect society and our eco-systems by collecting environmental information. As a result, we have revised our specific targets of where the NTT Group should be in the future.

We will continue to contribute to a sustainable society through environmentally responsible business practices. This is the challenge of our time.

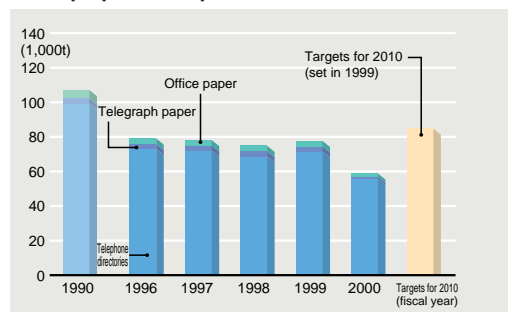**Fig. 1 Paper resource management toatal virgin pulp consumption**

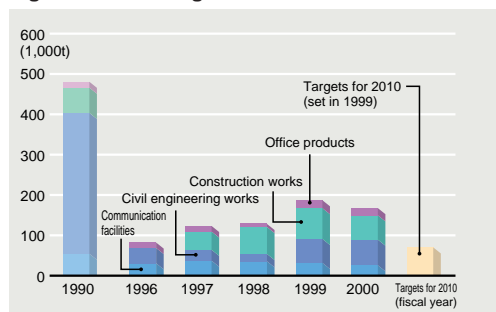**Fig. 2 Waste management volume of waste**

Fig. 3 Prevention of global warming (Volume of CO_2 emissions)
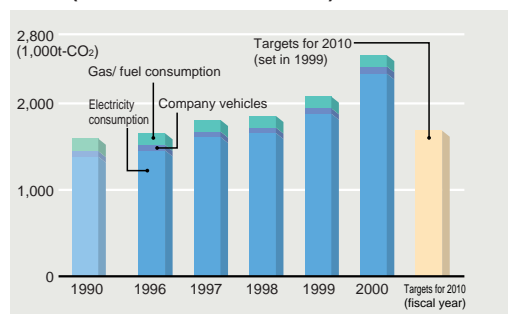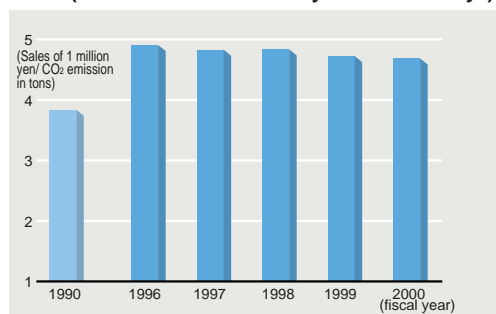

Fig. 4 Prevention of global warming (Environmental efficiency "eco-efficiency")

As of fiscal 1999, the amount of CO_2 emissions exceeded the target set for the year 2000 (at the 1990 level). (Fig. 3) One of the factors for this is the expanded business range of the NTT Group. However, sales per unit of CO_2 emission, an indication of environmental efficiency (eco-efficiency) show yearly improvement and have stabilized at around ¥4.7 million/t-CO_2 since 1996. (Fig. 4) The NTT Group has thus been making continuous progress in reducing the volume of CO_2 emissions since 1991. For 1999, CO_2 emitted by NTT Facilities and NTT Urban Development were included in the figure, thus the increase compared to the previous year.

*To measure the amount of CO_2 emissions under the same conditions, we included only data of major companies.