



**Nikon Environmental Report
2001**

Nikon

Company Profile

Corporate Name:	NIKON CORPORATION
Head Office:	Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo 100-8331, Japan Tel: +81-3-3214-5311
Established:	July 25, 1917
Capital: (as of March 31, 2001)	¥36,660 million
Net Sales: (for year ended March 31, 2001)	¥483,956 million (Consolidated) ¥391,320 million (Non-consolidated)
Number of Employees: (as of March 31, 2001)	13,894 (Consolidated) 6,582 (Non-consolidated)
Primary Business:	Manufacture and sales of optical instruments

Major Products of Nikon Group

Precision Equipment Business (Precision Equipment Company*)	IC steppers/LCD steppers
Imaging Products Business (Imaging Company*)	Single-lens reflex cameras/Compact cameras/Interchangeable lenses/Speedlights/ Photographic accessories/Digital cameras/Film scanners
Instruments Business (Instruments Company*)	Biological microscopes/Industrial microscopes/Stereoscopic microscopes/ Environmental scanning electron microscopes/Medical image information systems/ Measuring instruments/Inspection equipment/Presentation cameras/Optical components
Customised Products Business (Customised Products Division*)	Customised equipment/Space-related equipment/Astronomy-related equipment/ Nuclear power-related equipment/Optical components
Binoculars and Telescopes Business (Nikon Vision Co., Ltd.)	Binoculars/Monoculars/Fieldsopes/Fieldmicroscopes/Loupes/Large objective diameter binoculars/Sightseeing binoculars/Laser rangefinders/Field Image System/ Night vision scope
Surveying Instruments Business (Nikon Geotecs Co., Ltd.)	Total stations/Theodolites/Levels/GPS surveying systems
Eyewear Business (Nikon-Essilor Co., Ltd.; Nikon Eyewear Co., Ltd.)	Ophthalmic lenses/Hearing aids/Ophthalmic frames/Sunglasses/Pendant loupes

*These companies/division are part of Nikon Corporation's internal structure.

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Scope of Report

This environmental report contains information on the impact of Nikon Corporation's facilities on the environment, and measures undertaken for fiscal year 2001 (April 1, 2000 to March 31, 2001) at Nikon Corporation. It encompasses the head office, as well as the Ohi, Yokohama, Sagamihara, Kumagaya and Mito plants. The report also includes information on activities during the term, plans for future activities, and information on group companies.

The cover design expresses a world where Nikon's corporate activities are in harmony with nature. The lens, the foundation of Nikon corporate activity, projects air, water and earth onto a green leaf symbolising life.

Message from Management

Since Nikon established its “Nikon Basic Environmental Management Policy” in 1992, we have independently pursued a wide range of activities directed at environmental preservation, based on the core concepts of “recycling” and “coexistence.”

When we look at the world around us, we see a variety of problems that threaten our way of life, as well as our very lives, such as global warming and the spread of environmental pollutants throughout nature. Naturally, society demands that even more stringent environmental preservation activities be undertaken by corporations, and the efforts made in this area are becoming increasingly important as an index for evaluating corporate performance. We are fully aware of this evolution in the management environment, and are committed to taking the necessary measures to meet the changing requirements.

In line with the changes in the management environment, Nikon created a new corporate strategy named “Vision Nikon 21” to clarify our future direction and corporate targets. We have also restructured company management. This new strategy reaffirms the importance of the three principles upon which Nikon was founded:

- 1) Nikon is a manufacturer backed by excellent technologies
- 2) Nikon exists thanks to customers
- 3) Nikon exists due to its uniqueness

These three principles also serve as the foundation for Nikon’s environmental activities, and we intend to adhere to them ever more closely in order to achieve our goals.

Based on this corporate strategy, we integrated the many and varied environmental targets in June 2000 to formulate the “Nikon Environmental Action Plan 21”, which outlines midterm environmental targets for the entire corporation. Our efforts are already producing tangible results. In fiscal 2002 we will review our programmes and work to further reduce environmental loading. It is our sincerest hope that we may contribute to the continuing prosperity and fulfillment of humankind.

This environmental report includes an overview of Nikon’s corporate environmental activities for the last several years, especially for the fiscal year from April 2000 to March 2001. This is the first environmental report that Nikon has issued, and while we recognise that it is insufficient in certain areas, we intend to address these areas in future releases. We hope that this report will help you to better understand our stance and policies, and would be extremely appreciative if you would favour us with your honest comments and suggestions.



Shoichiro Yoshida

Shoichiro Yoshida
Chairman of the Board and
Chief Executive Officer



Teruo Shimamura

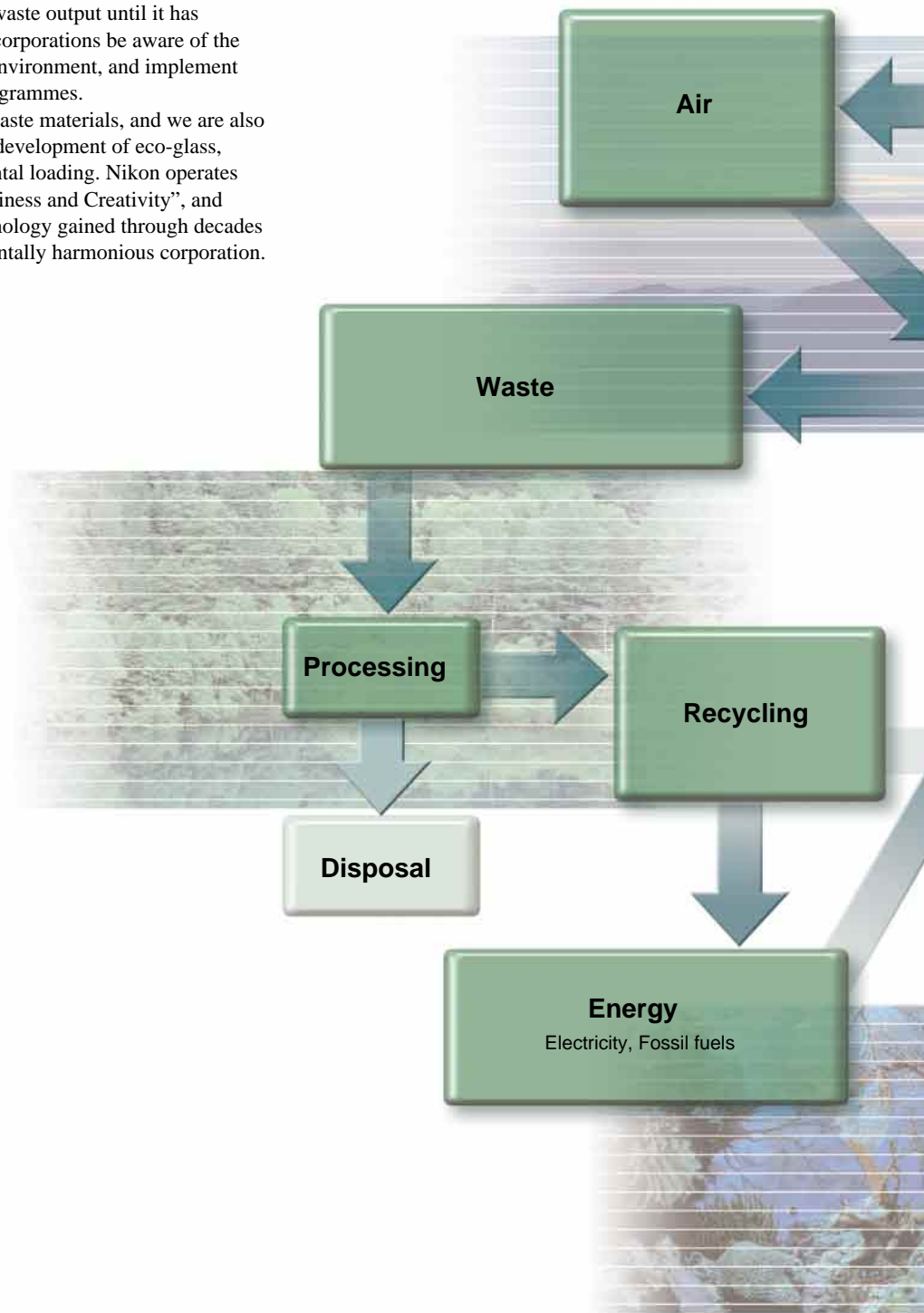
Teruo Shimamura
President, Member of the Board and
Chief Operating Officer

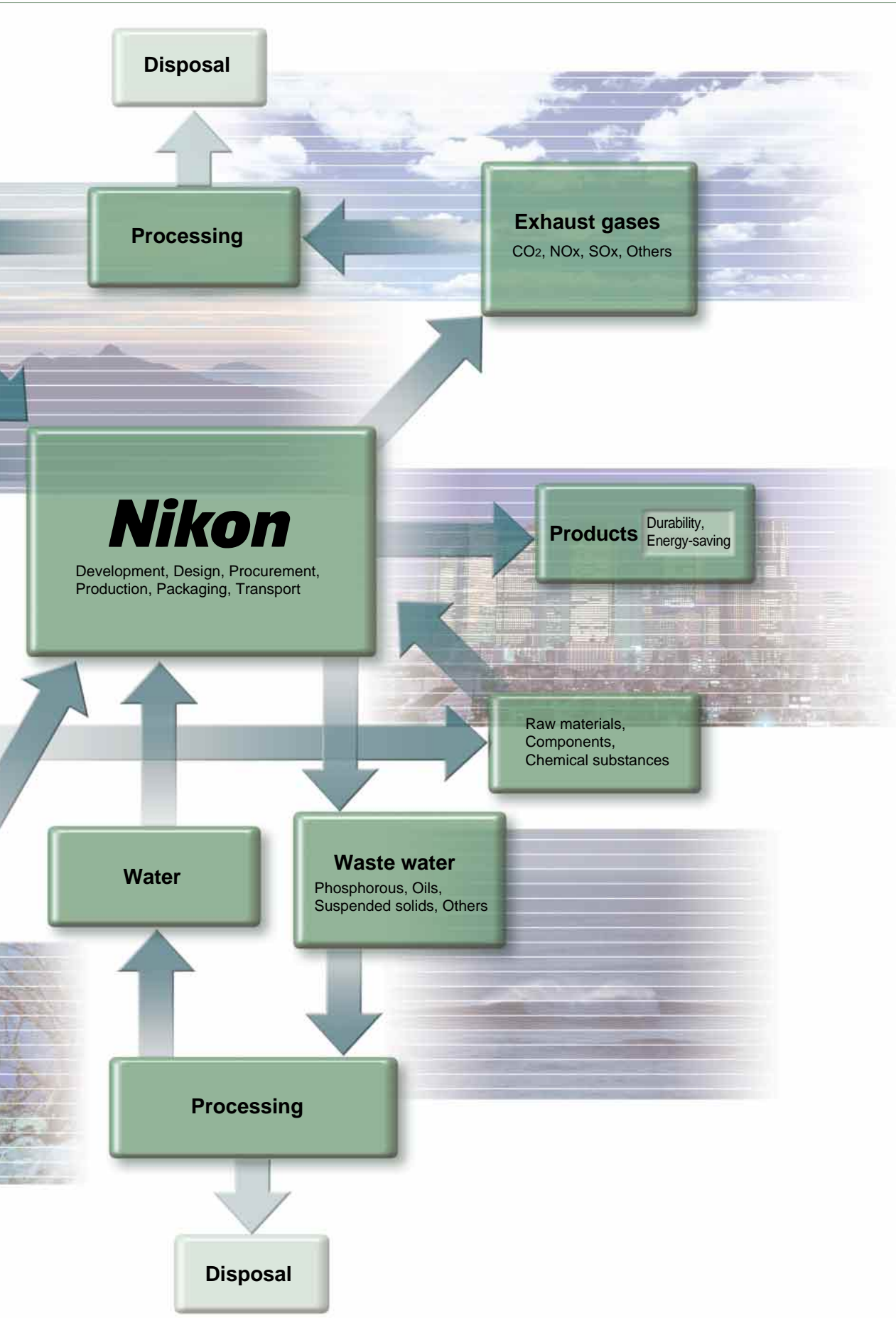
Nikon and the Environment

A corporation is like a living organism, functioning within the global environment. As it grows, it provides products and services to society and continues to grow, and during this time it consumes various resources and energy, and generates numerous types of waste.

It is crucial that we recognise the importance of recycling and conservation — particularly reductions in the use of energy and resources. We must also continue working to reduce our waste output until it has virtually been eliminated. It is imperative that corporations be aware of the impact their operations may be having on the environment, and implement more sophisticated ecological management programmes.

Nikon is continuing its efforts to reduce waste materials, and we are also actively pursuing unique activities such as the development of eco-glass, which will significantly reduce our environmental loading. Nikon operates based on its corporate philosophy, “Trustworthiness and Creativity”, and today we are applying the experience and technology gained through decades of work in the field to create a new, environmentally harmonious corporation.





Environmental Policy

Nikon made its official stance regarding environmental management activities in 1992, when it created and implemented the “Nikon Basic Environmental Management Policy”, and has continued to be active in environmental conservation. In March 2000, we devised the corporate strategy called “Vision Nikon 21”, which describes the direction of Nikon Group activities. Nikon also

redefined its corporate philosophy for the new century, using the keywords “Trustworthiness and Creativity”. Guided by our new philosophy, we will continue to pursue the goals of the “Nikon Basic Environmental Management Policy”.

Corporate Philosophy

Trustworthiness

Nikon:

- Is trusted and loved by people worldwide.
- Exists and prospers in harmony on all levels throughout the world.

Creativity

Nikon:

- Creates new values by maintaining pride and faith in our business and by encouraging entrepreneurial spirit.
- Appeals to people all over the world and satisfies them with efficient and useful products and services.

The Nikon Basic Environmental Management Policy

Purpose of the Policy

Nikon enacted the “Nikon Basic Environmental Management Policy” in 1992 in order to express its commitment to improvements in its local environment as well as globally, and to act as the foundation for its environmental management activities. Nikon believes that pollution prevention measures and the efficient use of resources are vital steps that must be taken, in order to be able to hand on to the next generation a healthy environment that is capable of supporting the continued development of society.

Main Points of the Policy

- We are committed to adhering to stringent self-imposed standards so that we do not in any way violate environmental conservation treaties, national or regional laws or regulations.
- Our design and development processes will accommodate environmental and safety concerns. We will meet preservation objectives at every stage from manufacturing and distribution to use and disposal.
- We will develop and improve technologies for environmental preservation at each phase, while introducing materials and equipment to aid us in achieving our goals.
- We will make every effort to promote energy and resource conservation in all activities. We will also promote recycling, waste reduction and practise proper disposal methods.
- We are conducting environmental awareness education on an ongoing basis to improve our employees’ knowledge of environmental issues.
- In order to implement the aforementioned policies on as large a scale as possible, we will also require our Group companies and suppliers to work with us on environmental issues.



The Nikon Environmental Symbol

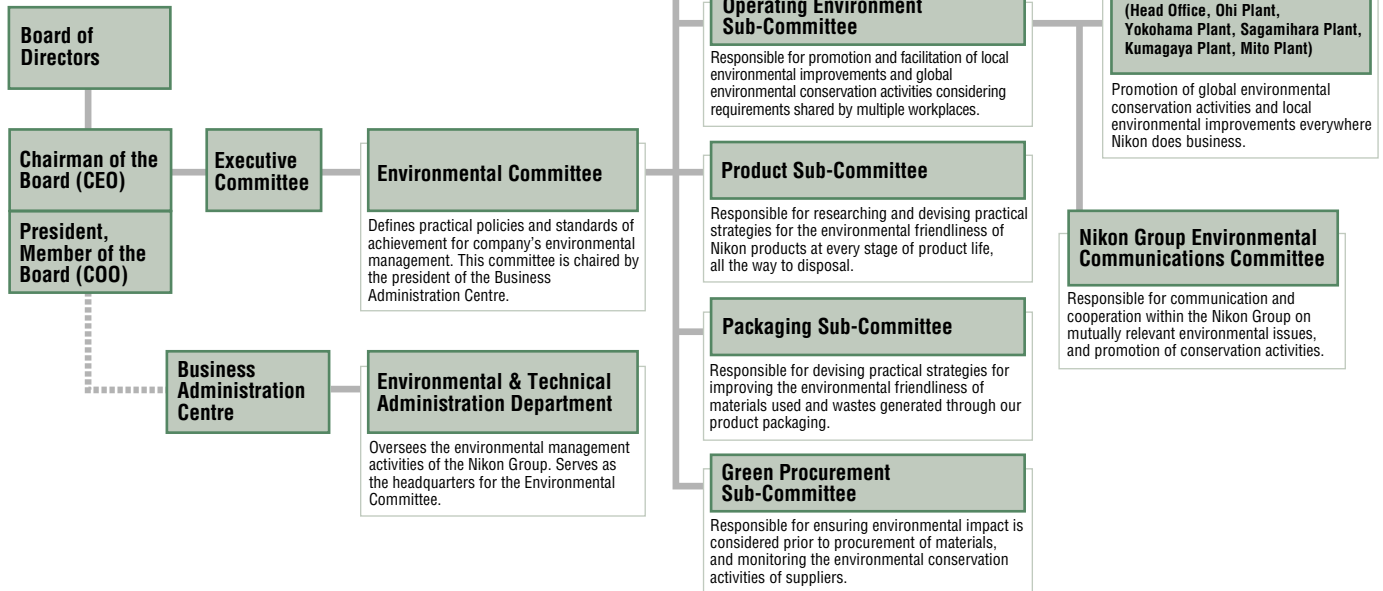
This symbol was created and introduced in 1998 to represent the environmental conservation and improvement activities being undertaken by the Nikon Group.

Environmental Management Organisation

Nikon first entered into environmental protection activities in 1970, when it formed its “First Pollution Response Committee”. This committee was renamed the “Pollution Prevention Committee” in 1971, and again in 1973 to be known as the “Environmental Improvement Committee”. This gave birth to our programme of more practical environmental conservation activities.

The environmental management organisation was restructured in 1992 with the enactment of the “Nikon Basic Environmental Management Policy”, and in 1999, as part of the expansion and adjustments to the system, we established an “Environmental &

Technical Administration Department” within the company. The current environmental management organisation ensures that we are constantly kept abreast of new domestic or international laws, treaties or regulations, or modifications to existing ones, as well as the ever-changing needs of society.



Environmental Management System

In September 1996, an international standard on environmental management systems (ISO 14001) was officially introduced by the International Standards Organisation. The intention of the standard is to promote the self-improvement of environment-related aspects of corporate activities, with the United Nation’s policy for ensuring the sustainable development of the human race as its foundation.

The Nikon Group’s current track record for obtaining ISO certification is shown below, along with each facility’s main activities. The organisation that performed the evaluation for each location was BVQI (Bureau Veritas Quality International, based in the UK).

Through earning this certification and our dedication to our environmental activities, we have not only achieved improved levels of environmental management, but have also become stricter in our classification of waste, significantly increased our recycling rate for paper, reduced our output of paper and other forms of refuse, and intensified our promotion of energy-conserving measures.

This Environmental Management System functions together with the quality standards set forth in ISO 9000 guidelines — for which each business unit has received certification — allowing us to meet our customers’ needs while showing consideration for the environment, and at the same time supplying high-quality products.

Location	Date of Approval	Primary Activities
Ohi Plant	July 1998	Development of basic technology, development and design of Imaging Company products
Kumagaya Plant	August 1998	Development, design and manufacture of IC steppers
Sagamihara Plant	August 1998	Manufacture of optical glass, research and development of lenses
Yokohama Plant	October 1998	Development, design and manufacture of Instruments Company products and LCD steppers
Mito Plant	April 1999	Development of manufacturing technology, production of customised products
Sendai Nikon Corporation	March 1997	Manufacture of cameras and LCD steppers
Zao Nikon Co., Ltd.	March 1999	Manufacture of component devices for IC/LCD steppers, surveying instruments
Tochigi Nikon Corporation	September 1999	Manufacture of IC/LCD steppers, various optical lenses
Nasu Nikon Co., Ltd.	December 1999	Manufacture of ophthalmic lenses
Aichi Nikon Co., Ltd.	December 1999	Manufacture of ophthalmic lenses
Kurobane Nikon Co., Ltd.	December 1999	Manufacture of lenses for microscopes, profile projectors and surveying instruments
Mito Nikon Corporation	December 1999	Manufacture of component devices for IC/LCD steppers, cameras
Sagami Optical Co., Ltd.	January 2000	Processing of optical-glass products, other glass items



The Certificate of Approval awarded to the Ohi Plant

Environmental Accounting

Nikon introduced its first comprehensive environmental accounting system in fiscal 2001. Environmental accounting involves accounts that show the cost and the effects of environmental conservation activities. Through the introduction of environmental accounting, we aim to improve the effectiveness of our conservation activities,

Features

Nikon's environmental accounting features the classification of environmental costs and effects according to our environmental preservation activities.

Basic Policy

The figures contained in our environmental accounts for fiscal 2001 are for Nikon Corporation only. Environmental costs (investments and expenses) are classified based on our environmental targets and measures, as well as standards set forth in the guidelines of Ministry of the Environment (Developing an Environmental Accounting System, Year 2000 Report).

and implement sustainable environmental policies over the long term with quantifiable results. We are also working to heighten awareness of our environmental conservation activities, through the publication of related information and the clarification of our stance on the environment.

Development

We established an "Environmental Accounting Sub-Committee" within the "Environmental Committee" in June 2000, with the aims of creating an environmental accounting system and an appropriate means of operation. This Sub-Committee is active on an ongoing basis.

Effects

The effects of our environmental activities are shown under the heading "Results through Fiscal 2001" on the Environmental Action Plan on the next page. These results are the actual results of strategies implemented in response to our environmental target values.

Cost of Environmental Conservation (Fiscal 2001)

Unit: millions of yen

Category		Main Activities	Investment	Expenses	Total
Product environment	Product development: Energy conservation, reduced use of resources, reduction in use of harmful chemical substances, ozone layer protection	Energy-saving design, switch to hot-runner moulds, development of eco-glass	-	49	49
	Containers and packaging	Reduction in use of plastics in packaging materials	-	17	17
	Green procurement	Operation of green procurement guide	-	1	1
	Product Environmental Accounts		-	66	66
Workplace environment	Energy conservation	Replacement of air conditioning systems, installation of inverters	126	61	187
	Waste reduction	Recycling of waste plastics, promotion of paper reuse	-	27	27
	Reduction in use of harmful chemical substances	Promotion of use of alternative solvents, refurbishment of wash machines	48	9	57
	Workplace Environmental Accounts		174	97	271
Response to laws and regulations		Operations management for gas and water emissions processing equipment, maintenance of noise and vibration-emitting facilities, waste management, control of dangerous substances	258	446	704
Management activities		ISO 14001 related (EMS management, workplace education), introduction of greenery	-	383	383
Total			432	993	1,424

Classified According to Guidelines of Ministry of the Environment (Fiscal 2001)

Unit: millions of yen

Category	Details	Investment	Expenses	Total
Cost within business area				
Pollution prevention costs	Operations management for gas and water emissions processing equipment, maintenance of noise and vibration-emitting facilities	211	216	428
Global environment conservation costs	Energy conservation, reduction in use of harmful chemical substances, control of dangerous substances	219	140	359
Resource recycling costs	Waste reduction (recycling of waste plastics, promotion of paper reuse), waste management	1	187	188
Upstream/Downstream costs	Containers and packaging measures (reduction of plastics in containers and packaging materials)	-	18	18
Management activities costs	ISO 14001 related (EMS management, workplace education)	-	352	352
R & D costs	Energy-saving design, switch to hot-runner moulds, development of eco-glass	-	49	49
Social activities costs	Introduction of greenery	-	31	31
Environmental damage costs		-	0	0
Total		432	993	1,424

Scope of Data:
Nikon Corporation
(Non-consolidated)
Applicable Period: April 1, 2000 to March 31, 2001

* Costs which could not be clarified are in principle not included in these accounts.
* Depreciation and amortisation have not been factored into these accounts.
* Where a facility has been utilised for several purposes and breakdown is considered complex, the entire cost has been included in the investment cost.
* All costs have been rounded up or down to the nearest whole number, so in some cases the totals do not match the figures indicated.

The Ongoing Challenge

In addition to trying to collect environmental cost data more quickly and efficiently, we are also aiming to improve our methods for gauging the effects of our activities, so that we can clearly illustrate the relationship between cost and effect. Furthermore, we are

considering more extensive environmental accounting training, and looking at ways in which environmental accounting procedures could be put into use by our manufacturing subsidiaries, whose environmental impact is relatively significant.

Environmental Action Plan

Nikon implemented its corporate policy statement for group activities, known as “Vision Nikon 21”, in March 2000. This was the basis for the midterm environmental targets we specified in our “Nikon Environmental Action Plan 21 for Fiscal 2001”. Now we have the revised plan, “Nikon Environmental Action Plan 21 for

Fiscal 2002”, which separates the targets into 13 categories representing the product and workplace environments as shown below. The results achieved to fiscal 2001 are shown on the right.

Nikon is committed to reaching every one of the targets during the coming period.

The Nikon Environmental Action Plan 21 for Fiscal 2002

Product Environment

Theme	Midterm environmental targets	Results through fiscal 2001
1. Energy conservation (prevention of global warming)	<ul style="list-style-type: none"> Improvement in energy efficiency of 30% or greater for functions on products marketed during fiscal 2003, compared with products sold since fiscal 1998. 	<ul style="list-style-type: none"> Six out of 14 products selected from among products marketed during fiscal 2001 achieved a 30% or greater improvement in energy efficiency. Some examples are introduced on pages 12 and 13.
2. Reduction in use of harmful chemical substances	<ul style="list-style-type: none"> Development of eco-glass (lead and arsenic-free optical glass) to be completed by end of fiscal 2001. Use of eco-glass in 90% or more of all optical designs in fiscal 2003. 	<ul style="list-style-type: none"> Development completed during fiscal 2001. Use of eco-glass rose from 77% in fiscal 2000 to 86% in fiscal 2001.
3. Ozone layer protection	<ul style="list-style-type: none"> Reduction of models using ozone layer-damaging HCFC, used as refrigerant for IC and LCD steppers to fewer than 30% of all products shipped in fiscal 2003, with ultimate goal of total elimination of use of HCFC by end of fiscal 2005. 	<ul style="list-style-type: none"> Rate of models shipped utilising HCFC has fallen from 94% in fiscal 2000 to 75% in fiscal 2001.
4. Containers and packaging	<ul style="list-style-type: none"> 40% reduction in plastic containers used in consumer products by fiscal 2003, compared with figures for fiscal 1999. Total elimination of non-separable multi-material for new packaging from fiscal 2001 onward. 	<ul style="list-style-type: none"> 4% increase in fiscal 2000 was improved to a 24% decrease in fiscal 2001. Total elimination of non-separable multi-material for new packaging was achieved in fiscal 2001.
5. Green procurement	<ul style="list-style-type: none"> Increase average environmental conservation structure evaluation of suppliers by 20 points by end of fiscal 2003, compared with scores in fiscal 2000. 	<ul style="list-style-type: none"> A revised version of the Green Procurement Guide was produced and distributed to suppliers. Evaluation is to be performed in fiscal 2002.

Workplace Environment

Theme	Midterm environmental targets	Results through fiscal 2001
1. Energy conservation (prevention of global warming)	<ul style="list-style-type: none"> 20% or better reduction in energy consumption per net sales in fiscal 2003, compared with figures for fiscal 1999 	<ul style="list-style-type: none"> Reduction rate improved from 14% in fiscal 2000 to 29% in fiscal 2001.
2. Waste reduction	<ul style="list-style-type: none"> Achieve at least one zero-emission facility by end of fiscal 2003. Boost waste recycling rate to at least 85% in fiscal 2003. Reduce amount of waste generation per net sales by at least 40% in fiscal 2003 compared with figures for fiscal 1999. 	<ul style="list-style-type: none"> Continued to improve recycling efficiency. Improved from 65% in fiscal 2000 to 73% in fiscal 2001. Reduction rate improved from 26.9% in fiscal 2000 to 27.2% in fiscal 2001.
3. Reduction in use of harmful chemical substances	<ul style="list-style-type: none"> Reduce use of chlorinated organic solvents in wash by at least 70% in fiscal 2003, with goal of elimination of these solvents by end of fiscal 2006. 	<ul style="list-style-type: none"> Reduction rate of 0.4% in fiscal 2000 improved to 37% in fiscal 2001.
4. Green procurement	<ul style="list-style-type: none"> Increase the number of new or replacement ecological office supplies by at least 300 over fiscal 2001 level, by end of fiscal 2003. 	<ul style="list-style-type: none"> 97 new ecological items added.

Activities in the Product Environment

Product Assessment

To minimise the adverse environmental effects of our products throughout their life cycles (see diagram to right), Nikon formulated its own product assessment system in 1995. This system makes it possible to quantify the degree of reduction of environmental impact during product development.

From 1995 we implemented this system in all product development and design departments, in order to gradually decrease environmental loading caused by our products.

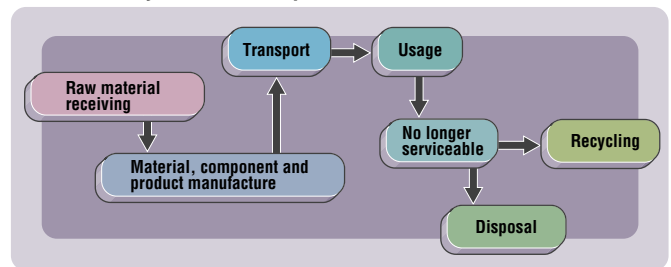
Features of Nikon Product Assessment System

- Priority placed on reducing consumption of resources and energy; recycling; long product life; reduction in use of harmful substances; reduction and simplified processing of waste; disclosure of material information.
- Advance survey and investigation of emerging environmental issues and regulations in each country, and development of Nikon standards that take the characteristics of our products into account.
- Formulated after thorough discussion among product development teams, material engineers and other related personnel.
- Make product assessment mandatory in design reviews and related phases of product development sequences, with procedures and standards clearly defined.
- Continuous revision through item addition and improvement; Version 4 is currently in use.
- Vigilance in product improvement from one model to the next.
- Support designers by building and maintaining an environmental database of material information (eco-glass, flame retardants, etc.), explanatory text and documentation.

Contents of the Nikon Product Assessment

- Continuing reduction in product mass, volume, part count and power consumption.
- Pursuit of extended product life and simpler repair.
- Promotion of recycling of harmful batteries (simplified removal, content marking and explanations).
- Elimination of specific brominated flame retardants (suppression of dioxin in waste processing).
- Reduce use of vinyl chloride (added chlorine and lead, cadmium and phthalates can cause problems after waste disposal).
- Elimination of ozone layer-depleting substances (specified CFCs and alternative substances).
- Marking of materials used (compliance with ISO 11469 international plastic marking standard, parts marking).
- Reduction in use of harmful substances.
- Simplified separation of plastics and metals.
- Reduction in amount of waste generated from consumables; appropriate customer guidance on waste processing.
- Use of optical glass free of lead and arsenic in optical system components such as lens elements (see page 11).
- Strict observance of environmental laws and regulations.
- Overall assessment (comments on degree of improvement, overall assessment points, etc.).

General life cycle for Nikon products



Nikon Product Assessment Record

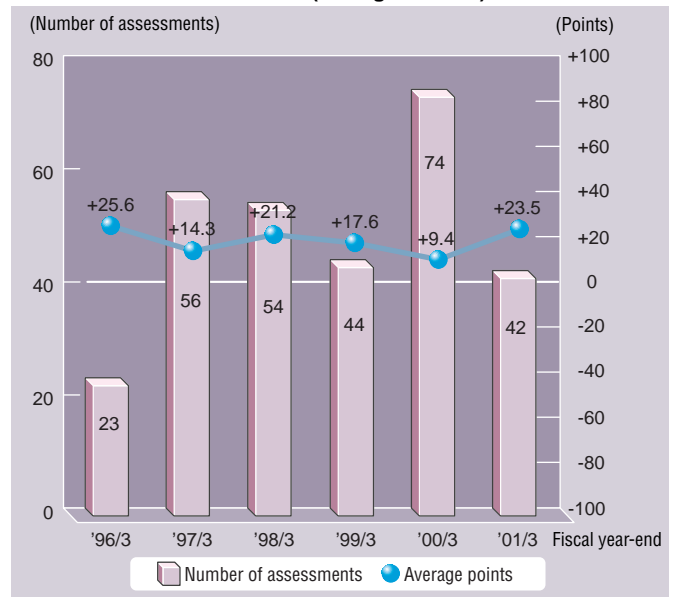
In all Nikon product categories, products are assessed at all stages of development, including prototype and mass production. Efforts to improve environmental friendliness are constant.

If a product shows improvement in terms of environmental friendliness when compared with the prior model, assessment points are awarded. If the product is about the same, no points are given. If it has deteriorated, points are subtracted. The assessment point scale ranges from -100 to +100.

For the six-year period from fiscal 1996 to fiscal 2001, a total of 293 products were assessed under this programme, with an average assessment of +17.0 points.

Nikon is continuing its efforts to improve and enhance the functionality and performance of all of its products, while releasing new products to world markets, and this assessment indicates that our environmental efforts are gradually being rewarded.

Product Assessment Results (through FY2001)



Activities in the Product Environment

Environmentally Sound Optical Glass (eco-glass)

Targets

- Development of eco-glass (lead and arsenic-free optical glass) to be completed by end of fiscal 2001.
- Use of eco-glass in 90% or more of all optical designs in fiscal 2003.



Nikon began full-scale work on the development of eco-glass, the environmentally sound optical glass free of lead and arsenic, in 1995. We are employing this new glass in all of our product categories such as IC steppers, cameras and microscopes that incorporate optical systems.

Approaches and Activities

Since Nikon was established in 1917 as the first optical glass manufacturer in Japan, we have placed a high priority on the development and manufacture of optical glass designed for use in optical equipment.

As part of our anti-pollution efforts, in the 1970s we developed a new composition for optical glass totally free of cadmium, a toxic material.

In the 1990s, to contribute to the resolution of global environmental problems, we thoroughly reexamined compositions of optical glass bearing in mind the possible effects on the environment. The majority of 70 to 100 types of optical glass contained lead and arsenic. We have recognised that this fact is one of the most significant environmental aspects of our business activities and products. Therefore, we decided to develop a new

Nikon offers a diverse range of optical equipment products, and as such there are certain products incorporating parts that may not accommodate eco-glass. As far as technically possible, however, we intend to switch over to the new material.

environmentally sound glass and employ it in our products.

We demanded that the new glass offer optical performance at least equalling that of the glass in use. As such, the optical glass development department and the optical design department initiated a joint effort to investigate a variety of new compositions and design factors. After development was completed and the supply stance solidified, we began introducing eco-glass into our products. In fiscal 1999, the new glass was used across the board in the optical design department.

Nikon is working to minimise the possible pollutants (air, water, soil and waste disposal sites) used in optical glass, including lead and arsenic, as far as possible throughout the entire product life cycle (raw material production, manufacturing, use and disposal).



Lenses and prisms made with eco-glass



Eco-glass development

Eco-glass Highlights

- Fiscal 1996 Eco-glass development project launched full-scale.
- Fiscal 1998 Eco-glass-related items added to Nikon product assessments.
- Fiscal 1999 Eco-glass database completed; employed across the board in optical design.
- Fiscal 2000 Development of eco-glass composition about 80% complete; eco-glass used in 77.1%* of new optical designs.
- Fiscal 2001 Development of eco-glass composition complete; eco-glass used in 86.1%* of new optical designs.

The rates of eco-glass utilisation* in new optical designs in various fields are as shown below.

	Fiscal 2000	Fiscal 2001
IC steppers	77.4%	84.2%
Cameras and digital cameras	75.4%	82.0%
Microscopes and measuring instruments	67.8%	88.4%
Surveying instruments, customised products, others	80.8%	90.8%
Future product development	100.0%	95.7%
Nikon overall	77.1%	86.1%

*Rates are calculated based on component units.

The R&D expenditures for the development of environmentally sound optical glass were as follows:

Fiscal 1997	¥21 million
Fiscal 1998	¥82 million
Fiscal 1999	¥145 million
Fiscal 2000	¥148 million
Fiscal 2001	¥14 million



Examples of Environmentally Friendly Product Development

The entire Nikon group is implementing the “Nikon Product Assessment” to create new products which offer enhanced power consumption efficiency, are smaller and lighter, use less harmful

substances, and utilise eco-glass. We believe these improvements will be most beneficial to the global environment. Here are a few examples:

Precision Equipment Company Products

1. KrF excimer scanning IC stepper NSR-S205C

Overall power consumption efficiency is improved thanks to the enhancements in resolution, total alignment accuracy and throughput combined with efforts to minimise the increase in power consumption. Design modifications made it possible to change the supported wafer from 200mm to 300mm, providing new-generation semiconductor manufacturing capabilities without the need to replace equipment, enabling continued use of existing assets.

<Power consumption efficiency> Increased by more than 20% over the NSR-S204B in exposure of a 200mm wafer (internal reference).

<Ozone layer protection> New HFC refrigerant with zero ODP (Ozone-depletion Potential) used for temperature control and air conditioning chillers.

<Global warming substances> New HFE refrigerant with low global warming potential used in equipment internal cooling.

Nikon steppers lead the IC industry with highly integrated circuits, greatly contributing to revolutionary improvements in resource usage efficiency.

2. LCD stepper FX-21S

Power consumption efficiency is greatly improved thanks to significantly enhanced throughput (substrates exposed per hour) made possible by the development of sophisticated, proprietary Nikon technology and a range of innovations, primarily in multi-lens projection optical systems and scanning exposure systems.

<Power consumption efficiency> (Compared with FX-701M)

Exposure process for 15-inch TFT LCD panel +50%

Exposure process for 18-inch TFT LCD panel +150%

Exposure process for 21-inch TFT LCD panel +100%

Nikon’s LCD steppers are used in the production of high-definition liquid crystal displays*, which replace CRT monitors and offer lower environmental loading. They are expected to contribute to the preservation of the global environment in the 21st century.

* Reduction in environmental loading of a 15-inch LCD when compared to a 17-inch CRT. (Example used was from a research report published in an industry journal.)

● Total power consumption during usage — 65% less ● Resources consumed — 65% less ● Total CO₂ emission from material manufacturing phase through product disposal — 60% less



NSR-S205C



FX-21S

Imaging Company Products

1. Silver-halide film cameras and interchangeable lenses

● F65

Energy-saving design enables shooting up to 75 rolls of 24-shot film using only two CR2 3-volt lithium batteries (when not using Speedlight).

<Power consumption efficiency> +20% compared to F60.

● Nuvis V

This Advanced Photo System™ 3x zoom compact camera achieves a significant reduction in weight thanks to a stylish aluminium and plastic shell, while inheriting the advanced technologies and functions of its predecessor, the Nuvis S.

<Product mass> 33% less than Nuvis S.

● AF Zoom-Nikkor 28-80mm f/3.3-5.6G

With a plastic lens body and the adoption of composite aspherical lenses to reduce the total number of lenses, this lens has become the world’s smallest and lightest AF 28-80mm zoom lens (as of February 2001).

<Product mass> 36% less than AF Zoom-Nikkor 28-80mm f/3.5-5.6D.

<Eco-glass usage> 100%.

● AF Zoom-Nikkor 70-300mm f/4-5.6G

The plastic lens body and hybrid mount make this the lightest among nearly all comparable AF 70-300mm class zoom lenses from other makers, as well as our own 70-300mm f/4-5.6D ED.

<Product mass> 7.5% less than AF Zoom-Nikkor 70-300mm f/4-5.6D ED.

<Eco-glass usage> 100%.

2. Digital cameras

● COOLPIX 880

Battery consumption — and subsequently waste — significantly reduced through the adoption of a newly developed rechargeable, recyclable exclusive EN-EL1 battery.

<Eco-glass usage> 100%, including projection lens.

● COOLPIX 995

A fully charged EN-EL1 battery can operate the power-efficient COOLPIX 995 for up to 100 hours of continuous shooting — even with the LCD monitor on. Like the COOLPIX 880, it significantly reduces battery consumption and waste materials generated.

<Eco-glass usage> 100%, including projection lens.

<Power consumption efficiency> +30% compared to COOLPIX 990.

3. Film scanners

● SUPER COOLSCAN 4000ED/COOLSCAN IV ED

Both scanners employ an LED light source for minimal power consumption and longer light source life, increasing efficiency of resource usage. Clears the high-level energy-saving standards of the “International Energy Star Program”, and is an internationally recommended and registered product.



F65



COOLPIX 995



COOLSCAN IV ED

Targets

- Improvement in energy efficiency of 30% or greater for functions on products marketed during fiscal 2003, compared with products sold since fiscal 1998.
- Reduction of models using ozone layer-damaging HCFC, used as refrigerant for IC and LCD steppers to fewer than 30% of all products shipped in fiscal 2003, with ultimate goal of total elimination of use of HCFC by fiscal 2006.



Instruments Company Products

1. Industrial microscope ECLIPSE ME600L

Minimises power consumption of power supply unit and improves illumination of darkfield observation for brighter images, resulting in enhanced power consumption efficiency.

A single model can run off power supplies from 100 to 240 V, which facilitates global plant relocation, reduces wasteful expenditures and provides longer product service life.

(Prior ME600 was manufactured in 100, 120 and 230 V models.)

<Power consumption efficiency> +36% in comparison to ME600. (*observed field brightness/consumed power)

(Observed field brightness measured for various observation types, and frequency of use is factored in for each.)

<Eco-glass usage> 60% (25% in ME600).

2. Automatic macro inspection system AMI-2000

This system automates external macro inspection of wafer surfaces in the semiconductor manufacturing process, detecting a range of defects such as pattern variations caused by coating inconsistencies and stepper defocus, defects caused during development, foreign objects and scratches.

As this system was developed under a new product concept, there are no prior systems to use as a reference, but the design was improved in a number of ways from the original prototype as indicated below, and the final product assessment is an impressive 68 points.

<Product mass> Reduced by 11%.

<Product volume> Reduced by 51%.

<Power consumption efficiency> +47% improvement through reduction in number of printed circuit boards, simplification of electrical system, use of LCDs, and enhanced throughput.

<Harmful substances> Reduced use of vinyl chloride cable and lead solder, and elimination of PBDPE brominated flame retardants.

<Easier repair> Simpler construction through reduction in part count.



ECLIPSE ME600L



AMI-2000

Nikon Group Products

1. Outdoor binoculars 8x30E II, 10x35E II

The standard for bird-watching, these binoculars employ eco-glass: the perfect viewing tools for true lovers of nature.

<Eco-glass usage> 100% (up from 10% in prior models 8x30E CF and 10x35E CF).

2. Surveying instrument Total Station DTM-350

This surveying instrument combines rapid distance measurement capability, waterproofing, light weight and an affordable price, using an energy-saving design and high-performance Ni-MH batteries for 16 hours of operation from a single charge. The quantity of waste batteries is expected to drop significantly as a result.

<Power consumption> 42% reduction compared to DTM-300.

<Battery drive time> +120% in comparison to DTM-300.

<Battery discards> 50% less than DTM-300.



8x30E II



DTM-350

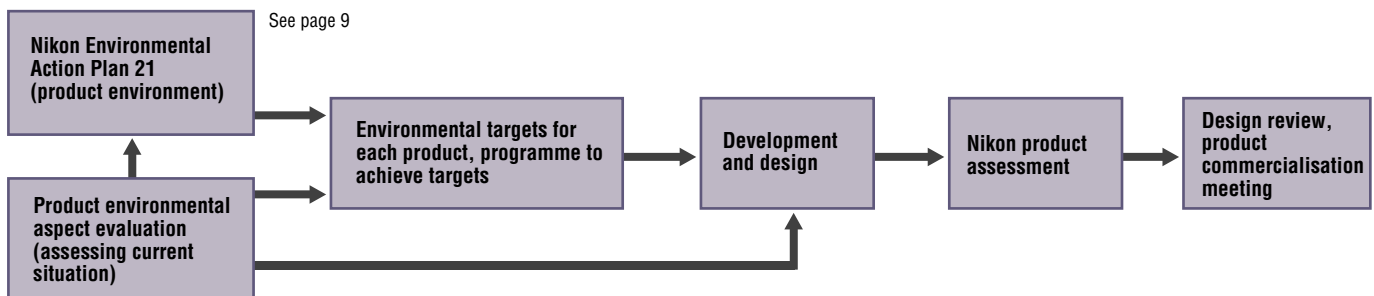
NOTE: Most of the products introduced here were released during fiscal year 2001 in Japan.

Future Activities

We have established a rigorous system for environment-oriented design activities and enhancement of the ISO 14001-compliant environmental management system as shown below, and are applying this system to the development of products which will

display an entirely new level of environmental friendliness.

We are also involved in a variety of individual projects such as technical development work on practical lead-free solders and reduction in vinyl chloride use.



Activities in the Product Environment

Containers and Packaging

Targets

- 40% reduction in plastic containers used in consumer products by fiscal 2003, compared with figures for fiscal 1999.
- Total elimination of non-separable multi-material for new packaging from fiscal 2001 onward.



Nikon defined its “Environmental Policy Regarding Packaging Materials” in May 1998, and reviewed it in June 2000. This policy has seven main points:

1. Elimination of harmful substances
2. Reduction in volume and content
3. Recyclability
4. Safety and ease of separation of materials
5. Use of recycled resources
6. Reusability
7. Marking regarding packaging materials and handling precautions

The activities implemented based on this policy are as described in the following chart:



Pulp moulding

Theme	Policy	Contents	Application
Non-vinyl chloride film	1. Elimination of harmful substances	Switch from use of vinyl chloride material, which is considered a major source of dioxin, to non-vinyl chloride materials such as polypropylene.	Wrapping materials for equipment such as steppers
Plant-derived filler materials	2. Reduction in volume and content	Plant-derived filler materials are made from bean and wheat husks. They are significantly safer and more environmentally friendly filler materials than those derived from crude oil. We also use biodegradable resins in packaging containing filler materials.	Gap filler (Instruments Company products)
Reinforced cardboard boxes	2. Reduction in volume and content 3. Recyclability 5. Use of recycled resources	Adoption of reinforced three-layer cardboard boxes has enabled a significant reduction in weight and volume of packaging in comparison with old-style wooden boxes.	Stepper body (for shipping to certain destinations)
Single-material presentation cases	4. Safety and ease of separation of materials	Use of film in presentation cases has been eliminated. Cases are now made from paper only, for ease of breakdown and decomposition.	Accessories
Assembly-type packaging	4. Safety and ease of separation of materials	The filler material and the cardboard are assembled manually for ease of separation later. Old-style packaging involved a fusing of different materials (cardboard and a crude-oil derived filler material).	Instruments Company products
Pulp moulding	5. Use of recycled resources	A paper filler material consisting of 55% recycled paper. This material is gradually being introduced as an alternative to crude oil derivatives.	Cameras, lenses, microscopes
Dedicated transport containers	6. Reusability	Dedicated containers are used for shipment to certain corporations.	Microscopes
Polyethylene bags	7. Marking regarding packaging materials and handling precautions	All packaging material is marked to facilitate separation. All bags, other than those of extremely small size, are marked with a warning of suffocation risk to infants.	



Reinforced cardboard boxes



Plant-derived filler material

So far, we have achieved the following in our challenge to meet targets:

- Plastic containers and packaging for consumer products have been reduced by 24% in weight against fiscal 1999 levels, through the progressive use of pulp moulding and other techniques.
- Through the use of single-material presentation cases and assembly-type packaging, as well as other methods, we achieved our target of eliminating the use of non-separable multi-material for new packaging in fiscal 2001.

Activities in the Product Environment

Examples of Implementation in Sales and Distribution

Nikon is working tirelessly to reduce the total and long-term environmental impact of its products and services. Since Nikon supplies products worldwide, we must also pay strict attention to

1. Sales of used steppers for reuse

Nikon has been collecting used steppers discarded by customers, and reconditioning and reselling them for new users, with the appropriate services supplied. This is an example of Nikon actively reusing its own products.

Not many steppers have been resold to date, but this business is still in its developmental stage, with consideration being given to marketability, dedication to environmental conservation, profitability and customer satisfaction.

sales and distribution activities. The following are some examples of our reuse and recycling efforts in these areas:

2. Recycling of packaging materials and batteries in Europe

(1) Packaging materials

Our overseas sales subsidiaries have contracted the services of DSD (Duales System Deutschland) to collect and recycle packaging materials used during the sale of Nikon products.

(2) Batteries

Our overseas sales subsidiaries have contracted the services of GRS (Stiftung Gemeinsames Rücknahmesystem Batterien) to collect and recycle batteries for cameras and other products discarded by consumers.

Activities in the Workplace Environment

Energy Conservation (anti-global warming measures)

Targets

- 20% or better reduction in energy consumption per net sales in fiscal 2003, compared with figures for fiscal 1999



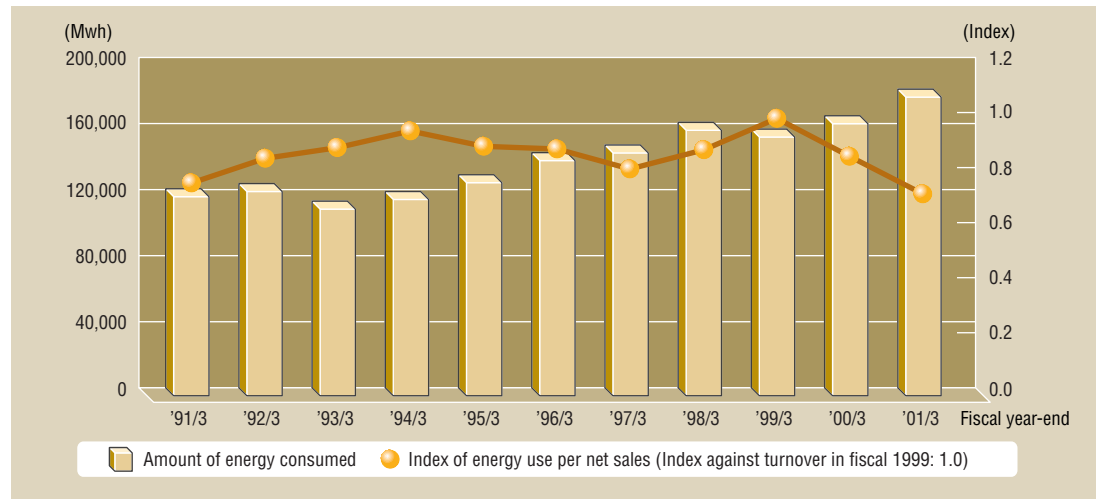
Carbon dioxide (CO₂), which is released into the atmosphere when fossil fuels are burned, is the main cause of global warming. The Third Conference of the Parties (COP 3) to the United Nations Framework Convention on Climate Change in December 1997 stressed the need for a reduction in greenhouse gas emissions. The control of CO₂ emissions through savings in energy use is one way in which global warming may be slowed.

Nikon has established a target for savings in energy use including electricity, which is a major source of CO₂ emission, of a 20% or better reduction (compared with fiscal 1999 levels per net

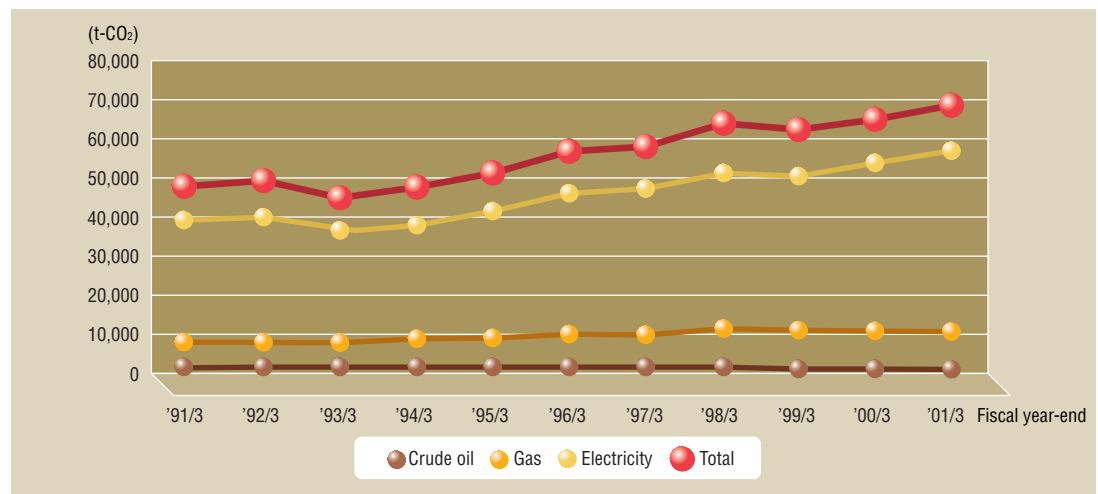
sales) by fiscal 2003.

During fiscal 2001, we improved the efficiency of our air conditioning system and replaced our lighting system with one which uses energy more efficiently. We have also implemented and promoted various energy-saving measures such as improvements in the manufacturing process and conscientious use of lighting and office equipment. Due to Nikon's increased sales during the period, the energy savings for the year (compared with fiscal 1999 per net sales), were an impressive 29%.

Energy Use (calculated for electricity)/Energy Use per Net Sales



CO₂ Emission



*Standard figures for calculating CO₂ emissions are taken from the "Environmental Activities Evaluation Program" (published September 1999 by the Environment Agency, now known as Ministry of the Environment).

Future Energy-saving Strategies

We intend to implement the following strategies as we head into fiscal 2003.

- Reduction in harmful emissions from air conditioning
- Highly efficient operations of utilities facilities
- Highly efficient operation of manufacturing facilities
- Renewal of aging facilities/equipment
- Standardisation of electrical load
- Integration of electrical facilities
- Improvements in quality control efficiency

Promotion of Reduction and Recycling of Waste

The manufacturing industry, which evolved as part of the mass production/mass consumption system, is currently at a crossroads in terms of the way things are done.

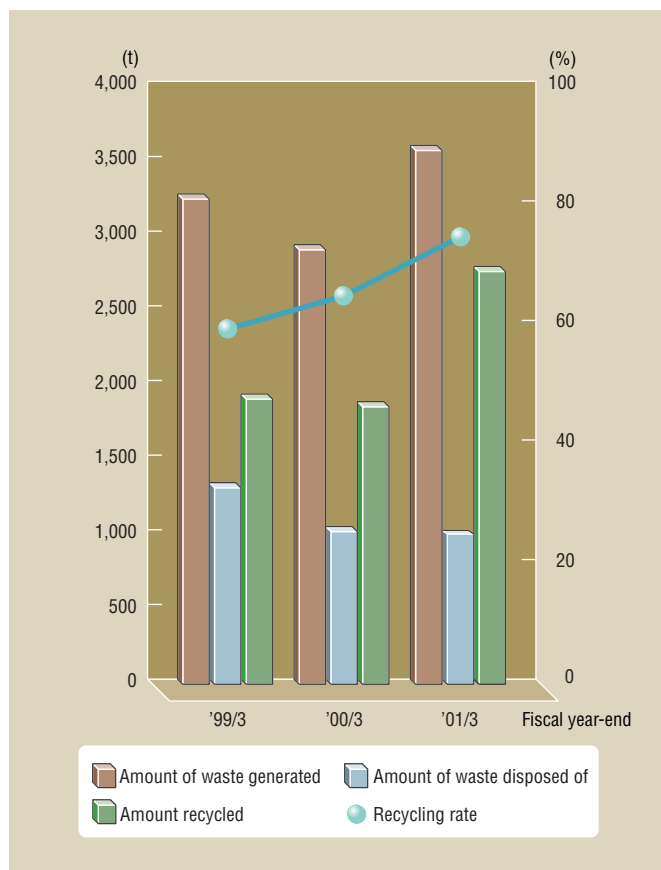
Economic expansion has brought with it yearly increases in the amount of waste produced. Waste was for too long classified as “refuse”, and simply discarded. As a result, waste has grown in amount and diversity, and there is a great deal of pressure on end-

Production, Disposal and Recycling of Waste

We implemented programmes to reduce both general and plastic waste, and strictly enforced refuse separation guidelines within our activities for this period, which enabled us to control our waste output (including that to be recycled). We also actively promoted the recycling of materials. As a result, the amount of waste disposed of during fiscal 2001 represented a 25% (335-ton) reduction against the amount recorded for fiscal 1999, and our recycling rate was 73% (up from 59% for fiscal 1999).

These results were achieved through utilising waste in RDF (Refuse Derived Fuel)*¹, raw material for furnaces*² and thermal recycling*³, all of which contribute to the process of recycling.

In the coming period, we will continue to achieve reductions in amount of waste through continued emphasis on the 3R*⁴ principle, and developing further recycling technologies and links with recycling agencies, in order to achieve a recycling rate of 85% for fiscal 2003.



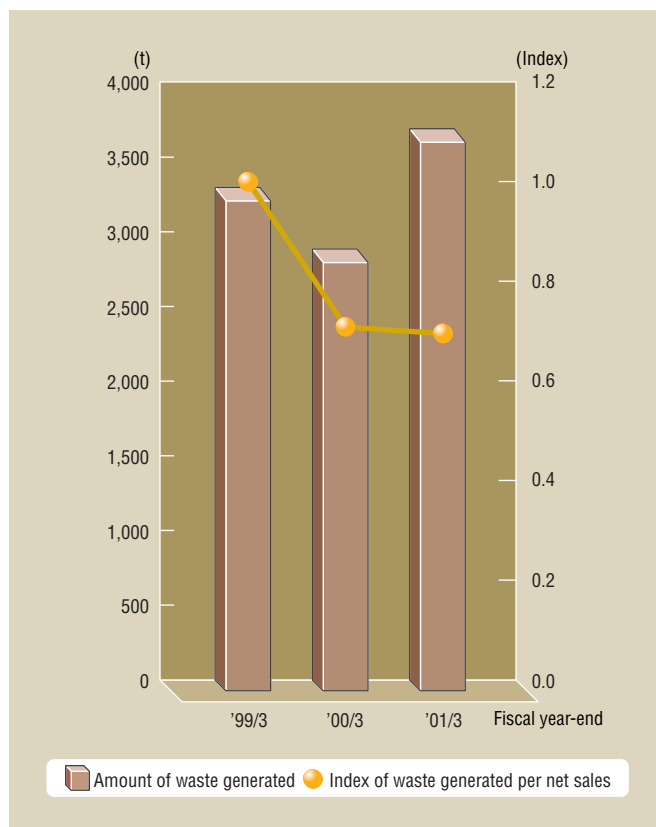
*¹ The practice of using waste as solid fuel. The waste is ground and separated, and then compressed and shaped and can be used as burnable fuel.
 *² Ground waste may be used as raw material in furnaces in place of coke.
 *³ Certain waste may be burned and the heat released used as an energy source. This contributes both to the reduction of waste and to recycling.
 *⁴ 3Rs: Reduce, Reuse and Recycle

of-line disposal agencies to devise more efficient methods for disposing of waste.

Nikon is committed to the concept of a “Resource Recycling Society”, in which the world’s valuable resources are used as effectively as possible. Through our activities, we are headed in the right direction in pursuit of this objective.

Amount of Waste Generated/Amount of Waste Generated per Net Sales

Nikon has set a target to reduce waste generation by fiscal 2003 by at least 40% (compared with fiscal 1999 level per net sales). During fiscal 2001, we achieved a 27% reduction, bolstered by a growth in net sales.



Toward Zero Emissions

Our Mito Plant is currently facing the challenge of zero emissions (elimination of waste).

In order to increase the amount of waste being put to use, all paper is sent for recycling, waste wood is used as raw material for paper (wood chips) or fuel chips, PET bottles are used for RDF or recycled and again used as bottles, glass is utilised as a material in road foundations, and waste oil is used as a subsidiary fuel.

Employees of the Mito Plant, through hard work and ingenuity, have discovered a wide variety of ways to utilise its waste and is aiming to completely eliminate the disposal of waste in landfills.

We are working towards introducing these activities across the whole of the Nikon Group, and finding suitable ways to implement waste reduction activities in all our places of business.

Targets

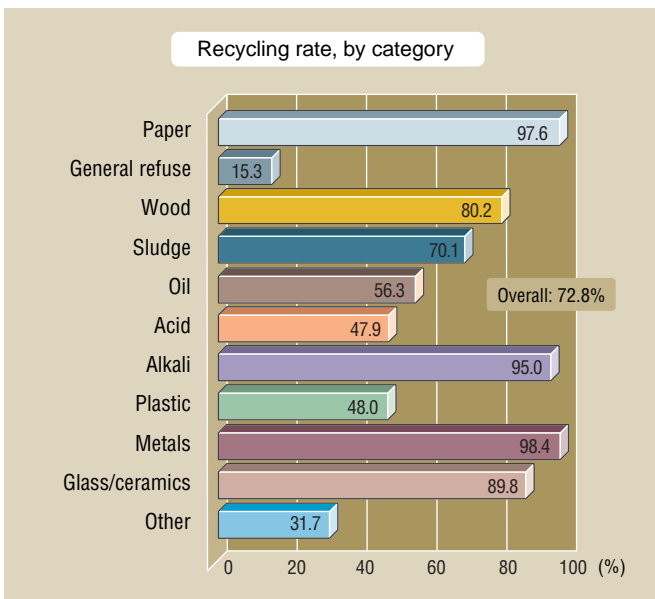
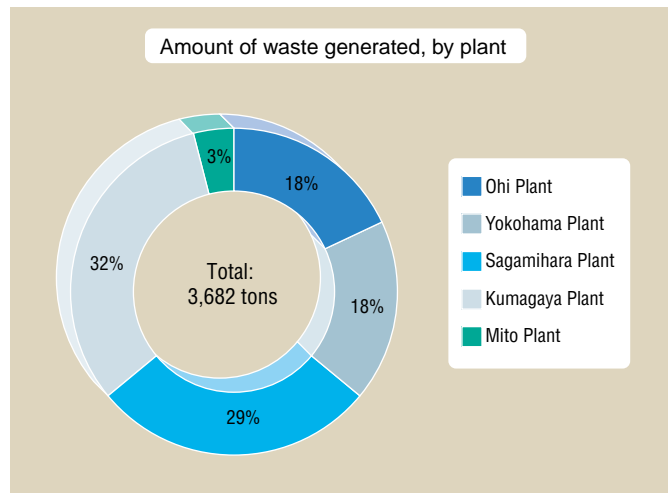
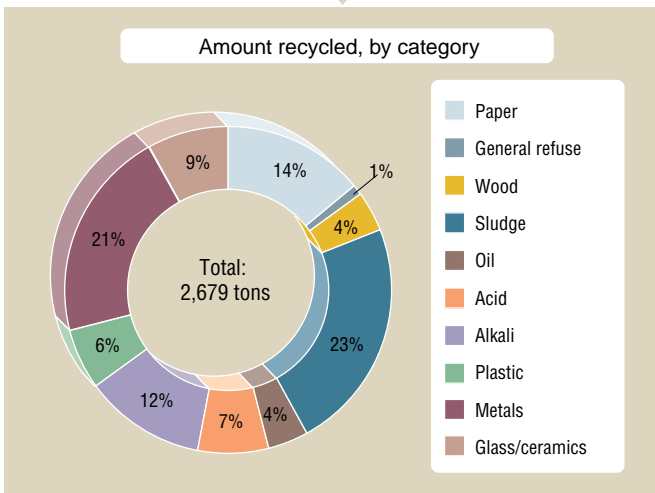
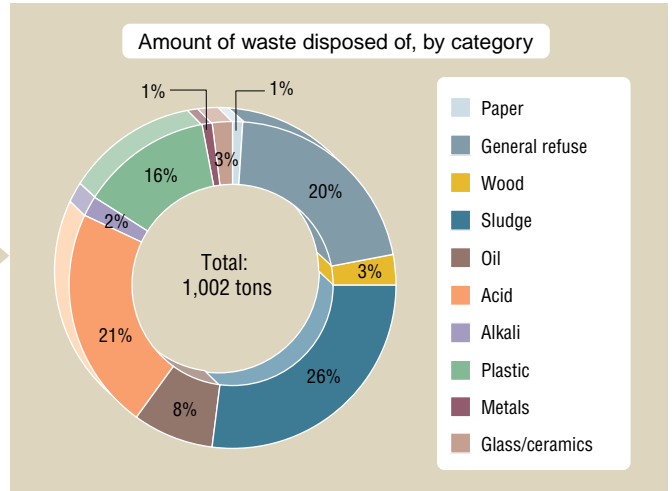
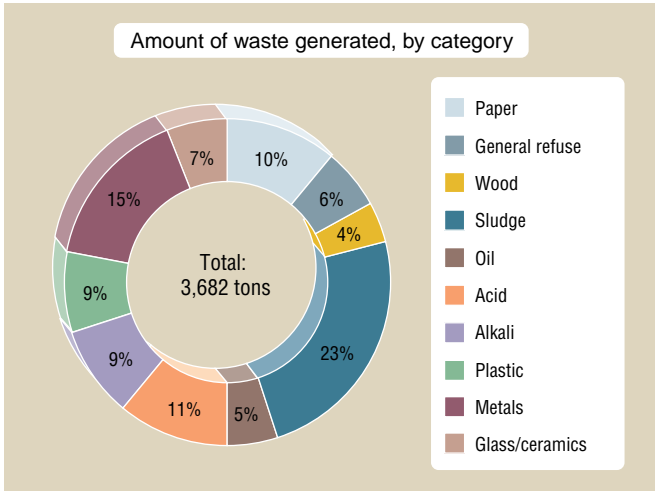
- Achieve at least one zero-emission facility by end of fiscal 2003.
- Boost waste recycling rate to at least 85% in fiscal 2003.
- Reduce amount of waste generation per net sales by at least 40% in fiscal 2003 compared with figures for fiscal 1999.



Breakdown of Waste during Fiscal 2001

The breakdown of Nikon's waste during fiscal 2001 is as shown in the graphs below.

(Figures in the graphs have been rounded up or down to the nearest whole number, so some of the graphs do not total 100%).



Dioxin Reduction Measures

We have done away with the incinerators at all our plants as of January 2000, in order to reduce dioxin emissions.

We are constantly devising and implementing new methods for reducing and recycling waste that was previously incinerated.

Activities in the Workplace Environment

Control of Chemical Substances

Chemical substances have the potential to improve our lives in many ways, but at the same time can cause many serious problems such as ozone layer depletion, dioxin poisoning of earth and water, and the environmental endocrine effect — the spread of harmful elements throughout nature. In order to forestall this sort of damage,

Substance Control Procedures

Nikon performs chemical substance control at every phase of the product life cycle, from purchase through use and disposal, in order to stop pollution caused by these substances. When first purchasing a new chemical substance, we obtain a Material Safety Data Sheet (MSDS) for the item, and carry out an assessment of the potential dangers of its use in the workplace. Based on the results of this

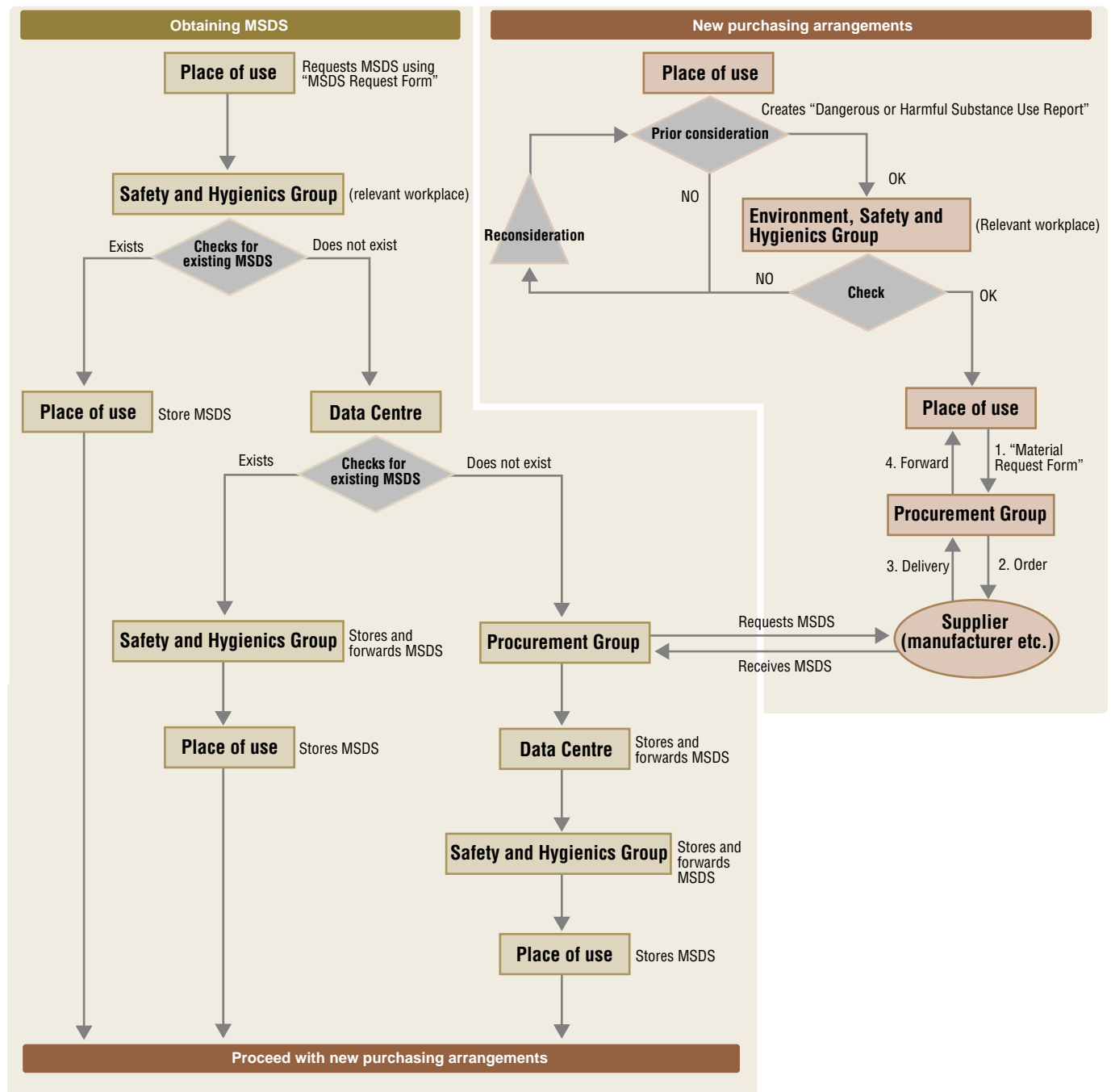
it is vital that the use of chemical substances be carefully controlled, that the amount of chemicals used is reduced, and that safer substances are substituted wherever possible.

Nikon is currently devising a management system that will enable us to effectively take all of these actions.

assessment, our Environment, Safety and Hygienics section performs a review and confirmation of actions taken.

In addition to these measures, our Data Centre, located at the Ohi Plant, carries out intensive management of registration, updates and storage of MSDS.

The process of obtaining MSDS and the purchasing of new chemical substances



- Reduce use of chlorinated organic solvents in wash by at least 70% in fiscal 2003, with goal of elimination of these solvents by end of fiscal 2006.



Nikon's PRTR

The Pollutant Release and Transfer Register (PRTR) Law has been enacted in Japan as well, and daily management of chemical substances and diligent risk management are key factors in promoting business.

The "Nikon PRTR Guide" was released in March 2000, and management activity for the specified chemical substances is

underway at each plant. This guide serves as a safety management standard which clearly outlines handling and disposal according to MSDS, for all product phases from procurement to use and disposal.



Nikon PRTR Guide

PRTR Survey Results for fiscal 2001

Facility	Substance No.	Substance name	Volume handled	Amount released			Amount transferred		Amount in on-site landfill	Amount removed for processing	Amount shipped in product
				Air	Public water	Soil	Sewage	Waste			
Ohi Plant	144	Dichloropenta fluoropropane	1.32	1.08	0.00	0.00	0.00	0.24	0.00	0.00	0.00
	145	Dichloromethane	1.11	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.36
Yokohama Plant	145	Dichloromethane	6.35	6.27	0.00	0.00	0.00	0.08	0.00	0.00	0.00
Sagamihara Plant	145	Dichloromethane	10.98	9.52	0.00	0.00	0.00	1.46	0.00	0.00	0.00
	230	Lead and lead compounds	9.69	0.01	0.00	0.00	0.00	5.70	0.00	0.00	3.99
	304	Boron and boron compounds	11.19	0.01	0.00	0.00	0.00	6.57	0.00	0.00	4.61
Kumagaya Plant	145	Dichloromethane	3.79	3.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	200	Tetrachloroethylene	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	227	Toluene	2.54	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.90
Total	144	Dichloropenta fluoropropane	1.32	1.08	0.00	0.00	0.00	0.24	0.00	0.00	0.00
	145	Dichloromethane	22.22	20.32	0.00	0.00	0.00	1.54	0.00	0.00	0.36
	200	Tetrachloroethylene	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	227	Toluene	2.54	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.90
	230	Lead and lead compounds	9.69	0.01	0.00	0.00	0.00	5.70	0.00	0.00	3.99
	304	Boron and boron compounds	11.19	0.01	0.00	0.00	0.00	6.57	0.00	0.00	4.61

Unit: tons/year

* The above table includes data only for specified substances of which one or more tons are handled per year per facility. No such substances exist at the Mito Plant.

* Waste transferred includes tonnage transferred off-site for disposal or processing, as well as for free or fee-based recycling.

* Amount removed for processing indicates change in substance due to neutralization, decomposition or reactive processing on-site.

* Amount shipped in product indicates tonnage shipped from the site in or accompanying products (finished and semi-finished products). Tonnages sold to external firms for recycling or eliminated through chemical processing are also included.

* PRTR

The Pollutant Release and Transfer Register (PRTR) is a framework for registering and publicly announcing transfer tonnages for harmful chemical substances, either released into the environment or transferred as waste for proper disposal. The appropriate government agency tracks, compiles and announces release tonnages (air, water, soil) and transfer tonnages (waste) for specified substances, based on enterprise reports and statistics. In Japan, the PRTR became law on July 13, 1999, and it applied beginning with reports submitted during the year starting April 2001 with a notification date of April 2002 or later.

Reduction in Chemical Substances

The key question is how to best reduce the amount of chemical substances used. This is more than merely avoiding the risk of environmental pollution, and in fact signifies an improvement in Nikon's design and production systems. We are constantly working to reduce the volume of chemical substances used which have the most adverse effects on the environment, searching for alternates, and making every effort to achieve zero chemical pollution.

1) CFC elimination

CFCs have been cited as one of the key factors in the deterioration of the ozone layer. Nikon established the "CFC Countermeasures Committee" in December 1988, and totally eliminated CFC usage in May 1994, well in advance of the December 1994 goal established in the "Montreal Protocol".

2) Efforts to eliminate chlorinated organic solvents

We have established a target for total elimination of chlorinated organic solvents in wash applications of the end of fiscal 2006, and are now switching over to hydrocarbon wash agents and similar substances that have minimal effect on the environment. In fiscal 2001, usage was reduced by 37% from fiscal 1999 levels.



A lens wash finishing system using IPA (isopropyl alcohol) instead of CFCs

Prevention of Pollution and Protection of Air and Water

To help preserve air and water quality, Nikon not only observes applicable laws and regulations, but has also established its own independent plant standards for management.

Each plant regularly measures pollutants released into the air and water, and inspects equipment such as boilers and waste-water processing systems periodically to ensure safety.

Air and Water Quality Environmental Data for Fiscal 2001

1. Location 2. Establishment 3. Number of employees 4. Outline (As of March 31, 2001)

Ohi Plant

1. Nishi-Ohi, Shinagawa-ku, Tokyo 2. February 1, 1918
3. 1,462 4. Development of basic technology, development and design of Imaging Company products, etc.

Air (Air Pollution Control Law)

Unit: Dust: g/Nm³, NOx (nitrous oxides): ppm

Item	Established standard	Plant standard	Actual (max.)
Boiler	Dust	0.3	0.003
		0.3	0.002
		0.15	0.002
NOx	250	85	
	250	82	
	150	38	

*1 Occurred May 2000 (exceeded plant standards)

Cause: Drainage of concrete wash water from construction site

Corrective action: Enforced observation of environmental checklist for on-site construction

*2 Occurred July 2000 (violated established standard)

Cause: Inspection and measurement failed to determine cause; thought to be due to foreign material present in original test sample

Corrective action: Soil replaced around tank

Water Quality (Sewerage Regulations)

Unit: mg/l, except for pH

Item	Established standard	Plant standard	Actual (max.)	
Living environment	pH	5.8-8.6	5.9-8.5	6.3-8.6 *1
	BOD	300.0	285.0	129.3
	SS	300.0	285.0	1,316.2 *2
	n-hexane (animal/vegetable)	30.0	28.0	10.4
	Iodine demand	220.0	209.0	119.4
	Copper	3.0	2.8	0.1
	Zinc	5.0	4.7	1.4
	Soluble iron	10.0	9.5	7.5
	Total chrome	2.0	1.9	1.2
	Fluorine	15.0	14.2	2.2
	Nitrogen	120.0	114.0	60.2
	Phosphorous	16.0	15.0	3.2
	Health	Cyanide	1.0	0.95
Lead		0.1	0.09	0.08
Hexavalent chrome		0.5	0.47	0.0
Trichloroethylene		0.3	0.28	0.00
Dichloromethane		0.2	0.19	0.00

Yokohama Plant

1. Nagaodai-machi, Sakae-ku, Yokohama, Kanagawa 2. June 9, 1967
3. 813 4. Development, design and manufacture of Instruments Company products, and LCD steppers

Air (Air Pollution Control Law, Prefectural Regulations)

Unit: NOx (nitrous oxides): ppm

Item	Established standard	Plant standard	Actual (max.)
Boiler	NOx	65	40
		65	55
		65	34
		46	26
		46	45 *1
		46	32

*1 Occurred February 2001 (exceeded plant standards)

Cause: Improper low-NOx burner adjustment

Corrective action: Adjusted to 41 ppm; adjustment and measurement frequency increased to four times/year

Water Quality (Sewerage Law)

Unit: mg/l, except for pH

Item	Established standard	Plant standard	Actual (max.)	
Living environment	pH	5.0-9.0	5.5-8.5	6.6-7.5
	COD	600.0	540.0	0.0
	SS	600.0	540.0	0.0
	n-hexane (mineral)	5.0	4.5	1.2
	Iodine demand	220.0	200.0	53.3
	Copper	1.0	0.9	0.0
	Zinc	1.0	0.9	0.0
	Soluble iron	3.0	1.0	0.0
	Soluble manganese	1.0	0.9	0.0
	Total chrome	2.0	1.0	0.0
	Nickel	1.0	0.9	0.0
	Fluorine	15.0	13.0	1.2
	Health	Nitrogen	240.0	135.0
Phosphorous		32.0	18.0	2.50
Lead		0.1	0.1	0.02
Arsenic		0.1	0.1	0.00
Hexavalent chrome		0.5	0.4	0.00
Trichloroethylene		0.3	0.2	0.00
Tetrachloroethylene		0.1	0.1	0.00
Dichloromethane	0.2	0.1	0.01	

Sagamihara Plant

1. Asamizodai, Sagamihara, Kanagawa 2. July 5, 1971
3. 533 4. Manufacture of optical glass, R&D of lenses

Air (Air Pollution Control Law, Prefectural Regulations)

Unit: Dust: g/Nm³,
NOx (nitrous oxides): ppm

Item	Established standard	Plant standard	Actual (max.)	
Boiler	Dust	0.15	0.1	0.0015
		0.15	0.1	0.0019
		0.15	0.1	0.0023
		0.15	0.1	0.0019
		0.15	0.1	0.0021
		0.15	0.1	0.0015
		0.15	0.1	0.0015
		0.15	0.1	0.005
	NOx	105	100	85
		105	100	95
		105	100	83
		105	100	89
		105	100	89
		105	100	6
		105	100	3
105	100	<5		

Water Quality (Sewerage Law, Prefectural Regulations)

Unit: mg/l, except for pH

Item	Established standard	Plant standard	Actual (max.)	
Living environment	pH	5.7-8.7	6.0-8.0	6.7-7.5
	BOD	300.0	60.0	≤29
	SS	300.0	90.0	<10
	Zinc	3.0	0.5	<0.05
	Fluorine	15.0	13.0	≤9.6
Health	Lead	0.1	0.08	≤0.14 *1
	Arsenic	0.1	0.05	<0.01
	Dichloromethane	0.2	0.1	≤0.053

*1 Occurred March 2001 (violated established standard)
Occurred once during weekly measurement
Cause: Wash water volume exceeded processing capacity
Corrective action: Improvements in cleaning precipitation pit

Kumagaya Plant

1. Oaza-miizugahara, Kumagaya, Saitama 2. December 1, 1984 3. 1,303
4. Development, design and manufacture of IC steppers

Air (Air Pollution Control Law, Prefectural Regulations)

Unit: Dust: g/Nm³,
NOx (nitrous oxides): ppm

Item	Established standard	Plant standard	Actual (max.)	
Boiler	Dust	0.1	0.05	0.001
		0.1	0.05	0.001
		0.1	0.05	0.001
		0.1	0.05	0.001
		0.1	0.05	0.001
		0.1	0.05	0.001
		0.1	0.05	0.001
		0.1	0.05	0.001
		0.1	0.05	0.001
		0.1	0.05	0.002
		0.1	0.05	0.002
		0.1	0.05	0.001
	NOx	150	100	26
		150	100	29
		150	100	36
		150	100	27
		150	100	26
		150	100	24
		150	100	31
		150	100	25
150	100	28		
150	100	25		
150	100	30		

Water Quality (Sewerage Law, Prefectural Regulations)

Unit: mg/l, except for pH

Item	Established standard	Plant standard	Actual (max.)		
Living environment	pH	5.1-8.9	5.9-8.2	6.2-7.4	
	BOD	600.0	450.0	58.0	
	SS	600.0	150.0	15.0	
	n-hexane (mineral)	5.0	4.0	<1	
	n-hexane (animal/vegetable)	30.0	30.0	2.0	
	Iodine demand	220.0	220.0	210.0	
	Copper	3.0	0.5	<0.02	
	Zinc	5.0	0.5	<0.05	
	Soluble iron	10.0	9.0	<0.3	
	Total chrome	2.0	1.7	<0.2	
	Fluorine	15.0	2.5	<0.5	
	Nitrogen	240.0	60.0	48.0	
	Phosphorous	32.0	20.0	11.00	
	Health	Cyanide	1.0	0.3	<0.1
		Lead	0.1	0.1	<0.01
Hexavalent chrome		0.5	0.1	<0.05	

Mito Plant

1. Motoishikawa-cho, Mito, Ibaraki 2. January 21, 1991
3. 290 4. Development of manufacturing technology, production of customised products

Air (Air Pollution Control Law, Prefectural Regulations)

Unit: Dust: g/Nm³
NOx (nitrous oxides): ppm
SOx (sulfurous oxides): Nm³/h

Item		Established standard	Plant standard	Actual (max.)
Boiler	Dust	0.3	0.27	0.015
		0.3	0.27	0.031
		0.3	0.27	0.026
	NOx	180	162	67
		180	162	71
		180	162	87
	SOx	3.25	0.67	0.083
		3.25	0.67	0.031
		3.25	0.67	0.13

Water Quality (Water Pollution Control Law)

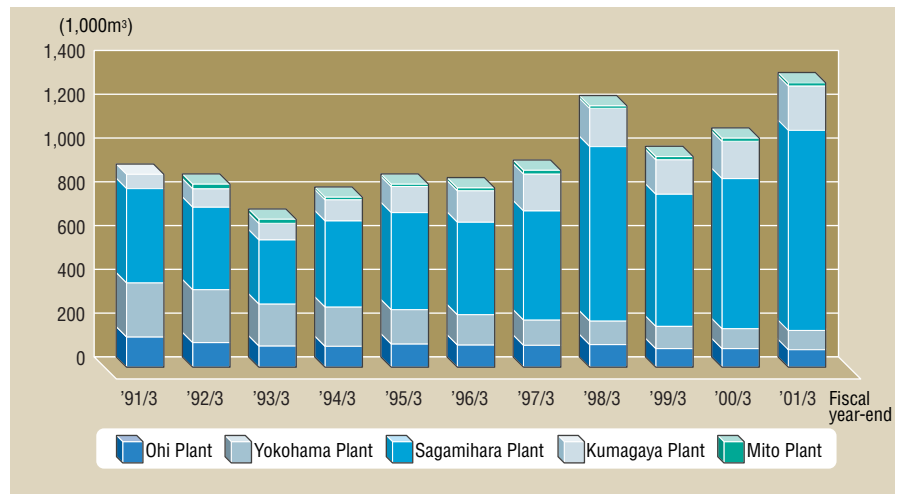
Unit: mg/l, except for pH and E. coli (colonies/ml)

Item		Established standard	Plant standard	Actual (max.)
Living environment	pH	5.8-8.6	6.0-8.2	6.3-7.8
	BOD	160.0	20.0	15.0
	SS	200.0	30.0	12.0
	n-hexane (animal/vegetable)	30.0	10.0	1.8
	E. coli (daily average)	3,000.0	2,700.0	82.0
Living environment	Nitrogen	120.0	60.0	57.8
	Phosphorous	16.0	8.0	6.39
Health	Trichloroethylene	0.3	0.3	<0.001

Water Usage

Plants engaged in manufacturing continuously expand and evolve structurally, but since the introduction of the “Environmental Management System” in fiscal 1999, efforts have been made to promote reuse of process waste water, and reduce water usage by involving all employees in water-saving activities.

The sharp rise in production activity during fiscal 2001, however, resulted in the figures shown at right. We are working actively to promote water reuse and reduce consumption in the future.



Glossary

ppm: Parts per million

pH: Hydrogen ion concentration

Indicates the acidity or alkalinity of a substance, where a solution of pH 0 to 7 is acid, pH of 7 is neutral, and a pH over 7 is alkaline. A change of one pH number indicates a 10-fold change in the concentration of hydrogen ions.

COD: Chemical oxygen demand

The amount of oxygen consumed to oxidise organic pollutants in water with an oxidiser. Indicates the degree of pollution of seas and lakes.

BOD: Biochemical oxygen demand

The amount of oxygen required for microorganisms to oxidise and consume organic pollutants in water. Used to gauge the degree of pollution of rivers.

SS: Suspended solids

Also referred to as substances that cause water clouding, they include small particles, plankton, organism carcasses and detritus, excretions and other organic materials, as well as sand, mud and inorganics and a range of manmade pollutants.

n-hexane (mineral or animal/vegetable): Normal hexane mass

Used to measure the total content of oils and hydrocarbons in waste water, it indicates the amount of materials extracted to normal hexane and which do not volatilise at about 100°C. Covers animal and vegetable oils, fatty acids, petroleum-based hydrocarbons, wax and grease.

Iodine demand

The amount of iodine used by the reducing substances (sulphide, etc.) in waste water during iodine oxidation. It is an index of the presence of the reducing substances in waste water.

- Increase average environmental conservation structure evaluation of suppliers by 20 points by end of fiscal 2003, compared with scores in fiscal 2000.
- Increase the number of new or replacement ecological office supplies by at least 300 over fiscal 2001 level, by end of fiscal 2003.



Nikon has begun a programme of green procurement, beginning with the purchase of paper and office supplies, and extending to other activities to reduce the environmental impact of our products.

The Green Procurement Sub-Committee was established within the Environmental Committee in May 1998, and in August of the same year, issued the “Nikon Basic Policy for Green Procurement”. The policy’s purpose is:

- To give priority to the purchase of items that have been produced by taking environmental issues into consideration.
- To give priority to suppliers who are proactive in conserving the environment.

Product Environment

Regarding the procurement of items that will be passed on to our customers, either as Nikon products or services, we have produced a Product Survey for materials and parts, and another for assembled units. We use the results of these surveys in designing our products.

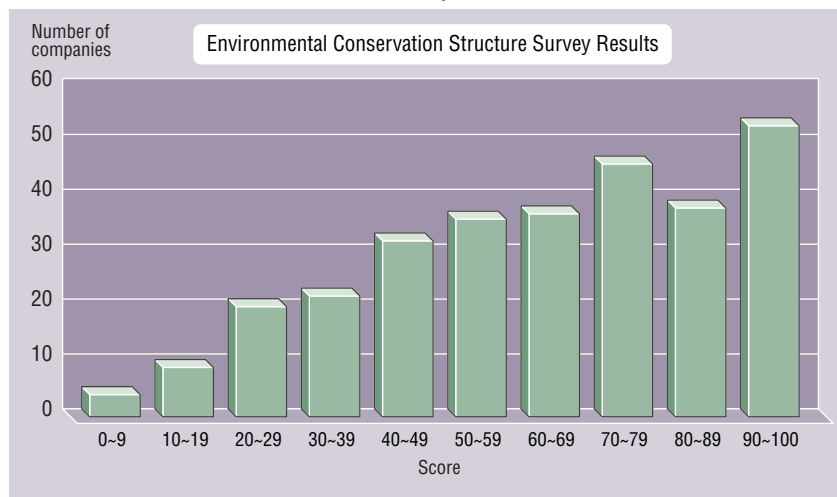
We also evaluate all suppliers in over 50 categories using our Environmental Conservation Structure Survey. During fiscal 2000,

Nikon issued the “Nikon Green Procurement Guide”, which was distributed to about 500 of our leading Japanese suppliers in July 1997. We requested that suppliers participate in a survey (incorporating a Product Survey and an Environmental Conservation Structure Survey), and received positive responses from the majority.

the average score achieved in this survey was 60 out of a possible 100 points. The suppliers of some products and services that are not supplied to customers are also covered.

The responses we received enable us to support our suppliers, with the aim of improving their environmental activities.

Green Procurement Evaluation Score Analysis



Workplace Environment

Nikon is implementing the following types of activities in regard to procured items that are not supplied to our customers as products or services, in response to the Product Surveys:

- Shift to use of recycled paper in copiers (including fine quality paper), intra-company envelopes, business cards, toilet paper, etc.

- Shift to use of office supply products (e.g. writing instruments, binders) with the “Eco-mark”, and increase the variety and number of such items used.
- During fiscal 2001, we introduced 97 ecological office supply products, and are pressing ahead with further introductions.

Examples of Recycling and Other Activities

Recycling of PET bottles (used for soft drinks, alcohol and soy sauce) and glass began with the introduction of the “Container and Packaging Recycling Law”, in April 1997. The most important factor in effective recycling is ensuring the quality of the recycled product, which depends on the cooperation of individuals. In order to help our employees realise that “refuse” can be turned into

“resources” through effective separation, we have installed waste collection containers known as “Resource Collection Boxes”, and encourage the separated disposal of waste on a day-to-day basis. We also implement a clean workplace policy as the basis of all our work, and carry out risk management in the event of an emergency.

Examples of Recycling



Recycling box at Ohi Plant

Collection of used reading matter

We have implemented separated collection and recycling of newspapers, magazines and catalogues. We also promote the recycling of copier paper. This separation of paper items has long been practised within the company, and employees are used to cooperating in this way with regard to environmental matters.



The resource recycling box at Ohi Plant

Recycling of waste plastics

Recycling of PET bottles is contracted to an external agent, who uses them as raw material for a deoxidising agent in blast furnaces. (The PET bottles convert to deoxidising gases — carbon monoxide and hydrogen — when burned in a steel-making blast furnace). With the exception of plastic containing vinyl chloride or metal alloys, other plastic waste is contracted to an outside agent for use as RDF.



IPA recycling equipment in use at Sagami Plant

Recycling of IPA (isopropyl alcohol)

We use specialised equipment to refine used IPA for further use. This has enabled a significant reduction in the amount of new IPA we need to procure. We also carry out the recycling of dichloromethane.



Unused equipment and office supplies, and some of the space created through disposal



Clean workplace policy and recycling promotion

The Yokohama Plant has implemented a clean workplace policy, and cleared out approximately 30 tons of unused equipment and office supplies, which they were able to recycle. This led to the creation of a significant amount of extra space, and various improvements to the working environment. These clean workplace activities continue.

Example of Risk Management



Emergency equipment permanently located at Ohi Plant

Emergency equipment

We have located stores of emergency equipment, such as oil absorbing cloths to prevent oil leaks from contaminating external areas, in all main departments. We also educate our staff on how to deal with such emergencies.

Contributing to Society

Nikon tries to live in cooperation and harmony as a member of society, and carries out various community-based activities in order to maintain close links with society.

Company employees are involved in many projects to clean local roads, rivers and the areas surrounding our places of business.



Local cleanup activities

Nikon cooperated with local citizen's groups in cleanup activities in an area near the Ishikawa River, which runs south of the Mito Plant. Nikon employees have taken part in this activity, which is organised annually by Mito City, since its inception in 1990. Other plants also take part in local cleanups, as a way to express their dedication to improving their local environments.

We also receive study visits from pupils at elementary and junior high schools, thereby deepening our contact with the local community. We also support organisations that are involved in nature preservation. These activities are an expression of our dedication to the society of which we are a part.



Plant study tours

Pupils from a local junior high school visited the Sagami-hara Plant. Study tours are also offered of our environmental facilities. Many other visitors tour our plants, enabling the formation of strong community links. Similar tours are carried out at other plants.



Support for nature preservation organisations

Nikon is a corporate member of the "Wild Bird Society of Japan", the "Nature Conservation Society of Japan", the "Japanese Society for Preservation of Birds" and "The Shiretoko Nature Foundation", supporting the activities of all of these organisations.



Support for United Nations University World Environment Day Events

The United Nations has designated June 5 as "World Environment Day". In conjunction with this, Nikon supported the "United Nations University World Environment Day Events" organised by the United Nations University.

History of Environmental Preservation Activities

	Nikon	Japan/Worldwide
1967		Basic Law for Environmental Pollution Control enacted
1968		Air Pollution Control Law and Noise Regulation Law enacted
1970	First Pollution Response Committee meeting held (September)	Water Pollution Control Law and Waste Disposal and Public Cleaning Law enacted
1971	Pollution Response Committee changed name to Pollution Prevention Committee (October)	Japan Environment Agency established
1972		Club of Rome published its "Limits to Growth" report United Nations Conference on the Human Environment held in Stockholm
1973	Pollution Prevention Committee changed name to Environmental Improvement Committee (November)	
1975		The London Convention on ocean dumping went into effect
1979	Environmental Management Office established within the construction department (July)	
1987		Montreal Protocol on Substances that Deplete the Ozone Layer adopted
1988	First Nikon Group Environmental Communications Committee meeting held (November) First Specialist Committee Meeting on CFC Measures held (December)	Vienna Convention for Protection of the Ozone Layer went into effect Ozone Layer Protection Law enacted
1991		Law for the Promotion of Utilisation of Recycled Resources enacted The Keidanren Global Environment Charter announced
1992	Nikon Basic Environmental Management Policy (April) Restructuring of the Environmental Improvement Committee, establishment of the Environmental Committee (April)	The Basel Convention went into effect "Earth Summit" held in Rio de Janeiro
1993		Basic Environment Law enacted Start of International Energy Star Program
1994	Elimination of specified CFC used in cleaning (May)	United Nations Framework Convention on Climate Change went into effect
1995	Implementation of Nikon Product Assessment (May) Implementation of policy toward attaining ISO 14001 certification (May)	Container and Packaging Recycling Law enacted
1996		Publication of ISO 14001 Standards
1997	Sendai Nikon earns the first ISO 14001 certification among the Nikon Group (March)	Third Conference of the Parties (COP 3) to the United Nations Framework Convention on Climate Change held in Kyoto
1998	Nikon's Environmental Symbol introduced (May) Basic Policy on Packaging Materials (May) Ohi Plant becomes the first Nikon plant to earn ISO 14001 certification (July) Nikon Basic Policy for Green Procurement (August)	Law Concerning the Promotion of Measures to cope with Global Warming enacted
1999	Nikon Green Procurement Guide distributed to suppliers (July) Environmental & Technical Administration Department established (October)	Pollutant Release and Transfer Register (PRTR) Law enacted
2000	Nikon PRTR Guide issued (March) Nikon Environmental Action Plan 21 (for fiscal 2001) issued (June)	Basic Law for Establishment of Recycling-Based Society enacted Law for Promotion of Effective Utilisation of Resources enacted
2001	Nikon Environmental Action Plan 21 (for fiscal 2002) released (August)	



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