

Environmental Education/Awareness Activities

We believe it is vital that all employees improve their knowledge of environmental matters, and to this end, related manuals, regulations and procedure must be put in place, and we must attain the necessary specialised knowledge and techniques, in order that environmental conservation activities can be rolled out effectively.

General Environmental Education

We are working on improving the overall level of our employees' awareness, with appropriate educational systems implemented at every level, throughout each plant and workplace within the company.

- Executive management education (general environmental management, ISO 14001, management responsibilities, etc.)
- Education of new employees (general environmental awareness, Nikon's environmental activities)
- Environmental seminars for mid-level employees (general environmental management, ISO 14001, product assessment, etc.)
- Education of EMS representatives (environmental policy, environmental objectives, environmental manuals/regulations/procedures, evaluation procedure for environmental aspects)
- Everyday on-the-job education (general environmental management, environmental manuals/regulations/procedures, environmental targets, separation of waste and recycling, energy saving, paper and resources saving, etc.)
- Link between midterm plan and target management, and conducting of seminars

Awareness Activities

Nikon implements a full programme of awareness activities, with the aim of supplying information, informing employees of new policies and increasing awareness in environmental matters, as well as applying standards for decision-making.

- Publication of "Environmental Report"
- Publication and distribution of "Environment/Product Safety Information", for use in product development
- Publication of environmental awareness journals "Report from the Environmental Administration Section" via the company intranet and display of "Environmental Panels" at all plants
- Publication and distribution of "ISO Update" (Ohi Plant), "EMS News" (Yokohama and Sagami-hara Plants) and "ISO 14001 News" (Mito Plant)
- Sharing of ideas for improvement – mottos, posters and the like promoting environmental conservation, with recognition and prizes for the best ideas
- Organising environment month
- Implementation of an energy-saving patrol
- Distribution of an environmental strategy card showing the environmental policy and objectives to all employees
- Clear posting and notification of all waste-separation categories and provision of waste-disposal areas that encourage recycling
- Notice boards within the workplace, displaying such information as environmental objectives, targets, and management programmes

Nikon is developing the following environmental education and awareness activities, which are to be provided to all employees. Some group companies and suppliers are also required to participate in the education process.

Specialist Environmental Education

Nikon employees are encouraged to undertake specialist education both within and outside the company, in order to gain the necessary knowledge, skills and technical abilities to carry out their individual responsibilities with consideration for the environment. We are working to develop specialists and increase specialist knowledge within the company.

- Internal environmental auditor development course
- Step-up seminar for internal environmental auditors
- Control of chemical substances (handling procedures, PRTR, etc.)
- Environmental facilities operation management
- Specialised industrial waste management qualification course
- Energy management course
- Pollution control management course
- Course for persons in charge of handling dangerous substances
- Emergency countermeasures (simulation of accidental leak)



Emergency countermeasures (simulation of accidental leak)



Step-up seminar for internal environmental auditors



Internal environmental auditor development course

Contributing to Society

Participation in Campaign to Halt Illegal Dumping — Sagamihara Plant

Sagamihara City held a campaign to put a stop to illegal dumping on November 9, 2002. The activity was sponsored by the Sagamihara City Beautification Movement Promotion Council. Beginning with the Shimomizo Koyama Park and Athletic Grounds, the main site of the event, more than 800 volunteers — including a number of employees of the Sagamihara plant — collected about 11 tons of rubbish and other illegally dumped materials from the park and surrounding areas.



“Environment Fair” to Promote Awareness of Nikon’s Dedication to Environmental Preservation — Mito Plant

On October 12 and 13, 2002, “Environment Fair 2002” was held at the Kasama Geijutsu-no-Mori Park in Kasama City, sponsored by Ibaraki Prefecture. The Mito Plant participated in the event for the first time, demonstrating Nikon’s dedication to, and efforts towards, preserving the environment. Elementary school students particularly enjoyed the observation corner featuring our “Fabre” Fieldmicroscopes (compact, portable microscopes).



Lecture on Zero Emissions Held at Tohoku University — Sendai Nikon

On September 11, 2002, Sendai Nikon gave a lecture at Tohoku University describing its efforts in the interest of environmental preservation. The lecture was titled, “Achievement of Zero-Emissions at Sendai Nikon.”

The lecture was at the invitation of the University’s Metals Research Laboratory, under the theme of corporate environmental activities. Interest centred on enhancing sorting efficiency and the economic effects of achieving zero emissions, and the lecture was followed by active discussion.



Local clean-up and beautification activities

Nikon employees cooperated with local residents in a variety of public clean-up and beautification projects, in addition to taking on the responsibility of policing the areas around Nikon facilities.



Clean-up and beautification around the Mito Plant



Cleaning and beautification around the Yokohama Plant

Communication with the local community

Clean-up Hinuma Network (Mito Plant)
Ibaraki Prefecture Managers’ Association Environment Committee (Mito Plant)
Association to Improve the Sagamihara Environment (Sagamihara Plant)
Sagamihara Waste Countermeasures Council (Sagamihara Plant)
Kanagawa Prefecture Environmental Preservation Council (Sagamihara Plant)
Shinagawa Ward Business Information Exchange Association (Ohi Plant)
Yokohama City Environmental Preservation Council (Yokohama Plant)

Cooperative Effort with Ishikawa River Nature Education Association — Mito Plant

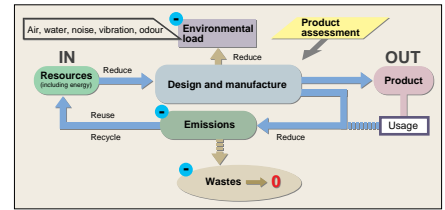
On March 23, 2003, 55 people gathered at the Mito Plant for a session conducted by the Ishikawa river nature education association. Pupils were shown how to make underwater viewing devices out of milk cartons, and used them to observe activity underwater. They also studied the surrounding environment and sampled wild watercress. It was a day for the pupils to truly get in touch with nature.



Topics

Zero Emissions Achieved at All Manufacturing Locations

In the first half of fiscal 2003, the Mito Plant became Nikon's first manufacturing facility to achieve zero-emissions status, and it was followed in the second half of fiscal 2003 by the Ohi, Yokohama, Sagamihara and Kumagaya plants. Today, all of our manufacturing facilities are now operating with zero emissions. Note that both the Mito Plant and Sendai Nikon achieved zero emissions for all of fiscal 2003.



The zero emission concept

Mito Plant Receives Environmentally Friendly Corporation Award

On June 5 (Environment Day), 2002, the plant was presented with the Environmentally Friendly Corporation Award for energy conservation at the Global Environment Forum, hosted by Ibaraki Prefecture. Presented to corporations who have made outstanding contributions to environmental preservation, the award was given in recognition of the efforts of the plant in reducing energy consumption. Mito Plant General Manager Takeo Nishigaki accepted the award from Ibaraki Governor Masaru Hashimoto.



Sagamihara Plant "Recycling Days" Announced in Prefecture's Environment Bulletin

The Sagamihara Plant has designated the 5th, 15th and 25th of each month as "Recycling Day", and sorts waste materials on those days. The programme has been under way for seven years now, with highly satisfactory results. The activity's success led to coverage in the 100th anniversary edition of "Shinkankyo", a seasonal bulletin published by the Kanagawa Prefecture Environmental Preservation Council. They lauded it for its simplicity, terming it an "environmental activity that anyone can perform."



Fiscal 2004 Nikon Environmental Action Plan Enacted Groupwide

Nikon established "Vision Nikon 21 — For the Development of Nikon in the 21st Century" in March 2000 as the guiding policy for Groupwide activity. Based on this policy, the Nikon Environmental Action Plan was developed in fiscal 2001 and midterm environmental objectives defined. Most recently, a new 3-year plan — the Fiscal 2004 Nikon Environmental Action Plan — has been announced.



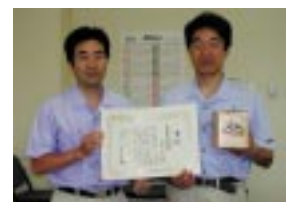
Participating in the JEITA Japan Green Procurement Survey Standardization Initiative

Nikon joined the Japan Green Procurement Survey Standardization Initiative of JEITA (Japan Electronics and Information Technology Industries Association) in November 2002, and is now creating a survey to determine the types and degree of chemical substances in use.



Accepting Submissions for "Nikon Eco-Family Plans" during 2nd Annual Environment Month

From the first year of the 21st century, Nikon has celebrated June as a company-wide "Environment Month" with a variety of activities and events. During the 2nd annual Environment Month, June 2002, we invited Nikon employees and their families to submit "Nikon Eco-Family Plans" describing activities that could also be done at home, and received 93 practical ideas.



Environmentally Friendly Ohi West Building Completed

On March 24, 2003, the new Nikon Ohi West Building was completed at the Ohi Plant. The oldest of all Nikon plants, the Ohi Plant has grown and changed over the years to comply with constantly changing requirements.

The majority of the buildings at the Ohi Plant, however, are now quite old, and maintenance has become difficult from the perspectives of safety, function and comfort. These issues were all addressed in the construction of the Ohi West Building, and bring enhanced overall operational efficiency to the Ohi Plant.

With seven floors above ground and one basement level, the new building has a total floor space of about 15,000 square meters, and incorporates a number of environmental features in its design:



1. Window Insulation and Shading from Sunlight

Window glass has been designed to reflect the majority of thermal radiation, providing improved thermal insulation. The windows are also set back from the outer surface of the building by 50cm to minimise direct sunlight and reduce thermal loading.

*Control of incident solar radiation reduces load on air conditioning

*Control of exposure to rain



2. Rooftop Greenery (area: 441m²)

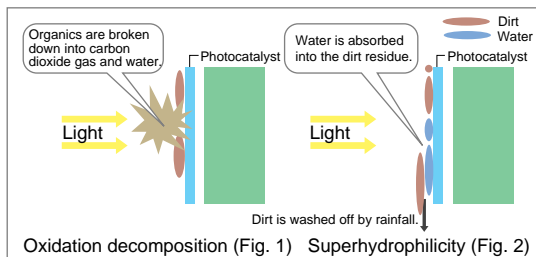
Rooftop greenery reduces thermal loading caused by sunlight, significantly reducing the load on the air conditioning system, and is effective as a measure to help prevent the building from becoming a "heat island".*1



*1 Energy consumption in metropolitan areas is high density, and as large portions of such areas are covered with dry materials such as concrete and asphalt, there is little temperature drop due to evaporation. As a result, the heat of sunlight is accumulated and released during the night, preventing significant cooling. Temperatures therefore tend to be higher in the city than in the suburbs, thus the name "heat island".

3. Exterior Tiles Treated to Resist Dirt (titanium oxide catalytic coating)

This special coating absorbs the ultraviolet wavelengths of sunlight, and utilises a photocatalytic reaction (Fig. 1) to break down surface dirt and allow it to be easily washed away by rainfall. (superhydrophilicity, Fig. 2). This brings a welcome reduction in cleaning costs.



The photocatalyst coating on the exterior of the building serves two purposes. In addition to breaking down surface dirt, it aids in lowering the temperature of the building — when the water retained during hydrophilic action evaporates, it takes the heat with it.

4. Automatic Staircase and Washroom Illumination

Sensors are used to detect the presence of people and automatically turn lights on and off as needed, slashing operating costs.



5. Air Conditioning System

Equipment such as heat sources, secondary cooling water and hot water pumps are controlled as required by their specific external loads for optimum energy efficiency. Air conditioner operation is maximised through the use of inverter control and variable-flow louvres. The system can automatically detect changes in room CO₂ concentration and introduce fresh outside air, or lower air conditioning if the outside temperature is sufficiently cool. Heat is recovered from return air using heat exchangers to further reduce energy consumption.

The implementation of magnetic water treatment systems has made possible a significant reduction in the cost of maintaining heat exchangers and other cooling water system piping (prevention of scaling, corrosion and slime*2).

*2 A mixture of waterborne microorganisms and sediment.

6. Rainwater Reuse

Rainwater falling on the roof is collected, filtered and used in sanitary facilities, reducing the consumption of potable water.

7. Water-saving Sanitary Facilities

Sanitary facilities are fitted with water-saving valves, and toilets with "flush noise" simulators, promoting reductions in water consumption.

8. Highly Efficient, Self-adjusting Lighting

HF (high-frequency) fluorescent tube lighting is employed in all rooms, improving brightness 1.5 times and reducing power consumption by 34% from the lighting previously used at Ohi. Furthermore, the self-adjusting design provides an 18% savings in energy costs.



Nikon Logistics the First Non-Manufacturing Group Company to Earn ISO14001 Certification

Nikon Logistics received ISO14001 certification on March 7, 2002. The head office and six business locations were certified, marking the first time ever for a non-manufacturing Nikon Group Company. At the same time, Nikon Logistics was also granted ISO9002 certification, for meeting international quality control system standards.



Kogaku Swiftly Acquires ISO14001 Certification

Kogaku was certified under the ISO14001 standard on February 28, 2003, acquiring its certification a mere four months after the programme was launched on November 1, 2002. The agency, while focusing primarily on sales activities, constantly works to fulfill its social responsibilities through environmentally related corporate activities and contributions to the development of a recycling society.