Energy Conservation (anti-global-warming measures)

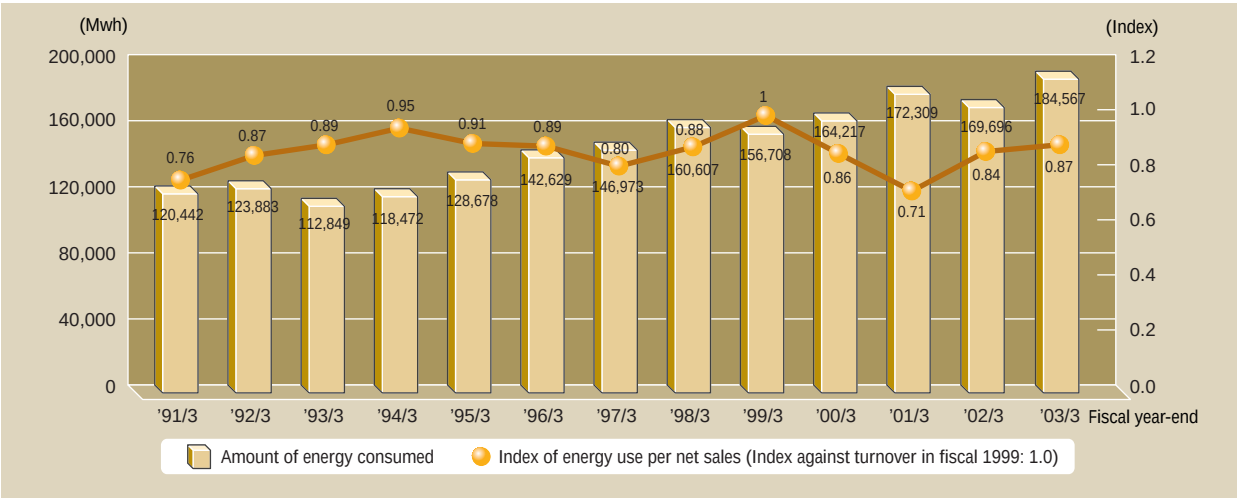
Targets

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

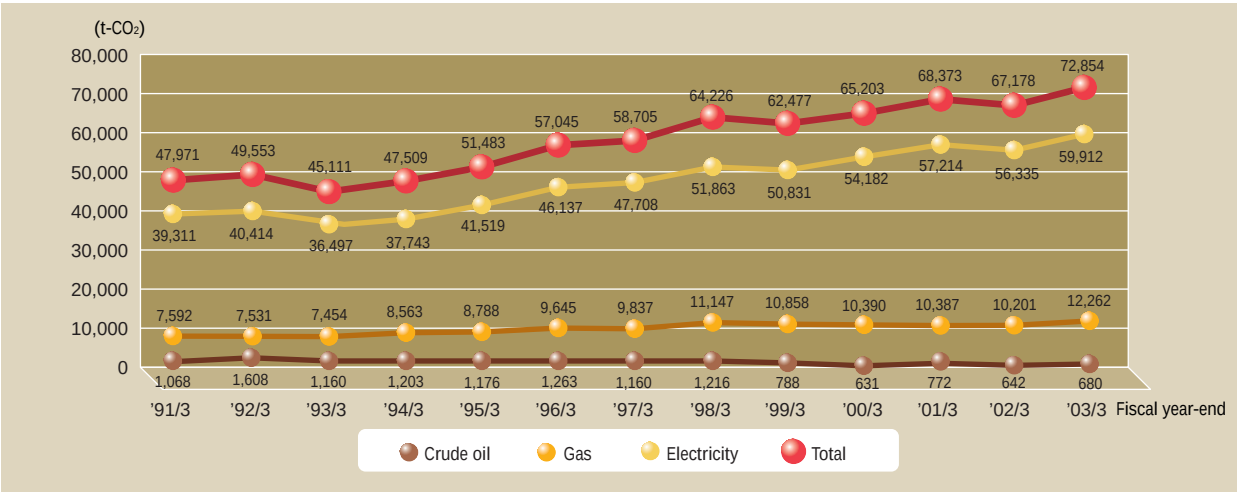
Carbon dioxide (CO_2), which is released into the atmosphere when fossil fuels are burned, is the main cause of global warming. The Third Conference of the Parties (COP 3) to the United Nations Framework Convention on Climate Change in December 1997 stressed the need for a reduction in greenhouse gas emissions. The control of CO_2 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 CO_2 emission, of a 20% or better reduction (compared with fiscal 1999 levels per net sales) by fiscal 2003. We improved the efficiency of our air conditioning system and switched to a lighting system that 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. However, due to a slowdown in the semiconductor market and the subsequent drop in net sales, we could not reach our goal of a 20% savings in energy (reduction of only 13% compared with fiscal 1999).

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



CO_2 Emission



*Standard figures for calculating CO_2 emissions are taken from the "Environmental Activities Evaluation Program" (published April 2002 by the Ministry of the Environment).

Future Energy-saving Strategies

We intend to implement the following strategies as we head into fiscal 2004.

- Reduction in harmful emissions from air conditioning
- Highly efficient operation 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-of-line disposal agencies to devise more efficient methods for disposing of waste.

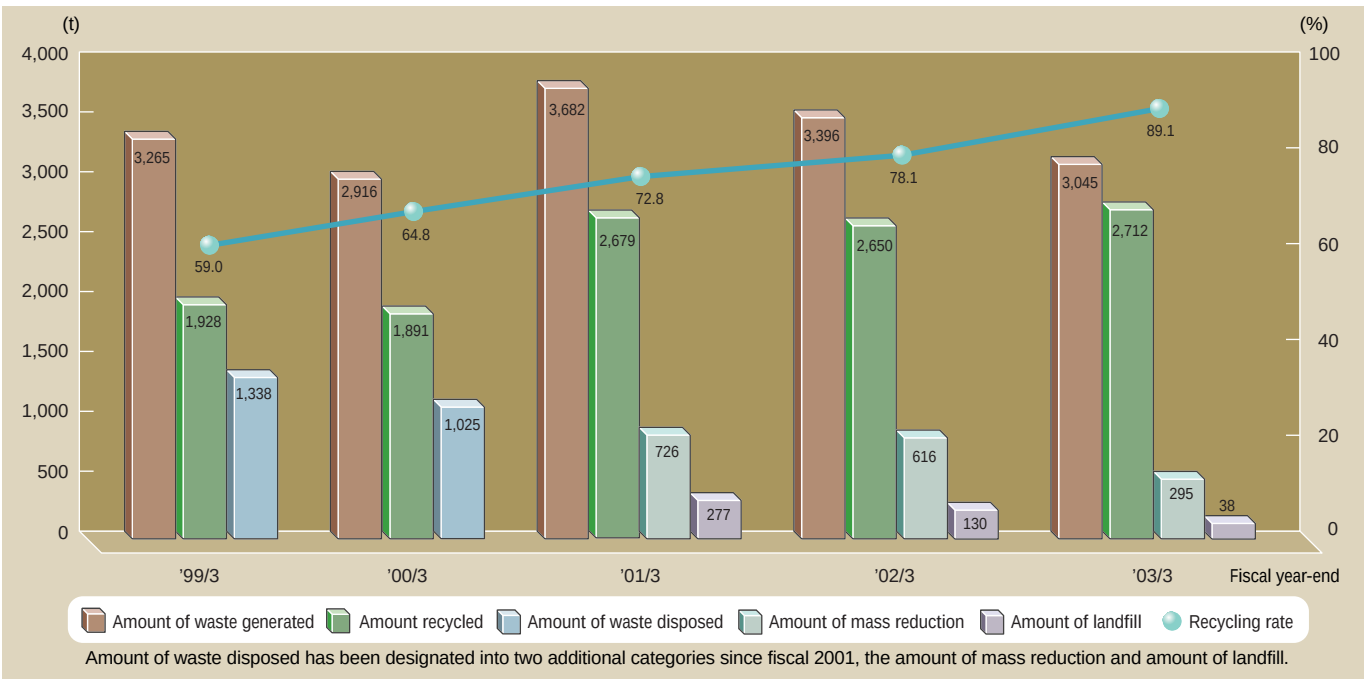
Nikon is committed to the concept of a "Resource Recycling Society", in which the world's valuable resources are used as effectively as possible. Through our activities, we are headed in the right direction in pursuit of this objective.

Production, Disposal and Recycling of Waste

We implemented programmes to reduce both general and plastic waste, and strictly enforced refuse separation guidelines 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 2003 represented a 75% (1,005-ton) reduction against the amount recorded for fiscal 1999, and our recycling rate was 89% (up from 59% for fiscal 1999). We also achieved our goal of implementing zero emission systems at all plants.

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

From this point forth, we will maintain our zero emission systems with emphasis on the 3R*2 principle, and we will work to develop more recycling technologies and foster relationships with recycling agencies.



Amount of waste disposed has been designated into two additional categories since fiscal 2001, the amount of mass reduction and amount of landfill.

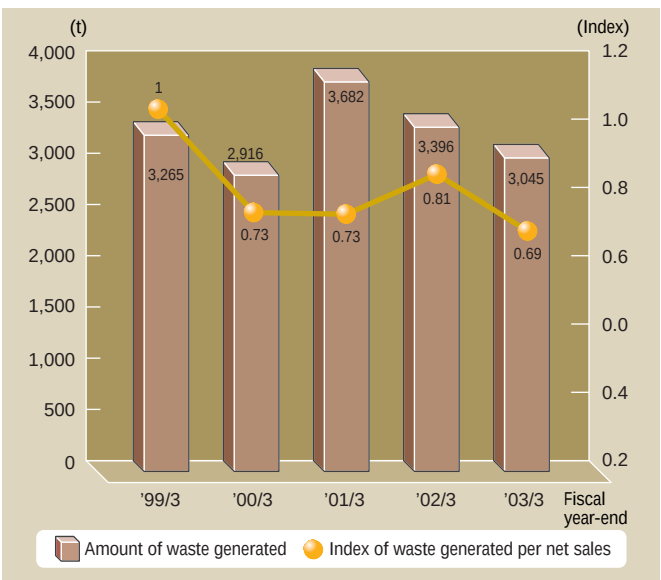
*1 The practice of using waste as solid fuel. The waste is ground and separated, and then compressed and shaped and can be used as burnable fuel.
Ground waste may be used as raw material in furnaces in place of coke.
Certain waste may be burned and the heat released used as an energy source. This contributes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

*2 3Rs: Reduce, Reuse and Recycle

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) propelled by the momentum created by the 3R principle.

In fiscal 2003 we reduced the tonnage of generated waste by 10% from the level of the prior year, but because the semiconductor market slumped, corporate net sales also dropped. As a result, the index of waste generated per net sales dropped 31% from fiscal 1999, shy of our target of 40%.



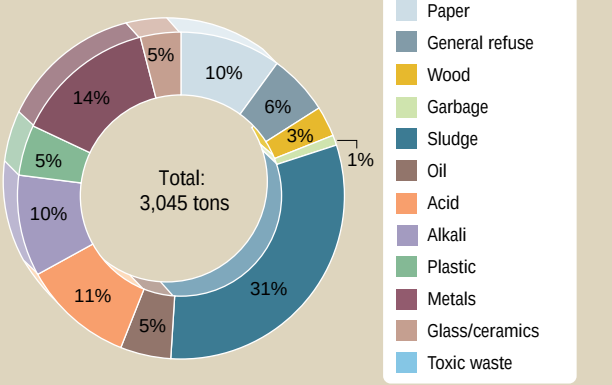
Targets

- 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.

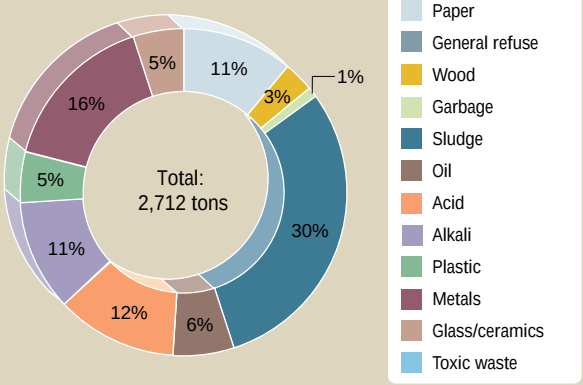
Breakdown of Waste during Fiscal 2003

The breakdown of Nikon's waste during fiscal 2003 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%).

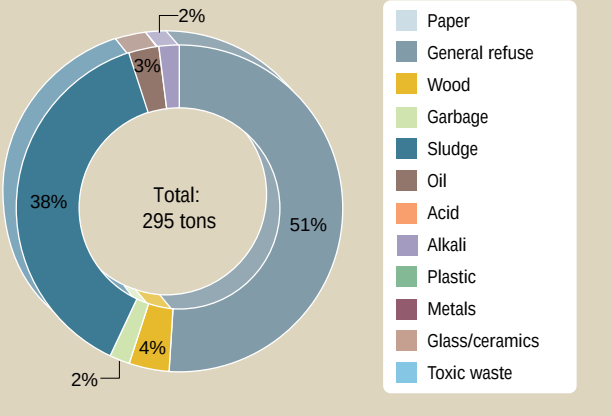
Amount of waste generated, by category



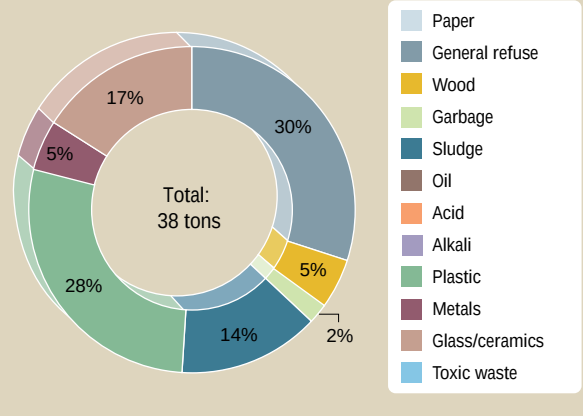
Amount recycled, by category



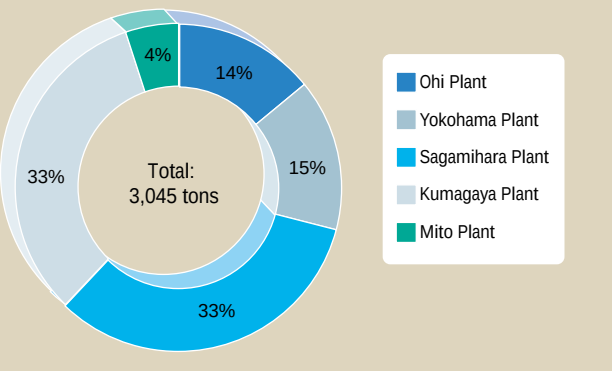
Amount of mass reduction, by category



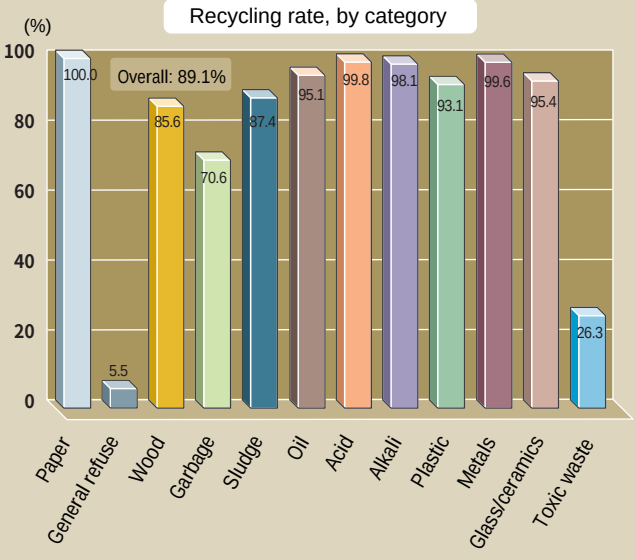
Landfill amount, by category



Amount of waste generated, by plant



Recycling rate, by category



Zero Emissions

Targets

- **Develop zero-emission system for at least two plants by the end of fiscal 2003, and for all plants by the end of fiscal 2005.**

The Nikon Group defines “zero emissions” as the condition in which no more than 1% of total waste output is disposed of as landfill. In the Nikon Environmental Action Plan, we established as a priority goal the achievement of zero-emission systems at all manufacturing sites for fiscal 2005, and have been working to reduce wastes and promote recycling through a variety of programmes. These efforts allowed us to attain our goal during fiscal 2003.

Nikon’s total waste output is about 3,000 tons per year, and the tonnage that becomes landfill has been reduced to under 1%, or less than 30 tons. Even with this reduction, though, industrial waste landfills serving the Tokyo metropolitan area are expected to be filled in about a year, making it clear that we are dangerously close to the limits of waste disposal through landfill.

Waste tonnage can also be disposed of by incineration, but combustion can produce extremely dangerous toxins such as dioxin. Japan has employed incineration as a disposal method for decades, and is now known as the country with the highest dioxin content in its environment.

Dioxin, which passes through the food chain and accumulates in the fatty tissues of organisms, is said to function as an endocrine disrupter and carcinogen. It is also passed to infants through breast feeding, and this capability of harming other individuals through indirect exposure has led to widespread restrictions on waste incineration. With the increasing regulations on landfills and incineration, reducing waste generation has become a crucial issue.

We fully recognise the importance of reducing the tonnage of wastes generated and sorting them effectively, to preserve our irreplaceable environment for our descendants. Nikon pledges to redouble its efforts to reduce wastes.

Definition of zero emissions: No more than 1% of total waste output is disposed of as landfill. Note that this excludes sewerage, household effluent and industrial waste water.

Examples of recycling

Paper	Recycled paper Paper materials (toilet paper) Solid fuel
Wood	Return to vendors Chips (raw material/compost) Particle boards Thermal recycling
Garbage	Return to vendors Automated garbage disposal machine Animal feed
Sludge	Fertilizer Cement material Thermal recycling
Plastic	Raw material Reducing agent for blast furnace Thermal recycling
Metals	Metal materials
Glass	Materials Roadbed materials

Waste compressor
(Sendai Nikon Corporation)

Crusher (Mito Plant)

Sorting (Sagamihara Plant)

The keys to achieving our goal of zero emissions are reduction of waste emissions and efficient sorting.

Nikon plant name	Target to develop zero-emission system
Ohi Plant	Fiscal 2003 (completed)
Yokohama Plant	Fiscal 2003 (completed)
Sagamihara Plant	Fiscal 2003 (completed)
Kumagaya Plant	Fiscal 2003 (completed)
Mito Plant	Fiscal 2003 (completed)

Major manufacturing subsidiaries	Target to develop zero-emission system
Sendai Nikon Corporation	Fiscal 2002 (completed)
Tochigi Nikon Corporation	Fiscal 2005
Mito Nikon Corporation	Fiscal 2006
Zao Nikon Co., Ltd.	Fiscal 2004
Kurobane Nikon Co., Ltd.	Fiscal 2006