



## Environmental Initiatives

**O**ur Global Design 100 medium-term management plan calls for us to assert world-class strengths in technologies for protecting the environment. We have formulated three guidelines to steer our efforts toward fulfilling that goal:



- Position environmental protection as a continuous emphasis in management
- Work to help prevent global warming
- Strive to help establish an environmentally sustainable foundation for society

Below are some highlights of activities that we have undertaken recently in accordance with those guidelines.



### Deploying fuel-saving tires

Yokohama was a pioneer in focusing on fuel economy in tire development, and we launched our DNA series of tires, which conserves fuel by reducing rolling resistance, in 1998. Since then, we have improved the fuel-saving performance of the DNA tires and have augmented the DNA lineup. Customers have responded positively, and the DNA series now accounts for about 70% of our Japanese unit sales of replacement tires for passenger cars. The July 2010 launch of the BluEarth series opens a new chapter in our continuing commitment to improving fuel economy. We have dedicated the new product line to the spirit of benefiting the environment, people, and society. And we will deploy the BluEarth tires in markets worldwide.

### Planting 500,000 trees worldwide in the Yokohama Forever Forest project

We inaugurated the Yokohama Forever Forest project in November 2007, which provides for planting 500,000 trees at 18 Yokohama plants worldwide. The tree plantings provide natural buffers against natural and industrial disasters and promote

biodiversity, as well as helping to prevent global warming by absorbing carbon dioxide. We have engaged the prominent plant ecologist Akira Miyawaki to oversee the project. Plant employees and members of the community carry out the forestation work, from gathering seeds and growing seedlings to preparing the soil and carrying out the planting. We had planted about 130,000 trees in the Yokohama Forever Forest project by December 2009.

### Minimizing environmental impact in all products

Our plans call for incorporating environmentally beneficial features in all of our products by fiscal 2018. We adopted original quantitative evaluation criteria for that goal in fiscal 2007 that span four categories: preventing global warming, reusing and recycling resources, reducing the consumption of resources, and ensuring safety and comfort. In developing new products, we mandate an average improvement for all the criteria of at least 5% over the predecessor products. And we require that all new products rank higher than their predecessors in all four criteria.



Our DNA Earth-1, in which adding orange oil to the tread compound reduces rolling resistance and improves grip



Continuing progress in the Yokohama Forever Forest project: tree-planting ceremonies in April 2009 in the United States at Yokohama Tire Corporation and in May 2009 in Japan at our Shinshiro Plant



Environmentally beneficial products accounted for 83% of our products in fiscal 2010, compared with 75% in fiscal 2009. All of our new products in each of the past two fiscal years have incorporated environmentally beneficial features.

### **Winning the electric vehicle class in the Pikes Peak International Hill Climb**

A Yokohama-sponsored electric vehicle won the electric vehicle class in the 2010 Pikes Peak International Hill Climb in record time. That race, held on the eponymous mountain in Colorado, is the world's best-known hill-climbing competition, and the 2010 edition took place on June 27. We began participating in the race in 2009 to help promote electric-powered transport and to support our work in developing tires for electric vehicles. Team Yokohama EV Challenge placed second in the race in the team's debut entry in 2009. In 2010, the team's independently developed battery-powered race car, equipped with prototype tires, placed first in the electric vehicle class. Driver Ikuo Hanawa steered the car to the finish line in 13 minutes and 17.57 seconds. That performance knocked 1 minute and 15 seconds off of a record that had stood for seven years.

### **Progressing toward eliminating landfill waste at all our plants by fiscal 2012**

Our Japanese operations eliminated landfill waste completely by the end of fiscal 2006, and we aim to eliminate landfill waste at all of our overseas operations by the end of fiscal 2012. In April 2010, our Chinese tire plant in Hangzhou became our first overseas plant to

eliminate landfill waste. And our Philippine tire plant eliminated landfill waste three months later. In Japan, we reuse all waste material as raw material or as fuel for energy-recovering systems. All our Japanese plants phased out nonregenerative incineration by the end of fiscal 2010, a year ahead of schedule.

### **Reducing output of greenhouse gases**

We participate proactively in Japan's commitment to reducing overall emissions of greenhouse gases. The Japanese government has pledged to reduce those emissions 6% by 2012, compared with 1990 in regard to carbon dioxide, methane, and nitrous oxide and compared with 1995 in regard to hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride. That pledge is Japan's commitment under the Kyoto Protocol to the United Nations Framework Convention on Climate Change. Our Japanese operations have reduced their output of greenhouse gases more than 6% in each of the past four fiscal years. We had set an interim target of reducing our Japanese output of greenhouse gases 12% by fiscal 2011, compared with 1990 and 1995, and we attained that target two years ahead of schedule. Our annual reduction in fiscal 2010 was 8.9%, which brought our cumulative reductions (1990 and 1995 comparisons) to 21.1%. The reductions in our output of greenhouse gases have resulted partly from decreased production volume associated with economic sluggishness. But they also reflect energy-saving measures, such as shifting energy sources and installing cogeneration systems at our principal tire plants.



*The electric race car sponsored by Yokohama and equipped with Yokohama tires that won the 2010 Pikes Peak International Hill Climb in record time*



*Hangzhou Yokohama Tire Co., Ltd.: our first overseas plant to eliminate landfill waste*



*A cogeneration system at our Shinshiro Plant, in Japan*