

## Ecosystem Conservation

Ecosystem conservation is an important part of creating a sustainable society, and a major responsibility for corporations. The role played by the construction industry is particularly significant, since its operations directly affect the natural world. Kajima pursues research and development aimed at the harmonious existence of nature and the construction business, and is proactive in incorporating the results of this study into its activities.

### Putting into Practice the Kajima Ecosystem Conservation Guidelines

During financial year 2006, Kajima began putting into practice the Kajima Ecosystem Conservation Guidelines formulated during the previous financial year.

Guideline	Current Status
Management systems measures	Ecosystem Conservation Management Plan added to the Handbook of Environmental Management at Worksites, and Environmental Management Plan. Adopted for use at all civil engineering project sites from financial year 2007.
Ensure compliance	Items related to environmental conservation regulations expanded on the Environmental Management Checklist of the Environmental Management Plan.
Raise employee awareness through education	Ecosystem information management system developed and made available on Kajima's intranet; sharing of knowledge and technology related to ecosystem conservation.
Construction business measures	Applied mainly to major projects impacting ecosystems, such as dams, tunnels and land grading.
Promote R&D	Research being conducted in 10 areas, including coastal ecosystems and preservation of green spaces.
Provide social contributions	Environmental education lectures given at two elementary schools in Tokyo, on the theme of new types of concrete and other measures that allow for the coexistence of nature and structures.

#### Case Study:

#### An Endangered Species of Algae Protected during Dam Construction

The Kajima Technical Research Institute *Global Environment, Biolife Group*

A preliminary survey of the immediate environment surrounding a proposed dam revealed that the area downstream of the construction site contained a growth of Chisujinori algae (*Thorea okadae*), listed as "vulnerable" in the Ministry of the Environment's Red Data Book. Downstream rivers have a significant impact on the growing conditions for Chisujinori algae, and Kajima's Technical Research Institute Hayama Aquatic Environment Testing Facility (Hayama City, Kanagawa Prefecture) cultivated the plant in order to preserve it. Several plants were harvested from the growing area, with the first step unialgal culture. For the next step, Kajima is working to propagate alga bodies by means of spore formation to return the plants to the site in the future.



Cultivation of endangered algae

#### Case Study:

#### Waste Bamboo Used to Protect a Hillside and Restore Native Flora

Kansai Branch *Hyogo Funakoshi Tunnel Joint Venture Project*

Kajima reused bamboo cut down during construction of the Funakoshi Tunnel joint venture project as mulching material to help protect hillside areas. The "plant reed mulching method" jointly developed by Kajima and TAK Co, Ltd. recycles bamboo as mulching material to enhance green spaces, rather than disposing of it as waste.

The cut bamboo was broken into chips of 50 mm or smaller, and blown over a 2,900 m<sup>2</sup> hillside to create a layer of mulch approximately 10 cm thick. Seeds of deutzia, weigela, and other plants were mixed with the mulch in order to restore the native flora. All aspects of the process were conducted on site, also providing reductions in transport and waste processing expenses.



Gathering cut bamboo for mulching