

## Conservation of Biodiversity

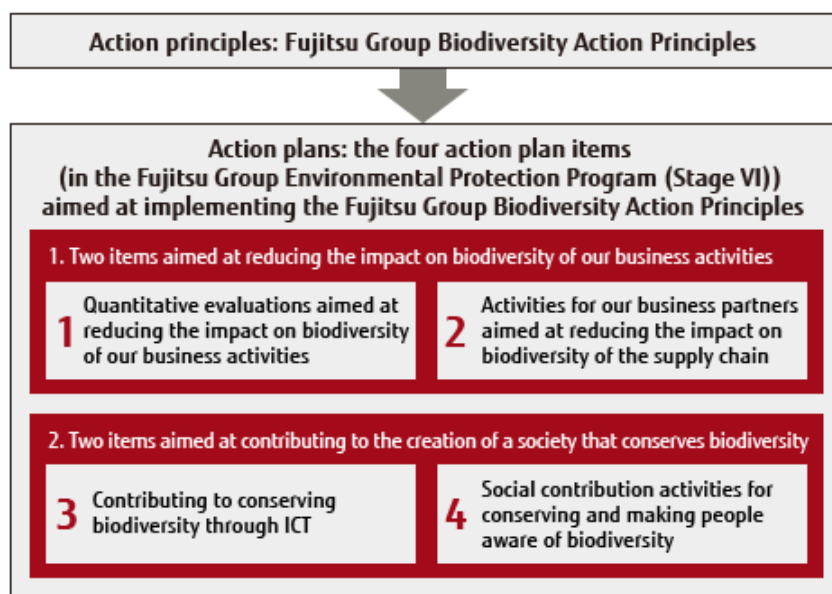
We have set conservation of biodiversity as one of our most important priorities, and are promoting activities toward that end.

### Our Approach

Only the bounty of nature makes our daily lives possible. From the provision of food and forests, to climatic regulation, water purification and recreation, the value to humankind of the functions nature performs is incalculable. These functions are called "ecosystem services," and they depend on biodiversity. The recent significant deterioration of ecosystems makes conserving biodiversity an urgent necessity to ensure sustainable ecosystem services.

Given this background, we set conserving biodiversity as one of our most important priorities and became a signatory to the leadership declaration for the Business and Biodiversity Initiative at the ninth meeting of the Conference of the Parties (COP 9) to the Convention on Biological Diversity (CBD), held in May 2008. Furthermore, we set a goal of promoting specific efforts by 2020 for all of the items proposed in the leadership declaration.

To achieve that goal, we settled on the Fujitsu Group Biodiversity Action Principles in October 2009. In this, we introduced both (1) Pursuing the Conservation of Biodiversity and the Sustainable Use of Natural Resources in Business Activities and (2) Contributing to Building a Society that Ensures the Conservation of Biodiversity and the Sustainable Use of Natural Resources as themes for future efforts. We then established four related action plan items in the Fujitsu Group Environmental Protection Program (Stage VI), which started in FY 2010, and have diligently worked to implement them.



- [Fujitsu Group Biodiversity Action Principles](#)

Furthermore, toward the achievement of two corporate citizenship targets "social challenges" and "social activities" under the Fujitsu Group Environmental Action Plan(Stage VII), which began in FY 2013 - employees are working with various organizations to apply ICT to the monitoring of species; working to conserve forests and woodlands near populated areas, and advancing other biodiversity conservation activities.

## Initiatives in FY 2012

### Quantitative Evaluation of Impacts on Biodiversity

To determine how our business activities impact biodiversity, we constructed the Fujitsu Group Biodiversity (BD) Integration Index in FY 2010 and have been evaluating the degrees to which our main business areas impact biodiversity. In FY 2012, we determined that this impact had declined by 9.6% compared to FY 2009, because of a reduction in our energy resource consumption. Going forward, we will continue to use the BD Integration Index as an indicator of the biodiversity impacts of our business activities.

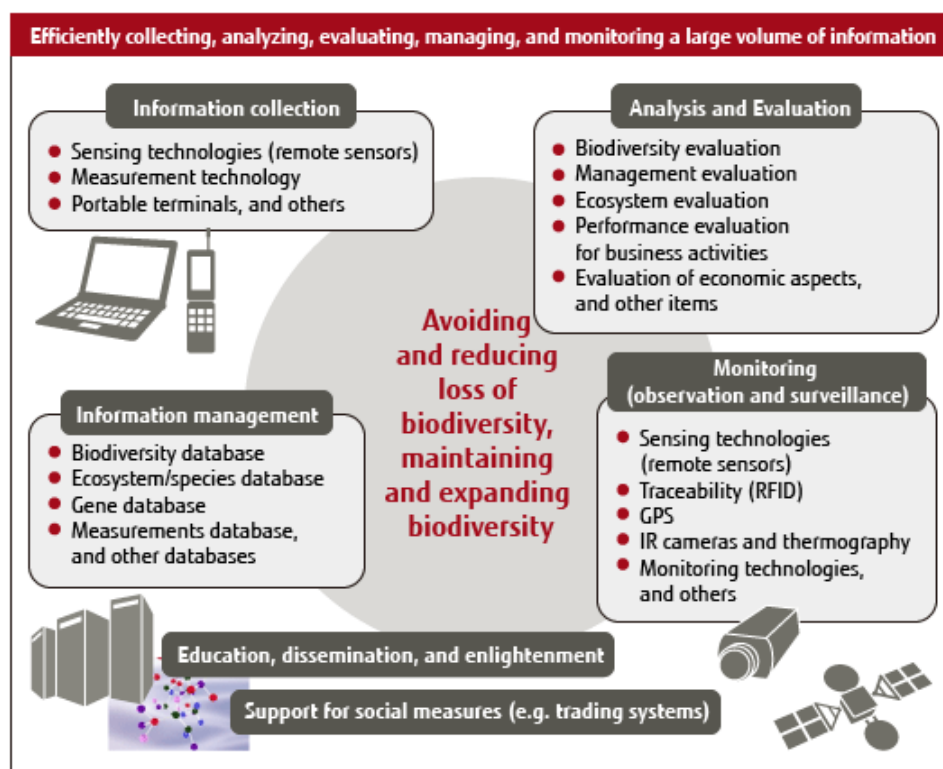
### Advancing Biodiversity Conservation Activities

To contribute to the building of a society that conserves biodiversity, Fujitsu has engaged in activities that use ICT to advance biodiversity conservation activities. Examples include the use of a multi-sensing network to protect the Japanese crane and the application of voice recognition technology in research on the Blakiston's fish owl. Furthermore, in pursuit of the Fujitsu Group Environmental Action Plan (Stage VI) goal of undertaking environmental and social contribution activities (once a year in Japan and once every three years overseas), we have also conducted rainforest revitalization activities on the Malaysian island of Borneo, forest and woodland conservation activities throughout Japan, and other biodiversity conservation and education activities at all 434 of our business sites across the globe.

## Contributing to the Conservation of Biodiversity Using ICT

The use of ICT makes it possible to avoid or reduce losses of biodiversity, and help to maintain or expand populations of species. It does this by enabling the proper gathering, analysis and evaluation, and management of complex, wide-ranging data relating to the conservation of biodiversity. Applying ICT in this way, the Fujitsu Group has developed a mobile photo system, which it is using to support a nationwide survey of dandelions and a survey of vegetation along the Tama River. Meanwhile, at a vineyard and winery in Yamanashi Prefecture, we are using a multi-sensing network to help boost productivity in agriculture, a form of the ecosystem service of provisioning.

### The Possibility of Conserving Biodiversity through ICT



In FY 2012, we embarked on the following efforts applying ICT to help conserve biodiversity.

- [Fujitsu provides free cloud service to ten organizations involved in biodiversity conservation activities \[Press Release\]](#)
- [Fujitsu uses ICT to support study of Blakiston's fish owl habitat in eastern Hokkaido \[Press Release\]](#)

Other Ongoing Fujitsu Group Initiatives:

- [Agricultural support activities at a vineyard and winery in Yamanashi Prefecture \(in Japanese\)](#)
- [Japanese crane conservation activities near the Kushiro wetlands](#)
- [Survey of vegetation along the Tama River using a mobile photo system](#)

## Biodiversity Conservation and enlightenment activities

### Promoting Tropical Rainforest Restoration Activities in Malaysia

To contribute to biodiversity conservation from a global perspective, we have implemented tree planting activities in Thailand, Vietnam, and Malaysia. Currently, at the Fujitsu Group Malaysia Eco-Forest Park, we continuously call for volunteers to assure that the saplings planted grow into a tropical rainforest, and we also perform supplementary plantings and maintenance.

At the Fujitsu Group Malaysia Eco-Forest Park, located in the Malaysian state of Sabah on the island of Borneo, we have been pursuing a tropical rainforest revitalization project with the support of a Sabah state forest development public corporation since 2002. This project is used as a place where people from the Fujitsu Group can come together from across the globe to work on the conservation of biodiversity. In FY 2012, Fujitsu Group employees and their families, a total of 64 people from seven countries - the U.K., Holland, Australia, China, Canada, Malaysia, and Japan - participated in this project under the slogan, "shaping tomorrow with you," the Group's brand promise. Together with local university students, students and parents from a school for Japanese, and others numbering approximately 100 in all, they worked up a good sweat performing supplementary plantings and maintenance. They also toured a tropical rainforest and mangrove forest to learn about biodiversity. Though unaccustomed to working outside in temperatures exceeding 30°C was extremely trying, involvement in an activity for protecting a tropical rainforest was of immense significance for the participants.



Performing forest maintenance work



Planting trees



Local stakeholders and Fujitsu employees

Fujitsu CoWorCo Limited conducted its Eco-Forest Campaign in FY 2009 and FY 2010, donating funds to the Fujitsu Group Malaysia Eco-Forest Park based on the volume of used toner cartridges it collected. In August 2011, funds collected in FY 2009 were used to construct a summer house where Eco-Forest Park workers can take breaks, and, in November 2012, funds collected in FY 2010 were used to donate 6,000 seedlings and establish the FUJITSU COWORCO'S FOREST. Employees of Fujitsu CoWorCo visited the site in November 2012 to plant trees for the company's forest.



The FUJITSU COWORCO'S FOREST, established in November 2011

- [Tropical rainforest revitalization activities at the Fujitsu Group Malaysia Eco-Forest Park \(in Japanese\)](#)



## Tree Planting Activities in Brazil

Fujitsu do Brasil Ltda (FBR), the Fujitsu Group company in Brazil, embarked on a tree planting activity in June 2012 to restore greenery to devastated land. 23 employees participated in the first year of this project. For the participants, most of whom had never participated in tree planting, this activity was very rewarding and an excellent opportunity to learn about biodiversity conservation. The next two years of the project will be spent nurturing the growth of the planted seedlings.



Tree planting site



Tree planting participants

## Green Curtain Initiative

To help conserve biodiversity and prevent global warming, the Fujitsu Group pursues its Green Curtain Project at business sites throughout Japan every summer. In FY 2012, 33 Fujitsu Group business sites participated in the project.

A green curtain is made by having climbing plants - like bitter melon, morning glory, or gourd - grow along windows and walls. By adding greenery where there was none, green curtains contribute to local biodiversity and block the sun's hot rays to provide shade that mitigates indoor temperature increases. When bitter melons are grown, the harvest is distributed for free within the company or used by the employee cafeteria to make special summertime dishes. In addition to promoting local production and local consumption, green curtains provide employees with the satisfaction of seeing seedlings they have planted grow day-by-day.

### Case Study

#### Fujitsu Semiconductor Ltd. Akiruno Technology Center

Fujitsu Semiconductor Ltd.'s Akiruno Technology Center created a green curtain that consisted of bitter melon and sponge gourd plants, and was 4.5m high and 60m wide. To make this curtain, employees actively sought to use repurposed items. For example, as a structure upon which the plants could climb, they used netting for the culturing seaweed and, as planter boxes, they used wafer cases no longer needed for their original purpose. As a planting medium, they used soil with plenty of organic matter, which they collected from the center grounds, and fertilizer they made from cafeteria waste. Harvested bitter melons were used by the cafeteria to prepare a dish for employees in an on-site local production / local consumption initiative. In November 2012, the Akiruno Technology Center was named the winner of an award for excellence in the organization category of the city of Akiruno's FY 2012 Green Curtain Contest.

Activity Period: April - September 2012

Activity Location: Akiruno City, Tokyo



Green curtain at Fujitsu Semiconductor Ltd.'s Akiruno Technology Center



Green curtain contest awards ceremony

## Case Study

### Fujitsu Solution Square

Fujitsu Solution Square has been growing plants for the Green Curtain Project since 2008. This year, the fifth year of this effort, it is growing a total of 336 plants, including bitter melon, sponge gourd, and morning glory. These will be used to green an area now expanded to 260m<sup>2</sup>. Fujitsu Solution Square has also made its own original system for using rainwater collection nets to gather rainwater and store it in planter tanks, and increased the number of soil moisture sensors to appropriately water plants. With increasing numbers of employees participating in activities like planting, weeding, and harvesting, green curtain activities at Fujitsu Solution Square have also become an important venue for communication among employees.

Activity Period: May 14 - October 2012

Activity Location: Ota Ward, Tokyo



Fujitsu Solution Square's green curtain

## Case Study

### Fujitsu Oita Systems Laboratory

In FY 2012, Fujitsu Oita Systems Laboratory, in pursuing its Green Tunnel Project, planted bitter melon, sponge gourd, and morning glory and was later rewarded with a prize in the organization category of Oita Prefecture's FY 2012 Green Curtain Photo Contest. The Green Tunnel helps to save energy through the shade it provides and the transpiration effect, and is soothing to walk through. The large number of bitter melons harvested from the Green Tunnel was distributed to employees, while harvested Japanese morning glory seeds were provided to various regions as part of a "morning glory bank" initiative. Going forward, we aim to use future initiatives to further expand the green curtain movement.

Activity Period: May 11 - September 2012

Activity Location: Oita City, Oita's



Fujitsu Oita Systems Laboratory's green curtain

- [Green Curtain Initiative: Case Study Archives](#)

## Contributing to Spreading these Efforts Throughout Society

We participate in external organizations such as the Business and Biodiversity Initiative (B&B) and the Japan Business Initiative for Biodiversity (JBIB) and contribute to the spread of biodiversity conservation efforts throughout society.

At the ninth meeting of the Conference of the Parties (COP 9) to the Convention on Biological Diversity (CBD), B&B inaugurated the event with the signing, by more than 40 companies from around the world, of the "leadership declaration." By publishing their best practices, these companies promote the conservation of biodiversity and sustainable use.

JBIB is a group in which over 30 Japanese companies from a wide range of businesses participate. Its purpose is to deploy activities that contribute to conserving biodiversity by aiming for dialogue between stakeholders and other companies based on the results of joint research. Fujitsu is involved with research activities and tool development for this effort.