

## Conservation of Biodiversity

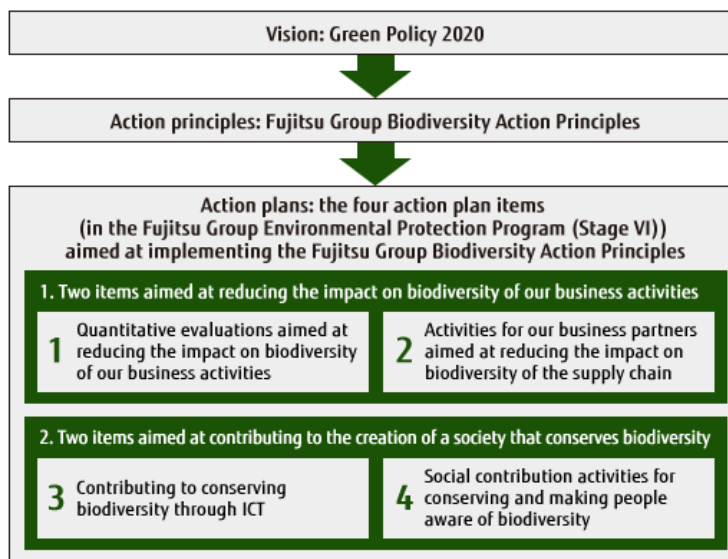
We have set conservation of biodiversity as a priority area in the Fujitsu Group Environmental Protection Program (Stage VI), and are promoting activities aimed at realizing this goal.

### Basic Concepts

Only the bounty of nature makes our daily lives possible. From the provision of food and forests, to climate 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 remarkable deterioration of ecosystems makes conserving biodiversity an urgent necessity to ensure sustainable ecosystem services.

Given this background, we set conserving biodiversity as one goal in the Fujitsu Group's medium-term environmental vision, Green Policy 2020, as published in July 2008. Furthermore, we set a goal of promoting specific efforts by 2020 for all of the items proposed in the leadership declaration for the Business and Biodiversity Initiative, which was signed at the ninth meeting of the Conference of the Parties (COP 9) to the Convention on Biological Diversity (CBD).

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.



- [Fujitsu Group Biodiversity Action Principles](#)

### Conservation of Biodiversity in Our Business Activities

In the Fujitsu Group, we are trying to reduce the environmental burden that results from our business activities based on an awareness of the consequences our actions have for biodiversity.

We have prepared Group guidelines on biodiversity for all phases of a product's life cycle; namely research, design, development, procurement, production, transportation, marketing, utilization and recovery. The guidelines outline the specific measures we must take for each of these phases and all our employees can refer to them to understand precisely how their work relates to biodiversity and what they need to do to reduce their environmental impact.

## Quantitative Evaluation to Reduce the Impact on Biodiversity of Our Business Activities

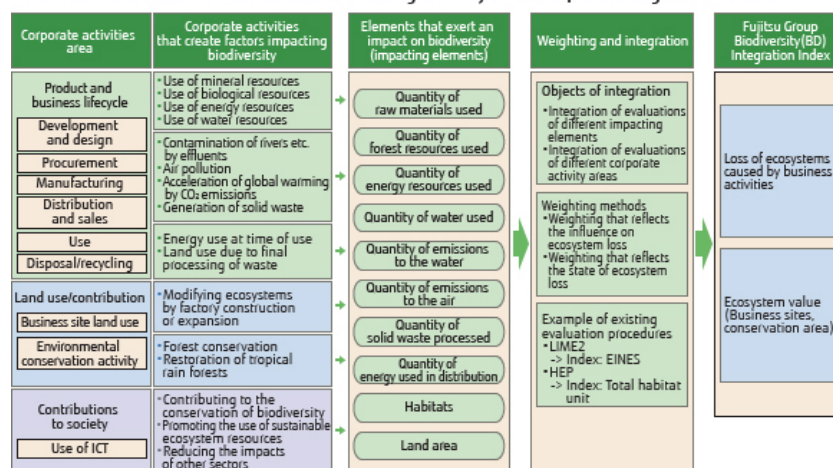
To conserve biodiversity, it is important to evaluate the quantitative impact of business activities on biodiversity and to promote activities that reduce that impact with targets set appropriately.

Accordingly, we first analyzed how our business activities affected biodiversity and ecosystem services. From this, we understand that our influence on ecosystems mainly depends on the use of water and forest resources. We also understood that there were possibilities of impact on biodiversity through (1) use of mineral resources and energy resources, (2) waste processing, (3) land development and reform caused by land use as business sites, (4) contamination due to emissions of chemical substances into the air and water, and (5) climate change due to emissions of greenhouse gases to the atmosphere.

To reduce such impacts, in FY 2010 we constructed the Fujitsu Group Biodiversity (BD) Integration Index as a means of quantitatively evaluating the influences of business activities on biodiversity. In this framework, we identify business activities that impact biodiversity and extract impacting elements as quantitative data related to this business activity. Next, we use existing methods to evaluate these impacting elements so as to weight and integrate them. This approach can therefore ultimately provide an index of the loss of ecosystems caused by business activities or of ecosystem value.

In the Fujitsu Group Environmental Protection Program (Stage VI), we have set a target of reducing the impact of our main business areas on biodiversity, as evaluated by the BD Integration Index, by 3% by the end of FY 2012 compared to FY 2009. In FY 2011, we achieved a 4.6% reduction compared to FY 2009, mainly through decreases in energy resource usage and waste processing. Going forward, we will strengthen our activities that reduce the impact on biodiversity.

Framework for Quantitative Evaluation Using the Fujitsu Group BD Integration Index



## Office Land Use Assessments

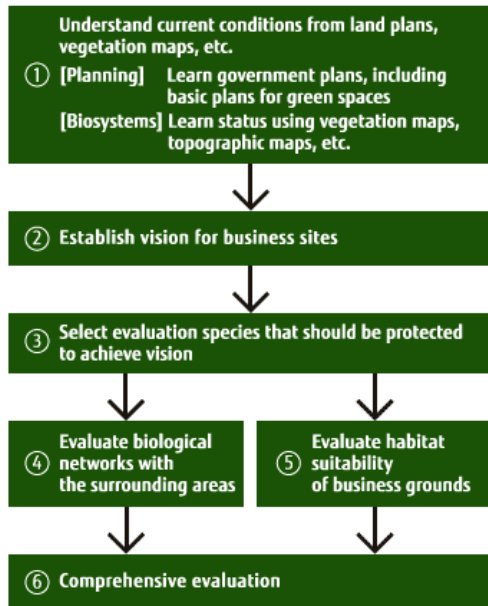
The properties on which Fujitsu offices and plants sit occupy a certain area within their local communities. In building local ecosystem networks, it is thus important that we position these properties as "patches" within these networks, consider how the properties should be maintained, and implement measures for their conservation. To do this, we need to implement a PDCA cycle in which we first conduct a quantitative assessment of the current density of biodiversity on our properties, enact conservation measures based on those assessments, and monitor and evaluate the results.

Fujitsu, in collaboration with Fujitsu FIP Corporation and Professor Akira Tanaka of the Department of Environmental and Information Studies, Tokyo City University, has developed KANTAN HEP, a procedure used to select which regional wildlife should be conserved by designating species of value. Assessments are then performed of those species' habitats in terms of ease of living.

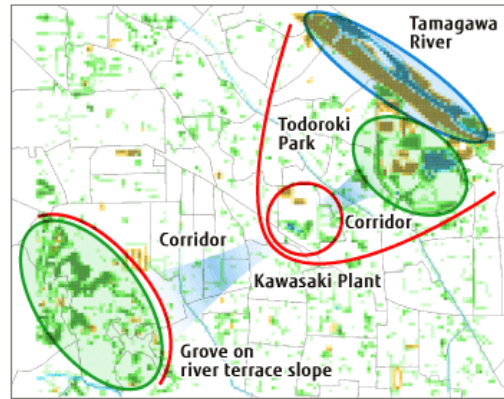
This methodology was applied at Fujitsu's Kawasaki Plant (Nakahara-ku, Kawasaki, Kanagawa Prefecture) and an assessment conducted.

The Kawasaki Plant, which occupies approximately 15 hectares, is located between the Tama River and a forested incline that makes up part of the river's fluvial terrace, and can be considered one area (or "patch") that comprises the ecosystem network of the region. Selected for this assessment as regional wildlife requiring conservation were the great tit (forest), the giant mantis (grassland), and the common kingfisher (waterside). The continuity of the habitat for these three species in the area around the plant was then assessed, and the land within the plant premises was then weighed for its suitability as a habitat by using a Habitat Suitability Index (HSI<sup>\*1</sup>) scorecard to evaluate vegetation, water, activity and rest, and breeding conditions.

### Flow of Evaluation



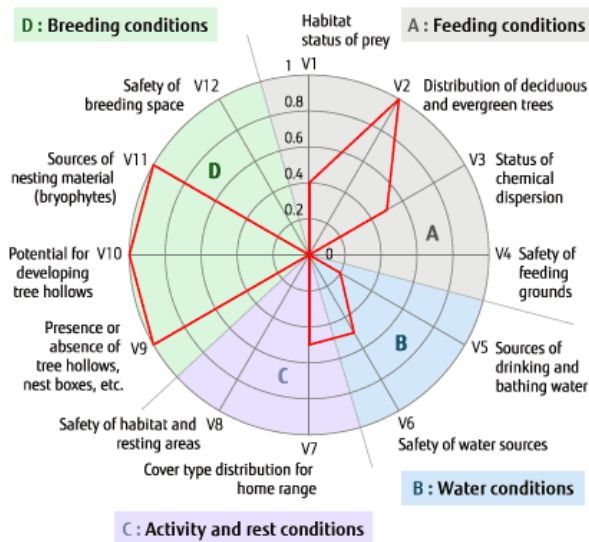
### Ecological network centered on Kawasaki Plant



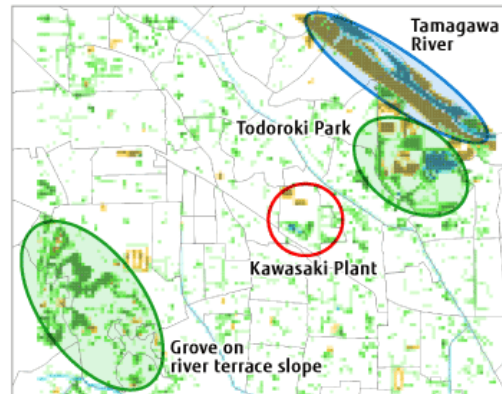
The assessment regarding the great tit, for example, revealed that safety was low in terms of vegetation, water, activity and rest, and breeding space, and the plant is now considering placing certain areas off-limits as a means of conservation. Assessment of the continuity of habitat for the great tit in the area around the Kawasaki Plant showed some continuity with areas along the Tama River and green areas in nearby Todoroki, but it was also learned that no continuity could be found with the river's fluvial terraces and hillside forests.

Application of this methodology is not only useful in efforts to conserve biodiversity on property where offices and plants are located. Through cooperation with governments, local residents, NPOs, and other companies, it can be helpful in considering specific conservation measures needed to build regional ecosystem networks.

### Examples of assessment of the great tit in forests



### Ongoing assessment in surrounding areas



\*1 Habitat Suitability Index (HSI) :

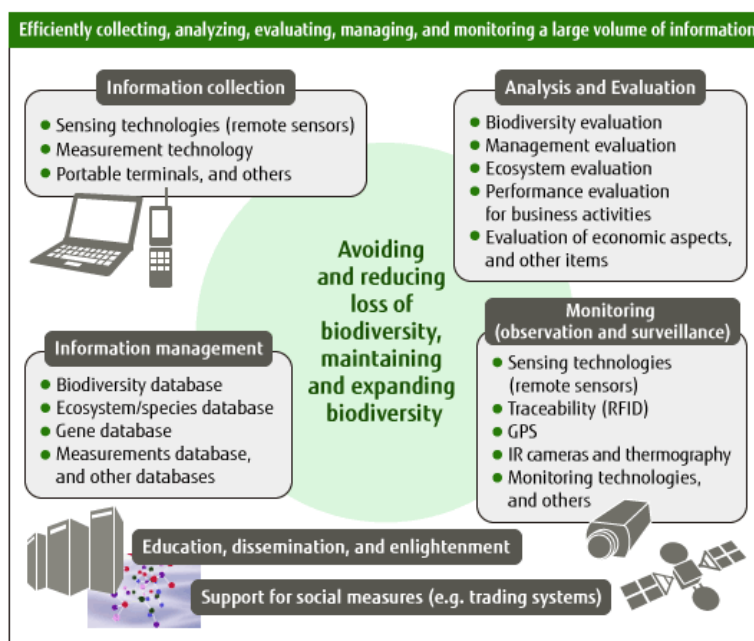
An index used to provide a quantitative assessment of wildlife habitats.

## ICT and Biodiversity

### Contributing to the Conservation of Biodiversity Using ICT

Using ICT to appropriately collect, analyze, assess, and manage complex, wide-reaching information on biodiversity makes it possible to avoid or reduce the loss of biodiversity, and to contribute to its maintenance and expansion.

#### The Possibility of Conserving Biodiversity through ICT



Examples of the use of ICT in biodiversity conservation include a nationwide survey of dandelions and a survey of vegetation along the Tama River, both using a mobile photo system. A multi-sensing network has also been used to contribute to conservation of the Japanese crane.

An example of the use of ICT in agriculture, one of the provisioning sides of ecosystem services, is the application of a multi-sensing network at Yumekyo Grape Farm Ltd., a winery located in Yamanashi Prefecture.

- [Highlight - Biodiversity Conservation That Leverages ICT -](#)

### 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. Fujitsu published the results of those efforts at a side event to CBD COP 10.

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.

## Activities on a Global Scale

### 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 Ec- 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.

In FY 2011, 31 Fujitsu Group employees and family members experienced forest planting and forest maintenance at these sites firsthand, and also took study tours of primary forests and mangrove forests.



Maintenance Experience: Tours of Primary Forests



An eco tour in progress

### Mangrove Tree Planting in Thailand

Similar to actions in 2010, in April and July of 2011 42 employees of Fujitsu System Business (Thailand) (FSBT), an ICT solution company, planted mangrove saplings in Chonburi Province as part of marine conservation and ecosystem restoration efforts. Planting of mangroves has become an annual part of FSBT's environmental conservation program, and through these activities, FSBT is working to fulfill its responsibility as one of Thailand's leading green ICT companies.



Planting Mangrove Sapling

