



Progress Report Fujitsu 2011/2012

On the Leadership Declaration of the 'Biodiversity in Good Company' Initiative

This progress report features activities that the Fujitsu Group has implemented in the last two years (2011/2012) and recognizes the seven points in the Leadership Declaration cited below.

Leadership Declaration

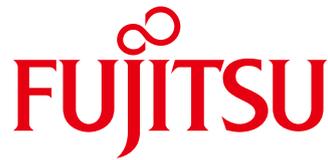
All signatory companies acknowledge and support the three objectives of the international "Convention on Biological Diversity":

1. Conservation of biological diversity
2. Sustainable use of its components
3. Fair and equitable sharing of the benefits that arise out of the utilization of genetic resources.

and commit themselves to:

1. Analyzing corporate activities with regard to their impacts on biological diversity;
2. Including the protection of biological diversity within their environmental management system;
3. Appointing a responsible individual within the company to steer all activities in the biodiversity sector and report to the Management Board;
4. Defining realistic, measurable objectives that are monitored and adjusted every two to three years;
5. Publishing activities and achievements in the biodiversity sector in the company's annual, environmental, and/or corporate social responsibility report;
6. Informing suppliers about the company's biodiversity objectives and integrating suppliers accordingly and step by step;
7. Exploring the potential for cooperation with scientific institutions, non-governmental organizations (NGOs) and/or governmental institutions with the aim of deepening dialogue and continuously improving the corporate management system vis-à-vis the biodiversity domain.

To demonstrate ongoing commitment, member companies will provide the Initiative with a progress report every two years.



1. Analyze the impact of corporate activities on biodiversity

Activities

The Fujitsu Group analyzes the impact of corporate activities on biodiversity with a focus on business/product life cycles, land utilization, and the areas in which ICT (Information and Communication Technology) comes into play.

Easy HEP for the Simple Evaluation of the State of and the Connection between Ecosystems Inside and Outside of the Facilities

Ecosystems in urban areas are gradually deteriorating. When considering protection activities for biodiversity for facilities in suburban areas, it is necessary to consider what action the facility should take from the point of view of a regional ecosystem network that includes the area around the facility. In order to do this, it is necessary to regularly evaluate the state of the ecosystem in which the facility is located as well as the surrounding area. The HEP (Habitat Evaluation Procedure) is an example of a method for evaluation of the ecosystems in an area, but a high level of expert knowledge is needed for its application.

In order to construct an ecosystem network as a scheme for the improvement of ecosystems in urban areas, Fujitsu developed “Easy HEP” in collaboration with Professor Akira Tanaka of Tokyo City University (a leading authority in HEP research in Japan) as a method for evaluation. This method uses a check sheet called an HSI chart, and by recording the current state of an ecosystem in a given place on this check sheet it can lead to the development of measures for protection. This method is comprised of the steps listed below.

- Understanding of current state with a ground plan and flora map etc.
- Establishment of an objective for the grounds of the facility
- Selection of species that should be protected
- Evaluation of ecosystem network with the surrounding area
- Evaluation of the facility grounds for adequacy as a habitat
- Overall evaluation

This Easy HEP has been applied to Fujitsu plants in Kawasaki, Numazu, and Kumagaya. As evaluation markers for wild species that should be protected on the site of a facility, the Canadian goose, the Chinese mantis, and the Kingfisher were selected and fixed volume evaluation was performed. As a result of this, to take the evaluation (0.00 – 1.00) of the livability of woodland in the grounds of the facility for Canadian geese as an example, the Kawasaki plant scored 0.371, the Numazu plant scored 0.931, and Kumagaya scored 0.0. At the Kumagaya plant the score for water places was low so the establishment of bodies of water henceforth can be considered to be a measure for protection henceforth. By applying this method in this way, it will be useful for protection activities of biodiversity on facility premises, and it can also be useful for investigation into the specific measures for the structuring of an ecosystem network for a region with the cooperation of governments, NPOs, and other companies.

| | No. | Habitat factor | Check | Score |
|-------------------|-----|--|-------|-------|
| Feeding condition | V1 | Living situations of butterflies and bees that are the main food | | |
| | a | Neither the butterfly, the moth nor the bee have been seen. | | 0 |
| | b | Butterfly, moth, and bee's imagos have been seen within one year. | ✓ | 0.2 |
| | c | Butterfly, moth, and bee's larvas and chrysalises have been seen within one year. | | 0.2 |
| | d | Butterfly, moth, and bee's imagos were seen in this investigation. | | 0.2 |
| | e | Butterfly, moth, and bee's larvas and chrysalises were seen in this investigation. | ✓ | 0.2 |

Figure 1: Check sheet of HSI

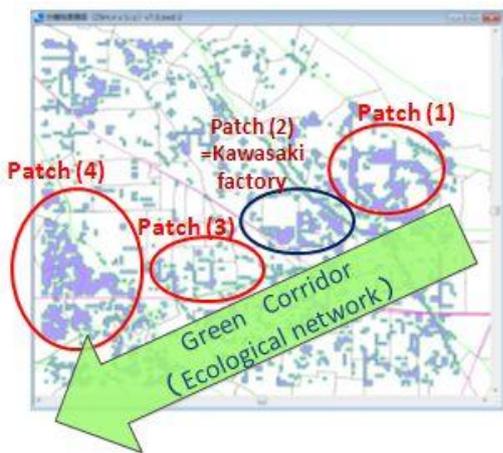


Figure 2: Ecological network

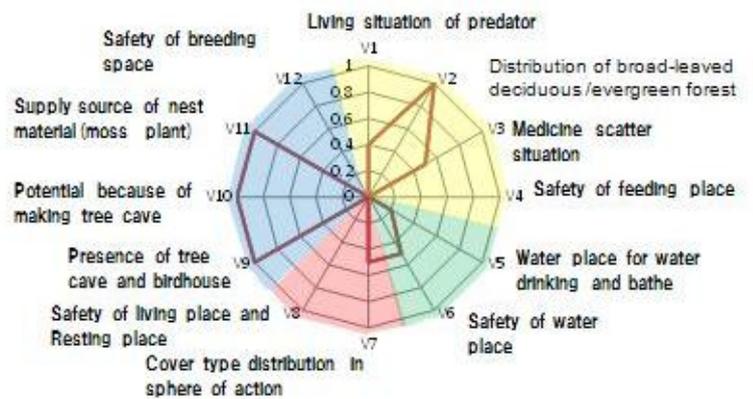


Figure 3: Evaluation of great tit in forest

2. Develop a biodiversity index by incorporating biodiversity conservation into the corporate environmental management system

Activities

The Fujitsu Group developed the Fujitsu Group Integrated Biodiversity Index for quantitative assessment of the impact and contributions of corporate activities on biodiversity and incorporated conservation activities into its environmental management system (EMS).

Quantitative Assessment of the Impact and Contributions of Corporate Activities on Biodiversity

Quantitatively assessing the impact of corporate activities on biodiversity and setting specific goals to reduce it are key to conserving biodiversity. The Fujitsu Group, therefore, developed the Fujitsu Group Integrated Biodiversity Index (Figure 4) to continuously reduce the impact of corporate activities and products through their life cycles on biodiversity, contribute more to biodiversity conservation through ICT, and assess improvements in biodiversity and the effectiveness of conservation measures.

This assessment method is designed to define the impact of corporate activities on biodiversity and to extract relevant quantitative data available as impact elements, which are weighted and integrated through existing assessment methods to develop indexes for “the loss of ecosystems due to corporate activities” and “the value of ecosystems.” The Sixth Fujitsu Group Environmental Protection Program set quantitative goals for the impact of key businesses on biodiversity by using the integrated BD (biodiversity) index, the results of which are analyzed and incorporated into specific measures to make continuous improvements.

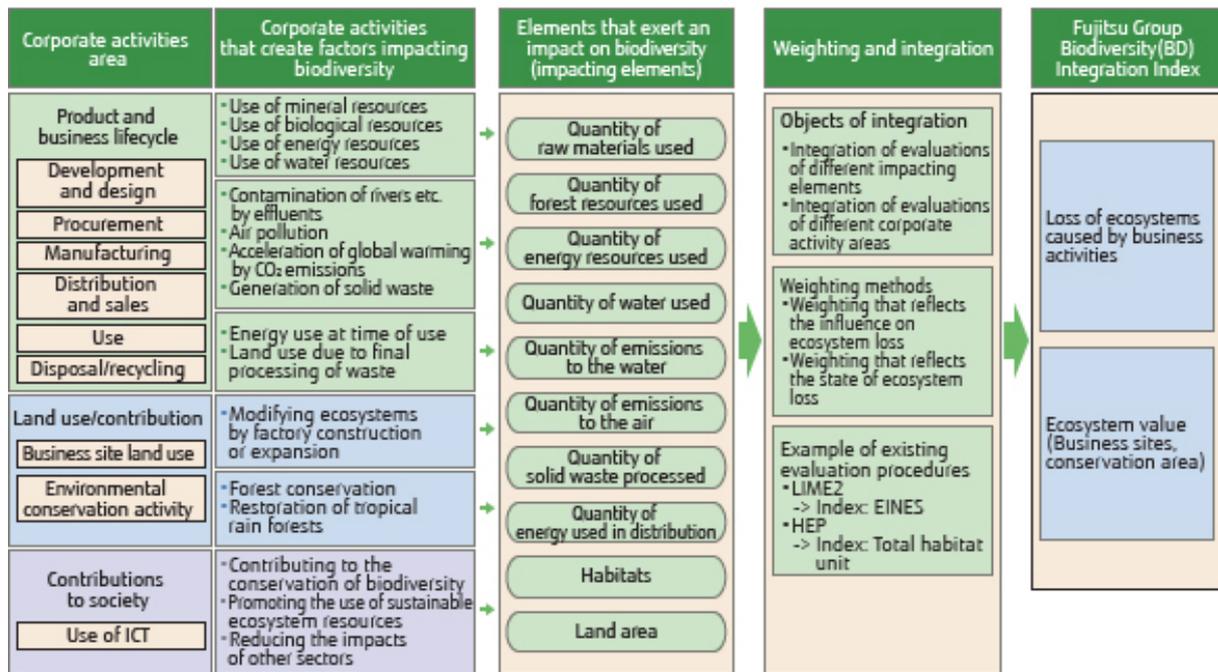


Figure 4: Framework for Quantitative Evaluation Using the Fujitsu Group BD Integration Index

3. Designate a representative who supervises all activities in the biodiversity sector and is responsible for reports to the board of directors

Activities

The Fujitsu Group’s activities on biodiversity conservation are conducted based on its environmental management system. They are supervised by an environmental management representative (currently, the general manager of the Environment Department) selected from among directors in charge of environmental issues. An environmental management representative and a director in charge of environmental issues, meanwhile, are responsible for reports to the board of directors through the Environmental Committee while the BD Working Group under the Environmental Committee is engaged in integration practices.



4. Set feasible and measurable goals that can be monitored and adjusted as needed every two to three years

Activities

The Sixth Fujitsu Group Environmental Protection Program (FY 2010–2012) set goals for biodiversity conservation.

The Sixth Fujitsu Group Environmental Protection Program

The Fujitsu Group Environmental Protection Program (FY 2010–2012) was adopted in April 2010 in accordance with the Green Policy 2020.

The following goals are in place to promote biodiversity conservation activities.

Reduction of the impact of corporate activities on biodiversity

- Development of indexes to quantify the impact and contributions of corporate activities on biodiversity and establishment of a system to reduce the impact and contribute more to biodiversity conservation through ICT
- Promotion of procurement from suppliers who are actively engaged in biodiversity conservation

Contribution to building a society in which biodiversity is conserved

- Development of ICT-based model cases for biodiversity conservation at key business establishments by the end of FY 2012
- Implementation of biodiversity conservation and education programs at all business establishments by the end of FY 2012

5. Publishing all activities and achievements made in the biodiversity sector on annual, environmental, and CSR reports

Activities

The Fujitsu Group has been regularly posting key activities and achievements made in the biodiversity sector on its social and environmental report since the declaration was signed in FY 2008 with the details updated on its website (<http://www.fujitsu.com/global/about/environment/>).

6. Informing suppliers about the Fujitsu Group's biodiversity objectives and integrating suppliers accordingly and step by step

Activities

The Fujitsu Group was held seminars on biodiversity conservation for suppliers and made efforts with suppliers to conserve SATOYAMA (secondary forest) in order to penetrate and promote biodiversity conservation activities in supply chains.

Approaches to supply chains

The Fujitsu Group has been promoting biodiversity conservation in cooperation with suppliers since FY 2010, making it one of the green procurement requirements.

Fujitsu drew up an original activity evaluation index for supplier’s activities situations (Figure 5) and request them to recognize the significance of biodiversity conservation and to carry out the activity announcement at Stage1. The company also supports their activities as appropriate.

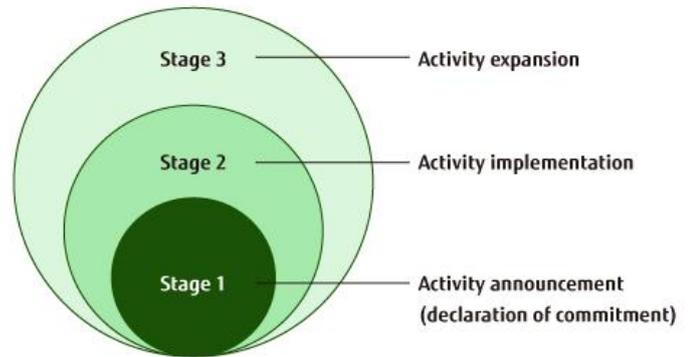


Figure 5: Stages of activities

Specifically, the Fujitsu Group compiled “Biodiversity Guidelines for suppliers” and it has been available free of charge since June 2010 to help suppliers promote their activities.

In order to encourage them to contribute to biodiversity conservation, moreover, the Biodiversity Seminars, which Fujitsu started in FY 2010, were continued into FY 2011 and 2012. A total of 68 representatives from 56 suppliers participated in the seminars in FY 2011 and 2012, where they were briefed on what biodiversity is, its relation and significance to corporate activities and specific conservation measures (Picture 1).



Picture 1: The Biodiversity Seminar (Sep. 2, 2011)

After learning at the seminars, all suppliers started to implement conservation activities categorized into Stage 1 or higher.

Additionally, Fujitsu thought it is essential for the company to have opportunities to experience biodiversity to understand the significance of it and working on its conservation, Fujitsu has held a SATOYAMA conservation program with help from an NPO since FY 2011 to encourage suppliers to participate in it. In this program in FY 2011 and 2012, a total of 35 representatives from 20 suppliers mowed Azumanezasa (*Pleioblastus chino*) and removed fallen trees to get first-hand experience in biodiversity conservation (Picture 2).

The Fujitsu Group will continue to work on biodiversity conservation in cooperation with suppliers in order to make the public aware of its significance.



Picture 2: Working participants and a group photo in a SATOYAMA conservation program (Oct. 27, 2012)

7. Cooperate with scientific institutions and NGOs to communicate with a wider range of people and improve the biodiversity management system

Activity

A scheme is in place to leverage ICT in conserving biodiversity in cooperation with universities, scientific institutions, and NGOs. And the Fujitsu Group has implemented a project in Malaysia for the protection and regeneration of rainforests.

ICT-based biodiversity conservation

The Fujitsu Group gives high priority to conserving biodiversity, leveraging its ICT products and services.

ICT is a system that can collect, analyze, and assess large amounts of data in an efficient manner, the results of which can be used to optimize work processes and social systems. Accordingly, it is expected to contribute to preventing or reducing the loss of biodiversity while maintaining and improving it by collecting and analyzing complex and diversified information.

Specific approaches include remote sensing of organisms, temperature and humidity; identification of organisms through image analysis; collection of biological and environmental information through mobile devices; assessment of the impact on organisms and ecosystems and of habitats; creation of a database on biological information (species, population, habitats, etc.) and gene information; monitoring and observation of environmental changes and biobehavior; network communication technology; and promotion of biodiversity conservation through image transmission technology (Figure 6).

ICT is also an effective tool to conserve biodiversity, contributing to improving economic activities, environmental considerations, and productivity in the primary industry (agriculture, fishery, forestry, etc.), which is directly engaged in ecosystem services.

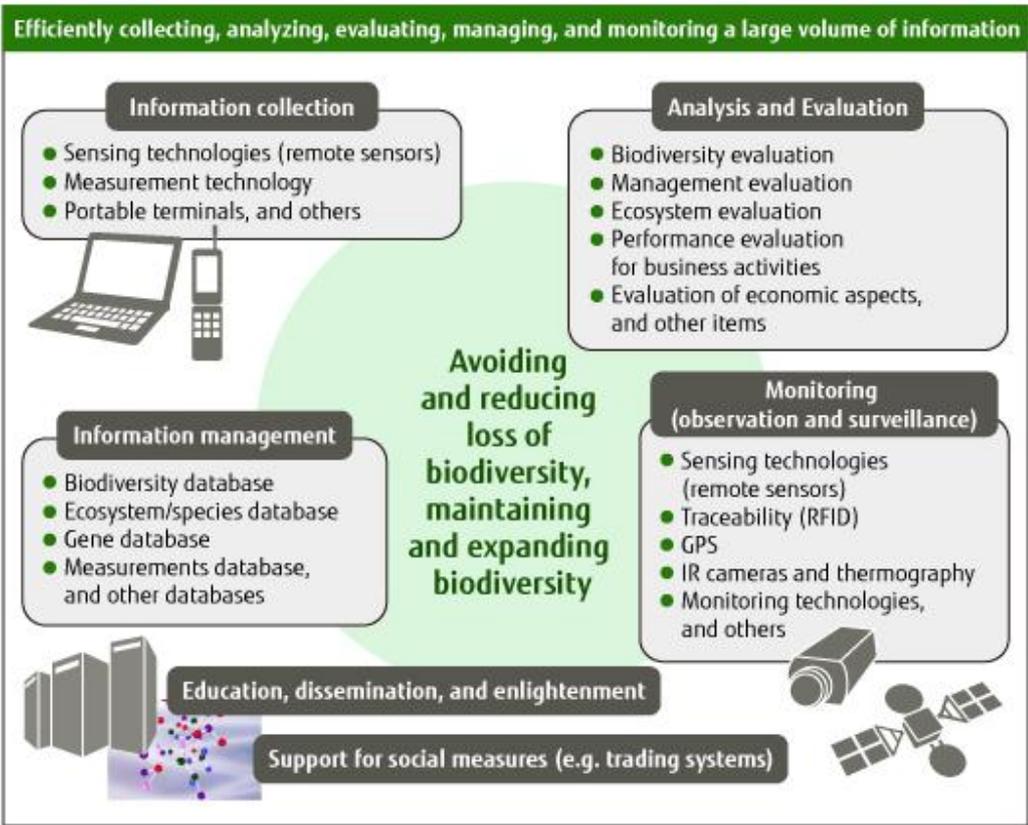


Figure 6: The Possibility of Conserving Biodiversity through ICT

Blakiston's Fish Owl Sound Recognition Software Program

The Blakiston's fish owl is one of the world's largest owls with its wings spanning nearly 2 meters. It is an endangered species that only inhabits the far eastern coast of Eurasia and Hokkaido in Japan.

The Wild Bird Society of Japan is conducting a survey to identify the habitat and population of the Blakiston's fish owl in an effort to protect it. Conventional methods involve installation of IC recorders along the roads in the habitat at about 500-meter intervals for three-hour recording, the results of which are collected and analyzed the next day using commercial sound recognition software with the sound audibly inspected and its spectrum visually inspected to identify the cry of the Blakiston's fish owl. A manual processing of three-hour audio data, however, takes about an hour while the distant cry of the Blakiston's fish owl is hard to detect.

The Fujitsu Group, therefore, developed a software program that automatically identifies the cry of the Blakiston's fish owl in audio data and extracts it in a highly accurate manner, and offered it to the Wild Bird Society of Japan. It significantly improves the efficiency and accuracy of surveys by analyzing audio data in a few minutes and detecting the distant cry of the Blakiston's fish owl, which could otherwise be missed by manual examination.

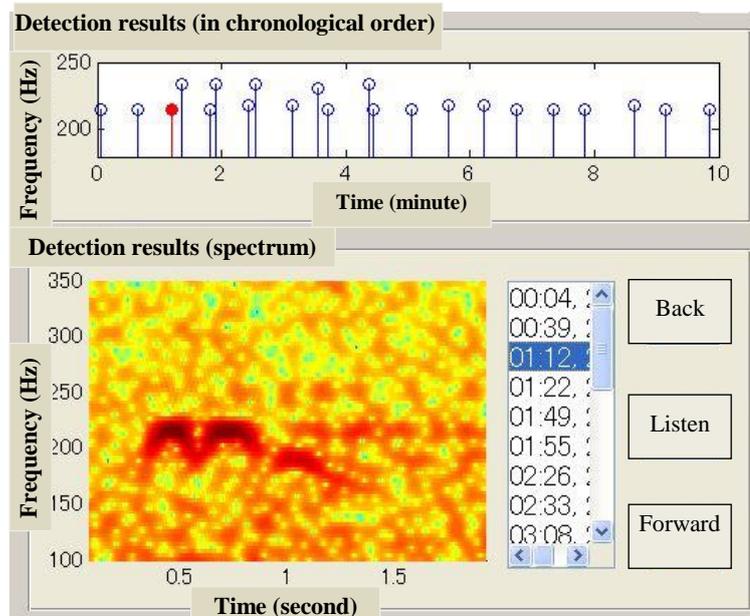


Figure 7: Blakiston's Fish Owl Sound Recognition Software Program

Smartphone Photo System and Cloud Services

It is essential that animals and plants inhabiting the areas under survey be kept track of in order to discuss and examine biodiversity conservation measures. This usually involves field surveys by experts, where they draw maps — a practice that requires much time and effort to be converted into digital data.

Beginning April 2013, the Fujitsu Group will start providing the smartphone photo system and cloud services to automate and streamline such surveys, which involve recording and drawing of distribution maps.

The smartphone photo system is designed to send images taken with GPS-enabled smartphones via email, which are then stored in a database to be put on a map that is accessible on the Web. It will be provided free of charge to research institutions, educational institutions, NPOs, municipalities, etc., to promote biodiversity conservation.



Figure 8: Outline of Smartphone Photo System

Rainforest Regeneration Project and Eco-Tour Activities for the Study of Biodiversity (Malaysia Eco-forest Park)

It is said that a quarter of all species exist in rainforests, and as such they are an extremely important and necessary ecosystem. However, the destruction of these rainforests is advancing at a great pace and the protection and regeneration of the remaining rainforests is a sizable challenge.

Furthermore, in order for the protection and sustainable use of biodiversity to make inroads into society, it is important to raise people who put this into practice, so the spread and promotion of the protection of biodiversity in society is a challenge.

To make efforts towards the protection of biodiversity on a global level as a global company, Fujitsu started a project in 1998 centering on South East Asia for the protection and regeneration of rainforests. In addition to activities in Thailand and Vietnam, since 2002 a rainforest regeneration project has been underway in Sabah, Malaysian Borneo called “Fujitsu Group Malaysia Eco-Forest Park” with the support of the Sabah Forestry Development Authority.

Also, since 2010, Fujitsu has implemented the “Biodiversity Eco-tour”, and the “Fujitsu Group Malaysia Eco-forest Park” has been used as an educational environment for biodiversity for employees and their families. In this Eco-forest Park, as well as activities for the regeneration of rainforests for experience, observation of oil palm fields and primary forest as well as the orangutan protection is included, making it a tour for learning about the dangers faced by biodiversity on Borneo.

37,500 indigenous dipterocarpaceae trees have been planted in an area of 150 hectares in the Fujitsu Group Malaysia Eco-forest Park. These trees have entered the seedling tree growth phase, and maintenance work, growth surveys, and surveys of wild fauna are being implemented, but for these trees to grow from seedlings to maturity will take a long time. The number of people involved in this project extends to 1190, including employees and local residents, and so that the Eco-forest Park once again becomes a place where a variety of species live, Fujitsu will continue maintenance and provide support. At the same time, for a range of stakeholders that includes Fujitsu employees, it will be used as a place for environmental education with the aim of an increase in the number of personnel who understand rainforest regeneration.



Picture 3: Working participants in the Eco-Tour in a Malaysia Eco-forest Park (Nov. 30, 2012)