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Declaration of Biodiversity by Keidanren

Guide to Action Policy

Keidanren
Committee on Nature Conservation

Declaration of Biodiversity by Keidanren

Guide to Action Policy

The purpose and aim of the Action Policy

The “Action Policy” is to illustrate appropriate directions of our specific activities based on “Declaration of Biodiversity by Keidanren”. This “Guide to Action Policy”, containing objectives (reasons) why we take such activities, points to consider upon taking them and examples of activities collected through “Questionnaire survey on business activity” conducted by Keidanren Committee on Nature Conservation, complements this Action Policy.

Please note this action policy is expected not to be a standard which defines the minimum requirement or satisfactory level of actions each company should take but a guideline for taking appropriate actions according to the field, scale and business content of each company.

As biodiversity is connected closely with nature conservation, climate change and resource recycle, nature conservation activities and global warming measures often contribute to biodiversity conservation. Thus, effective actions may be found by redefining existing efforts in such areas from a viewpoint of biodiversity.

The figure and table on page 20 list examples of ways of current situation analysis and corrective plans which contribute to biodiversity conservation based on the relationship among biodiversity, livelihood and economic activity, and “Questionnaire survey on business activity”. These figure and table can be a reference for companies voluntarily taking biodiversity into consideration in daily operation across the range of their business fields.

FOREWORD



According to the International Energy Agency, Japan consumed half as much energy per dollar worth of economic activity as the United States of America or the European Union and one eighth as much as most of the emerging countries in 2005. According to data from the Ministry of Economy, Trade and Industry, Japan has managed to keep its overall annual energy consumption unchanged at the equivalent of a little more than a billion barrels of oil since the early 1970s. In fact, Japan succeeded in maintaining that level even as the economy doubled in size during the country's boom years of the 1970s and 1980s.

Japan has therefore demonstrated that decoupling economic growth and energy consumption is not only possible but also is a prerequisite for sustained economic growth and achieving sustainable development. Japanese businesses have been a major player of this achievement in increasing investments in sustainable energy systems, where the global growth has jumped by almost seven times in the past seven years, reaching US\$ 155 billion. Japan, with the world most advanced energy conservation technology and with unique experience of having overcome pollution and waste problems, has set an example for other to follow.

Japan is one of the world's largest importers of natural resources, which make it in many respects dependent on global biodiversity. Therefore, the activities of Japanese business organizations in sourcing and managing these natural resources are of high importance for the future of biodiversity conservation globally.

A major challenge in addressing biodiversity loss remains the fact that most stakeholders do not understand the extent to which they actually rely on natural resources and the effects of this reliance. Addressing this gap in understanding is the first step for reducing the loss of biodiversity and generally requires consensus-building among stakeholders through a long and tedious process.

It is for this reason that at its eighth meeting, held in Curitiba, Brazil, in March 2006, the Conference of the Parties to the Convention on Biological Diversity reiterated the importance of engaging the business community in the implementation of the Convention. At its ninth meeting, held in Bonn, Germany, in May 2008, the Conference of the Parties adopted a framework for priority actions to promote business

engagement, which focuses on the continued development and promotion of the business case for biodiversity and the dissemination of best practice.

The Keidanren Declaration on Biodiversity is a direct response to the call addressed by the 191 Parties to the Convention to the business community to join forces for meeting the unprecedented biodiversity challenges. A strong and vibrant public-private partnership is essential for meeting the objectives of the Convention on Biological Diversity—the Convention for Life on Earth. I’m convinced that the Keidanren Declaration on Biodiversity, together with the Guideline on Business and Biodiversity prepared by the Government of Japan, will promote private-sector initiatives for the conservation and sustainable use of biodiversity.

Tadao Ando a famous Japanese architect said, “When you look at Japanese traditional architecture, you have to look at Japanese culture and its relationship with nature. You can actually live in a harmonious, close contact with nature - this very unique to Japan”. I sincerely hope the Japanese Business and Biodiversity Initiative will allow historians to state that, “When you look at the Japanese biodiversity technologies you have to look at Japanese culture and its relation with nature.”

The Keidanren Declaration on Biodiversity is a major achievement of the Keidanren Committee on Nature Conservation and 1,611 companies. It is also a major milestone for Japan in its journey towards achieving sustainable development and as the host of the tenth meeting of the Conference of the Parties. This will endure that Nagoya, Aichi Prefecture, will be lastingly associated with world-wide efforts to preserve biodiversity, the foundation of Life on Earth. In doing so, I believe that COP10 will be remembered in the minds and souls of generations to come that development and sustainability must go hand-in-hand

Ahmed Djoghlaif

24 July 2009

Executive Secretary

Convention on Biological Diversity

Montreal, Canada

**IUCN warmly welcomes
the Declaration of Biodiversity by Keidanren**



It is extremely heartening that the private sector in Japan is taking so many positive steps in support of biodiversity.

The concept of sustainability is very familiar to many in the private sector, but the focus on biodiversity is especially welcome as we approach 2010, the United Nations Year of Biodiversity. This statement will be very effective at the 10th Conference of Parties of the Convention on Biological Diversity, to be held in Nagoya in October next year. It could well inspire business associations in other countries to approve a similar declaration.

IUCN was especially happy to see the elements of learning from biodiversity, and the recognition that incorporating concern for biodiversity can contribute to sustainable industry, lifestyle, and culture. The accompanying Action Policy helps to specify the kinds of activities that Japanese industry can implement, both domestically and in international operations as well.

At its World Conservation Congress held in Barcelona, Spain, last year, IUCN's Members recognized the important roles that the private sector can play in helping to contribute to IUCN's mission to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. We warmly welcome Keidanren's strong contribution to ensuring that biodiversity remains a crucial element in Japanese society.

Julia Marton-Lefèvre

17 Sept. 2009

Director General

International Union for Conservation of Nature and Natural Resources (IUCN)

Grand, Switzerland

Declaration of Biodiversity

By

Keidanren

(Japan Business Federation)

Declaration of Biodiversity by Keidanren

17 March 2009

Keidanren (Japan Business Federation)

< Preamble >

1. Activities by Keidanren

Keidanren is engaged in numerous activities to tackle global environmental problems for future human prosperity. These activities are based on ideas in the “Global Environment Charter”¹ (announced in 1991), or the “Environment-led growth” in the “Envisioning A Vibrant and Attractive Nation in the Twenty-First Century”² (announced in 2003).

The Keidanren Nature Conservation Fund (KNCF) and its accompanying committee were established in 1992 to link between economic activities and the natural environment in order to bring them closer together in a harmonious way. In the same year, KNCF started supporting for NGO projects for nature conservation mainly in the Asia and Pacific regions. The number of supported projects has now reached about 800. In 2003, Keidanren announced the “Declaration of Keidanren on Nature Conservation” (hereafter Nature Conservation Declaration) and has been promoting awareness raising and activities related to the Declaration since then.

2. Biodiversity Crisis

The Convention on Biological Diversity (CBD) was adopted together with the United Nations Framework Convention on Climate Change (UNFCCC) at the United Nations Conference on Environment and Development (UNCED: Earth Summit) held in Rio De Janeiro in 1992. However the recognition of the importance of biodiversity has been insufficient, partly because biodiversity is difficult to measure and the concept is difficult to understand.

Biodiversity provides the gifts of nature to human beings; the loss of biodiversity is thus leading to serious problems for human life and livelihoods by affecting water resources, food security and poverty, among other things. It is necessary to recognize that biodiversity is essential to social and economic activities and that all people and organizations need to draw upon their wisdom and collaborate to face the biodiversity crisis.

3. Our Commitment

Based on the Nature Conservation Declaration, we have been promoting nature conservation activities with a focus on biodiversity. It is time to recognize that biodiversity is an important foundation for a future sustainable society and we are determined to act to contribute to biodiversity in collaboration and cooperation by sharing roles and responsibilities with all people as a member of the international community.

We aim for the conservation of biological diversity, the sustainable use of the components of biological diversity and the fair and equitable sharing of the benefits derived from genetic resources. Herewith we adopt the Declaration of Biodiversity which further develops the actions for biodiversity outlined in the “Nature Conservation Declaration”.

We will continue to improve this Declaration and Action Policy as we identify the need based on progress attained.

¹ <http://www.keidanren.or.jp/english/speech/spe001/s01001/s01b.html>

² <http://www.keidanren.or.jp/english/policy/vision2025.pdf>

1. Appreciate nature's gifts and aim for corporate activities in harmony with the natural environment

Appreciate that we depend upon nature's gifts (ecosystem services) which are derived from biodiversity. Aim for corporate activities which are in harmony with the natural environment, and which have been evolving since the birth of the earth.

2. Act from a global perspective on the biodiversity crisis

Act for biodiversity conservation from a global perspective and in consideration of local contexts by recognizing that we are benefiting from ecosystem services beyond national borders and by sharing the recognition with all people that biodiversity is being diminished.

In utilizing genetic resources, respect the ideas contained in the Convention on Biological Diversity and make efforts to maintain genetic resources for future generations.

3. Act voluntarily and steadily to contribute to biodiversity

Be aware of one's own social responsibility. Act voluntarily and steadily to reduce impacts on biodiversity, and to promote socially responsible activities that will substantially benefit biodiversity. In implementing actions, individual companies endeavor to use their own managerial resources and apply their creativity according to their management contexts and ideas.

4. Promote corporate management for sustainable resource use

Promote corporate management that will lead to solutions for biodiversity and climate change issues by creating a culture of sustainable resources use and energy saving by utilizing the '3R' approach (reduce, reuse and recycle).

5. Create an industry, lifestyle and culture that will learn from biodiversity

Learn from nature, society's wisdom and traditions regarding nature, and pursue management innovations by promoting the development of environmental technology and operational activities with a low impact on biodiversity, thus leading to sustainable industry, lifestyle and culture.

6. Collaborate with relevant international and national organizations

Collaborate, both in international and national contexts, with stakeholders to develop a better awareness and recognition of the importance of biodiversity and actively promote collaboration and cooperation in order to make the engagement and activities for biodiversity effective.

7. Spearhead activities to build a society that will nurture biodiversity

Based on a deep understanding of biodiversity, contribute to a sustainable global society by spearheading activities which address social responsibility for biodiversity.

We herewith declare that we will respect the seven principles detailed above and will act with firm commitments for biodiversity.

Action Policy

1. Appreciate nature's gifts and aim for corporate activities in harmony with the natural environment

- 1-1 Recognize the importance of biodiversity and nature's gifts and reflect them in corporate policy.
- 1-2 Establish a corporate management vision and provide leadership to integrate biodiversity concerns.

2. Act from a global perspective on the biodiversity crisis

- 2-1 Consider impacts on relevant ecosystems and local communities, both domestic and abroad, when setting out operational plans.
- 2-2 Make an effort to ensure that the both provider and users of genetic resources will benefit from their utilization.

3. Act voluntarily and steadily to contribute to biodiversity

- 3-1 Make an effort to improve the identification and analysis of biodiversity impacts and improve business operations on biodiversity.
- 3-2 Endeavor through the individual company's operations to contribute to substantial conservation of biodiversity and carefully consider implementation of trading or off-setting measures based on an economic evaluation.
- 3-3 As part of social responsibility activities, engage in biodiversity issues even if they are not directly linked to the operations of the company.

4. Promote corporate management for sustainable resource use

- 4-1 Continuously implement activities for resource and energy saving related to the use of the '3R' approach (reduce, reuse and recycle) for operations, and the entire lifecycle of products and services while improving upon established practices.

5. Create an industry, lifestyle and culture that will learn from biodiversity

- 5-1 Promote technical development learning from nature and traditional knowledge, and encourage innovation in lifestyle and culture.
- 5-2 Promote the development and dissemination of technology that will contribute to the conservation of biodiversity.
- 5-3 Make efforts to help restore biodiversity when operating in areas where nature has been negatively impacted.

6. Collaborate with relevant international and national organizations

- 6-1 Promote collaboration by strengthening communication with NGOs, local municipalities and educational, research and other relevant organizations.
- 6-2 Disseminate and share experiences from activities related to biodiversity.

7. Spearhead activities to build a society that will nurture biodiversity

- 7-1 Actively carry out environmental education activities for employees in collaboration with local communities, NGOs and other organizations.
- 7-2 Raise societal awareness of the need to nurture biodiversity.

** This text is translated from Japanese. The Japanese text is the definitive version.*

Guide to Action Policy

(Modified in August 2010)
(Modified in November 2011)
(Modified in July 2013)

1. Appreciate nature's gifts and aim for corporate activities in harmony with the natural environment

1-1 Recognize the importance of biodiversity and nature's gift (ecosystem services) and reflect them in corporate policy.

(Objective)

- ◎ Corporate activities utilize benefits of biodiversity¹ (ecosystem services²) as their essential base but, on the other hand, bring impacts on the natural environment and ecosystems³ (See the figure and the table on Page 19 as well as below).

(Examples of use of ecosystem services)

- Biological resources such as timber, pulp, plant/animal fiber, leather, rubber, vegetable/animal oil, micro-organism are used as raw materials.
- Production processes of biological resources including agriculture, forestry, fisheries and livestock industries, aquaculture, and imports of such products.
- Uses of water (natural water as beverage material, water transportation or hydro power, cooling water, etc.) and the atmosphere's self cleansing function (emission of pollutants or GHG to the air, etc.) Nature's beauty (eco-tourism, etc.) may also be considered as examples of use of ecosystem services.

(Examples of impacts on ecosystem caused by business-related activity)

- Impacts at construction sites when constructing/locating business offices.
- Impacts at places of origin of raw materials and distribution routes when procuring raw materials.
- Impacts caused by pollutant emissions or waste disposals.

Therefore, while respecting nature and its gifts, we are required to look for and create new forms of business and livelihood by which nature and its gift are not impaired. In this perspective, we need to develop business activities under a management policy formulated with considerations to the principles of biodiversity conservation and sustainable use⁴ of ecosystem services.

(Point to consider)

- ◎ Concepts toward nature nurtured by our ancestors such as SANSENSOMOKU SHITSU U BUSSHO - "Mountains, rivers, grasses and trees all have the spirit of Buddhism in themselves"⁵ are said to share the concept of biodiversity so our ancestors' wisdoms may be appropriate references to business managements.

It should be kept in mind that it is difficult to precisely predict impacts on the society brought by human activities, especially for the distant future or regions as nature's system is highly complicated and hardly understandable in perfect details.

(Examples of activity)

- Include aspects regarding biodiversity in management principle and policy, and environmental policy.
 - ① Refer to biodiversity considerations in environmental policy.
 - ② Formulate a policy or guidelines on biodiversity.
 - ③ (In case for business that handles natural resources) Refer to an approach to biodiversity in procurement policy.

1-2 Establish a corporate management vision and provide leadership to integrate biodiversity concerns.
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(Objective)

- ◎ Top-down approach is an effective approach to get the fact that management puts its efforts to spread biodiversity considerations across the entire organization and make them rooted. In other words, management is required to indicate in a visible manner that “biodiversity consideration” and “sustainable use of ecosystem services” are the foundations of management, to take initiatives and show good practices to raise/improve the awareness of each employee and every level of organization.

(Point to consider)

- ◎ “Charter of Corporate Behavior” and “Implementation Guidance (Version 6) for Charter of Corporate Behavior” are appropriate references for planning appropriate efforts expected to top management.
<http://www.keidanren.or.jp/japanese/policy/cgcb/tebiki6.pdf>

(Examples of managerial activity)

1. Puts an importance on biodiversity when developing management policy and its implementation management.
 - ① Set a target/targets on biodiversity
 - ② Adopt an agenda/agendas regarding biodiversity in top-down manner.
 - ③ Deepen understandings of ongoing efforts on biodiversity.
 2. Sends messages to or exchanges opinions with employees about biodiversity considerations at every opportunities.
 - ① Feature management messages in in-house journals, intranet and bulletin board etc.
 - ② Use effectively regular speeches such as ones at new-year ceremony, welcome ceremony for newly-hired employees and management meeting/instruction.
 - ③ Establish an organization structure for handling biodiversity-related issues.
 - ④ Reflect its policy on biodiversity to medium/long term operational plan (5-year plan etc.)
 - ⑤ Participate in employee volunteer activities for biodiversity conservation.
- ※ Addition to the above, public disclosure of management policy and product development itself can also be utilized as opportunities to send messages

2. Act from a global perspective on the biodiversity crisis

2-1 Consider impacts on relevant ecosystems and local communities, both domestic and abroad, when setting out operational plans.

(Objective)

- (1) Business activities in recent days heavily depend on trans-border ecosystem services. Therefore, we need to pay attentions to their impacts brought not only in own nation but also in foreign countries.

Importing any material of animal/plant origin from overseas means gifts of nature of exporting countries are also used by importing countries. For example, if you import foreign agriculture products, gifts of nature including water and soil (nutrition) of the country of origin, with which such products were produced, are imported at the same time.

- (2) In addition, impacts on unique lifestyle, tradition, culture and customs of people live in each related community should be considered.

In this guidelines, impacts on lifestyle, tradition, culture and customs mean that impacts on ecosystem services caused by activities like land development make certain lifestyle or culture unsustainable or hard to sustain.

(Point to consider)

- ◎ Business operations or measures that only aim at nature conservation or resource management are often insufficient for biodiversity conservation and promotion of sustainable use of ecosystem services. This is because biodiversity issues are broadly related to living environments and various problems including poverty and food supply of local communities. Therefore, efforts are needed to sustain and protect lifestyle, culture etc. of related communities.

(Examples of activity)

- ① Provide financial support to conservation activities of foreign countries' environment, especially these of NGOs etc. that simultaneously aim at improvements of community livelihood.
- ② Participate to forest conservation activities or bio-behavioral researches conducted in foreign countries through overseas office or local branch.
- ③ Conduct forest development activities etc. in neighboring area to offset the use of water in courses of business activities and to promote the groundwater recharge.
- ④ Offer cooperation to environment conservation activities in overseas by utilizing own technical know-how / products (ex. irrigation technology and use of high-absorbent resin for desert greening).

2-2 Make an effort to ensure that the both provider and users of genetic resources will benefit from their utilization

(Objective)

- ◎ The Convention on Biological Diversity (CBD) ⁶ sets “Access to genetic resources and Benefit-Sharing (ABS) ⁷” as well as conservation and sustainable use of biodiversity as its main purposes and recognizes possessing country’s sovereign right on genetic resources. Therefore, when using genetic resources, attentions should be paid to fair and equitable sharing of benefits arising out of the utilization of genetic resources.

(Points to consider)

- (1) International rules and laws and regulations of county of origin should be studied in advance and complied with. The Bonn Guidelines⁸ that clarifies contractual matters regarding benefit sharing arising from genetic resources for concerning parties and the Cartagena Protocol on Biodiversity⁹ that defines matters for handling of living modified organisms are examples of such international rules.

[CBD COP10 has adopted Nagoya Protocol¹⁰ on ABS and Nagoya-Kuala Lumpur Supplementary Protocol¹¹ on living modified organisms.]

- (2) As for genetic resources, “Guidelines on Access to Genetic Resources for Users in Japan” and “ABS Guidelines for Companies (Online version)” prepared by the Ministry of Economy, Trade and Industry, and Japan Bio-industry Association are good references for conducting biodiversity-oriented business activities.

“Guidelines on Access to Genetic Resources for Users in Japan”

http://www.mabs.jp/archives/pdf/iden_tebiki_e.pdf

“ABS Guidelines for Companies (Online version)”

<http://www.mabs.jp/>

For patent application of invention that utilizes genetic resources, see the following web page.

http://www.jpo.go.jp/cgi/link.cgi?url=/torikumi/kokusai/kokusai2/living_thing_meeting.htm

(Examples of activity)

- ① When accessing any genetic resource, obtain “Prior informed Consent” (PIC) from concerned parties such as governments in addition to that of the counterparty based on related national laws of possessing country.
- ② As for benefit sharing, confirm the way of sharing and achieve mutual agreement. This agreement is also needed in case that no benefit is expected to occur.
- ③ Contract a “material transfer agreement” to transfer genetic material to Japan.
- ④ Participate in joint projects regarding the usage and conservation of overseas resources conducted by National Institute of Technology and Evaluation(NITE).

3. Act voluntarily and steadily to contribute to biodiversity

3-1 Make an effort to improve the identification and analysis of biodiversity impacts and improve business operations on biodiversity.

(Objective)

- ◎ Corporate activities utilize benefits of biodiversity (ecosystem services) as their essential base but, on the other hand, bring impacts on the natural environment and ecosystems (See 1-1).

Therefore, efforts to manage uses of ecosystem services and degrees of impacts on ecosystem in appropriate and timely manner as well as to avoid negative impacts on ecosystem are essential for sustainable business activities.

(Points to consider)

- (1) Implement impact forecasts before starting new business and monitoring after starting the business appropriately.

Segmentation of business activities is one way of identifying/analyzing impacts on biodiversity brought by business activities. Geographical approach which focuses on each places of business activities may be another option (see the figure and the table on page 20).

Impacts on biodiversity vary by the content, scale and geographical area of business. In addition, such impacts are highly uncertain because of insufficient scientific knowledge. Therefore, biodiversity measures should be tailor-made, considered and verified on a project-by-project basis.

The following two strategic methods should be of importance in identifying/analyzing the mechanism of nature that is highly complicated and uncertain.

- ① Preventive action: Act humble and carefully (ex. even if scientific evidences are not sufficient, do not procrastinate, put efforts to gain more knowledge, and implement measures at the earliest stage).
- ② Adaptive management: Implement monitoring, feedback and PDCA cycle (management through trial and error process)(ex. monitor changes in biodiversity and review ways of management and utilization according to such monitoring results).

- (2) In case of introducing quantitative targets, pay attentions to avoid that the achievement of such targets itself becomes a goal and to consider the relationship between quantitative index used and actual impacts on biodiversity.

- (3) Compliance with local legislation of area of business activities should comprise a part of efforts for identification, analysis and improvement.

- (4) When multiple parties (business partners etc.) are involved in a course of business activities, the company's efforts on biodiversity and the necessity of efforts of whole supply chain need to be understood and recognized by such parties. And, if necessary, ask concerned parties their considerations on biodiversity (but, such asks should be done carefully as it might fall under "the abuse of dominant bargaining position" of the anti-monopoly act).

Responsible procurements and supplies accompanied by considerations to biodiversity from the standpoint of each party of supply chain are indispensable for acting towards possible impacts brought by certain business activity. Among other things, to understand the actual state of material procurement of the most upper stream is often more important in identifying the relationship with biodiversity. If multiple parties, including not a few SMEs and micro-enterprises, located various area of the globe form a supply chain and precise identification of distribution channel of a material is difficult, it is expected to link a chain by asking each party biodiversity considerations to a possible extent.

- (5) As for procurements of biological resources, third party assessment/certification systems like forest certification and marine resource certification may be utilized in identifying whether a method of procurement is accompanied by biodiversity consideration or not.

(Examples of activity)

1. Conduct studies, forecasts and assessments regarding environmental impacts at locations of business activities, and implement measures for rare species conservation.
 - ① Catch and release marine organisms left after dry-up works of the seafloor.
 - ② Transplant wild grass habitats from construction zones within a business establishment to a natural forest within the same business establishment.
 - ③ Utilize neo-natural construction methods: constructing animal paths or biotopes etc.
 - ④ Utilize noise insulation construction methods to avoid impacts on the raptors.
2. Develop easier methods of study, forecast and assessment of environmental impacts.
3. Design facilities with efforts to minimize surface areas affected by construction works; introduce smaller facilities or underground facilities etc.
4. Manage company-owned facilities and forests
 - ① Transplant and conserve rare plants (ex. *Cephalanthera falcate* and *Cremastra appendiculata* (D. Don) Makino) in cooperation with experts etc.
 - ② Conduct greenings with considerations to surrounding vegetation.
 - ③ Designate non-trimming area.
 - ④ Manage environments for biological habitation (biotope etc.)
5. Introduce designs, constructions and monitoring that are able to secure both building function and biodiversity conservation.
 - ① Utilize neo-natural construction methods including constructing animal paths or biotopes.
 - ② Construct a neo-natural regulatory pond through design improvement, and continue monitoring after construction.
6. Promote green procurements.
 - ① Define green procurement policy and spread it to suppliers.
 - ② Include biodiversity issues in CSR procurement management items.
 - ③ Develop "procurement policy" that defines the use of products certified against impacts on local ecosystem and livelihoods for the company and affiliated companies.
7. Control of usage and appropriate management of harmful chemical compounds

3-2 Endeavor through the individual company's operations to contribute to substantial conservation of biodiversity and carefully consider implementation of trading or off-setting measures based on an economic assessment.

(Objective)

- (1) Global discussions on how to evaluate economic values of biodiversity and ecosystem services, to enable such values created by conservation activities of third parties or in remote areas subjects of economic transactions, and to utilize these benefits in offsetting¹² biodiversity loss caused by other activities have been taking place.
- (2) The economic values of biodiversity and ecosystem services are useful in communicating the importance of biodiversity to people who are not experts, i.e. consumers or businesses as they make biodiversity's benefits visible. It is, however, impossible, at least at this moment, to understand or measure the quantity and the quality of the values appropriately due to their significant diversity.

It is being pointed out that biodiversity and ecosystem services have values difficult to evaluate economically, i.e. cultural or spiritual value etc., and even with values which can be evaluate easily, evaluation results may be significantly different by what approach was taken.

- (3) Compensatory mitigation¹³, the idea of compensating or offsetting a biodiversity loss in an area with conservation activities in other areas, is agreeable as it aims to decrease the total amount of biodiversity losses at the possible extent. Such losses in principle, however, cannot or are extremely difficult to be compensated; each area has a unique biome and ecosystems including threatened species and endemic species, and local livelihoods which depend on these ecosystems.

Based on the idea that compensatory mitigation is better than doing nothing even it cannot achieve the complete compensation in consideration of continued losses of biodiversity by development activities, there remains a room for compensatory mitigation.

- (4) When evaluating economic values of biodiversity or ecosystem services, careful considerations are required about whether local biodiversity can be substantially conserved and local communities being dependents on local ecosystem services can avoid negative impacts. Additionally, it should be kept in mind that some values are hard to or impossible to be evaluated economically.

(Points to consider)

- (1) Although certain alternative way if accompanied by an intention to minimize impacts on nature to a possible extent might be allowed as the last option in promoting sustainable use, even in such cases, contribution activities for local biodiversity conservation should be prioritized to avoid over accumulation of risks (Mitigation hierarchy).
- (2) When certain alternative method is the only option, it is important to act carefully by taking measures like consultations with experts for possible environmental

impacts, etc.

- (3) When conducting a quantitative evaluation (including an economic evaluation), these points should be considered.
- ① Clarify the purpose of evaluation, select an appropriate approach, and utilize the evaluation results within the scope of the purpose.
 - ② Clearly recognize what the subject of the evaluation was.
 - ③ Understand that, when they are relative values, these results cannot be compared to those of other area unless the same evaluation approach was taken.
 - ④ Even if the results are definitive (economic) values, it is impossible to evaluate whole biodiversity values of the subject area and there remain values which were not evaluated.

(Examples of activity)

- ① Construct an alternative pond, transplant and stock ecosystem to conserve ecosystem of a pond and its surrounding that need to be landfilled for an office building construction.
- ② Restore existing surrounding vegetation to conserve ecosystem of a forest that to be cut in a course of office building construction.
- ③ Support projects concerning the same ecosystem service to which impacts are brought by business activities in neighboring communities.
- ④ Create/Cultivate a water conservation forest in the upstream of a water intake area, groundwater recharging by watering paddies around a factory (evaluate groundwater recharging capacity quantitatively)
- ⑤ Conduct pre- and post- development biological monitoring to evaluate quantitatively the degrees of conservation and recovery of the biological habitat.

(Reference)

Example of reviews which assessed biodiversity and ecosystem services economically:
The Economics of Ecosystems & Biodiversity (TEEB)

3-3 As part of social responsibility activities, engage in biodiversity issues even if they are not directly linked to the operations of the company.

(Objective)

- ◎ From the viewpoint of corporate social responsibility, in addition to management of environmental impacts caused by business operations, activities to contribute to biodiversity conservation should be actively conducted with cooperation with NGOs etc. even if such activities are not directly linked to business operations.

(Points to consider)

- (1) Efforts might be in various forms such as financial support, physical support and offering opportunities. Conduct activities by utilizing advantages of the company's strength.
- (2) These activities should be assessed constantly if they are truly contributing to regional societies and environment (biodiversity conservation).

Events that might occur when such assessments are insufficient:

- Land has been abandoned after forestation because forested trees did not grow as selection of trees or management after forestation was not appropriate.
- Newly-developed products are made from materials produced by illegal logging of natural forest.

- (3) If activities are related to “endangered species” or “invasive alien species”, conduct appropriate measures from the following viewpoints.

Events that might occur when considerations regarding invasive alien species are insufficient:

- A plant introduced in large scale as a greening material migrates onto regional riverbeds, becomes an invasive alien species and makes indigenous species unable to live there.
- Fireflies raised in the area owned by the company in the west part of Japan are transported to a biotope in other area owned by the company in the east part of Japan. Flashing patterns of the ones transported and the ones raised there are different and it causes a disturbance to ecosystem.

(Examples of activity)

1. Direct contributions to conservation activities of surrounding environments.
 - ① Cooperate to forest management works (employee/family volunteers etc.)
 - ② Conduct activities in cooperation with NGOs to protect environments unique to each region (mountain, lake and coral reef etc.)
 - ③ Construct a park in surrounding area of factory and make it open to communities.
 - ④ Conduct forest ecosystem conservation activities in company owned area or “company forest”
 - ⑤ Raise and stock killifishes in company owned area in cooperation with municipal office.
 - ⑥ Conduct community forest (SATOYAMA) conservation activities in cooperation with civic groups or NGOs.
 - ⑦ Promote employees and their families' participation in forestation volunteer.
 - ⑧ Conduct river/coast clean-up activities.
2. Contributions through awareness raising activities.
 - Implement awareness raising events on the environment (photo/picture book contests etc.)
3. Contributions by tying up business activities to conservation activities (financial support).
 - ① Donate a part of sales revenue of certain products to nature conservation groups.
 - ② Establish “One-click donation” system on the company website.

4. Promote corporate management for sustainable resource use

4-1 Continuously implement activities for resource and energy saving related to the use of the “3R” approach (reduce, reuse and recycle) for operations, and the entire lifecycle of products and services while improving upon established practices.

(Objective)

- (1) Foreseeing the limitation of natural resources, the knowledge of wise-use and sustainable use of natural resources such as effective use and cycle use must be utilized from now on. In addition to measures that have been already promoted for effective use of resources like 3R¹⁴, continuous and proactive efforts to prevent depletion of biological resources and control deterioration of nature environment in the view of biodiversity.

It is apparent that the wise-use is directly linked to the prevention of depletion of biological resources like timbers and food among all natural resources. As for mineral resources such as fossil fuels and metals, impacts on surrounding environments are inevitable (natural forests are cut down in a course of a resource survey or mining). So, the wise-use of mineral resources is also an effort to contribute to biodiversity.

- (2) Also, efforts to realize business activities and lifestyle that utilize nature’s resource cycling mechanisms (water/soil nutrition cycling, air/water cycling and food chain etc.) without causing any hindrance to them should be implemented as the nature’s activity itself is the model of resource cycling.

(Points to consider)

- (1) When considering effective use of resources, it is important to consider efficiencies of whole lifecycles of products/services (ex. efficiency at use, easiness to dispose/recycle etc.) as well as in business operations (processes).
- (2) Technology or know-how on effective use of resources and recycling can be a business (ESCO etc.) by offering it to other companies.
- (3) Effective use may be difficult in some points with renewable natural energies that utilize nature cycling function because of low energy densities. But, on the other hand, easy to use systems like the green energy certification system have been established for them.
- (4) As for the increase use of bio-energy, it might be accompanied by land development or cultivation of one certain species in large scale. Moreover, it has a possibility to become trade-off relationship with food issues. So it should be promoted with careful considerations not only to energy security but also to biodiversity conservation.

(Examples of activity)

1. Efforts to reduce final industrial waste volume through 3R promotion.
 - The first target that aimed at 75% reduction of final industrial waste volume (compared to the one of FY1990) was achieved in FY2002, 8 years ahead of schedule. In FY 2007, the second target was set as 86% reduction and this target was achieved in FY2010 (89.4%) (Keidanren Voluntary Action Plan on the Environment (Section on building recycling-based society))
2. Efforts to realize the world's best energy efficiency.
 - Implement the Voluntary Action Plan on the Environment (Section on global warming measures).
3. Efforts to gain benefits for business activities through resource cycling.
 - ① ESCO business that utilizes energy saving technologies.
 - ② Develop and market eco products like highly biodegradable products.
 - ③ Improve energy efficiency through waste heat recovery and recycling.
 - ④ Recycle industrial effluent water and use recycled water.
 - ⑤ Establish used paper recovery business system.
 - ⑥ Establish aluminum can recycle system.
 - ⑦ Design products that are easy to scrap.
 - ⑧ Design products that are easy to recycle.
 - ⑨ Use thinned wood or wood chips.
 - ⑩ Recover frying oil and use it as recycled oil.
 - ⑪ Promote "Smart wrapping" and "My bag".
 - ⑫ Container weight saving.
 - ⑬ Promote repairs and re-use.
 - ⑭ Improve yield ratios by reviewing manufacturing processes.

(References)

- Voluntary Action Plan on the Environment (Section on building recycling -based society) - Annual Follow-up Survey Results - Japan Business Federation
<http://www.keidanren.or.jp/policy/vape.html>
- Voluntary Action Plan on the Environment (Section on global warming measures)- Annual Follow-up Survey Results (Industry specific summary) - Japan Business Federation
<http://www.keidanren.or.jp/policy/vape.html>

5. Create an industry, lifestyle and culture that will learn from biodiversity

5-1 Promote technical development learning from nature and traditional knowledge, and encourage innovation in lifestyle and culture.

(Objective)

- ◎ Changing our lifestyle to that is comfortable and spends less energy (without depending on fossil fuels) is necessary for realizing an affluent society accompanied by the sustainable use of natural resources.
Clues to develop technologies required for such lifestyle change might be found in nature's activities (ex. biological structures and functions). They can be models of cycling/efficient uses of resources. Also, traditions including lifestyles of our ancestors of days before mass consumption of energy became available might be referred in search of tips for realizing energy saving and comfortable lifestyle.
By incorporated into the state-of-the-art technologies, such nature system and traditional wisdoms may lead to the innovation of lifestyle.

(Point to consider)

- ◎ When using any bio-technology, manage products appropriately and engage in deepening understandings on bio-technology of society through active disclosures of intended use, descriptions of the operation and management method etc.

(Examples of activity)

1. Bio-mimicry (application of biological function)
 - ① Application of silken threads to new fiber.
 - ② Application of the Morpho wing's structure to chromogenic technology.
 - ③ Application of the shapes of owl wing and kingfisher's beak to reduce Shinkansen's air resistance.
 - ④ Application of the structure of snail's shell to stain-proof construction material technology.
 - ⑤ Application of the micro-structure of lotus leaf to water-repellent technology.
 - ⑥ Application of the micro-structure of gecko's leg to adhesion technology.
2. Our ancestors' wisdoms of living
 - ① Japanese style construction with good ventilation.
 - ② Arai-hari, a recycling system of clothes.
 - ③ Tips to make cooler comfortable lifestyle like water sprinkling and Japanese blinds.
 - ④ Sustainable use of community forest (Satoyama) resources.
 - ⑤ Farm management based on agriculture, forestry and husbandry cycling (ex. development of Santome rice fields in the Edo era).

5-2 Promote the development and dissemination of technology that will contribute to the conservation of biodiversity

(Objective)

- ◎ Developments of technologies that bring fewer impacts to biodiversity and application/dissemination of such technologies in large scale throughout the society are essential for realizing an affluent society. By achieving them, sustainable use of natural resources for the future becomes possible.

(Points to consider)

- (1) When applying such technology developed to the society, forecast and consider about additional impacts brought by the technology.
- (2) Technologies developed should be used actively for international cooperation including technology transfer to developing countries. Such use means a contribution to international biodiversity issues.

(Examples of activity)

- ① Develop pollution prevention technologies such as a technology that make harmful materials harmless.
- ② Improve technology for pollution prevention process review.
- ③ Save energy, enhance energy efficiency and develop technologies for 3R.
- ④ Develop products that bring fewer impacts on environment like high efficiency equipments.
- ⑤ Develop highly efficient catalysts.
- ⑥ Develop new energy technologies that do not depend on fossil fuels, firewood and coals etc.
- ⑦ Develop waste recycling technologies.
- ⑧ Develop fertilizing technologies to secure sustainable marine resources by utilizing wastes.
- ⑨ Develop environment friendly materials such as bio plastics.
- ⑩ Develop carbon dioxide sequestration technologies.
- ⑪ Develop bio technologies for efficient use of genetic resources.
- ⑫ Develop technologies regarding the primary industries including increased production of agriculture products and efficient aquaculture.
- ⑬ Develop methods of transplantation of plants.
- ⑭ Develop pest control technologies that do not kill insects.
- ⑮ Develop water quality control technologies (purification, extra-pure water and desalination of the seawater etc.)
- ⑯ Develop beach sweepers by utilizing possessing technologies.
- ⑰ Develop educational materials and know-hows regarding environmental education.
- ⑱ Innovate the society through new financial services.

(References)

- Fiscal 2006 Report on Global Warming Prevention Measures: 900 Hints on Reducing CO2 Emissions - Japan Business Federation
<http://www.keidanren.or.jp/japanese/policy/2007/029.html>

5-3 Make efforts to help restore biodiversity when operating in areas where nature has been negatively impacted.

(Objective)

- ◎ If any damage to biodiversity is recognized around the business establishment, it is expected to act for its restoration and rehabilitation in cooperation with stakeholders. The most typical example of area in where nature's gift has been damaged is "urban area". Considering the fact that the majority of population lives in such area, it is quite important to create ecosystem services for them. Moreover, not only for the urban area, creation of symbiotic regional societies in where human activities and nature's gift support each other also means "the creation of new industry, lifestyle and culture" indicated by the declaration.

(Points to consider)

- (1) When engaging the restoration of nature, it is important to apply environmental technologies that are in compliance with nature's mechanisms and bring fewer impacts. When selecting tree species for forestation, conduct carefully with considerations (consultation with experts who know well about surrounding vegetation, etc.)
- (2) For the area in where degradation, segmentation or loss of biodiversity is recognized, efforts to establish green area networks (corridors etc.) might be effective for biodiversity restoration/rehabilitation.

(Examples of activity)

- ① Develop urban ecosystem network assessment technologies and apply them to redevelopment projects.
- ② Secure green environments suitable to organisms of surrounding area.
- ③ Conduct greenings of factories and create biotopes with consideration to surrounding vegetation.
- ④ Conduct greenings of residential area and rooftops, and park management with consideration to surrounding vegetation.
- ⑤ Secure green area when conducting development work, and manage it after construction.
- ⑥ Formulate greening plans to interconnect segmented green areas.
- ⑦ Construct road crossing routes for small animals.

6. Collaborate with relevant international and national organizations.

6-1 Promote collaboration by strengthening communication with NGOs, local municipalities and educational, research and other relevant organizations.

(Objective)

- ◎ Biodiversity issues are global problems, in variety of their nature, and very complicated as they are closely related not only to scientific fields but also to social issues. Therefore, efforts by one company or industry can achieve only a little in solving the issues. Only by sharing information among various human resources/organizations, cooperating/coordinating/supplementing each other and with efforts of the whole society, the possibility of solving the issues will be increased and the scientific uncertainty will be complemented.

(Points to consider)

- (1) Cooperation with NGOs that actually involve in biodiversity in various area or educational/research organizations brings knowledge beneficial to understand the current status/issues of biodiversity.
- (2) When establishing new office, consult with local public organization or local stakeholders as such organizations and NGOs have information on regional biodiversity. This consultation is beneficial as a preventive approach.
- (3) Biodiversity conservation activities are generally for long term and need continuous efforts. Whether local residents' participation/cooperation is available or not is often a key for securing such continuity. Therefore, efforts to develop awareness through promoting local community participation and make merits for communities and residents (economic benefit and revitalization of the area etc.) visible are important.
- (4) Companies are expected to strengthen partnerships through not only financial supports but also in various forms including physical supports, provision of information and technical supports by utilizing their specialties.

When providing financial support, it is important to pay attention to how they spend and keep the sense of purpose. For example, by providing financial support with the purpose to contribute to human resource development of supported organization, experts trained with the contribution will bring know hows to the contributing company. This is a desired relationship.

- (5) These cooperation in various forms might create new business fields or industry.

(Examples of activity)

1. Examples of cooperation with other company
 - ① Conduct conservation activities in cooperation with regional companies.
 - ② Dispatch employees to events hosted by other company
2. Examples of cooperation with NGO
 - ① Support utilized supporting company's technology.
 - ② Physical support including temporally transfer of employees.
 - ③ Cooperation initiated by participation to the "exchange meeting" or the "activity report meeting" organized by Nippon Keidanren Nature Conservation Fund.
3. Examples of cooperation with local public organization or local office of the central government.
 - ① Participate as volunteers to thinning activities of public forests.
 - ② Involve in nature conservation projects organized by local public organization.
 - ③ Cooperate to create "company forest".
4. Examples of cooperation with customers.
 - ① Develop and promote uses of environment friendly products (ex. Certified paper etc.)
 - ② Introduce matching-gift system.
 - ③ Distribute acorns to customers and donate young trees raised by them to NGO for forestation.
5. Examples of cooperation with supply chain.
 - Ask their cooperation (establishment of green procurement policy etc.)
6. Examples of cooperation with employees.
 - Prepare lists of employee volunteer activities.
7. Development of social system or business model that makes environmental friendly products easier to buy.
 - Sell rice produced by producers whose methods are certified as the one that supports living of organisms.

6-2 Disseminate and share experiences from activities related to biodiversity

(Objective)

- (1) Currently, our efforts toward biodiversity are mainly based on each party's idea and being in a trial and error phase. The major reasons for this are participations of multiple stakeholders are essential and knowledge about best efforts for each issue has not been established yet. Therefore, to promote broader communications and learn from each other, sharing examples of efforts and knowledge including failure ones should be promoted. At the same time, it is important to understand expectations and needs of stakeholders through listening to their opinions and to reflect them in the management.
- (2) Company information and reports are getting more attention. Therefore, biodiversity-related topics should be included as appropriate in such reports.

(Points to consider)

- (1) Put efforts to share selected information suitable to each receiver through daily communications.
- (2) Put efforts to share information that is easy to understand for any assumable receiver.
- (3) Promote disclosures of information on examples that can be applied in overseas, especially in developing countries, effectively in global scale.
- (4) Provisions of products and services in compliance with any certification system related to biodiversity conservation might be ways of sharing information on biodiversity to consumers.

(Examples of activity)

- ① Information disclosures in corporate reports (environment/CSR/sustainability report etc.) or on company website.
- ② Advertisements utilizing mass media including commercial messages.
- ③ Advertisements at events hosted by the company.
- ④ Welcoming visitors to in house biotopes.
- ⑤ Participations to events (international conference or regional event etc.) hosted by other companies.
- ⑥ Sales promotions of products recommendable from the viewpoint of biodiversity conservation.
- ⑦ Utilization of qualified certification systems on biodiversity.
- ⑧ Utilization of the Environment day (June 5) and the Biodiversity day (May 22).
- ⑨ Presentation of study results conducted by the company at meetings organized by NGOs.
- ⑩ Information sharing and experience exchanges through "Japan Business and Biodiversity Partnership"

7. Spearhead activities to build a society that will nurture biodiversity

7-1 Actively carry out environmental education activities for employees in collaboration with local communities, NGOs and other organizations.

(Objective)

- ◎ For realizing sustainable business activities, we need to continue biodiversity-oriented business activities and, at the same time, the direction of businesses needs to be changed to the one that towards contribution to biodiversity conservation. The most important issue is to nurture human resources who can engage in business activities with the awareness of biodiversity concerns.

(Point to consider)

- (1) Human resource training that links environmental impacts of business activities and biodiversity itself is desirable.

- Trainings to recognize risks against company's business activities caused by the environmental impacts of business activities and company's efforts to avoid exposures to such risks.
- Trainings to gain recognition about how the company's business activities depend on domestic/foreign ecosystem services.
- Trainings to deepen understandings on social responsibilities for surrounding regions of company establishments (impacts and contributions to regions).
- Trainings to deepen knowledge on ecosystem services through experiencing the nature itself.

- (2) Not only business activities but each department, employees' families and each individual as well are expected to take actions at their possible extents for biodiversity conservation. Therefore, for initiating such actions, provision of opportunity for utilizing knowledge acquired from environmental education etc. might be expected.

- Trainings that provide an opportunity to review one's own actions by self-analysis, discussions and sharing of impressions gained through own practices and experiencing the nature etc.

(Examples of activity)

- ① Organizing seminars.
- ② Knowledge education by utilizing e-learning or intranet.
- ③ Environmental awareness development through experiencing the nature itself, agriculture and forestry.
- ④ Providing an opportunity to review each person's lifestyle by conducting questionnaires.
- ⑤ Regular and continuous provision of information via in-house journals etc.
- ⑥ Showing short films on the environment.
- ⑦ Education of selected employees as environmental volunteer leaders.
- ⑧ Encouragement of taking certification exams.

7-2 Raise societal awareness of the need to nurture biodiversity.

(Objective)

- ◎ Toward solving biodiversity issues, efforts of every stakeholder are required and single company's efforts cannot achieve this goal. Making opportunities for communities to offer their cooperation is important to promote biodiversity-oriented society as efforts of communities become more effective when linked to efforts of companies.

The lack of biodiversity awareness is being pointed out globally. Therefore, by engaging biodiversity awareness developments by utilizing human resources trained through employee education together with local stakeholders' cooperation, we need to offer our efforts and contributions to build up a climate in which a society in harmony with biodiversity is achievable.

In addition, promotion of consumer's choice of goods and services based on the biodiversity awareness of their producing companies may bring feedbacks on such companies' efforts and contribute to build a society in harmony with biodiversity.

(Points to consider)

- (1) Efforts to establish a social climate in which efforts and merits of biodiversity considerations are easy to understand or an incentive is offered to residents by cooperating with local public organizations.
- (2) It is also beneficial to ask people engage in agriculture, forestry or fishery to get involved as they directly get benefits from gifts of the nature (ex. agriculture-commerce-industry cooperation).

(Examples of activity)

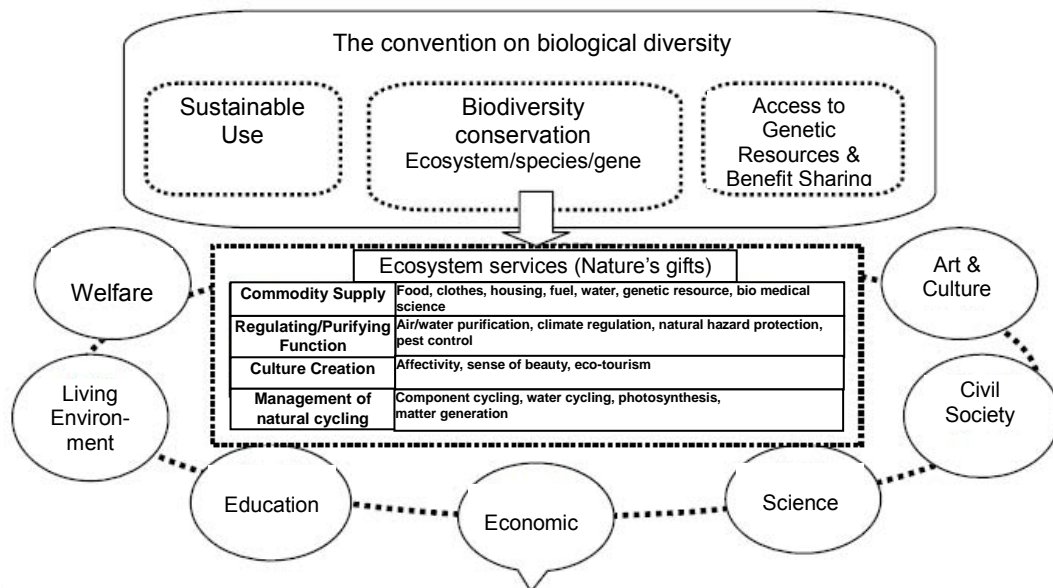
1. Awareness development of people other than employees.

- ① Employees' families : environmental education for parents and kids at company-owned forest etc.
- ② Customers : sales promotion of environment friendly products by offering trial uses.
- ③ Supply chain : green procurements.
- ④ Young adult segment : lesson on the environment incorporated into elementally school curriculum.
- ⑤ Business partners : review of order specifications etc.
- ⑥ Group companies : promotion of environment-oriented business activities from the viewpoint as group management.

2. Others

- ① Supports for developing new products made from local agriculture products and their market cultivation.
- ② Biological survey of company-owned forests.
- ③ Featuring articles on biodiversity.

Linking relationship between biodiversity and lifestyle/ economic activities



Current status analysis of scopes of business activity and remediation planning.		
Current status analysis (impacts on ecosystem)→Risk forecast→Remediation planning		
Scope of business activity/department	Point of analysis and direction of remediation	Example of remediation plan
Material location	Assessment, in advance discussion with stakeholders (for preventive/adaptive management of ecosystem)	Establishment of management program for ecosystem conservation
Energy location		
Management of company owned area	Study of company owned area as the area of biodiversity resources	Utilization of the area for environmental education
Factory/office location	Impact evaluation of business activities/construction works, Impacts on surroundings of factory and office (rare forest/ocean species, endangered species, conservation area etc.)	Improvement of manufacturing process/method, development and management of water source forest or community forest, consideration to local culture, cooperation with local NGO
Sales/distribution	Green procurement, prior use of certified products, traceability, fair and equitable sharing of genetic resources, consumer protection/trust/safety, cooperation with business partners	Certification of forestry/fishery products (green cycling, SGEN, SFC/MFC), Certification and testing of organic food
Research and development	Environment friendly technology learned from nature itself or traditions, gene issues, fair and equitable sharing of genetic resources	Nature restoration/rehabilitation, compliance with Bonn Guidelines, Bio safety
Finance	Selection of environment-oriented loans and investments, environment funds, rating index	Ecosystem conservation fund
Administration/human resources	Environmental education promotion, communication with local stakeholders	Environment leader training
Environmental management	In-house monitoring, development of awareness of employees/residents	Ecosystem monitoring, LCA
CSR management	Socially responsible management, contribution to regional society	Cooperation with NGO, volunteering
Public relations/advertising	Environmental communication	Internal and external information disclosure

The above figure of linking relationship was prepared by referring to the value of biodiversity mentioned in the Convention of Biological Diversity (adopted in 1992) and ecosystem services described in the "Millennium Ecosystem Assessment" (United Nations, reported in 2005).

Targets of the Strategic Plan for the Convention on Biological Diversity 2011-2020
(Aichi Targets¹⁵) and Examples of Business Activities

20 Targets for 2020	Example of Activity Numbers in [] are the numbers of relevant action policies	
Mainstreaming of Biodiversity		
Target 1	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably	Inclusion of "biodiversity" into company policy. [1-1]
		Inclusion of "biodiversity" into business target setting and planning. [1-2]
		Promotion of Employee communication by management [1-2]
		Utilization of certification systems [6-2, 7-2]
		Green procurement [6-2, 7-2]
		Information disclosure by business reporting [6-2]
		Accepting company visitors [6-2]
		Environmental education for employees [7-1]
		Support for taking qualification exams on environment[7-1]
		Environment awareness development [7-2]
		Environmental education in collaboration with academic institutions [7-2]
	Development and marketing of eco products [7-2]	
Target 2	Biodiversity values have been integrated into national and local strategies/policies.	-
Target 3	Incentives, including subsidies, harmful to biodiversity are eliminated.	-
Target 4	Sustainable production and consumption have been planned and implemented, and the use of natural resources are kept within safe ecological limits.	Inclusion of "biodiversity" into company policy. [1-1]
		Inclusion of "biodiversity" into business target setting and planning. [1-2]
		Promotion of Employee communication by management [1-2]
		Assessment of environmental impacts caused by business activities and corrective actions based on the assessment results. [3-1]
		Improvement and monitoring of land use design and construction methods. [3-1]
		Environmental considerations in managing company property [3-1]
		Utilization, introduction and marketing of certified products and eco-friendly products. [3-1]
		Green procurement [3-1, 6-2]
		Resource recycling, 3R [4-1]
		Energy efficiency improvement [4-1]
		Improvement of yields [4-1]
		Technology development [5-1]
		Utilization of certification systems [6-2]
		Information disclosure by business reporting [6-2]
		Environmental education for employees [7-1]
	Support for taking qualification exams on environment[7-1]	
	Environment awareness development [7-2]	
	Environmental education in collaboration with academic institutions [7-2]	
	Development and marketing of eco products [7-2]	
B. Reduce the direct pressures on biodiversity and promote sustainable use		
Target 5	The rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero.	Assessment of environmental impacts caused by business activities and corrective actions based on the assessment results. [3-1]
		Improvement and monitoring of land use design and

		<p>construction methods. [3-1]</p> <p>Environmental considerations in managing company property [3-1]</p> <p>Utilization, introduction and marketing of certified products and eco-friendly products. [3-1]</p> <p>Green procurement [3-1]</p> <p>Conservation activities in areas or forests owned by company. [3-3]</p> <p>Eco system rehabilitation activities including development of green space or green corridor. [3-3]</p> <p>Support/cooperation to NGOs' conservation projects. [3-3]</p> <p>Resource recycling, 3R [4-1]</p> <p>Energy efficiency improvement [4-1]</p> <p>Improvement of yields [4-1]</p>
Target 6	The impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	<p>Assessment of environmental impacts caused by business activities and corrective actions based on the assessment results. [3-1]</p> <p>Utilization of certified products. [3-1]</p> <p>Green procurement [3-1]</p> <p>Contributions to promote eco-friendly fisheries locally [6-1]</p>
Target 7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	<p>Assessment of environmental impacts caused by business activities and corrective actions based on the assessment results. [3-1]</p> <p>Utilization of certified products. [3-1]</p> <p>Green procurement [3-1]</p> <p>Utilization of thinned wood [4-1]</p> <p>Contributions to promote eco-friendly agriculture and forestry locally [6-1]</p>
Target 8	Pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	<p>Green procurement [3-1]</p> <p>Resource recycling, 3R [4-1]</p> <p>Reduction of usage of pollutants and chemical substances, sound management [4-1]</p> <p>Technology development [5-2]</p>
Target 9	Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated.	<p>Assessment of environmental impacts caused by business activities and corrective actions based on the assessment results. [3-1]</p> <p>Considerations in conservation activities in areas or forests owned by company. [3-3]</p> <p>Support/cooperation to NGOs' conservation projects. [3-3]</p> <p>Population studies in collaboration with experts or NGOs. [6-2]</p>
Target 10	By 2015, the pressures caused by climate change or ocean acidification on ecosystems are minimized.	<p>Promotion of energy saving [4-1]</p> <p>Improvement of energy efficiency [4-1]</p> <p>Technology development [5-2]</p> <p>Introduction and marketing of eco-friendly products including those contribute to energy saving. [6-1]</p>
C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity		
Target 11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity are effectively conserved.	<p>Assessment of environmental impacts caused by business activities and corrective actions based on the assessment results. [3-1]</p> <p>Improvement and monitoring of land use design and construction methods. [3-1]</p> <p>Environmental considerations in managing company property [3-1]</p> <p>Conservation activities in areas or forests owned by company. [3-3]</p> <p>Support/cooperation to NGOs' conservation projects. [3-3]</p>
Target 12	The extinction of known threatened species has been prevented and their conservation status has been	<p>Assessment of environmental impacts caused by business activities and corrective actions based on the assessment results. [3-1]</p> <p>Improvement and monitoring of land use design and</p>

	improved and sustained.	<p>construction methods. [3-1]</p> <p>Environmental considerations in managing company property [3-1]</p> <p>Conservation activities in areas or forests owned by company. [3-3]</p> <p>Support/cooperation to NGOs' conservation projects. [3-3]</p> <p>Technology development [5-1]</p>
Target 13	The genetic diversity of cultivated plants and farmed and domesticated animals is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	<p>Assessment of environmental impacts caused by business activities and corrective actions based on the assessment results. [3-1]</p> <p>Conservation activities in areas or forests owned by company. [3-3]</p> <p>Support/cooperation to NGOs' conservation projects. [3-3]</p> <p>Technology development [5-1]</p>
D. Enhance the benefits to all from biodiversity and ecosystem services		
Target 14	Ecosystems that contribute to health, livelihoods and well-being are restored and safeguarded.	<p>Utilization of certified products. [3-1]</p> <p>Green procurement [3-1]</p> <p>Technology development including bio-mimicry [5-1]</p> <p>Learning from our ancestors' livelihoods. [5-1]</p> <p>Development and diffusion of business model or local model [6-1]</p>
Target 15	Through conservation and restoration of ecosystems (including at least 15 per cent of degraded ecosystems), measures are taken for climate change mitigation and adaptation and combating desertification.	<p>Conservation activities in areas or forests owned by company. [3-3]</p> <p>Eco system rehabilitation activities including development of green space or green corridor. [3-3, 5-3]</p> <p>Support/cooperation to NGOs' conservation projects. [3-3]</p> <p>Sustainable use such as utilization of thinned wood [4-1]</p> <p>Support/cooperation to NGOs' conservation projects. [6-1]</p>
Target 16	By 2015, Nagoya Protocol is in force and operational in consistent with national legislation.	<p>Compliance with relevant legislation or voluntary rules such as Bonn Guidelines [2-2]</p> <p>Support/cooperation to NGOs' conservation projects. [3-1]</p>
E. Participatory planning, knowledge management and capacity building		
Target 17	National strategy and action plan has been developed and implemented.	-
Target 18	The traditional knowledge, innovations and practices of indigenous and local communities are respected and integrated into the implementation of the Convention.	<p>Learning from our ancestors' livelihoods. [5-1]</p> <p>Support/cooperation to NGOs' conservation projects. [6-1]</p>
Target 19	Knowledge, the science base and technologies relating biodiversity are improved, widely shared and applied.	<p>Implementation of monitoring [3-1]</p> <p>Support/cooperation to NGOs' conservation projects. [6-1]</p> <p>Disclosure of monitoring data [6-2]</p>
Target 20	The mobilization of financial resources for effectively implementing the strategic plan should increase substantially from the current levels.	<p>Actions through oversea offices/local entities. [2-1]</p> <p>Conservation activities by utilizing own products. [2-1]</p> <p>Donation of a part of revenue [3-3]</p> <p>Matching-gift [3-3]</p> <p>Support/cooperation to NGOs' conservation projects. [3-3]</p> <p>Conservation activities (or cooperation to them) by employees or their family. [3-3]</p>

¹ **BIODIVERSITY** or Biological diversity means life forms in variety of kinds and shapes exist and are mutually related. The Convention on Biological Diversity classifies the following three levels of diversity.

- ① Diversity within species: Even within the same species, each growing environment and genetic differences bring characteristic varieties.
- ② Diversity between species: Various species exist.
- ③ Ecosystem diversity: Ecosystems in which multiple living organisms are mutually related are in variety depending each regional environment

² **ECOSYSTEM SERVICES** mean benefits that human can obtain from ecosystem. United Nations' "Millennium Ecosystem Assessment: MA" reported in 2005 classifies and explains ecosystem services as below.

- Provisioning services: Materials or products obtained from ecosystem (foodstuff, freshwater, timber, and fiber etc.)
- Regulating services: Benefits gained from ecosystem's regulating function against nature processes (climate regulation, disease prevention, conservation of soil and water, natural hazard protection etc.)
- Cultural services: Non-matter benefits gained from ecosystem (landscapes, sense of beauty etc.)
- Supporting services: Nature's cycling processes to sustain other services (nutrient cycling, photosynthesis, and water cycling etc.)

³ **ECOSYSTEM** is the concept that comprehensively summarizes inter-relationships among biological organisms and among surrounding non-biological environments in certain area. Roughly speaking, it is classified as producers (plants), consumers (animals) and decomposers (micro organisms) and the process between decomposers to producers are non-matter process. Inter-relationships among biological organisms are in variety, such as predators, preys, competitors, co-habitats and parasites, and complicated.

⁴ **SUSTAINABLE USE** means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. (Article 2, the Convention on Biological Diversity)

⁵ **SANSENSOMOKU SHITSU U BUSSHO** is the concept that all components of the nature have the spirit of Buddhism. Japanese view of nature that the nature allows us to live and the lifestyles of our ancestors who enjoyed gifts of the nature like community forests or gloves of a village shrine with feelings of reverence and appreciation are said to be based on this concept. **SANSENSOMOKU SHIKKAI JOBUTSU** also means the same.

⁶ **THE CONVENTION ON BIOLOGICAL DIVERSITY (CBD)**
[Objectives] (see Article 1 of the Convention)

- ① Conservation of diverse biological organisms on the earth as well as their living environments.
- ② Sustainable use of components of biodiversity (biological organisms, ecosystems and genetic resources).
- ③ Fair and equitable sharing of benefits arising out of the utilization of genetic resources.

[Effective Date] December 29th, 1993

[Parties to the Convention] 193 countries and European Union (as of October 2012). Japan accepted in 1993, US has not ratified.

[Conference of the parties (COP)] Held biennially.

- So-called the 2010 biodiversity target that aims at significant reduction of the current rate of biodiversity loss by 2010 was adopted (the 6th COP held in Hague, Netherlands in 2002)
- Decision to promote private sector's participation (the 8th COP held in Curitiba, Brazil in 2006)
- COP10 held in Nagoya, Aichi prefecture in October 2010 adopted a series of decisions including Post-2010 targets ("Aichi Targets"), ABS("Nagoya Protocol"), promotion of business engagement, etc.
- COP11 held in Hyderabad, India in October, 2012 adopted a series of decisions including the strategy for resource mobilization, the financial mechanism, the scientific criteria for ecologically and biologically significant marine areas, the preparations for the 1st COP to the Nagoya Protocol, etc.

7 ACCESS TO GENETIC RESOURCES AND BENEFITS SHARING (ABS), which was included in the Convention as one of its objectives, aims at the fair and equitable sharing of the benefits arising from the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components.

8 BONN GUIDELINES (Bonn guidelines on access to genetic resources and the fair and equitable sharing of the benefits arising from their utilization) is the guidelines for formulating governmental policy on access to genetic resources and its benefits sharing and preparing conditions (contracts) of mutual agreements between parties concerned. This guidelines cover every genetic resources except human beings, related traditional knowledge and benefits arising out of their utilization. Provisions regarding the approval of the country of origin when using and benefit sharing by signing prior agreement between users and providers etc. are included. Adopted at the 6th COP held in April 2002.

9 CARTAGENA PROTOCOL ON BIODIVERSITY defines measures for preventing possible negative impacts caused by living modified organisms (LMO) against biodiversity conservation and sustainable use of biodiversity (ex. LMO trans-bordering process). This protocol was formulated in the discussions regarding Article 19.3 of the Convention on Biological Diversity and adopted at the COP held in January 2000 in Montreal. The protocol was ratified by Japan on November 21, 2003, and became effective on February 19, 2004.

10 NAGOYA PROTOCOL ON ACCESS TO GENETIC RESOURCES AND THE FAIR AND EQUITABLE SHARING OF BENEFITS ARISING FROM THEIR UTILIZATION is the international measure on Access and Benefit-sharing (ABS); The protocol defines 1) access to genetic resources should be managed by each party's national system, 2) the benefits arising from their utilization should be shared in a fair and equitable manner based on a mutually agreed contract, and 3) certain monitoring system should be established and implemented. The protocol was adopted at the 10th COP in October, 2010 in Nagoya.

¹¹ **NAGOYA –KUALA LUMPUR SUPPLEMENTARY PROTOCOL ON LIABILITY AND REDRESS TO THE CARTAGENA PROTOCOL ON BIOSAFETY** supplements the Cartagena protocol on biosafety. It defines, among other things, each country should identify the responsible entity and ask it to make restitution or reparation for the damages when exported or imported living modified organisms affect local ecosystems. The protocol was adopted at the 5th MOP in October, 2010 in Nagoya.

¹² **OFFSET**, i.e. "**BIODIVERSITY OFFSET**" aims to compensate for impacts on ecosystem caused by human activities such as commercial activities or project development by creating biodiverse ecosystems in other areas.

¹³ **COMPENSATORY MITIGATION** is a measure to compensate for impacts on the environmental losses caused by human activities. Mitigation is categorized into three levels, namely avoidance, minimization and compensation. Compensation is considered as the last measure to be taken among them. Compensatory mitigation is approximately for synonymous with Offset.

¹⁴ **3R** means "Reduce: reducing waste volume", "Re-use" and "Recycle" and includes effective use of by-products. In terms of biodiversity conservation, another import "R", namely "Restore", is considered to exist.

¹⁵ **AICHI TARGETS**, formally the "Strategic Plan for Biodiversity 2011-2020", have been adopted by COP10 held in Nagoya, Aichi prefecture. It aims to realize "Living in Harmony with Nature" and agreed that "By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people." It also defines 20 short-term targets (the mission) to "take effective and urgent action to halt the loss of biodiversity by 2020."