

Guidelines for Action by the Electrical and Electronic Industries concerning Biodiversity Conservation

The Biodiversity Working Group,
The 4 Electrical and Electronic Industry Associations
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This project is recognized as a cooperative project endorsed by the Japan Committee for UNDB (UNDB-J).



This project is registered as part of the Double 20 Campaign (Nijyu-maru Project) which aims to achieve the Aichi Biodiversity Targets in Japan.



Introduction



The Strategic Plan for Biodiversity 2011-2020 (commonly known as the “Aichi Biodiversity Targets”) was adopted at the 10th meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD-COP 10) held in Nagoya, Aichi in 2010. The Aichi Biodiversity Targets are the targets that the international community should achieve in the field of biodiversity by 2020. The achievement of the targets requires activities by all parties including local governments, research institutes, companies and citizen groups, in addition to the national government.

For this reason, we (the 4 Electrical and Electronic Industry Associations¹⁾) formulated the Guidelines for Action by the Electrical and Electronic Industries concerning Biodiversity Conservation (hereinafter referred to as the “Action Guidelines”) in order to clarify our industries’ contribution to the Aichi Biodiversity Targets and to accelerate our biodiversity conservation activities.

Convention on Biological Diversity and the Aichi Biodiversity Targets

The Convention on Biological Diversity (CBD) is an international convention adopted on May 22, 1992 and entered into effect on December 29, 1993. In Japan, it is often referred to as the “twin conventions” along with the United Nations Framework Convention on Climate Change (UNFCCC) which was adopted at the United Nations Conference on Environment and Development (UNCED, commonly known as the Earth Summit) which was held in Rio de Janeiro, Brazil. The CBD has 194 parties including the European Union (EU), as of 2014. The objectives of the CBD are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.





The Aichi Biodiversity Targets were adopted at the 10th meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD-COP 10), as part of the Strategic Plan for Biodiversity 2011-2020. The Strategic Plan for Biodiversity provides the basic direction for the CBD for a 10-year period, and has the following components:

- (1) The vision of the Strategic Plan: To achieve a world of “Living in harmony with nature” by 2050;
- (2) The mission of the Strategic Plan up to 2020 agreed by the parties to the CBD with the aim of achieving the vision: To “take effective and urgent action to halt the loss of biodiversity” by 2020;
- (3) 20 targets within five strategic goals (the Aichi Biodiversity Targets); and
- (4) Systems that support implementation.

The United Nations declared the period between 2011 and 2020 to be “the United Nations Decade on Biodiversity” and calls on all people to achieve the targets.

● Official Guide by the CBD Secretariat (PDF file, in English):

<http://www.cbd.int/doc/strategic-plan/targets/compilation-quick-guide-en.pdf>

Strategic Goal A Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society	
	Target 1 By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.
	Target 2 By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.
	Target 3 By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.
	Target 4 By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

¹ See the annex at the end of the booklet

Strategic Goal B Reduce the direct pressures on biodiversity and promote sustainable use



Target 5

By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.



Target 6

By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.



Target 7

By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.



Target 8

By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.



Target 9

By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.



Target 10

By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Strategic Goal C To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity



Target 11

By 2020, 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 and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.



Target 12

By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.



Target 13

By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

Strategic Goal D Enhance the benefits to all from biodiversity and ecosystem services



Target 14

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.



Target 15

By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.



Target 16

By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

Strategic Goal E Enhance implementation through participatory planning, knowledge management and capacity building



Target 17

By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.



Target 18

By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.



Target 19

By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.



Target 20

By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.

Relevance of the Biodiversity Conservation Activities by the Electrical and Electronic Industries to the Aichi Biodiversity Targets

We classified the relevance of the environmental and biodiversity conservation activities conducted by the electrical and electronic industries, to the 20 targets set in the Aichi Biodiversity Targets, for each life-cycle stage² of our business activities those are: land use; R & D and planning; material procurement; product manufacturing; transportation; sales; usage; and recovery, recycling and disposal. The results show that our conservation activities were relevant to 17 out of the 20 targets (see Fig.1). The mark “●” was placed on the chart where our conservation activities at each life-cycle stage had any relevance to a target, regardless of whether the impact of the activities was direct or indirect, and regardless of the degree of impact. Therefore, the number of “●” marks does not represent the degree of relevance of our conservation activities to each target.

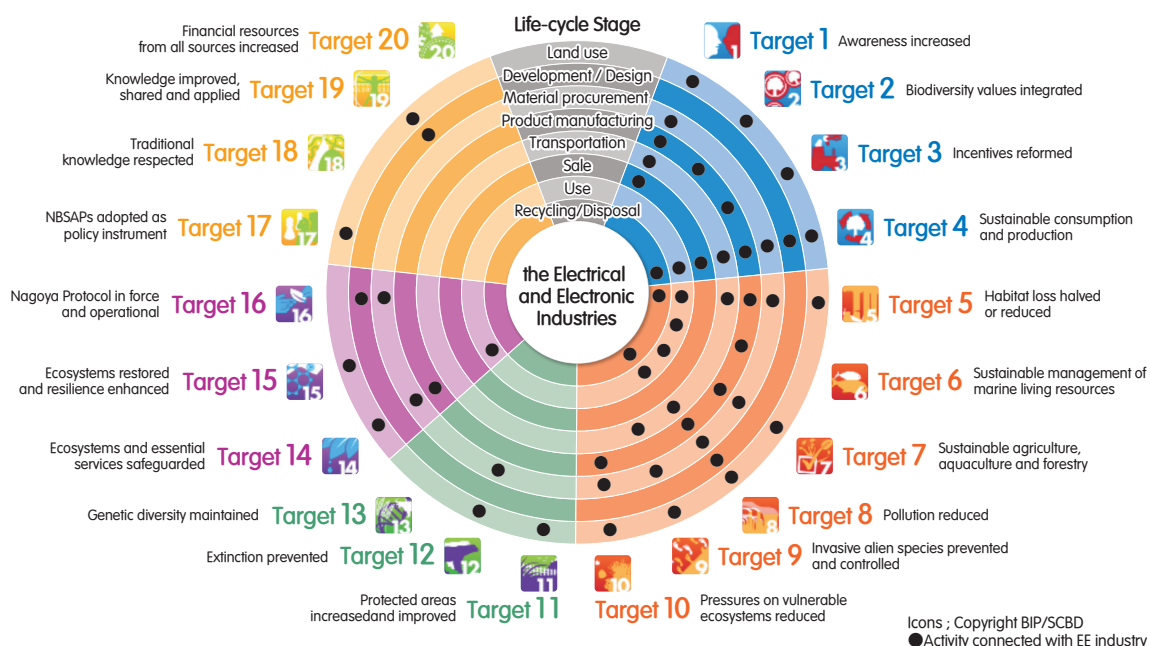


Fig.1 Relevance of the Biodiversity Conservation Activities by the Electrical and Electronic Industries to the Aichi Biodiversity Targets

² "Land use" is not always included in life-cycle stages, but we added "land use" for the construction of business facilities, etc., because land alterations may pose problems to biodiversity.

Guidelines for Action by the Electrical and Electronic Industries concerning Biodiversity Conservation

We selected 8 targets (Aichi Biodiversity Targets 1, 4, 5, 8, 9, 11, 14 and 19) out of the 17 targets which are relevant to the electrical and electronic industries, and created action guidelines for each of the 8 targets.

The Action Guidelines are not intended to be standards and therefore fulfilling the guidelines does not mean that individual companies in the electrical and electronic industries did enough to achieve the targets. Rather, the Action Guidelines provide a guide for specific actions by individual companies. Examples of specific actions were added to the guidelines for each selected target so that our member companies can refer to the examples when they take action.

The selected 8 targets include ones which have only a small number of “●” marks in Fig.1 which indicate the relevance of our activities to each target (such as Targets 11 and 19). This is because we took qualitative analysis results into account rather than the number of “●” marks. In other words, we selected targets that are closely related to our business activities for which we are likely to be able to make a greater contribution if we promote an industry-wide effort. For example, we selected Aichi Biodiversity Target 19 (“Knowledge improved, shared and applied”) because it is expected that the electrical and electronic industries can make unique contributions to such fields as the utilization of information communications technology (ICT), sensor technology and analysis technology in monitoring studies.

We also ask our member companies to take action that contributes to achieving the targets which were not selected in the Action Guidelines (Aichi Biodiversity Targets 2, 3, 6, 7, 10, 12, 13, 15, 16, 17, 18 and 20).

The List of the Action Guidelines for Biodiversity Conservation

Aichi Target	Action Guideline	Page
Target 1 Awareness increased 	Member companies will conduct employee education on biodiversity wherever possible so that the importance of biodiversity conservation will be widely recognized. Member companies will also contribute to raising public awareness of information about their conservation activities through by cooperating with other stakeholders.	06
Target 4 Sustainable consumption and production 	Member companies will conduct the following activities in their production activities and supply chains at each life-cycle stage wherever possible, in order to achieve sustainable consumption and production. <ul style="list-style-type: none"> : Continuous efforts to reduce CO₂ emissions in the production process : The provision of products and services that contribute to achieving a low-carbon society : Reducing the volume of waste to be landfilled : The 3R activities (Reduce, Reuse and Recycle) : The procurement of biodiversity-friendly materials, etc. 	07
Target 5 Habitat loss halved or reduced 	Member companies will, wherever possible, take social actions and conduct biodiversity-conscious management of green spaces within their business premises, as well as promote the creation of ecosystem networks around the business premises, in order to protect habitats and reduce the degradation and fragmentation of habitats.	08
Target 8 Pollution reduced 	Member companies will strive for the appropriate management of chemical substances from a global perspective and reduce adverse effects on ecosystems wherever possible, in order to prevent pollution that is detrimental to ecosystems and biodiversity.	09
Target 9 Invasive alien species prevented and controlled 	Member companies will actively work on the eradication of invasive alien species, the prevention of the introduction of invasive alien species and awareness-raising activities about the problem, particularly in the transportation of their products, in the management of green spaces within their business premises and in their social actions, in order to prevent the impacts caused by invasive alien species.	10
Target 11 Protected areas increased and improved 	Member companies will, wherever possible, conduct biodiversity-conscious green space management which contributes to protected areas within their business premises and on land owned by their companies, as well as conduct conservation activities in protected areas outside their company premises, in order to expand protected areas that are important for biodiversity.	11
Target 14 Ecosystems and essential services safeguarded 	Member companies will conduct activities for conserving and restoring ecosystems wherever possible, so that ecosystem services can be used sustainably.	12
Target 19 Knowledge improved, shared and applied 	Member companies will work on the development and dissemination of monitoring technologies which use ICT as well as promote the accumulation of data through biodiversity monitoring wherever possible, in order to improve knowledge, the scientific base and technologies relating to biodiversity.	13



Awareness increased

Aichi Biodiversity

By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

The Action Guidelines

Member companies will conduct employee education on biodiversity wherever possible so that the importance of biodiversity conservation will be widely recognized. Member companies will also contribute to raising public awareness of information about their conservation activities through by cooperating with other stakeholders.

(Explanation)

In order to involve more people in activities that contribute to biodiversity conservation, various groups of people need to deepen their understanding of the value of biodiversity. Biodiversity has a cultural value, a value as a component of the living environment, and an economic value. The existence of diverse life forms is in itself valuable. Deepening understanding of the various values of biodiversity is important.

Companies can contribute to achieving Aichi Biodiversity Target 1 by conducting education activities on biodiversity. The education activities could include: holding nature observation meetings for employees, their families and local residents; conducting in-house education; and organizing hands-on experience events for rice planting and the conservation of satoyama (semi-natural areas near settlements used to collect firewood, wild edible plants, etc.). It is also important for member companies to disseminate information about their activities to the public. For example, companies may publish the results of ecosystem surveys (surveys on living organisms) in green spaces within their business premises and examples of biomimetics.³

Examples of Actions

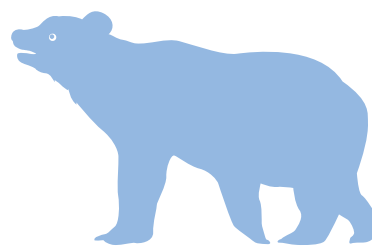
Education activities for employees, etc.

- Education on biodiversity
- Employee education using the education and awareness-raising tool “Let’s Study Biodiversity (LSB)” (see the annex at the end of the booklet)
- Raising awareness through nature observation meetings
- Holding hands-on experience events for the conservation of satoyama, rice planting, etc.
- Holding lectures, workshops, symposiums, etc., on biodiversity

The dissemination of information to other stakeholders

- Your company’s biodiversity conservation activities
- Ecosystem surveys within your business premises
- Biodiversity considerations in your products and services
- Biomimetics

³ By disseminating information about biomimetics which uses the functions and mechanisms of living organisms to create new technologies, companies can communicate to the public the importance of conserving living organisms (biodiversity), as they could be used to develop new technologies in the future.



Sustainable consumption and production

Aichi Biodiversity

By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

The Action Guidelines

Member companies will conduct the following activities in their production activities and supply chains at each life-cycle stage wherever possible, in order to achieve sustainable consumption and production.

Continuous efforts to reduce CO₂ emissions in the production process

The provision of products and services

that contribute to achieving a low-carbon society

Reducing the volume of waste to be landfilled

The 3R activities (Reduce, Reuse and Recycle)

The procurement of biodiversity-friendly materials, etc.

(Explanation)

Various environmental issues including the destruction of nature, climate change and the recycling of materials greatly affect biodiversity. Addressing these issues contributes to the conservation of biodiversity. One effective way to do this is to reevaluate the actions that your company is already taking regarding these environmental issues such as measures to curb global warming and the effective utilization of materials, from a biodiversity standpoint.

For example, the National Biodiversity Strategy of Japan 2012-2020 includes the "crisis caused by changes in the global environment" such as global warming and ocean acidification in the "four crises of biodiversity." In addition to global warming, climate change (which includes the increasing number of large typhoons and changes in precipitation) could have serious impacts on biodiversity. Therefore, efforts to achieve a low-carbon society and to curb global warming and climate change also contribute to biodiversity conservation.

Changes to land use through the creation of landfill sites on tidal flats, wetlands and coastal waters bring about the destruction or degradation of habitats for many living organisms. A reduction in the volume of waste dumped in final disposal sites by taking actions for a sound material-cycle society will reduce the number of landfill sites (the conversion of land use) and therefore reduce their impact on biodiversity.

It is also important to take actions which directly contribute to the conservation of biodiversity, including the procurement of biodiversity-friendly materials such as FSC-certified⁴ wood and paper.

You can contribute to achieving Aichi Biodiversity Target 4 "sustainable consumption and production," by taking various relevant actions in your production activities including the supply chains at each product life-cycle stage, such as procurement, manufacturing, transportation, usage, recovery, recycling and disposal.

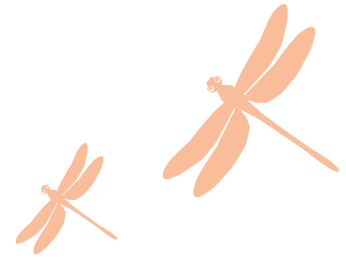
Examples of Actions

- Introduction of energy-efficient equipment in the production process
- Integrating energy-saving technologies into products
- Reducing the amount of material input through miniaturizing or reducing the weight of products
- Reducing the volume of waste to be landfilled
- The 3R activities (Reduce, Reuse and Recycle)
- The effective utilization of scraped materials (recyclables such as plastic and metal) from factories
- The procurement of biodiversity-friendly materials (such as FSC-certified paper)
- The promotion of environmentally-conscious designs which take into account impacts on biodiversity and the reliance on natural capital⁵ and ecosystem services⁶
- Setting your company's own targets concerning biodiversity

⁴ It is a certification system which uses the standards of the Forest Stewardship Council (FSC) to certify that the wood is produced in a sustainable manner by giving consideration to the forest environment and the benefits to local communities. FSC has two types of certification: Forest Management Certification (FM Certification) which certifies that the forest is appropriately managed; and the Chain of Custody Certification (CoC Certification) which certifies that the wood or the wood products come from FM-certified forests.

⁵ Natural capital is the world's stock of natural assets including the components of nature such as forests, rivers, air, soil and living organisms, which enables the supply of ecosystem services, fossil fuels, mineral resources, etc.

⁶ Ecosystem services are the services that humans receive from nature, such as climate regulation and the supply of groundwater and wood from natural capital.



Habitat loss halved or reduced

Aichi Biodiversity

By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

The Action Guidelines

Member companies will, wherever possible, take social actions and conduct biodiversity-conscious management of green spaces within their business premises, as well as promote the creation of ecosystem networks around the business premises, in order to protect habitats and reduce the degradation and fragmentation of habitats.

(Explanation)

The loss and fragmentation of habitats are believed to have the largest impact among the factors which cause the loss of biodiversity. In addition to the protection of natural ecosystems such as primeval forests, wetlands and coral reefs, our immediate natural environments and even green spaces within business premises can be precious habitats for locally occurring organisms, if they are managed by taking biodiversity into consideration.

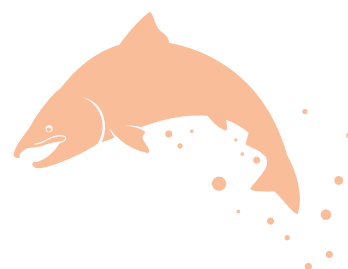
For example, biodiversity-conscious green space management such as creating biotopes within business premises contributes to the protection of habitats for animals and plants. Harmonization with surrounding natural environments and the creation of ecosystem networks around the business premises lead to less fragmented habitats, and therefore they also contribute to achieving Target 5.

Examples of Actions

- Biodiversity-conscious green space management on your business premises, such as the use of native species and the development of suitable habitats for organisms
- Improving the connections between fragmented natural habitats located on your business premises, on the land owned by your company and in the surrounding areas (the creation of ecosystem networks)
- The procurement of biodiversity-friendly materials (such as FSC-certified paper)
- Social actions such as the improvement of forests and satoyama by taking biodiversity into account



Pollution reduced



Aichi Biodiversity

By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

The Action Guidelines

Member companies will strive for the appropriate management of chemical substances from a global perspective and reduce adverse effects on ecosystems wherever possible, in order to prevent pollution that is detrimental to ecosystems and biodiversity.

(Explanation)

The pollution of water, air, soil, etc., by chemical substances and excess nutrients is causing biodiversity loss and the degradation of ecosystem functions particularly in wetlands, in coastal areas, in the sea and in arid areas.

For example, the appropriate management of chemical substances in business activities will lead to a reduction in adverse effects on river and marine ecosystems. Companies can also contribute to achieving Target 8 through the appropriate use of agrochemicals and fertilizers in green spaces within business premises (the prevention of soil pollution and excess nutrients).

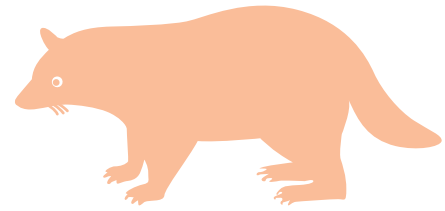
In fact, many companies are already contributing to achieving Target 8, because they have set stricter voluntary standards for the management of chemical substances in addition to complying with the environmental regulations set by national and local governments. It is also important to introduce advanced measures such as the use of end-of-pipe technologies⁷ which prevent hazardous substances generated within factories and business facilities from being released to the outside world. Your company can further contribute to achieving Target 8, through working on appropriate management from a global perspective, by for example implementing these measures in your business facilities and supply chains operating globally.

Examples of Actions

- The appropriate use and management of chemical substances in your business activities and product designing
- The appropriate management of effluent
- Controlling the emission of pollutants from factories by, for example, introducing end-of-pipe technologies
- The appropriate use of agrochemicals and chemical fertilizers in green spaces within your business premises (the prevention of soil pollution and excess nutrients)
- The use of agricultural products which were grown using environmentally-friendly farming methods⁸ in your company cafeteria

⁷ End-of-pipe technologies are pollution control technologies for the immobilization or neutralization of environmental pollutants emitted from production facilities.

⁸ Environmentally-friendly farming methods use fertilizers appropriately and manage livestock excreta properly.



【 Invasive alien species prevented and controlled 】

Aichi Biodiversity

By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

The Action Guidelines

Member companies will actively work on the eradication of invasive alien species, the prevention of the introduction of invasive alien species and awareness-raising activities about the problem, particularly in the transportation of their products, in the management of green spaces within their business premises and in their social actions, in order to prevent the impacts caused by invasive alien species.

(Explanation)

Invasive alien species refer to species which have been introduced to areas outside their original habitats and threatened biodiversity. They may threaten food security, human health and economic development, in addition to preying upon native species and competing with native species for food and habitats. Invasive alien species are a major threat to biodiversity and ecosystem services.

For example, it is important to use native species in green spaces within your business premises wherever possible and not to introduce alien species, in order to protect local ecosystems. Companies can also contribute to achieving Target 9 by preventing the introduction of alien species such as poisonous spiders, ants and plants (seeds) via packaging and pallets, and by selecting carriers which take measures to prevent the movement of organisms via ballast water⁹ from vessels.

Examples of Actions

- Eradicating invasive alien species in green spaces within your business premises or on land owned by your company, or in surrounding areas, and preventing the introduction of invasive alien species to these areas
- The use of native or local species in green spaces within your business premises and on land owned by your company
- Conducting surveys of and taking measures against the routes through which alien species are introduced, such as product packaging and pallets in product transportation
- The use of carriers which take measures to control alien species in ballast water in vessels
- Eradicating invasive alien species and preventing the introduction of invasive alien species in social actions such as afforestation and the clean-up of rivers

⁹ Ballast water is the water which is held in the bottom of vessels to act as ballast. The ballast water may contain alien species which can cause the destruction of ecosystems, if they are discharged into areas outside their original habitats.



Protected areas increased and improved



Aichi Biodiversity

By 2020, 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 and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

The Action Guidelines

Member companies will, wherever possible, conduct biodiversity-conscious green space management which contributes to protected areas within their business premises and on land owned by their companies, as well as conduct conservation activities in protected areas outside their company premises, in order to expand protected areas that are important for biodiversity.

(Explanation)

Protected areas play an important role in biodiversity conservation. The conservation of protected areas requires a lot of efforts after they have been set up, such as making considerations about the biodiversity in areas outside the protected areas (the surrounding environment) and ensuring connections between ecosystems in the protected areas and those in surrounding areas. Various efforts concerning protected areas are becoming increasingly active. These efforts include: the preparation for registering private protected areas (that are protected by citizens and companies through conservation agreements and action) with the list of the world's protected areas; the preparation of guidelines for improving management systems and legislation; and the creation of a list of well-managed protected areas (the IUCN Green List of Protected Areas).

Business premises can be considered as protected areas if, for example, they are contributing to the protection of living organisms and ecosystems within the premises and in surrounding areas as a result of switching from a conventional green space management method to a biodiversity-conscious method. Similarly, business premises will have equal functions as protected areas when the company takes measures to protect a rare species, if such a species has been found on the premises through an ecosystem survey. In such cases, it will be important to manage the premises while receiving advice from academic experts, experts from NGOs and local residents.

Your company can contribute to achieving Target 11, through biodiversity conservation activities or activities to protect living organisms and ecosystems within your business premises and on land owned by your company, as well as through social actions that support the conservation of specific protected areas outside your business premises.

Examples of Actions

- The management of green spaces within your business premises and on land owned by your company which aims to protect living organisms and ecosystems
- Surveys of rare species, etc.
- Conservation of areas inhabited by rare species
- Conservation activities based on agreements to conserve biodiversity priority areas
- Conservation activities in protected areas such as biodiversity-conscious afforestation



Ecosystems and essential services safeguarded

Aichi Biodiversity

By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

The Action Guidelines

Member companies will conduct activities for conserving and restoring ecosystems wherever possible, so that ecosystem services can be used sustainably.

(Explanation)

Ecosystem services are essential for people's lives and livelihoods, local communities, economic activities, etc. They include the supply of food, fiber, water, wood, etc., the purification of pollution, protection from natural disasters and the provision of places for recreation and relaxation. In business activities, the exhaustion of groundwater, which is an ecosystem service is an operational risk if the production activities use groundwater, such as at semiconductor plants. Therefore, it is important to protect ecosystem services so that they can be used sustainably as well as restoring, in order to ensure continuous business activities.

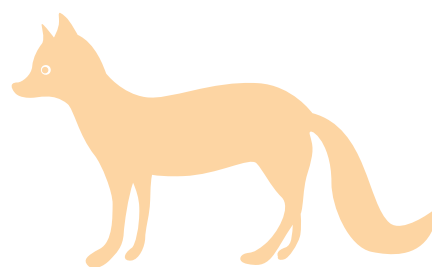
Your company can contribute to achieving Target 14 by, for example, recharging water and planting trees in areas that supply groundwater and wood, as well as by establishing green spaces that can be used by your employees and local residents to relax and enjoy recreational activities.

When conducting conservation activities in tropical areas, it is important to give consideration to the people who rely heavily on ecosystem services such as the poor and, indigenous people.

Examples of Actions

- Introducing PES (payment for ecosystem services)¹⁰ for ecosystem services such as groundwater recharge (provisioning services)
- Afforestation activities in catchment areas (provisioning services)
- The development of shelterbelts on seashore (regulating services)
- The provision of places for your employees and local residents to relax and enjoy recreational activities (cultural services)
- Social actions such as biodiversity-conscious afforestation and forest management (activities that give consideration to the needs of the poor, indigenous people, etc.) (all types of services)

¹⁰ PES (payment for ecosystem services) is a method of conserving ecosystems by paying for the ecosystem services or by paying the maintenance costs for the services.



【 Knowledge improved, shared and applied 】

Aichi Biodiversity

By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

The Action Guidelines

Member companies will work on the development and dissemination of monitoring technologies which use ICT as well as promote the accumulation of data through biodiversity monitoring wherever possible, in order to improve knowledge, the scientific base and technologies relating to biodiversity.

(Explanation)

In order to move biodiversity conservation efforts forward, new technologies relating to biodiversity need to be developed and monitoring methods need to be improved. The accumulation of scientific data is also an important international challenge. There is a need to improve our knowledge, scientific base and technologies relating to the values of biodiversity, its functioning, its status and trends, and the consequences of its loss.

Your company can contribute to achieving Target 19 by, for example, developing technologies that can be used for monitoring such as sensor technologies, analysis technologies and satellite monitoring technologies, as well as by publishing data obtained through ecosystem surveys in green spaces within your business premises and surrounding areas.

Examples of Actions

- The development of sensor technologies, analysis technologies, satellite monitoring technologies and other technologies that can be used for monitoring
- The development of a system which makes it easier to search and understand large volumes of biodiversity-related information
- Conducting ecosystem surveys in green spaces within your business premises, etc., and disclosing the resulting information
- The development and utilization of quantitative assessment (biodiversity impact assessment) methods



Annex

The Activities of the Biodiversity Working Group, the 4 Electrical and Electronic Industry Associations

The Biodiversity Working Group of the 4 Electrical and Electronic Associations* conducts various activities in order to promote biodiversity conservation activities by the electrical and electronic industries.

- * The 4 Electrical and Electronic Industry Associations
- JEMA : The Japan Electrical Manufacturers' Association
 - JEITA : Japan Electronics and Information Technology Industries Association
 - CIAJ : Communications and Information network Association of Japan
 - JBMA : Japan Business Machine and Information System Industries Association

The website on biodiversity conservation by the 4 Electrical and Electronic Industry Associations:
<http://www.jema-net.or.jp/English/businessfields/environment/biodiversity.html>

Biodiversity Conservation Case Studies

We have summarized the relationship between electrical and electronic business activities and biodiversity, for each product life-cycle stage, and compiled examples of various biodiversity conservation activities into one book. Please make use of the information when your company takes action for biodiversity conservation.

Biodiversity Conservation Case Studies (in English):
http://www.jema-net.or.jp/English/businessfields/environment/data/Biodiversity_Conservation_Casestudies.pdf

Let's Study Biodiversity (LSB): Japanese edition only

The Biodiversity Working Group of the 4 Electrical and Electronic Industry Associations developed an education and awareness-raising tool "Let's Study Biodiversity (LSB)".

We hope that the use of LSB will help company employees and stakeholders interested in biodiversity to deepen their understanding of the relationship between corporate activities and biodiversity, as well as help them to conduct biodiversity conservation activities. You can also use LSB as an educational tool in introductory biodiversity training sessions for your employees.

LSB is comprised of four chapters: "What Is Biodiversity?" "Trends of Biodiversity," "The Relationship between Companies and Biodiversity," and "Activities by the Electrical and Electronic Industries." It contains information such as the relationship between companies and biodiversity, particularly in the electrical and electronic industries, the risks and opportunities involved, as well as specific examples, in addition to basic knowledge on biodiversity. It comes in the form of Microsoft® PowerPoint® presentation, so that you can choose the slides needed in accordance with the usage and the type of audience.

Cooperative Project Endorsed by the Japan Committee for UNDB (UNDB-J)

The activities of the Biodiversity Working Group of the 4 Electrical and Electronic Industry Associations have been registered as part of the Double 20 Campaign (Nijyu-maru Project) which aims to achieve the Aichi Biodiversity Targets. The Working Group's activities have been rated highly and were recognized in 2014 and 2015 as a cooperative project endorsed by the Japan Committee for UNDB (UNDB-J).



This project is recognized as a cooperative project endorsed by the Japan Committee for UNDB (UNDB-J).

Double 20 Campaign (Nijyu-maru Project)

It is a campaign to promote activities that contribute to achieving the Aichi Biodiversity Targets. It networks activities across Japan and promotes them as one team, as well as disseminates information domestically and internationally from a citizens' standpoint. Citizen groups, companies, local governments, etc., declare that they will contribute to achieving the Aichi Biodiversity Targets through their actions ("Nijyu-maru declarations") and register to become part of the campaign.

<http://bd20.jp/en/>



This project is registered as part of the Double 20 Campaign (Nijyu-maru Project) which aims to achieve the Aichi Biodiversity Targets in Japan.

Guidelines for Action by the Electrical and Electronic Industries concerning Biodiversity Conservation

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The Japan
Electrical Manufacturers'
Association



Japan Electronics
and Information Technology
Industries Association



Communications
and Information network
Association of Japan



Japan Business Machine
and Information System
Industries Association
