



Challenge for the Mainstreaming of Biodiversity

by the 4 E&E Industry Associations in Japan

~ For the Change of E&E Industry ~

*E&E : Electrical and Electronic

The Biodiversity Working Group,
The 4 E&E Industry Associations

About the 4 E&E Industry Associations



The Japan Electrical Manufacturers' Association



Japan Electronics and Information Technology
Industries Association



Japan Business Machine and Information System
Industries Association



Communications and Information network
Association of Japan

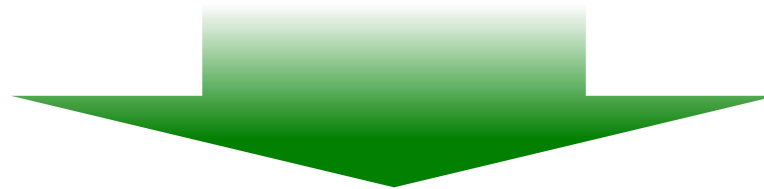
About 450 member companies

About the Biodiversity Working Group



□ Why the E&E industry address biodiversity?

- Could have wide range of influence on the supply chain
- Lead a change among companies worldwide by taking initiative



□ The Biodiversity Working Group of the 4 E&E Industry Associations

- Established in May 2011 to build up on the discussions features at COP10
- Promote and support biodiversity conservation activities to achieve the Aichi Target

WG member companies in 2016 fiscal year;

- | | | |
|--------------------------------|---|------------------------|
| ■ NEC Corporation/Chair person | ■ MEIDENSHA CORPORATION/Vice chair person | |
| ■ CASIO COMPUTER CO., LTD. | ■ ESPEC CORP. | ■ Fuji Xerox Co., Ltd. |
| ■ Hitachi, Ltd. | ■ Mitsubishi Electric Corporation | ■ NIKON CORPORATION |
| ■ Panasonic Corporation | ■ Sony Corporation | ■ TOSHIBA CORPORATION |
| ■ YASKAWA Electric Corporation | | |

Introduction of Activities and Output



2011	2012	2013	2014	2015	2016
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Ecosystem services which are received	Provisioning																		
	Regulating																		
	Cultural																		
Business activities																			
Impact on ecosystems	Change of habitat																		
	Climate change																		
	Overexploitation																		
	Alien species																		
	Pollution																		
	Reduction of use																		
Management risk																			
Opportunities																			
Contribution to ecosystems																			

Land use	R&D/design	Procurement of raw materials	Product Manufacturing	Transportation	Sales	Use	Recycling/disposal	Communication	Social contribution
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Introduction of Activities and Output



2011

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The relationship between the operational and administrative activities and indicators

The benefits of business (Outcome/Strategic)	Business activities		Management									
	Processing activities	Regulating activities	Land use	NEC/Design	Development of raw materials	Product manufacturing	Logistics and transportation	Waste	Energy	Water	Environment	Cultural institutions and life
Business activities	Processing activities	Regulating activities										
	Cultural activities	Other										
Plan of the Business	Business strategy											
	Business strategy											
	Business strategy											
	Business strategy											
	Business strategy											
	Business strategy											
Strategic system (Business Model) refers to reduce the effect on the environment (Change contribution) (Program management activities)	Business strategy											
	Business strategy											
	Business strategy											
	Business strategy											
	Business strategy											
	Business strategy											
Management Unit												
Operational Unit												
Support of manufacturing or business activities (Contribution by supporting activities)												

Example
(3)Over exploitation x
(E)Product manufacturing
Actions:

- Control the excessive usage of water resources.
- Appropriate handling and reusing of materials and usage of recyclable materials.

Introduction of Activities and Output



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Biodiversity Conservation Case Studies

Four E and E Industry Associations
Biodiversity WG

Biodiversity Conservation Case Studies (Second Edition)

March 2013

Four Electrical and Electronic Industry Associations Biodiversity WG

The Japan Electrical Manufacturers' Association
Communications and Information network Association of Japan
Japan Electronics and Information Technology Industries Association
Japan Business Machine and Information System Industries Association

Studies

are gathered as case studies.
zed into A-K as below.
the number at the top left) correspond to the category
ween the electrical and electronic industries and

o support biodiversity conservation)
ctory(plant))

ecosystem by products/services

ez))
Change of habitat

- 6. Pollution
- 6. Reduction of use

Four E and E Industry Associations
Biodiversity WG
Sharp Corporation

Global Initiatives from "Sharp Biodiversity Initiative" (2/2)

[Highlights]

- The "biodiversity check lists" based on "Sharp Biodiversity Initiative" has established unique evaluation criteria. Based on these evaluation criteria, the progress of each company in the group regarding the initiatives is regularly quantized.
- Featured initiatives collected in the assessment were collected in case-studies and publicized on the Japanese, English and Chinese Intranet, and sharing the good examples increased employee awareness.

(Practical use of good example
At the Kameyama factory, Japan, made into an initiative in the case study. English production base being in hal surrounding ecosystem, and work of biotope was started, and currently 70 species of life can be seen, such as the common skimmer or migratory locust. (Seihen Cottai)

[2010 edition]
Good Examples towards Biodiversity Conservation and Sustainable Use
Japanese (right), English (centre), Chinese (right)

[Next Step]
Assessment and feedback from all bases based on the "biodiversity check lists" are carried out this year, and through progress management at each company and hori developed good examples, sharp will continue to make such efforts at a deeper lev work hard to protect biodiversity around the world.
[Related URL] <http://www.sharp-world.com/corporate/ecoenvironment/biodiversity/>

Four E and E Industry Associations
Biodiversity WG
Sony Corporation

Green Star Program - Environmental assessment system for business activities - (1/3)

A, B-1, 4, 5, 6

[Outline]

- To achieve the ultimate goals of the 4 key perspectives (climate change, resource conservation, chemical substance management and the biodiversity conservation) of Sony's Road to Zero environment plan, each site's activities are evaluated comprehensively through quantitative and qualitative assessment criteria.
- Activities until 2015 focus on achieving Sony Group's Green Management 2015 mid-term environment targets. Assessment criteria comprised of numerical targets and countermeasures are developed, and activities for reducing environmental impacts are promoted while managing attainment levels.
- Level that shows the attainment of the mid-term targets is four stars. All sites are thus striving to earn a four-star rating by 2015.

Example of qualitative assessment criteria

Climate aspect	Hard aspect	Monitor energy use with appropriate monitoring system, introducing highly efficient systems and equipment.
Aspect	Monitor energy use and raise employee awareness.	
a	Reduce of generated waste, promote resource recovery and recycling, and ensure proper processing by waste companies.	
r	Monitor water use, raise conservation awareness and take steps to conserve water.	
es	Monitor handling amount, amount released and transferred, and replace with alternative substances.	
	Promote sustainable use of ecosystem services, and conduct land use management and greening activities.	

Four E and E Industry Associations
Biodiversity WG
Panasonic Corporation

Panasonic model project for biodiversity (1/2)

B-4, 5

[Highlights]

Panasonic has started model project of biodiversity at Moriguchi and Kadoma areas in Osaka, where our 12 business sites including the head office are located with various stakeholders. The project aims to enhance of ecological network that connects the Yodo first-class river running in the north of the areas and Tsurumi Green Park located to the south of the

Current status of green network at project area

4 approaches of the project

- Make a green area for varied life
- Recovery of region specific bio
- Scientific approach by monitor
- Collaboration with various regu stakeholders

Four E and E Industry Associations
Biodiversity WG
Toshiba Corporation

Planting changes at the manufacturing sites

B-4, 5

[Outline]

- "On-site planting is changed from garden species (attractive to humans) to regional endemic species (attractive to regional wildlife).

[Biodiversity Conservation Viewpoint]

- By changing to plants liked by the desired life (butterflies), a biotope will be gained in several years.

[Highlights]

- By grasping the on-site and surrounding flora and fauna, the desired target can be selected. For example, select the target focusing on butterflies.
- Consider endangered species as well as endemic flora and fauna.

Match the plants with the desired butterflies (example)

Plants	Butterflies
Ramie	Asian Admiral
Heracleum L.	Old World Swallowtail
Mugwort	Painted Lady

Target areas - Honshu, Shikoku, Kyushu

30Cases

Introduction of Activities and Output



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Let's Study Biodiversity! (LSB)

- Conservation of ecosystem services and biodiversity, the foundation of our lives and economy -

Impact Factors for Ecosystems and Reduction Actions, by Life Cycle

Land Use Pertaining to Business Sites

Changes in habitats owing to plant / business site construction (loss, contamination, etc.)

Emission of chemical substances into the water, air and soil

Disturbance of regional ecosystems due to the use of alien organisms, such as by planting

Desertion and inadequate management of company land

- Implementation of environmental assessments for the location of business sites

- Implementation of repair, recovery, restoration and compensation activities for the ecosystem before construction

- Management which takes biodiversity into consideration (use of native species, extermination of alien species, appropriate use of insecticides and chemical fertilizers, biotopes, etc.)

- Management in cooperation with the surrounding area (ecological networks, etc.)

(1) Awareness increased (2) Biodiversity values recognized (3) Incentives reformed (4) Sustainable consumption and production (5) Habitats lost, reduced or destroyed (6) Pollution reduced (7) Sustainable agriculture, aquaculture and forestry (8) Extinction prevented (9) Pressures on vulnerable ecosystems reduced (10) Protected areas increased and improved (11) Ecosystems restored and resilience enhanced (12) Knowledge improved, shared and applied (13) NBSAPs adopted (14) Ecosystems and essential services safeguarded (15) NBSAPs adapted (16) NBSAPs implemented (17) NBSAPs adapted (18) NBSAPs implemented (19) Knowledge improved, shared and applied (20) Knowledge improved, shared and applied

What is Biodiversity

- Higher-order consumers
- Primary consumers
- Producers
- Decomposers

- The current diversity of life is the result of the birth of life on Earth.
- As represented by the "food web", the relationship between various kinds of living organisms is a close balance.
- Biodiversity is an indicator of something which brings us a sense of well-being.
- All living organisms have their lives, they support each other.
- Biodiversity has 3 levels: genetic diversity, species diversity, and ecosystem diversity.

Diversity of ecosystems

There are various types of natural environments, such as forests, rivers, marshes and coral reefs

Diversity of species

There are various kinds of living organisms, from animals and plants to microorganisms such as bacteria

Diversity of genes

There is individuality of form and function even within the same species, through the possession of different genes

The Biodiversity Working Group,
The 4 Electrical and Electronic Industry Associations
September 2016

Provisioning services

Services which provide key resources for life, such as food, fuel, wood, fiber, water and chemicals

Regulating services

Services which control the environment, such as natural disaster control and water and air purification by forests

Cultural services

Services which form the basis for regulating and cultural services. The generation of oxygen by photosynthesis, the circulation of water...

Supporting services

Services which form the basis for regulating and cultural services. The generation of oxygen by photosynthesis, the circulation of water...

Source: United Nations Development Programme (UNDP)

Activities are established as a result of receiving the benefits in each stage of their life cycle. Activities have impacts on biodiversity.

Manufacturing → Distribution → Use → Collection/recycling/disposal

Benefits of the environment
Natural energy, raw materials (wood, etc.)

Impact on the environment
Greenhouse gases, emission into the air, discharge into the soil, etc.

Regulating services, Cultural services, Supporting services

Biodiversity

52Pages

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2011

2012

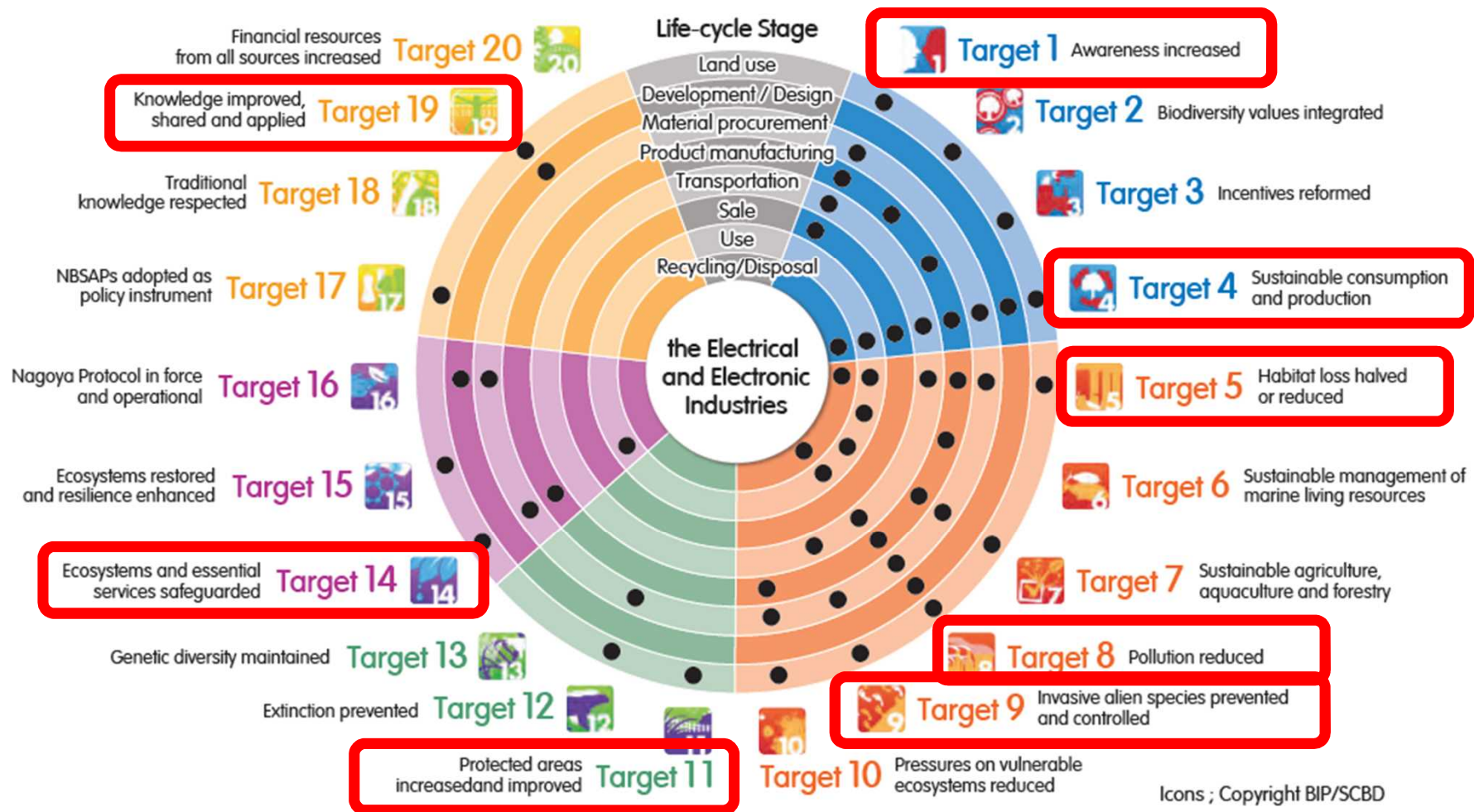
2013

2014

2015

2016

Relevance of the Biodiversity Conservation Activities by the E&E Industries to the Aichi Biodiversity Targets



8 Targets relevant to 4 E&E Conservation activities

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2012

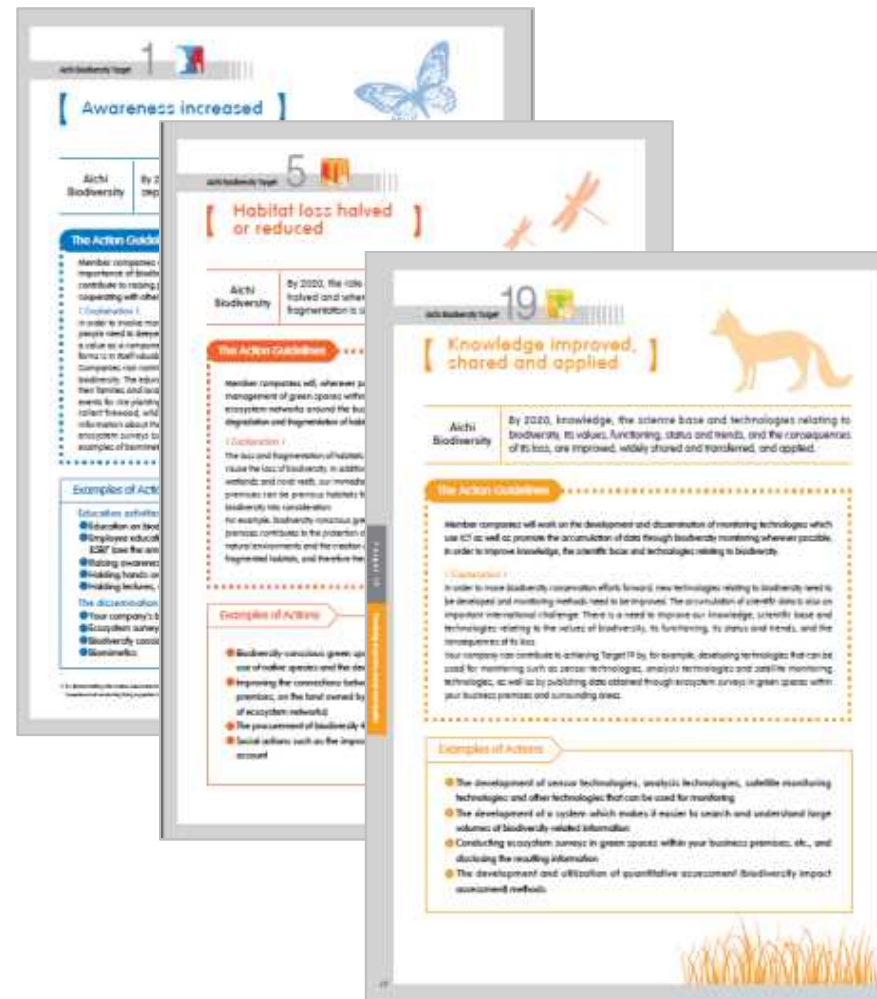
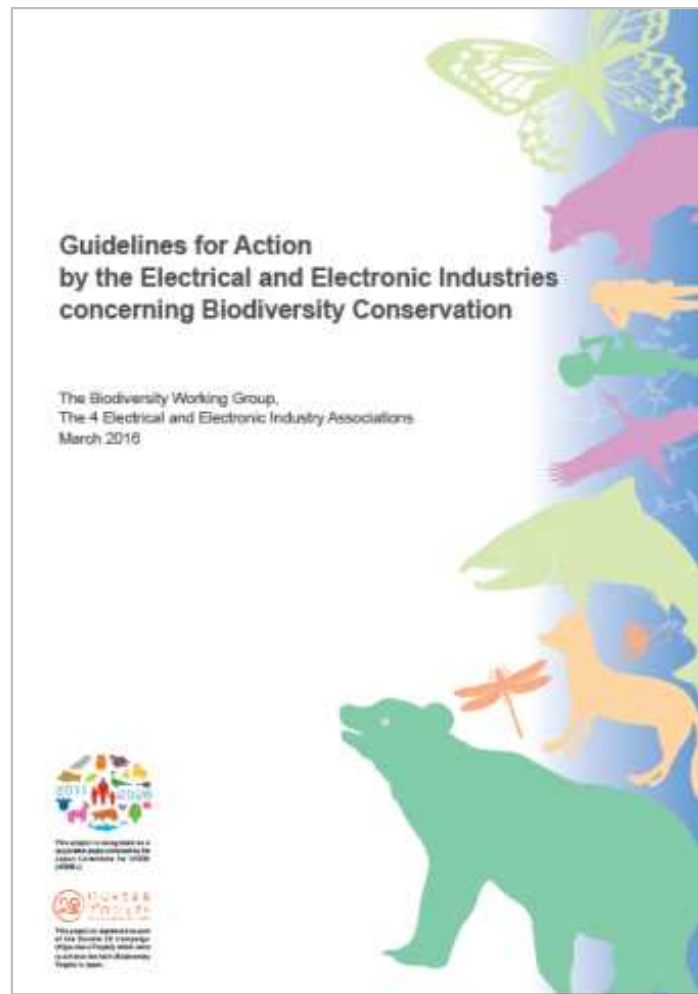
2013

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



Introduction of Activities and Output



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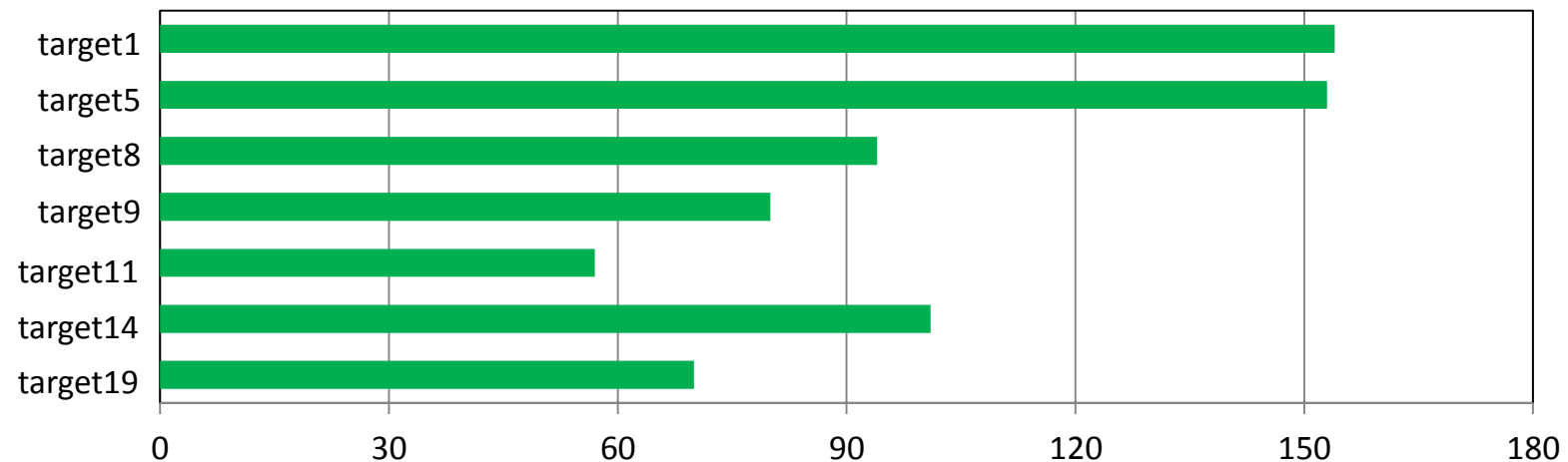
2015

2016

Promotion of 4 E&E guidelines through seminar



Start the activity progress monitoring by questionnaire to member companies, and understand the contribution to Aichi Targets



Introduction of Activities and Output



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Database of Biodiversity Conservation Activities (JP only)



生物多様性活動データベース

電機・電子4団体会員企業並びにグループ企業の生物多様性保全活動事例をご紹介します。
活動地域、愛知目標での検索や、フリーワードによる検索が可能です。

活動地域別検索 愛知目標別検索 あ1 テキスト検索

活動地域別検索

Map of Japan with checkboxes for various prefectures and regions. Active checkboxes include: 茨城県, 徳島県, 香川県, 愛媛県, 高知県, 徳島県, 香川県, 愛媛県, 高知県, 茨城県, 栃木県, 群馬県, 埼玉県, 千葉県, 東京都, 神奈川県, 三重県, 茨城県, 栃木県, 群馬県, 埼玉県, 千葉県, 東京都, 神奈川県, 三重県.

茨城県

and or

該当 3 件

検索

× 選択をクリア

2 件の活動が検索されました。

※LCS=ライフサイクルステージ：A.土地利用 B.研究開発 C.材料調達 D.製品製造 E.輸送 F.販売 G.使用 H.リサイクル・廃棄 I.社会貢献 J.教育

NO	画像	会社名 活動/プロジェクト名/ 詳細URL	概要	活動範囲	愛知 目標	LCS (※)
1		株式会社 ニコン 海岸林再生プロジェクト1 0 周年計画 URL	2011年3月に被災した宮城県名取市の海岸林の再生へ向け10年計画で取り組む「海岸林再生プロジェクト10周年計画」を支援しています。プロジェクトは地元の雇用も創出しながら、育苗、植林、育林までを一貫して行い、飛砂・飛塩・高潮等から農地や宅地を守る地域のインフラとして、生物多様性に配慮した海岸林の再生を目指しています。ニコンは、公益財団法人オイスカを通じての毎年の寄付のほか、活動報告写真展や撮影機材の提供、社員によるボランティア派遣などさまざまな面でこのプロジェクトに協力しています。	名取市	01,02,03,04,05,06,07,09,10,11,12,14,15,17,18,19	I
2		株式会社 ニコン 赤谷プロジェクト URL	約1万haの国有林「赤谷の森」(群馬県)で進む、生物多様性復元計画「赤谷プロジェクト」を支援しています。プロジェクトは、生態系保全管理のための梓組や生物多様性保全に資する科学的な地域環境管理計画の実現などに関する日本におけるモデル構築を目的としています。プロジェクト地では、公益財団法人日本自然保護協会を通じて双眼鏡・フィールドスコープ、カメラなど多くのニコンの機材が活用され、プロジェクトメンバーにより記録された写真は、調査・研究、環境教育、普及啓発などに役立てられています。	みなかみ町	01,03,05,07,11,12,14,15,19	I



2017

2018

2019

2020

The biodiversity WG will continue to

- act toward “mainstreaming” of biodiversity conservation activities in the E&E industry by 2020
- tackle common issues in cooperation with member companies

