

# The Environment

Related SDGs



## Basic Approach

The Lion Group believes it is our serious responsibility to provide our consumers with customer experience-based values in the areas of health, comfort and cleanliness, while protecting the global environment, which is the foundation of people's health and lifestyle, as a company aiming for "Becoming an advanced daily healthcare company."

Under the "Eco Vision 2020" environmental targets formulated in 2013, we are striving to realize a sustainable planet while addressing to achieve the 2020 target regarding Realization of Low Carbon Society, Realizing a Sound Material-Cycle Society, Harmonizing with Nature and Environmental Education.

Recently, with the background of the Paris Agreement in 2015 and the adoption of the SDGs, the movement towards a sustainable society in Japan and other countries has intensified.

Taking these trends into consideration, in 2019, Lion Group formulated the New Environmental Objectives: LION Eco Challenge 2050. In the future, our Group will take on the challenges of realizing the Decarbonized Society and the Resource-Circulating Society.



Every day. For the Earth. (Japanese)  
<https://www.lion.co.jp/ja/csr/ecolion/>

## Environmental Guidelines

Lion's Environmental Guidelines adhere to the spirit of the "Lion Group Charter for Corporate Behavior," which states: "We shall play a positive and active role in creating a sustainable society that harmonizes economic development and environmental protection." Lion's Environmental Guidelines are the foundation for our environmental activities.

## Environmental Guidelines

Lion will act voluntarily and proactively to reduce its environmental burden to the global environment in all processes of business activities from the development of products to the procurement of raw materials, production, distribution, sales, use by customers, as well as disposal. This will be done with due consideration to "realizing a low carbon society to prevent global warming," "realizing a sound material-cycle society with maximum usage of recycled resources" and "realizing a society harmonizing with nature to conserve people's health, natural ecosystems and biodiversity."

### 1. Aiming for a Sustainable Society

Promote an environmental management system, and through ongoing maintenance and improvement of that system, protect the global environment.

### 2. Complying with Legal and Other Requirements

Comply with the system of legislation, regulations and arrangements pertaining to environmental protection, and establish and implement voluntary standards of conduct.

### 3. Setting and Verifying Implementation of Environmental Objectives and Targets

Correctly understand the environmental impact of our corporate activities, and as far as technically and economically possible, establish objectives and targets for improvement, while at the same time formulating, implementing and regularly verifying the status of implementation of an environmental management program.

### 4. Developing Environment-Friendly Products

Continue aggressively with product development in tune with Lion's own "Lion eco-standards" and in light of life cycle assessments.

### 5. Reducing Environmental Impacts Together with Our Business Partners

Strive to reduce environmental burdens at all stages from purchase through provision of products to customers, in cooperation with suppliers of materials, outsourcing contractors, and sales companies.

### 6. Harmonizing with Nature

Conduct business activities while taking into account biodiversity and air and water environments, and proactively address natural environment protection activities.

### 7. Enhancing Environmental Protection Activities Based on Uniform Understanding of the Guidelines

Disseminate the Guidelines to all Lion employees, including those of its affiliated companies, raise awareness of environmental protection among them and bolster environmental management activities throughout the entire Lion Group.

### 8. Promoting Disclosure of Information

Seek to maintain and promote communication with stakeholders involved in Lion's businesses. These Environmental Guidelines are freely available to anyone upon request.

Revised January 1, 2013

## Environmental Management System and Environmental Management Structure

### • Environmental Management System

The purpose of the Lion Group's Environmental Management System is to identify, evaluate and remedy adverse impacts that our business activities, products and services have on the environment, and to improve our environmental protection activities on an on-going basis.

Systems for environmental management and reporting activities have been enhanced with the aim of responding to the environment globally. Data on overseas Group companies is available on our website.

[Data on the environmental burden of group companies' plants \(overseas\)](https://www.lion.co.jp/ja/csr/report/pdf/environment-management.pdf)  
<https://www.lion.co.jp/ja/csr/report/pdf/environment-management.pdf>

### Status of ISO 14001 Certification

Lion acquired ISO 14001 certification covering all its plants in July 2001. The certification was renewed to the latest 2015 version in June 2016, and the Japan Management Association Quality Assurance Registration Center (JMAQA) reviewed and verified that all our plants are operating in conformity with the requirements of the standards. Including the plants of group companies in and outside Japan, the Lion Group has been continuing to push ahead with its management systems and environmental conservation activities by obtaining ISO 14001 certifications and performing operations in compliance with ISO14001.

### • Environmental Management Structure

In order to make our business grow while reducing the impact on the global environment, in 2019, we consolidated the former "Environmental Conservation Committee" into the newly established "Sustainability Promotion Meeting". Its members consist of the Executive Officers, including the President, and the relevant divisions, they conduct deliberations on policy for responding to environmental problems and carry on monitoring the progress status.

### • Legal Compliance

In regard to the revisions of environmental laws and regulations, namely "the Act on the Rational Use of Energy", "the Act on Promotion of Global Warming Countermeasures", "the Act on Confirmation, etc. of Released Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof", "the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc." and "the Waste Disposal and Public Cleansing Act" information is collected from administrative agencies and industrial associations, and is then registered with an intranet system for information on chemicals-related laws to keep the related departments updated about latest developments.

We also established waste management regulations and other internal regulations to build up an appropriate management structure. There were no violations resulting in a fine or other penalty during 2018.

## Pollution Prevention

Lion also implements voluntary initiatives for reducing emissions of chemical substances, including nitrogen oxides (NOx), sulfur oxides (SOx), particulate matter, and volatile organic compounds (VOC). We also strive to reduce Chemical Oxygen Demand (COD) with improvements in the reliability of the waste water processing

[Data of environmental impacts of production sites in Japan \(Japanese\)](https://www.lion.co.jp/ja/csr/report/pdf/domestic.pdf)  
<https://www.lion.co.jp/ja/csr/report/pdf/domestic.pdf>

### \* PRTR system

A system to measure, compile, and publish emissions volume of chemical substances.

facilities through periodical maintenance.

Data on the management of chemical substances in compliance with the PRTR system\* is available on Lion's website. We will continue to enhance our efforts for proper notifications and management of emission volumes.

[Data of the amount of PRTR-Designated Substances released in production sites in Japan in 2018 \(Japanese\)](https://www.lion.co.jp/ja/csr/env/enhancement/pdf/prevention.pdf)  
<https://www.lion.co.jp/ja/csr/env/enhancement/pdf/prevention.pdf>

### Introduction of websites



[Together with the Global Environment \(Japanese\)](https://www.lion.co.jp/ja/csr/env/)  
<https://www.lion.co.jp/ja/csr/env/>



[Every day. For the Earth. \(Japanese\)](https://www.lion.co.jp/ja/csr/ecolion/#sec4)  
<https://www.lion.co.jp/ja/csr/ecolion/#sec4>

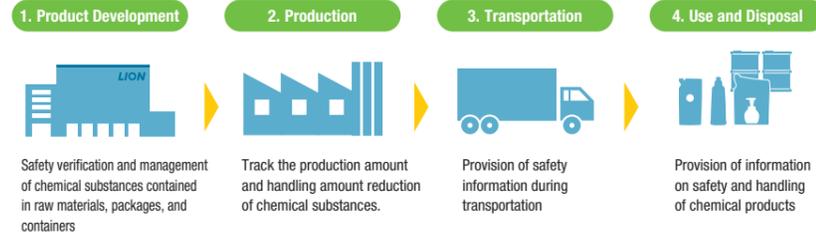
## Enhancing Group-wide Management of Chemical Substances

Chemical substances are indispensable for people to lead comfortable and fulfilling lives. Failure to properly manage chemical substances, however, can result in accidents that put human health and ecosystems at enormous risk. In addition to compliance with related laws and regulations, Lion strives to ensure strict management of chemical substances at all stages

from Product Development to use and disposal in accordance with our own independent standards. We have been operating a "Management System for Information on Chemical Substances" at Lion's research and development sites since 2018.

[www \[Chemical Substance Management\] \(Japanese\)](https://www.lion.co.jp/ja/csr/env/enhancement/)  
https://www.lion.co.jp/ja/csr/env/enhancement/

### ● Lion's Chemical Substance Management



## Lion Group Environmental Initiatives

### ● Performance in Phase 3 (2018) of Eco Vision 2020

"Eco Vision 2020" is being implemented in phases 3 of three years each over a nine-year period from 2012 to 2020. The first fiscal year of Phase 3 (2018-2020) is 2018. In advancing toward

the final fiscal year of 2020, all the employees of the Lion Group worked together to promote environmental initiatives.

### Description of Main Measures in 2018 for Key Categories (Greenhouse Gases, Water)

<p><b>CO<sub>2</sub></b> Greenhouse gas emissions from domestic business activities</p> <p><b>49% reduction</b> (Compared to 1990, emission intensity per unit total revenue)</p> <ul style="list-style-type: none"> <li>Integration of production facilities</li> <li>Implementation of energy-saving activities</li> </ul>	<p><b>CO<sub>2</sub></b> Greenhouse gas emissions from post-use productions in Japan</p> <p><b>53% reduction</b> (Compared to 1990, emission intensity per unit total revenue)</p> <ul style="list-style-type: none"> <li>Making products more compact, switching to plant-based ingredient</li> <li>Expanding sales of refill products</li> </ul>	<p><b>CO<sub>2</sub></b> Greenhouse gas emissions from overseas business activities</p> <p><b>2% reduction</b> (Compared to 2017, emission intensity per unit of production)</p> <ul style="list-style-type: none"> <li>Promoting energy-saving activities at each plant</li> </ul>
<p><b>Water</b> Water use in domestic business activities</p> <p><b>48% reduction</b> (Compared to 2000, emission intensity per unit total revenue)</p> <ul style="list-style-type: none"> <li>Promoting water-saving activities</li> </ul>	<p><b>Water</b> Recycle of factory waste water discharge Chiba Plant</p> <p>Recycling of waste water from production processes is in stable operation</p> 	

#### Column 1

At our Tokyo Office (in the Ryogoku district), visualization of electric power usage was an efficient power-saving measure, and Lion was awarded the fiscal year "2018 Kanto Bureau of Economy, Trade and Industry Director-General's Award for Excellence in Energy Management by a Business Operator".

In addition, among the "Osaka Stop Global Warming Award" sponsored by Osaka Prefecture, where the Osaka Factory (Kashiwa City) and the Osaka Office (Osaka City) are located, both sites were awarded the "Osaka Prefectural Governor's Award" for as a particularly excellent business operator in preventing global warming.



Kanto Bureau of Economy, Trade and Industry Director-General's Award for Excellence in Energy Management by a Business Operator



Osaka Stop Global Warming Awards  
Osaka Prefectural Governor's Award

Contributed SDGs 

### ● Achievements and Target Values in Phase 3 (2018) of Eco Vision 2020

Categories		Achievements in 2018	Target values for 2020
Realizing a Low Carbon Society	Greenhouse gases (domestic) Within the company	(1) Reduction of greenhouse gases from business activities Emission intensity per unit total revenue: 35% reduction (compared to 2010), 49% reduction (compared to 1990) Absolute quantity: 48% reduction (compared to 1990)	Emission intensity per unit total revenue: 34% reduction (compared to 2010), 49% reduction (compared to 1990) Absolute quantity: 40% reduction (compared to 1990)
	Greenhouse gases (domestic) Outside the company	(2) Reduction of greenhouse gases from post-use products Emission intensity per unit total revenue: 9% reduction (compared to 2010), 53% reduction (compared to 1990) Absolute quantity: 51% reduction (compared to 1990)	Emission intensity per unit total revenue: 9% reduction (compared to 2010), 53% reduction (compared to 1990) Absolute quantity: 41% reduction (compared to 1990)
	Greenhouse gases (overseas) Within the company	(3) Reduction of greenhouse gases from business activities overseas*1 Emission intensity per unit of production: 2% reduction (compared to 2017)	Emission intensity per unit of production: 1% reduction year-on-year
	Greenhouse gases (overseas) Outside the company	(4) Reduction of greenhouse gases from post-use products overseas Reduction of 52 thousand tons annually	Reduction of 100 thousand tons annually
Realizing a Sound Material-Cycle Society	Water Within the company	(5) Reduction of water use in business activities Water use per unit total revenue: 33% reduction (compared to 2010), 48% reduction (compared to 2000) Absolute quantity: 47% reduction (compared to 2000)	Water use per unit total revenue: 15% reduction (compared to 2010), 35% reduction (compared to 2000) Absolute quantity: 23% reduction (compared to 2000)
	Water Outside the company	(6) Reduction of water use at households using our products Water use per unit total revenue: 29% reduction (compared to 2010), 54% reduction (compared to 2000) Absolute quantity: 52% reduction (compared to 2000)	Water use per unit total revenue: 17% reduction (compared to 2010), 45% reduction (compared to 2000) Absolute quantity: 33% reduction (compared to 2000)
	Waste	(7) Zero emissions within the company*2 Continued zero emissions at all domestic sites*4	Zero emissions at all domestic sites*4
	Waste water	(8) Recycle of factory waste water discharge*3 Stable operation of recycling waste water from production processes at Chiba Plant	Recycle factory waste water discharge at multiple plants
Harmonizing with Nature	Procurement	(9) Procurement of plant-derived oils considering biodiversity Continuing purchases of RSPO <sup>®</sup> -certified palm oil derivatives	All palm oil derivatives purchased to be RSPO certified
	Biodiversity	(10) Enhancement of biodiversity conservation activities Carried out in all of Lion's plants, with implementation expanding at offices of Lion and its affiliate companies	Carry out at all domestic sites
Education	Awareness and Education in the Society	(11) Enhancement of environmental education for consumers 2.2 times increase in number of customers participating in educational activities (compared to 2010)	100% increase in number of customers participating in our educational activities (compared to 2010)

\*1 Target scope consists of our consolidated subsidiaries as of December 31, 2018.

\*2 Achieve a 99% or better recycling ratio for total waste generated. However, this excludes recycling residues.

\*3 Waste water from production processes

\*4 Chiba Plant, Odawara Plant, Osaka Plant, Akashi Plant, Hirai Office Site, Sapporo Office, Sendai Office, Headquarters/Tokyo Office, Nagoya Office, Osaka Office, Fukuoka Office, Lion Chemical Co., Ltd. Fine Chemical Production Site, Lion Chemical Co., Ltd. Oleochemical Production Site, Lion Specialty Chemicals Co., Ltd. Yokkaichi Production Site, Lion Specialty Chemicals Co., Ltd. Ono Production Site, Lion Packaging Co., Ltd. Fukushima Plant

\*5 Roundtable on Sustainable Palm Oil

## ● Realizing a Low Carbon Society / a Sound Material-Cycle Society

Lion has worked to reduce greenhouse gas emissions, as well as to recycle and effectively use resources, at each stage from raw material procurement to disposal. Detailed data is available on our website. We will promote activities toward realization of a low carbon society / a sound material-cycle society.

### Overview of Our Business Activities Toward Realization of a Low Carbon Society / a Sound Material-Cycle Society

	Procurement of Raw Materials, Packages, and Containers	Major Initiatives Undertaken by Lion	Use by consumers	Disposal by consumers
<b>Activities for realizing a low carbon society</b>	<ul style="list-style-type: none"> <li>Substituting plant-derived materials for petroleum resources → <a href="#">Related Information</a> Web (1)</li> <li>Reducing the use of petroleum resources with biomass-derived container materials</li> </ul>	<p><b>Plants</b></p> <ul style="list-style-type: none"> <li>Improving energy efficiency by reviewing production processes, introducing energy-saving equipment when upgrading facilities, and downsizing products → <a href="#">Related Information</a> p.35 Column 1</li> </ul> <p><b>Office/Facilities</b></p> <ul style="list-style-type: none"> <li>Company-wide energy-saving activities including at the Administrative/Sales Division and the R&amp;D/Engineering Division → <a href="#">Column 1</a></li> </ul> <p><b>Distribution after shipment</b></p> <ul style="list-style-type: none"> <li>Increasing the rate of modal shift during the transportation of products through such as shifting freight from truck to rail or ship → <a href="#">Column 2</a></li> <li>Improving logistics efficiency through means such as by increasing the transport loading rate → <a href="#">Related Information</a> Web (1)</li> </ul>	<ul style="list-style-type: none"> <li>Education to increase environmental awareness through products (an environmental label is attached to products that meet the "Lion eco-standard") → <a href="#">Related Information</a> p.54</li> <li>Reducing power consumption during the use of our power-saving products (decreasing the number of rinsing times when washing)</li> </ul>	<ul style="list-style-type: none"> <li>Substituting plant-derived materials for petroleum resources</li> <li>Promotion of 3Rs (refills, condensing of content to make products more compact, and development of containers, e.g., recycled PET (polyethylene terephthalate) bottles and containers with thin-wall molding) → <a href="#">Related Information</a> p.54, Web (2)</li> </ul>
<b>Activities for realizing a sound material-cycle society</b>	<ul style="list-style-type: none"> <li>Using plant-derived raw materials</li> <li>Using recycled materials</li> </ul>	<p><b>Plants</b></p> <ul style="list-style-type: none"> <li>Promoting zero emissions within the company</li> <li>Reducing water consumption by recycling waste water from production processes and utilizing rainwater → <a href="#">Related Information</a> Web (2)</li> </ul> <p><b>Offices/Facilities</b></p> <ul style="list-style-type: none"> <li>Promoting company-wide green purchases → <a href="#">Related Information</a> Web (2)</li> </ul>	<ul style="list-style-type: none"> <li>Education to increase environmental awareness through products (an environmental label is attached to products that meet the "Lion eco-standard") → <a href="#">Related Information</a> p.54</li> <li>Reducing water usage during the use of our water-saving products → <a href="#">Related Information</a> Web (2)</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of 3Rs (refills, condensing of content to make products more compact, and development of containers, e.g., recycled PET (polyethylene terephthalate) bottles and containers with thin-wall molding) → <a href="#">Related Information</a> p.54, Web (2)</li> <li>Promoting the Toothbrush Recycling Program → <a href="#">Related Information</a> Highlight (1) p.26</li> </ul>

Web (1) [Realizing a Low Carbon Society] (Japanese) [URL](https://www.lion.co.jp/ja/csr/env/climate/) https://www.lion.co.jp/ja/csr/env/climate/

Web (2) [Realizing a Sound Material-Cycle Society] (Japanese) [URL](https://www.lion.co.jp/ja/csr/env/resources/) https://www.lion.co.jp/ja/csr/env/resources/

#### Column 2

#### Joint Award from the Minister of Land, Infrastructure, Transport and Tourism Award to Three Companies Operating in Different Industries for their Joint Transport Operations

In recent years, the logistics industry has been facing serious social issues, including issues such as driver shortages, rising distribution costs and CO<sub>2</sub> emissions. Under these circumstances, three companies operating in different industries but who are facing the same issues collaborated and started a joint transport operation with modal shift using ferries in August 2018.

As a result of their measures, the number of empty cars utilized was reduced significantly, which raised the transportation efficiency ratio of total trips\*<sup>1</sup>, relieved drivers of the need for prolonged operation and thusly improved the work environment and contributed to the reduction of CO<sub>2</sub> emissions\*<sup>2</sup>. These activities resulted in commendation as outstanding operators at the "Green Logistics Partnership Conference of 2018," where the three companies were jointly awarded the Minister of Land, Infrastructure, Transport and Tourism Award.

At Lion, we will continue actively expanding our measures with corporations capable of acting as partners, regardless of their industry or area of business, and go on advancing the creation of a sustainable logistics network.



2018 Green Logistics Partnership Conference award ceremony



Contributed SDGs  
Impact: round-trip operations between regional centers located in Kanto and Kyushu.

\*<sup>1</sup> Achieved over 99% ratio of loading trips to total trips

\*<sup>2</sup> Achieved 62% reduction in CO<sub>2</sub> emissions

## ● Harmonizing with Nature

Lion has taken initiative in responding to the water-related environment issues such as eutrophication in lakes and floating bubbles in rivers which is linked to the use of detergents, through consideration for biodiversity conservation at each stage from raw material procurement to disposal. However, in order to receive the blessings of biodiversity into the future, it will be necessary for us to coordinate with local communities to focus on conservation of biodiversity and promote sustainable use of the resources. Additionally, it is important to promote a shift in lifestyle of consumers through products that take biodiversity into consideration, and to contribute to the realization of a society harmonizing with nature.

To this end, Lion will contribute to the development of a sustainable society through its businesses by ascertaining the natural resources used in business activities and the impact on biodiversity throughout the supply chain. Furthermore, our company will carry out biodiversity conservation activities that will lead to the expansion of opportunities and reduction of environmental risks. Also, by having each of our employees participate in activities to conserve biodiversity as part of our environmental education, we will spread awareness of biodiversity conservation to all our office sites.

### Overview of Our Business Activities that Take Biodiversity Conservation into Consideration

	Biodiversity on which Lion relies	Watershed* ecosystem in raw material origination sites	Watershed ecosystem where our plants are located	Watershed ecosystem where consumers reside	
		Procurement of Raw Materials, Packages, and Containers	Production	Use by consumers	
		Disposal by consumers			
<b>Key natural resources used by Lion</b>	<ul style="list-style-type: none"> <li>Plants used as raw materials (oil palms etc.)</li> <li>Wood which becomes raw materials for paper used in packaging</li> </ul>	<ul style="list-style-type: none"> <li>Cooling water and raw water for equipment cleaning etc., which are used in production sites</li> </ul>	<ul style="list-style-type: none"> <li>Service water at the time of using our products</li> </ul>	—	
<b>Possible major impact of our activities on biodiversity</b>	<ul style="list-style-type: none"> <li>Impact of palm oil growers on natural environments and local communities (impact on wildlife habitats caused by illegal logging of tropical forests)</li> <li>Damage to forest environments which are the source of raw materials for paper</li> </ul>	<ul style="list-style-type: none"> <li>Impact of underground water intake by production plants on surrounding natural environments and local communities</li> <li>Impact of waste water and exhaust gases from production plants on surrounding natural environments and local communities</li> <li>Impact of light and odors from production plants on surrounding natural environments and local communities</li> </ul>	<ul style="list-style-type: none"> <li>Impact of water intake by consumers on the surrounding natural environments and local communities</li> </ul>	<ul style="list-style-type: none"> <li>Impact of waste water and waste packaging materials generated by consumers on the surrounding natural environment and local communities</li> </ul>	
<b>Biodiversity conservation activities</b>	<b>Activities to reduce risks</b>	<ul style="list-style-type: none"> <li>Promotion of procurement of sustainable palm oils (participation in RSPO and purchase of RSPO-certified oils) → <a href="#">Related Information</a> p.49</li> <li>Promotion of forest conservation (use of third-party certified paper) → <a href="#">Related Information</a> p.49</li> </ul>	<ul style="list-style-type: none"> <li>Reduction of production plant wastes → <a href="#">Related Information</a> Web (2)</li> <li>Reduction of water consumption at plants → <a href="#">Related Information</a> Web (2)</li> <li>Conservation of rivers and other ecosystems by implementing purification technologies on discharged waste water</li> </ul>	<ul style="list-style-type: none"> <li>Development of water-saving products → <a href="#">Related Information</a> Web (2)</li> <li>Development of highly biodegradable detergents → <a href="#">Related Information</a> Web (2)</li> </ul>	<ul style="list-style-type: none"> <li>Surveying environmental impact of surfactants → <a href="#">Related Information</a> Web (3)</li> </ul>
	<b>Activities to expand opportunities</b>	—	<ul style="list-style-type: none"> <li>Conservation and monitoring of habitats on the watershed where production plants are located (Activities include protection of endangered loggerhead sea turtles, maintaining biotopes, removal of non-native species on beaches.) → <a href="#">Related Information</a> Web (4)</li> </ul>	<ul style="list-style-type: none"> <li>Educational activities for consideration of water and natural environments (activities include forest maintenance under the name of Lion Forest in Yamanashi, and water-related environmental research support through the Japan Society on Water Environment) → <a href="#">Related Information</a> p.55</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of 3Rs (refills, condensing of content to make products more compact, and development of containers, e.g., recycled PET (polyethylene terephthalate) bottles and containers with thin-wall molding) → <a href="#">Related Information</a> p.54, Web (2)</li> </ul>

\* Watershed: Ecosystems including forests, rivers, domestic woodlands (satoyama), tidal flats and beaches that are connected by water.

Web (3) [Harmonizing with Nature] (Japanese) [URL](https://www.lion.co.jp/ja/csr/env/biodiversity/) https://www.lion.co.jp/ja/csr/env/biodiversity/

Web (4) [Biodiversity Conservation Initiatives at Each Production Site] (Japanese) [URL](https://www.lion.co.jp/ja/csr/biodiversity/) https://www.lion.co.jp/ja/csr/biodiversity/