



## Environmental Management

Positioning environmental preservation as an important challenge in management, the Tokai Rika Group establishes an Environmental Action Plan that constitutes our mid- to long-term action plan every five years, and we are developing activities to achieve compatibility between Monozukuri and environmental preservation.

### Enhancing and promoting consolidated environmental management

In order to take action on global environmental challenges, the Tokai Rika Group has established environmental management systems, and is promoting concerted activities under organizational structures built in cooperation with our group companies and suppliers in Japan and overseas.

### Promotion system for environmental management

In the Tokai Rika Group, an environment committee has been organized in order to promote environmental activities systematically. On the basis of policies that are decided by the Company-wide Environment Committee, the Production Environment Committee, Product Environment Committee, Green Procurement Committee, and Domestic Group Companies and Facilities Environment Meeting roll out activities for committees and subcommittees in each company and region and are promoting continuous activities.

#### Production Environment Committee

The Production Environment Committee is promoting environmental initiatives related to production activities, such as CO<sub>2</sub> reduction and response to environmental regulations, in cooperation with regional environmental committees and subcommittees. In FY 2017, we compiled policies for introducing solar power generation, in order to expand the use of renewable energy.



Production Environment Committee meeting

#### Product Environment Committee

By understanding the regulatory trends and customer requirements in each country, the Product Environment Committee decides on compliance policies and reflects them in the product design in a planned manner. We address the target products through regulated substance projects, and check the progress through the committee.



Product Environment Committee meeting

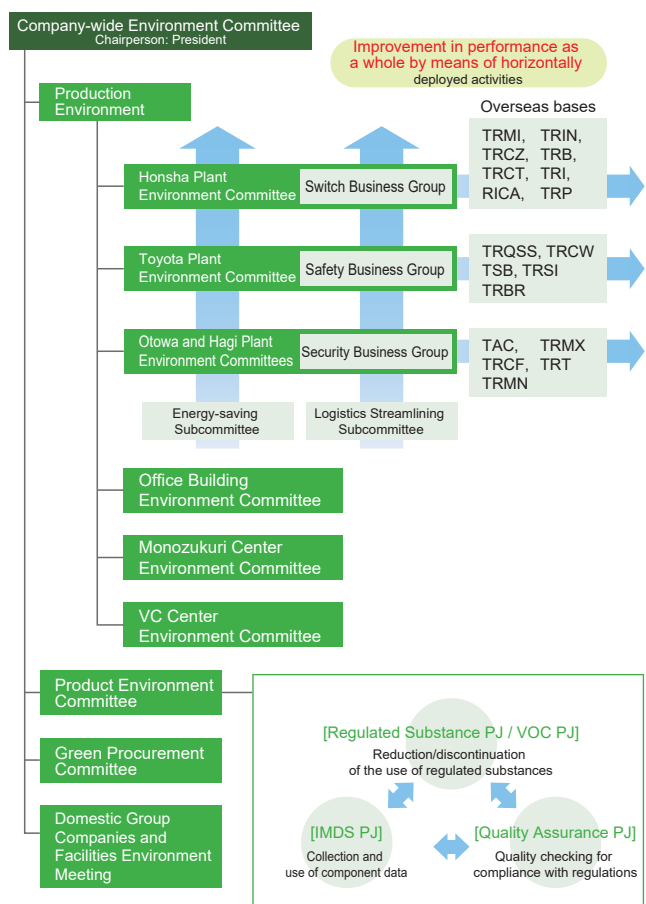
#### Domestic Group Companies and Facilities Environment Meeting

For the purpose of mutual improvement, we regularly hold meetings with the seven domestic group companies, through which we horizontally deploy example cases of improvements and problem countermeasures from each company, conduct energy-saving patrols, etc.



Rolling out an example case of improvement

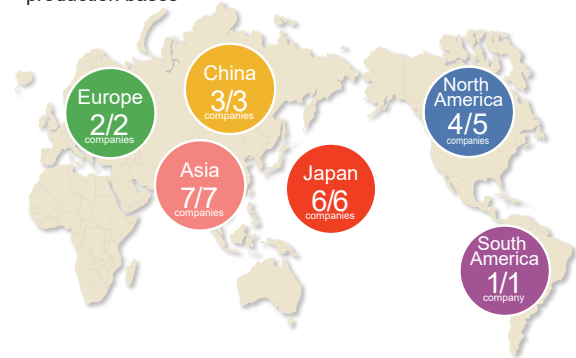
### Environmental promotion system



### Establishment and implementation of an environmental management system

In order to conduct planned environmental management, we are setting up environmental management systems in each base and acquiring external certifications. All overseas production bases apart from the newly established TRMX (Mexico) have acquired the ISO14001 certification. Furthermore, five of our domestic group companies have newly acquired the Eco Action 21 certification, and all production bases have acquired external certifications for environmental management systems.

### Situation regarding acquisition of EMS external certification at production bases



#### Topics

### "Environmental Contribution Award" received by TRP (Philippines)

TRP's improvements in use efficiency in order to eliminate waste regarding compressed air used in production and energy used in air conditioning were recognized, and the company was awarded the "Environmental Contribution Award" by Toyota Motor Philippines.



Environmental Contribution Award Ceremony (TMP Supplier General Meeting)

In order to put a stop to wasting energy, we have held a series of discussions by studying example cases of improvement that the Tokai Rika Group has implemented, and have been searching for feasible improvements. There were many difficulties to overcome before we achieved improvement, but we are extremely happy that our efforts have been recognized in this way.



Voice

TRP (Philippines) **Ben Montano**

### Environmental risk management

#### Response training for anticipated emergencies

We evaluate environmental risks with regard to equipment and work. And we have clarified how to respond to possible emergencies (such as drainage problems in semiconductor manufacturing processes that use harmful substances) by establishing emergency response procedures. We conduct periodic response training so that we will be able to respond quickly as described in the procedures in the event of an emergency. We conduct the training jointly with the relevant departments, confirming the roles and cooperation of each department.



Response training for the event of a drainage problem

#### Countermeasures against soil and underground water contamination

We are working on remediation of soil and underground water contamination caused by harmful substances such as trichloroethylene that were used in the past. At the former Nishibiwajima Plant, the soil was contaminated by hexavalent chromium, and the soil and underground water were contaminated by trichloroethylene and its decomposition products. We completed countermeasures in 2016, and are currently following up by monitoring underground water.

#### Soil contamination countermeasures at each plant

Name of business office	Status of countermeasures
Head Office / Plant	There is no soil / underground water contamination
Toyota Plant	Soil: There is contamination by fluorine, boron and hexavalent chromium. We are conducting scattering prevention using covers and periodic checks of underground water. Underground water: There is contamination by trichloroethylene and its decomposition products, and remediation pumping is ongoing.
Otowa Plant	Underground water: There is contamination by trichloroethylene and its decomposition products, and remediation pumping is ongoing.
Hagi Plant	There is no soil / underground water contamination

#### Storage status with regard to PCB (polychlorobiphenyl)

We are proceeding with the appropriate processing of PCB (polychlorobiphenyl), which has been designated as a prohibited substance. In FY 2017, the processing of two capacitors was completed. With regard to the luminaire ballasts and transformers that we currently own, we will proceed with the processing in a planned fashion. Until completion, we will continue to conduct appropriate management pursuant to the Act on Special Measures Concerning the Promotion of the Proper Treatment of PCB Waste, in order to ensure that outflow and soil contamination do not occur.

#### Storage status regarding PCB waste

Plant stored at	Capacitors (Qty)	Ballasts (Qty)	Transformers (Qty)	Switches (Qty)
Head Office / Plant	0	0	0	0
Toyota Plant	0	0	0	0
Otowa Plant	0	595	1	0
Hagi Plant	0	0	0	0

Environmental Management

Promotion of environmental activities in cooperation with business partners

In order to achieve improvements regarding environmental issues, such as reduction of environmental loads throughout the life cycle and reduction of environmental risks in order to build stable production systems, we share information with suppliers and roll out cooperative activities.

Cooperative activities with suppliers

Study activities using the Genchi-Genbutsu method

In order to improve the levels of both Tokai Rika and our suppliers, we have been conducting study activities using the Genchi-Genbutsu ("actual place and actual thing") method on a continuous basis since FY 2015. In FY 2017, we visited 10 suppliers and used the Genchi-Genbutsu method to check and study about compliance with environment-related laws, support for waste management and ways to make energy-saving improvements, and were able to successfully link this to reduction of environmental risks.



Studying using the Genchi-Genbutsu method

Activities of Tokai Rika Kyouryoku-kai

We have organized Kyouryoku-kai together with 51 suppliers, and are rolling out cooperative activities through it. At a meeting held every other month, we share information about revisions to environment-related laws and regulations and things like example cases of energy-saving improvements, environmental problems and near-miss incidents, and promote environmental activities while cooperating with suppliers.

Green Procurement Guidelines

We believe that in order to provide products that have less environmental load, the whole of the supply chain needs to construct a cooperative system and respond to the issue together. At Tokai Rika, we have established the "Green Procurement Guidelines" so that everyone will understand our way of thinking with regard to environmental preservation, and we have been pressing forward with environmental management that also includes the suppliers.



Green Procurement Guidelines

Improvement of the urban air environment in each country and region

In order to reduce the impact of automobile gas emissions to the air, which is the main cause of urban air pollution, we are proceeding with a changeover to low-emission company cars.

Introduction status of low-emission vehicles

Head Office, plants, others	Total number of company cars (vehicles)	Number of introduced HVs and FCVs (vehicles)	Low-emission vehicle introduction rate (%)
Head Office / Plant	133	72	54.1%
Toyota Plant	15	9	60.0%
Otowa and Hagi Plants	41	8	19.5%
Others	6	3	50.0%
Total	195	92	47.2%

Target for FY 2017

42%



Actual result for FY 2017

47.2%

## Enhancing global employee education / enlightenment activities

In order to create a culture where each and every one of our employees works on environmental preservation as "their own problem," we are nurturing highly environmentally-aware and skilled employees through environmental education and enlightenment activities.

### Environmental education

We conduct employee education for acquiring the necessary environmental knowledge in each workplace through systematic programs that correspond to the rank of the recipients and the details of the workplace, such as education for new employees, education on compliance with environment-related laws, and passing on of improvement know-how at energy-saving dojos. Furthermore, in order to operate environmental management systems on a continuous basis, we provide ISO education for internal auditors and employees responsible for environmentally important facilities.

### Enlightenment activities during Environment Month

During the Environment Month of June, we carry out a variety of events each year, in order to make it a good opportunity for employees to think of the environment as being a matter that is close to home. In FY 2017, we held environment lectures, created green walls, and distributed environment crossword puzzles and the Environment Month Magazine, through which our employees can enjoy learning about the environment together with their families. Also, each department plans and implement initiatives tailored to suit their workplaces, such as energy-saving patrols and conducting environmental KYT.

### Environmental education system

#### Education categorized by rank

Education for newly appointed managers
Education for overseas environment key persons
Acquisition of environment-related qualifications
Education for new employees
Energy-saving dojo education
Education on compliance with environment-related laws



Education for new employees

#### ISO education

Education for newly-appointed personnel in the environment secretariat
Skills improvement education for internal auditors
Education for registration as an internal auditor
Education for employees who handle environmentally important equipment
General employee education



Energy-saving dojo (education for overseas environment key persons)



Environment Month Magazine



Environment crossword puzzle

### Topics

#### Environment lectures

During Environment Month, we invite external lecturers and hold environment lectures every year. In FY 2017, we invited Professor Junko Edahiro from Tokyo City University as a lecturer, and held a lecture with the theme "For a sustainable society - Global trends and expectations for Japanese companies -." We furthered understanding of the situation that surrounds companies, such as the movement toward decarbonization and the expansion of ESG investment (which are accelerating globally), and successfully made it an opportunity to share with many employees, as well as the management echelons, matters that we must consider when we address environmental problems as our corporate responsibility in the future.



Environment lecture



Lecturer Junko Edahiro

Environment Month is a valuable opportunity for all employees to think about the environment. We plan events with a focus on making it easy to understand and learn using familiar environmental issues, in order to capture the interest of as many people as possible. We get feedback from participants saying that they would like to participate again next year, and I feel rewarded by my work every year.



Production Facilities & Environment Division  
Fuka Yokoyama

Voice

Environmental Management

Environmental accounting

At Tokai Rika, we ascertain the investments/expenses involved in environmental preservation and their effects, and use them as guidelines to advance environmental preservation activities more practically. The costs for environmental preservation in FY 2017 were an investment of 133 million yen, an expense of 1,575 million yen, and an economic effect of 1,289 million yen.

Way of thinking with regard to environmental accounting

We ascertain and add up environment costs on a payment basis. Therefore, we understand capital investments as investment amounts, and do not record depreciation costs. With regard to items that are implemented together for purposes other than the environment, we record the figures by means of proportional division. With regard to economic effects that accompany environmental preservation activities, we add up the figures under three items through which we are able to soundly understand the amount of the costs for each fiscal year.

Environmental preservation costs

Unit: million yen

Details of main activities	FY 2016		FY 2017		
	Investment	Expenses	Investment	Expenses	
In-business-area costs	Costs for pollution prevention Costs for prevention of pollution (air, water, noise, etc.)	24	262	1	264
	Costs for global environmental preservation Costs required for global warming prevention	59	516	133	464
	Resource circulation costs Costs for disposal, reduction and recycling of waste materials	0	164	0	165
Up/downstream costs	Difference arising from purchasing products, fuels, materials, etc. with less environmental load	0	23	0	23
Management activity costs	Costs for construction/operation of an environmental management system, monitoring of environmental loads and nature conservation/greening accompanying business activities	6	223	0	177
Research and development costs	Costs required for the research and development for products, etc. that contribute to environmental preservation	0	456	0	424
Social activity costs	Costs for measures to improve environments such as nature conservation, greening and beautification, excluding with regard to offices	0	21	0	40
Environmental damage costs	Costs for remediation of environmental pollution, insurance premiums for environmental damage, etc.	0	19	0	18
<b>Total</b>		<b>89</b>	<b>1,684</b>	<b>133</b>	<b>1,575</b>
		<b>1,773</b>		<b>1,709</b>	

Economic effect

Unit: million yen

Items	FY 2016	FY 2017
Sales amount for recycled materials	963	1,193
Cost reduction from energy saving	34	96
Waste disposal cost reduction	14	0
<b>Total</b>	<b>1,011</b>	<b>1,289</b>

Effects in terms of quantities

Items	FY 2016	FY 2017
Energy saving effects (t-CO <sub>2</sub> )	879	2,533
Amount of recycled materials sold (t)	8,399	9,459
Waste disposal amount compared to the previous year (t)	124	(49)

Input resources and emission to environment in business activities

We are trying to reduce the environmental load by understanding the whole picture regarding the energy and resources that are used in business activities and the discharge from our business offices, such as CO<sub>2</sub> and waste.

