Toyota Boshoku'2050 Environmental Vision'and'2020 Environmental Action Plan'

In order to set specific action plans to achieve Toyota Boshoku'2050 Environmental Vision', actions to be taken in the five years from FY2016 to FY2020 have been planned in'2020 Environmental Action Plan'. In the five years to 2020, we will accelerate our activities for three priority areas we set in the 2015 Environmental Action Plan, i.e., 'establishment of low carbon society', 'the establishment of recycling-based society' and 'the establishment of symbiotic society', to tackle critical environmental issues incl. climate change, water scarcity, resource depletion and crisis of biodiversity. We work together with all the like-minded stakeholders to realise sustainable global environment.

Relations between '2050 Environmental Vision' and '2020 Environmental Action Plan'

Category	2050 Environmental Vision [6 Environmental Challenge Targets]	No. 2020 Environmental Action Plan
Establishment of Low Carbon Society (Climate Change, CO ₂)	Challenge of achieving zero CO ₂ emissions in Toyota Boshoku group	 Promote the development of innovative production technology with low CO₂ emissions
		 Promote the use of renewable energy suitable for individual countries and regions
		3 Study the possibility of utilizing the next generation energy within the company, and define the mid- to long-term outlook for the utilization of such energy
	Challenge of achieving zero CO ₂ emissions in the lifecycle	4 Minimize the CO ₂ emissions in daily production activities
		5 Product development that contribute to top-level fuel efficiency
		6 Promote product development to support the next generation automobiles
		7 Develop and commer c ial ize product s using plant- based materials
		8 Reduce CO ₂ emissions through the pursuit of efficient logistics activities
		9 Reduce the amount of water used in production activities
Establishment of Recycling-based Society (Water & Resources)	Challenge of achieving zero wastewater in Toyota Boshoku group production processes by water recycling	 Reduce the use of depleting natural resources through the utilization of plant-based materials
		11 Reduce the amount of waste generated in production activities & Promote the effective use of resources
	Challenge of minimizing natural resources usage	12 Reduce the amount of packaging materials used in logistics activities and effective use of resources
	5 Challenge of minimizing wastes produced by Toyota Boshoku group	13 Promote the environmental social contribution through forest-making activities/forest conservation activities
		14 Promote the reinforcement of the consolidated environmental management
Establishment of Symbiotic Society (Biodiversity)	6 Challenge of planting 1.32 million trees as part of afforestation activities	15 Strengthen the chemical substance management system
Environmental Management	Environmental Management	16 Reduce the VOC emissions from production activities
		17 Promote environmental activities in collaboration with business partners (suppliers)
		18 Promote the environmental management in product development
		19 Strengthen the environmental education to pass the environmental conservation activities on to the future generations
		20 Enhance the communication with stakeholders through active disclosure of environmental information

2050 Environmental Vision



Development of Toyota Boshoku '2050 Environmental Vision'

Toyota Boshoku traces its roots back to the spinning and weaving business founded by Sakichi Toyoda in 1918, and have evolved into an automotive parts manufacturer of Toyota Group, developing and producing seats, interior/exterior and unit components globally.





We will work together with all the stakeholders with an aim of creating sustainable global environment where children can lead their lives with smile



Vision

Climate Change



Challenge of achieving zero CO₂ emissions in Toyota Boshoku group

Abnormal weather conditions have frequently been experienced in many parts of the world. There is a report*1 that says'the global average temperature is likely to rise by 2.6-4.8 °C by 2100 from pre-industrial levels'. Toyota Boshoku group will take on the challenge of achieving zero CO_2 emissions from all of our plants by 2050'. We will strive to reduce CO_2 emissions significantly through the development of innovative production technology, the development of plants and the utilization of renewable/ next generation energy.

* 1 Fifth Assessment Report, IPPC, 2014



Instead of focusing only on the reduction of CO₂ emissions during our auto parts production process, Toyota Boshoku will take on the challenge of 'achieving zero CO₂ emissions'in all stages of product life cycle from production to use, disposal and recycling of products. We will strive to produce'clean products'and offer eco-friendly interior products through the production of materials with low CO₂ emissions, the development of heat-insulating interior materials and highly efficient filter power train parts and the promotion of manufacturing process with the minimum CO₂ emissions.

Water Scarcity



Challenge of achieving zero wastewater in Toyota Boshoku group production processes by water recycling

It is expected that the number of people suffering from water scarcity and water stress*2 will reach 4 billion by 2050 due to the climate change and the surge in global population (7.2 billion in 2013 \Rightarrow 9.7 billion in 2050). Toyota Boshoku currently uses water in product cleaning and painting processes. Moving forward, however, we will take on the challenge of achieving zero wastewater in Toyota Boshoku group production processes by water recycling 'through the establishment of a circulation system by replacing the existing processes with water-less process, purfying and recycling wastewater as well as using rainwater.

*2 Water consumption/Potential river water consumption =1: High water stress

Resource Depletion



Challenge of minimizing natural resources usage

If the surge in demand and the massive extraction of resources continue along with the increase of global population, they will exceed the current reserves of many of the resources incl. fossil fuels and minerals by 2050*3. Toyota Boshoku group will take on the challenge of minimizing natural resources usage 'through the promotion of readily disassemblable and recyclable design, the development of recycling technologies to realise a material cycle and the replacement of materials with a wider range of plant-based materials.

*3 World to face resource-constraints by 2050, National Institute for Materials Science, 2007



Challenge of minimizing wastes produced by Toyota Boshoku group

Toyota Boshoku has vigorously driven the 3R activities (Reduce: To reduce the amount of wastes, Reuse: To use repeatedly, Recycle: To recycle disposed materials as useful resources), and has achieved zero direct landfill waste*4 since 2007. Moving forward, we will take on the challenge of minimizing wastes produced by Toyota Boshoku group'by expanding the activities globally and embarking on various efforts incl. the design and method development enabling efficient use of resources, the development of recycling technologies and 100% material recycling (To make parts from parts).

 $^{\ast}4$ Toyota Boshoku defines zero direct landfill wastes as the ratio of

Biodiversity Crisis



Challenge of planting 1.32 million trees as part of afforestation activities

Our life and culture have been supported by benefits brought by biodiversity. However, the world is now losing 13,000.000 ha of forests*5 every year, which is equivalent to about a third of Japan's land. Toyota Boshoku will take on the challenge of planting 1.32 million trees as part of afforestation activities'by harnessing its group network to contribute to the habitat conservation for endemic species in individual regions and countries, the protection of forests and the restoration of abundant habitat.

*5 Global Forest Resources Assessment 2010: FRA 2010, Food and Agriculture Organization of the United Nations (FAO)