Fundamental Approach Toward the Environment GRI 102-16, 103-2

In order to contribute to the sustainable development of society and the world through its business activities while cooperating with global society, Toyota has been conducting continuous environmental initiatives since the 1960s. We aim to build a corporate group that is admired and trusted by society through ensuring that all employees, including those at consolidated subsidiaries, recognize our sustainable policies.
In the area of environment, we established the Toyota Earth Charter in 1992 (revised in 2000). Based on this, we formulated our long-term initiatives for the global environment by 2050 as the Toyota Environmental Challenge 2050, in 2015, when the Paris Agreement was adopted at COP 21*. We are advancing various initiatives centered on this.

* The 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change

Vision & Philosophy Toyota Environmental Challenge 2050 p. 11

Toyota Earth Charter

I. Basic Policy

1. **Contribution toward a prosperous 21st century society**
   Contribute toward a prosperous 21st century society. Aim for growth that is in harmony with the environment and set as a challenge the achievement of zero emissions throughout all areas of business activities.
2. **Pursuit of environmental technologies**
   Pursue all possible environmental technologies, developing and establishing new technologies to enable the environment and economy to coexist harmoniously.
3. **Voluntary actions**
   Develop a voluntary improvement plan, based on thorough preventive measures and compliance with laws, which addresses environmental issues on the global, national and regional scales and undertake continuous implementation.
4. **Working in cooperation with society**
   Build close and cooperative relationships with a wide spectrum of individuals and organizations involved in environmental preservation, including governments, local municipalities, affiliated companies and industries.

II. Action Guidelines

1. **Always be concerned about the environment**
   Take on the challenge of achieving zero emissions at all stages, i.e., production, utilization and disposal.
   (1) Develop and provide products with top-level environmental performance
   (2) Pursue production activities that do not generate waste
   (3) Implement thorough preventive measures
   (4) Promote businesses that contribute toward environmental improvement
2. **Business partners are partners in creating a better environment**
   Cooperate with affiliated companies.
3. **As a member of society**
   Actively participate in social actions.
   (1) Participate in the creation of a recycling-based society
   (2) Support government environmental policies
   (3) Contribute to non-profit activities
4. **Toward better understanding**
   Actively disclose information and promote environmental awareness.

III. Organization in Charge

Promotion by the Sustainability Meeting which consists of top management

<Toyota's Commitment>

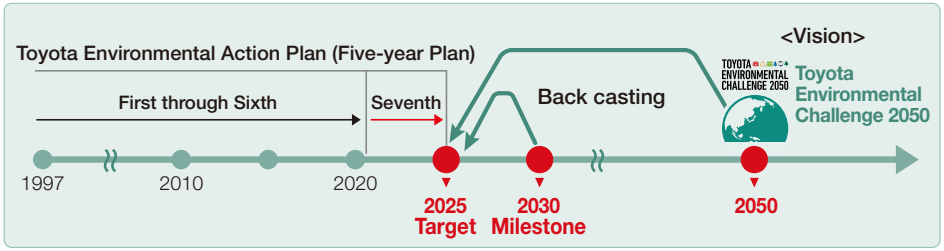
Toyota Environmental Challenge 2050

TOYOTA ENVIRONMENTAL CHALLENGE 2050 | TCFD Strategies a | GRI 102-11

Six Challenges

Toyota has been continuously following trends and customers' opinions and considering what issues should be focused, and working on environmental issues with new ideas and technologies in anticipation of future issues. However, global environmental issues such as climate change, water shortages, resource depletion and loss of biodiversity are continuing to grow and increase in seriousness every day.
We formulated the Toyota Environmental Challenge 2050 in October 2015 and the 2030 Milestone in 2018 so that each one of us can face these issues and continue to tackle challenges from a long-term perspective of the world 20 and 30 years ahead. Also, in 2020 we set the 2025 Target as the most recent target of the Toyota Environmental Action Plan, a five-year plan for achieving this. By establishing a medium- to long-term vision and implementing specific measures back cast from the vision in collaboration with global consolidated subsidiaries and business partners around the world, we are pursuing the development of a sustainable society.

Structure of Toyota's Environmental Strategies



Achieve Zero CO_2 Emissions

Life Cycle Zero CO_2 Emissions Challenge

Challenge CO_2 0

Completely eliminate all CO_2 emissions throughout the entire vehicle life cycle

Contribution to SDGs

New Vehicle Zero CO_2 Emissions Challenge

Challenge CO_2 0

Reduce global[1] average CO_2 emissions (TtW[2]) from new vehicles by 90 percent compared to Toyota's 2010 levels by 2050

Contribution to SDGs

Plant Zero CO_2 Emissions Challenge

Challenge CO_2 0

Achieve zero CO_2 emissions at global plants by 2050

Contribution to SDGs

Achieve a Net Positive Environmental Impact

Challenge of Minimizing and Optimizing Water Usage

Challenge

Minimize water usage and implement water discharge management according to individual local conditions

Contribution to SDGs

Challenge of Establishing a Recycling-based Society and Systems

Challenge

Promote global deployment of End-of-life vehicle treatment and recycling technologies and systems developed in Japan

Contribution to SDGs

Challenge of Establishing a Future Society in Harmony with Nature

Challenge

Connect the reach of nature conservation activities among communities, with the world, to the future

Contribution to SDGs

1 Countries & Regions: Japan, U.S., Europe, China, Canada, Brazil, Saudi Arabia, India, Australia, Taiwan, Thailand and Indonesia
2 Tank to Wheel: CO_2 emissions during driving (CO_2 emissions during the production stage of the fuel and electricity are not included; TtW emissions are zero in the case of battery electric vehicles and fuel cell electric vehicles)

2030 Milestone

TCFD | Metrics and Targets a & c GRI | 103-2, 103-3

The 2030 Milestone formulated in 2018 indicates how the six challenges will be as of 2030.
Steady action is being taken while confirming progress each year along with the Toyota Environmental Action Plan that sets the specific targets for every five-year period.

Toyota Environmental Challenge 2050	2030 Milestone
Challenge Life Cycle Zero CO_2 Emissions Challenge	• **Reduce CO_2 emissions by 25 percent or more throughout the entire vehicle life cycle compared to 2013 levels by promoting activities for the milestones of New Vehicle Zero CO_2 Emissions Challenge and Plant Zero CO_2 Emissions Challenge, and with support from stakeholders such as suppliers, energy providers, infrastructure developers, governments and customers**
Challenge New Vehicle Zero CO_2 Emissions Challenge	• **The estimate of global[1] average CO_2 emissions reduction (TtW[2] g/km) from new vehicles will be 35 percent or more, which may vary depending on market conditions, compared to 2010 levels.** 1 Countries & Regions: Japan, U.S., Europe, China, Canada, Brazil, Saudi Arabia, India, Australia, Taiwan, Thailand and Indonesia 2 Tank to Wheel: CO_2 emissions during driving (CO_2 emissions during the production stage of the fuel and electricity are not included; TtW emissions are zero in the case of battery electric vehicles and fuel cell electric vehicles)
Challenge Plant Zero CO_2 Emissions Challenge	• **Reduce CO_2 emissions from global plants by 35 percent compared to 2013 levels**
Challenge Challenge of Minimizing and Optimizing Water Usage	• **Implement measures, on a priority basis, in the regions where the water environment is considered to have a large impact** **<Water quantity> Complete measures at the 4 Challenge-focused plants in North America, Asia and South Africa** **<Water quality> Complete impact assessments and measures at all of the 22 plants where used water is discharged directly to river in North America, Asia and Europe** • **Disclose information appropriately and communicate actively with local communities and suppliers**
Challenge Challenge of Establishing a Recycling-based Society and Systems	• **Complete establishment of battery collection and recycling systems globally** • **Complete setup of 30 model facilities for appropriate treatment and recycling of End-of-life vehicles**
Challenge Challenge of Establishing a Future Society in Harmony with Nature	• **Realize "Plant in Harmony with Nature"—12 in Japan and 7 in other regions—as well as implement activities promoting harmony with nature in all regions where Toyota is based in collaboration with local communities and companies** • **Contribute to biodiversity conservation activities in collaboration with NGOs and others** • **Expand initiatives both in-house and outside to foster environmentally conscious persons responsible for the future**

<Toyota's Commitment>

Seventh Toyota Environmental Action Plan—2025 Target

TCFD Metrics and Targets a | GRI 103-2 | 2025 Target-Seventh Toyota Environmental Action Plan

In 2020, Toyota formulated the Seventh Toyota Environmental Action Plan—2025 Target, a five-year action plan to achieve the Toyota Environmental Challenge 2050. Under this target, we are accelerating environmental initiatives and aiming to come together globally to realize a sustainable society.

Challenge $CO_2$0 Life Cycle Zero CO_2 Emissions Challenge	Life cycle CO_2 emissions	• **Reduce CO_2 emissions by 18 percent or more throughout the entire vehicle life cycle compared to 2013 levels**
	Logistics	• **Japan: Reduce CO_2 emissions by 7 percent by improving transport efficiency compared to 2018 levels (average of 1 percent reduction per year)** • **Japan⇔Other regions: Reduce CO_2 emissions by vessels for export (introduce 2 LNG-powered pure car carriers)**
	Suppliers	• **Promote CO_2 emissions reduction activities among major suppliers**
	Dealers and distributors	• **Achieve 100 percent introduction rate for CO_2 emissions reduction items at newly constructed and remodeled dealers**
Challenge $CO_2$0 New Vehicle Zero CO_2 Emissions Challenge	Average CO_2 emissions from new vehicles	• **Reduce global[1] average CO_2 emissions (TtW[2] g/km) from new vehicles by 30 percent or more compared to 2010 levels** 1 Countries & Regions: Japan, U.S., Europe, China, Canada, Brazil, Saudi Arabia, India, Australia, Taiwan, Thailand and Indonesia 2 Tank to Wheel: CO_2 emissions during driving (CO_2 emissions during the production stage of the fuel and electricity are not included; TtW emissions are zero in the case of battery electric vehicles and fuel cell electric vehicles)
	Electrified vehicles	• **Make cumulative sales of 30 million electrified vehicles or more**
Challenge $CO_2$0 Plant Zero CO_2 Emissions Challenge	Plant CO_2 emissions	• **Reduce CO_2 emissions by implementing innovative technologies and daily *kaizen* and introducing renewable energy** • **Reduce CO_2 emissions from global plants by 30 percent compared to 2013 levels** • **Achieve a 25 percent introduction rate for renewable electricity** • **Promote proactive technological development to utilize hydrogen**

Challenge Challenge of Minimizing and Optimizing Water Usage	Water quantity	• **Reduce water usage taking the water environment in each country and region into consideration** • **Promote wastewater recycling, rainwater use and various activities including daily *kaizen*** • **Reduce global water usage by 3 percent per vehicle produced compared to 2013 levels (reduce by 34 percent compared to 2001 levels)** • **Complete measures at 2 Challenge-focused plants where the water environment is considered to have a large impact**
	Water quality	• **Thoroughly manage water discharge quality under internal standards that are stricter than regulatory standards** • **Continuously assess the impact of wastewater at all plants where it is discharged directly into the river**
Challenge Challenge of Establishing a Recycling-based Society and Systems	Toyota Global 100 Dismantlers Project	• **Complete setup of 15 model facilities for appropriate treatment and recycling of End-of-life vehicles** • **Continuously accelerate easy-to-dismantle designs** ◆ Integrate easy-to-dismantle designs to respond to appropriate treatment and recycling of End-of-life vehicles and resource issues, and provide appropriate information (large batteries, fuel cell (FC), hydrogen tank)
	Toyota Global Car-to-Car Recycle Project	• **Establish a safe and efficient system for battery 3R (Rebuild, Reuse and Recycle), eyeing the widespread use of electrified vehicles** ◆ Aim to maximize collection and detoxification of End-of-life batteries globally ◆ Start operating battery 3R throughout 5 regions—Japan, U.S., Europe, China and Asia • **Develop technologies to utilize recycled materials (especially plastics) in accordance with the conditions in each region** ◆ Promote utilization by technological development to optimally exploit recycled materials in Europe and to increase the supply of recycled materials in Japan
Challenge Challenge of Establishing a Future Society in Harmony with Nature	Toyota Green Wave Project	• **Realize "Plant in Harmony with Nature"—6 in Japan and 4 in other regions** • **Promote activities to connect with local communities in collaboration with affiliated companies** • **Start activities promoting harmony with nature in collaboration with local communities and companies toward biodiversity conservation**
	Toyota Today for Tomorrow Project	• **Globally strengthen conservation of endangered species, which symbolize biodiversity in collaboration with NGOs and others**
	Toyota ESD[3] Project	• **Implement globally unified initiatives to foster environmentally conscious persons responsible for the future** ◆ Offer environmental education opportunities by utilizing biotopes and others in collaboration with the Plant in Harmony with Nature ◆ Foster environmentally conscious persons at both in-house and outside sites, including plants and the Forest of Toyota, by utilizing educational tools in harmony with nature for the next generation 3 Education for Sustainable Development

Environmental Management	Chemical substances	• **Implement thorough management by carefully considering legal trends in each country and region**
	Air quality	• **Product: Steadily introduce low-emission vehicles and boost further improvement by introducing and increasing ZEVs[4]** • **Production: Continue volatile organic compound (VOC) emissions reduction activities and maintain industry-leading level** 4 Zero Emission Vehicles: Vehicles that have the potential not to emit any CO_2 during driving such as battery electric vehicles and fuel cell electric vehicles
	Waste	• **Promote activities to thoroughly reduce waste globally and aim to minimize the volume of resource input and waste, with the environment and economy in balance**
	Logistics packaging	• **Implement initiatives to reduce and recycle plastics used in packaging and recycle them**
	Risk management	• **Thoroughly comply with environmental laws and regulations and strengthen proactive prevention activities for environmental risks in each country and region**

Highlights of Results of the Sixth Toyota Environmental Action Plan (FY2017–2021)

TCFD Metrics and Targets a & c | GRI 103-2, 103-3

Results of the Sixth Toyota Environmental Action Plan (Detail) Data pp. 46-51

After implementing initiatives based on the Sixth Toyota Environmental Action Plan—FY2021 Target, which was carried out from FY2017 to FY2021, we achieved the following results. From 2021, under the Seventh Toyota Environmental Action Plan—2025 Target, we are accelerating measures to achieve the Toyota Environmental Challenge 2050.

Area	Challenge	Highlights of Results from FY2017 to FY2021
Low Carbon (Climate Change, CO_2)	Challenge Life Cycle Zero CO_2 Emissions Challenge	• Conducted Life Cycle Assessment on 46 of the total 62 (74 percent coverage) new and redesigned models in Japan and achieved CO_2 emissions levels equivalent to or lower than those of reference vehicles (previous models or vehicles of the same class); e.g., reduced CO_2 emissions of the Yaris Cross hybrid electric vehicle model by 16 percent compared to vehicles of the same class • Reduced total CO_2 emissions by 40 percent and emissions per transportation volume by 16 percent in Japan, by making further improvements to transport efficiency (loading efficiency improvements, shortening of logistics routes, modal shifts, use of tandem trailers, etc.) in the area of logistics • Used 100 percent renewable electricity at all R&D centers in Japan as of April 2020
	Challenge New Vehicle Zero CO_2 Emissions Challenge	• Reduced global average CO_2 emissions from new vehicles by 23 percent compared to 2010 levels by improving environmental performance and expanding vehicle lineups • Set 56 models with an electrified option; achieved cumulative global sales of 16.98 million electrified vehicles, exceeding the target by 2020 of 15 million units
	Challenge Plant Zero CO_2 Emissions Challenge	• Reduced global CO_2 emissions per vehicle produced by 39 percent compared to FY2002 levels by introducing low-CO_2 production technologies and promoting comprehensive energy savings • Accelerated global introduction of renewable energy, and achieved an 11 percent introduction rate. Maintained 100 percent renewable electricity introduction rate at all plants in Europe and also achieved it at all plants in South America. • Started various verification tests to support the utilization of hydrogen at the Toyota Motor Corporation Honsha Plant and Motomachi Plant
Recycling (Resources, Water)	Challenge Challenge of Minimizing and Optimizing Water Usage	• Comprehensively introduced reduction technologies and undertook daily water-saving efforts such as water recycling and reducing the amount of steam used in painting processes, decreasing Toyota Motor Corporation's water usage per vehicle produced (at vehicle production plants) by 31 percent compared to FY2002 levels • Assessed the impact of plant wastewater that is discharged directly into rivers and managed water quality under internal standards that are stricter than regulatory standards
	Challenge Challenge of Establishing a Recycling-based Society and Systems	• Under the Toyota Global 100 Dismantlers Project, completed setup of model facilities for appropriate treatment and recycling of End-of-life vehicles in Japan, Belgium, Thailand, Vietnam, Malaysia, Brazil and Argentina and achieved the target (setup of 7 facilities) • Under the Toyota Global Car-to-Car Recycle Project, established organizations for promoting the 3R (Rebuild, Reuse and Recycle) for onboard batteries in 4 regions (North America, Europe, China and Asia) and took other measures to continuously promote utilization of renewable resources and recycled materials
Harmony with Nature	Challenge Challenge of Establishing a Future Society in Harmony with Nature	• Under the Toyota Green Wave Project, implemented the PDCA process such as wildlife habitats maintenance and improvement measures as well as surveys to confirm the effects, at 3 plants in Japan and 3 plants in other regions. Conducted 971 Harmony with Nature activities with the participation of 170,000 people or more in the past 5 years in collaboration with the Toyota Group companies and other affiliated companies. • Under the Toyota Today for Tomorrow Project, continuously supported the assessment of endangered species (cumulative total of 29,830 species in the past 5 years) by the International Union for Conservation of Nature (IUCN). Supported 136 projects in the past 5 years by NPOs under the Toyota Environmental Activities Grant Program. • Under the Toyota ESD[1] Project, conducted environmental education programs at company-owned lands including hands-on nature programs for local elementary schools (a total of 48,338 students participated in the past 5 years) at the Forest of Toyota, and hands-on nature programs for children and adults (a total of 49,786 people participated) at the Toyota Shirakawa-Go Eco-Institute 1 Education for Sustainable Development
Environmental Management/ Value Chains Collaboration		• There were no significant violations of environmental laws and regulations and environmental non-compliance issues in the past 5 years • Toyota revealed in the CDP[2] A List, the highest rank, in both the climate change and water security categories scored by CDP (2016–2017, 2019–2020). Continued the CDP Supply Chain Program from FY2016, and conducted measures based on programs for climate change and water security in cooperation with suppliers accounting for approximately 82 percent of the total purchasing value by Toyota Motor Corporation (127 companies). 2 CDP: An international NGO that encourages and assesses corporate disclosures on environmental actions based on calls from global institutional investors with high levels of interest in environmental issues

Risks and Opportunities and Scenario Analysis Relating to Climate Change

TCFD Strategies a & b & c, Risk Management a
SASB TR-AU-410a.3 **GRI** 102-15, 103-1, 103-2, 201-2

Risks and Opportunities Relating to Climate Change

Toyota strives to identify the various risks and opportunities that will arise from environmental issues, takes action while continuously confirming the validity of strategies such as the Toyota Environmental Challenge 2050 and works to enhance its competitiveness.
Among them, climate change requires measures in various areas including the adoption of new technology and tighter regulations by governments. As climate change progresses, higher temperatures, rising sea levels and severity of natural disasters such as typhoons and flooding are expected. These changes may have various impacts on Toyota's business fields. These impacts may also pose risks to Toyota's business, but it is our understanding that if we can respond appropriately, this will lead to enhanced competitiveness and the acquisition of new business opportunities. In accordance with this understanding, we have organized the risks relating to climate change and identified particularly significant risks in line with risk management processes based on the degree of impact and stakeholders' interest. To respond to risks, we are promoting electrification, the introduction of renewable energy in production processes, and adaptation measures for natural disasters. Toyota supports the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and appropriately discloses information concerning risks and opportunities related to climate change and their analyses. Disclosure is also being conducted through responses to CDP in accordance with the TCFD.

TCFD Content Index

List of Toyota's Climate Change Related Risks (Risks (1), (3) and (7) are significant)

Transition Risks	**Regulation**	**(1) Tightening of regulations for fuel efficiency and ZEVs* (electrification responses);** (2) Tightening of regulations for life cycle CO_2 emissions; **(3) Expansion of carbon pricing** * Zero Emission Vehicles: Vehicles that have the potential not to emit any CO_2 during driving such as battery electric vehicles and fuel cell electric vehicles
	Market	(4) Increase in costs to reduce plant CO_2 emissions (by expansion of renewable energy and hydrogen use, and energy-saving technologies)
	Reputation	(5) Tightening of ESG assessment criteria and expansion of disclosure requirement fields; (6) Differences between catalog fuel efficiency and actual fuel efficiency
Physical Risks	**Acute**	**(7) Increase in frequency and severity of natural disasters**
	Chronic	(8) Increase in threat to water security

Significant Risks and Opportunities and Toyota's Measures

Risks		Opportunities	Toyota's Measures	Relationship with Climate Scenario	
				Current Scenario	Enhanced Measures Scenario (below 2°C/1.5°C)
(1) Tightening of regulations for fuel efficiency and ZEVs (electrification responses)	• Fines for failure in achieving fuel efficiency regulations • Decrease in total vehicle sales due to delays in complying with ZEV regulations • Stranded assets of internal combustion engine manufacturing facilities	• Increase in sales of electrified vehicles • Increase in profits from external sales of electrification systems	• Maintenance of the top-level fuel efficiency (currently the highest in Europe) • Increase in investment in batteries and shift of resources • Start of external sales of electrification systems • Expansion of electrified vehicle lineup • Reduction of CO_2 emissions from vehicles currently in use	Impacts will be an extension of current status →	Impacts will increase ↗
(3) Expansion of carbon pricing	• Increase in production and purchasing costs due to the introduction of carbon taxes, etc.	• Decrease in energy costs due to promoting the introduction of energy-saving technology	• Reduction of energy use through comprehensive energy conservation and promotion of renewable energy and hydrogen use • Promotion of emission reductions in collaboration with suppliers	Impacts will be an extension of current status →	Impacts will increase ↗
(7) Increase in frequency and severity of natural disasters	• Production suspension due to damage to production sites and supply chain disruptions caused by natural disasters	• Increase in demand for electrified vehicles due to increased need for supply of power from automobiles during emergency situations	• Continuous improvement of a BCP in light of disaster experiences in an effort for adaptation • Reinforcement of information gathering in collaboration with suppliers to avoid purchasing delays	Impacts will increase ↗	Impacts will be an extension of current status →

Scenario Analysis Assuming Risks and Opportunities

STEP 1

Set Future Images Assuming Climate Change Effects

Climate change and the policies of various countries may expose the automobile industry and the entire mobility society to substantial changes. These changes will present both risks and opportunities to Toyota. We used scenarios such as those of the IEA* to examine future images of society based on the current policy scenario, below 2°C scenario and 1.5°C scenario at around 2030 for Toyota's external environment, in light of risk and opportunity analysis.

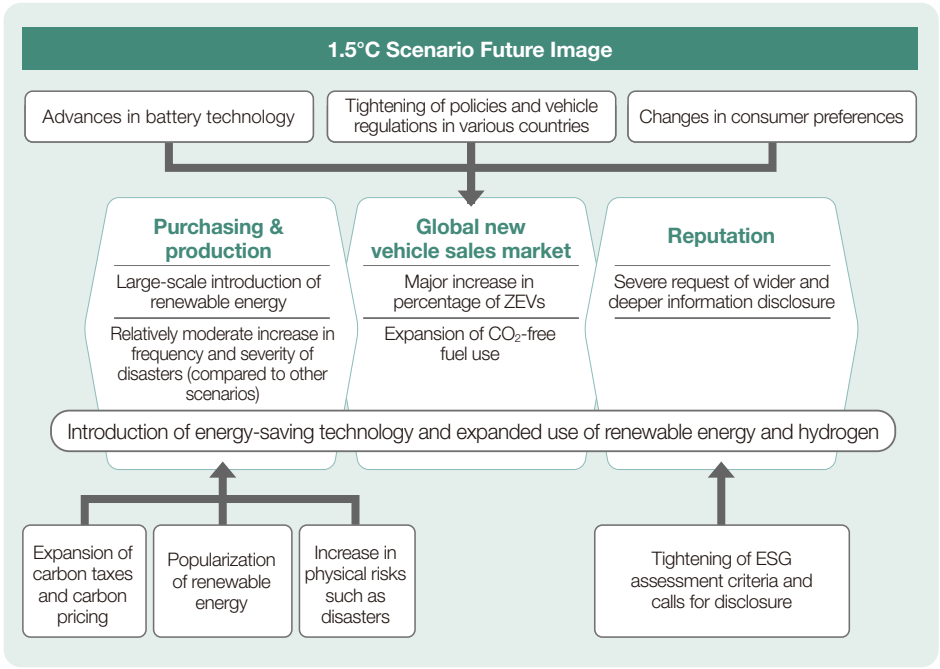
* Set using scenarios such as the IEA's Stated Policies Scenario (STEPS), Sustainable Development Scenario (SDS) and Net Zero Emissions by 2050 Scenario (NZE) as reference

STEP 2

Consider the Impacts on Toyota

In a society based on the below 2°C scenario or 1.5°C scenario in which climate change measures proceed, the percentage of electrified vehicles (ZEVs in particular) will increase. In case of a society based on the 1.5°C scenario in particular, it is said that the percentage of ZEVs among new vehicle sales will increase greatly and the use of CO_2-free fuels such as biofuels will also expand, mainly for large cargo and marine/air transport. With regard to effects on production and purchasing, the introduction of carbon taxes and increased tax rates may lead to higher costs, while expanding the use of energy-saving technology, renewable energy and hydrogen will mitigate risks. On the other hand, if adequate climate change measures are not implemented throughout society, production suspensions due to increased frequency and severity of natural disasters such as flooding as well as decreased production and production suspensions due to supply chain disruptions are likely to increase.

Three Different Images of Society as Toyota's External Environment



STEP 3

Toyota's Strategies

In April 2021, Toyota proclaimed that it would address global-scale challenges to achieve carbon neutrality by 2050. It is vital that energy policies (renewable energy, charging infrastructure, etc.) and industrial policies (purchasing grants, supplier support, battery recycling systems, etc.) are operated in a unified manner to enable the automobile industry to achieve carbon neutrality. Initiatives must be implemented in coordination with various stakeholders such as national governments and industry organizations. When undertaking its business activities globally, Toyota will coordinate with national governments to establish environmental infrastructure for promoting electrification while implementing electrified vehicle strategies that contribute to reducing CO_2 throughout the entire life cycle.
Based on this electrified vehicle strategy, Toyota has sold a cumulative total of over 18 million electrified vehicles worldwide. As one of the first companies to respond to climate change risks, it has achieved a CO_2 reduction of over 140 million tons. Going forward, with regards to battery electric vehicles (BEVs), we will successively introduce models with dedicated platforms starting in 2022 and seek to achieve practical vehicle supply through battery development and production strategies. In addition to BEVs, we are promoting electrification from all directions including hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs) and fuel cell electric vehicles (FCEVs). We will respond flexibly and strategically to each demand for varying powertrains depending on the scenario. Sales of electrified vehicles will be optimized for each region by introducing BEVs in regions where the emission factors from electricity are low and promoting emissions reductions through HEVs in regions where the emission factors are high.
In December 2021, we announced our aim of developing 30 types of BEVs and achieving a full lineup in the passenger and commercial segments globally by 2030 to reach 3.5 million annual global vehicle sales by 2030. In light of changes in the market, we will continue to flexibly increase total vehicle sales while leveraging the strengths that we have gained through our experience so far to increase the number of options for electrified vehicles. This will encourage customers in each region to choose us and accelerate the increased use of electrified vehicles. Even if battery demand increases in accordance with altered customer needs under the below 2°C scenario and 1.5°C scenario, we will work toward achieving carbon neutrality through flexible response such as enhancing collaboration with partners, considering a collaboration structure with new partners, and swiftly establishing production structures at suppliers that have capital ties with Toyota.
In addition to increasing the number of electrified vehicles, it is important to expand technology options to reduce CO_2 emissions of vehicles currently in use as well. This may include the adoption of CO_2-reducing off-cycle technology* (although not reflected in mode fuel efficiency) and the development of engines that can use CO_2-free fuel such as hydrogen engine vehicle. In order to achieve carbon neutrality, we will work together not only with the automobile industry, but with all industries while continuing to engage in challenges to respond to a society based on the 1.5°C scenario through initiatives that are practical as well as sustainable.

In the production field, we announced that we aim to achieve carbon neutrality at global plants by 2035. We are promoting the reduction of CO_2 emissions through comprehensive energy-saving technology and the introduction of renewable energy and hydrogen at plants, and have already achieved 100 percent renewable electricity introduction rate at all plants in Europe and South America. Furthermore, we will prepare to face risks such as carbon taxes through initiatives such as these. In addition, we will prepare adaptation measures to respond to natural disasters such as formulating a business continuity plan (BCP), strengthening the supply chain by enhancing information gathering and improving communication.
To confirm the suitability and progress of Toyota's strategies, we will conduct appropriate information disclosures regarding various ESG assessment indicators and enhance dialogue with stakeholders including institutional investors. We believe that this will enable stable fund procurement and lasting corporate value enhancement.

* Off-cycle technology: Technologies such as high efficiency lightings, waste heat recovery, active aerodynamic improvement and solar radiation/temperature management that improve actual fuel consumption. The U.S. has a system offering credits equivalent to the amount of improvement achieved.

Media briefing on batteries and carbon neutrality (September 7, 2021)

Environmental Management

GRI 102-29, 103-2, 103-3

Contribution to SDGs

Fundamental Approach

Together with consolidated subsidiaries, we are steadily promoting environmental management globally, including legal compliance measures and comprehensive risk management, to build a structure that enable sustainable development together with society. Also, we are constantly improving our management methods to be able to quickly respond to increasingly serious climate change and environmental issues, and to society's changing needs.

	2025 Target	2020 Initiatives
Chemical substances	Implement thorough management by carefully considering legal trends in each country and region	Complied with Toyota internal rules in the global deployment of chemical substance management structures, and evaluated and improved chemical substance management structures by auditing and investigating suppliers' processes
Air quality	Product: Steadily introduce low-emission vehicles and boost further improvement by introducing and increasing ZEVs* Production: Continue volatile organic compound (VOC) emissions reduction activities and maintain industry-leading level * Zero Emission Vehicles: Vehicles that have the potential not to emit any CO_2 during driving such as battery electric vehicles and fuel cell electric vehicles	Product: In response to stricter emissions regulations in various countries and regions, steadily introduced vehicles that satisfy those regulations Production: Promoted a switch to water-based paint in the bumper painting process. Took measures to completely eliminate the use of ozone-depleting substances (ODS). No significant releases occurred. GRI 305-6 Environmental Data p. 38-A
Waste	Promote activities to thoroughly reduce waste globally and aim to minimize the volume of resource input and waste, with the environment and economy in balance	Promoted waste reduction and efficient use of resources through measures aimed at the sources of waste Environmental Data p. 38-B
Logistics packaging	Implement initiatives to reduce and recycle plastics used in packaging and recycle them	Promoted *kaizen* with a focus on increasing use of returnable containers and reducing the weight of packaging Environmental Data p. 38-C
Risk management	Thoroughly comply with environmental laws and regulations and strengthen proactive prevention activities for environmental risks in each country and region	There were 3 minor non-compliance issues (2 concerning abnormal water quality and 1 concerning exhaust gas) in the production area, for which measures were completed. There were no abnormalities or complaints in the non-production area.

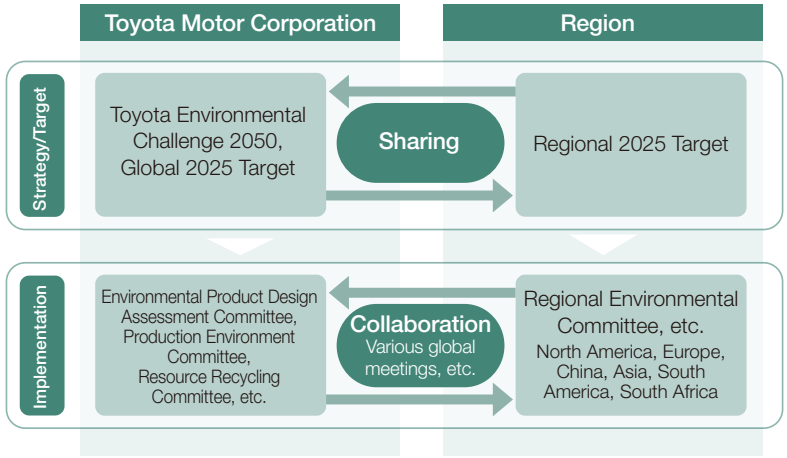
Environmental Management Structure

TCFD Governance a & b, Risk Management a & b & c

GRI 102-30, 102-32, 102-33

At Toyota, operating officers and executives make timely decisions and carry out environmental initiatives from positions that are closer to customers and worksites under the supervision of the Board of Directors. Strategies and response policies in each area in light of risks and opportunities are set by three committees—the Environmental Product Design Assessment Committee, the Production Environment Committee and the Resource Recycling Committee—and all relevant organizations work together to carry out initiatives.
Environmental secretariats have been established in six regions (North America, Europe, China, Asia, South America and South Africa). In addition, Toyota Motor Corporation and each region shared the Toyota Environmental Challenge 2050 and 2025 Target, and are cooperating with one another through various global meetings in order to undertake globally integrated environmental initiatives while taking local conditions into consideration. Moreover, the Sustainability Meeting, which is chaired by the Chief Sustainability Officer (CSO), timely deliberates on long-term enhancement of competitiveness and responses to risks in light of internal and external changes with a focus on environment, social and governance issues, and reports the results to the Board of Directors.
The progress regarding measures to reduce CO_2 in the area of product and production are regularly reported as key management indicator at meetings attended by all of those on and above chief officer and company president levels at Toyota Motor Corporation.

Global Environmental Management Structure



Environmental Management System: Organizational Boundary and Promotions

We built an environmental management system that covers all consolidated subsidiaries (486 companies) on a financial accounting basis and are carrying out the following three steps. We will maintain and improve this system in the future so that we can undertake even further environmental initiatives.

Environmental Management Promotions

1. Organize internal structures (governance system)
2. Ensure thorough risk management and compliance (including voluntary actions)
3. Maximize environmental performance

ISO 14001/ISO 50001

As of 2020, all plants of Toyota Motor Corporation and consolidated subsidiaries (124 companies) have obtained ISO 14001 certification, of which 8 companies also obtained ISO 50001 certification.

Awards Received

Revealed in the CDP* A List

In December 2020, Toyota has been selected for inclusion in the A List which is the highest evaluation for climate change and water security by CDP.

* CDP: An international NGO that encourages and assesses corporate disclosures on environmental actions based on calls from global institutional investors with high levels of interest in environmental issues

Risk Management TCFD Governance a & b, Risk Management a & b & c GRI 102-32, 102-33

Risk Management Through the Toyota Global Risk Management Standard (TGRS)

Under supervision of the Chief Risk Officer (CRO), we promote management focused on proactive preventive measures by gathering and analyzing all risks related to Toyota's corporate activities and behavior, including the area of environment, and developing a system (TGRS) that takes countermeasures.

Risk Management Relating to Climate Change

We strive to understand the various risks and opportunities arising due to climate change and always check the suitability of our strategies using scenario analysis to minimize risks and boost our competitiveness.

Risks and Opportunities and Scenario Analysis Relating to Climate Change pp. 15–17

Compliance GRI 306-2, 307-1

At all plants of Toyota Motor Corporation and consolidated subsidiaries, comprehensive risk management are undertaken based on prevention in accordance with criteria that meet or exceed laws and regulations. If a violation occurs or a complaint is made, we have systems in place to respond in a timely manner, and we work to prevent reoccurrence through identification of root causes. Furthermore, we also collaborate with unconsolidated subsidiaries to improve the environmental performance in the production area through discussion at the All-Toyota Production Environment Conference or All-Toyota Production Environment Liaison Committee.
In 2020, we were not involved in any major environmental incidents causing air or water pollution, nor were we subjected to any fines or penalties. However, there were three minor non-compliance issues (two concerning abnormal water quality and one concerning exhaust gas) in the production area, for which measures were completed. There were no abnormalities or complaints in the non-production area.

Air Pollution Measures (California, U.S.)

Toyota Motor Corporation is working with various partners, conducting research and taking action to improve the atmospheric environment. One such measure that we have been implementing since 2017 is a verification project that seeks to achieve zero emissions from the transport of cargo to verify the potential of deploying fuel cell electric vehicle (FCEV) technology on commercial trucks at the Port of Long Beach and the Port of Los Angeles, where air pollution from freight trucks is severe.
We are working to improve the atmospheric environment around the world by expanding the use of hydrogen including introduction of new heavy-duty commercial fuel cell (FC) electric trucks equipped with the second-generation FCEV system used on the new Mirai and conducting verification projects in freight transport operations.

Reduction of Waste and Efficient Use of Resources in Production Activities GRI 306-2

At all plants of Toyota Motor Corporation and consolidated subsidiaries, we are continuously taking measures aimed at the sources of waste (design and production method innovations), developing and deploying production technologies and implementing daily reduction activities, aiming to minimize the volume of resource input and waste.
And, in hazardous waste management, we ensure that End-of-life vehicle treatment is in compliance with the laws and regulations of each country at every plant. In addition, we do not import or export any hazardous waste listed in Annexes I, II, III or VII of the Basel Convention.

Target: Maintain the volume of waste per vehicle produced at each plant at or below FY2019 levels

<Organizational Boundary and Coverage>
All plants of Toyota Motor Corporation and consolidated subsidiaries, and all Toyota vehicle production plants of unconsolidated subsidiaries (100% coverage)

Environmental Data p. 38-B

Value Chains Collaboration GRI 102-9, 103-2, 308-1, 308-2

Contribution to SDGs

Fundamental Approach

To reduce environmental footprint throughout the entire vehicle life cycle, Toyota is taking measures not limited to scope of consolidation, but also in broad collaboration with partners, including suppliers and dealers, in the upstream and downstream value chains.

Initiatives with Suppliers

Green Purchasing[1] Guidelines

Toyota purchases various materials, parts and equipment from many different suppliers. We ask all tier 1 suppliers, including new suppliers, to implement initiatives based on the TOYOTA Green Purchasing Guidelines (the "guidelines"), and also deploy and enlighten the guidelines to all tier 2 and subsequent suppliers.

Under the guidelines, we request that suppliers reduce environmental footprint throughout the product life cycle, and we are promoting risk management and activities by using a self-assessment sheet to confirm the status of initiatives by each company. In FY2021, we received responses from approximately 140 main companies in Japan and provided feedback on the scoring results. Each year, Toyota presents its CO_2 reduction program to each company, and in addition to monitoring their results, deepens communication by discussing reduction measures.

There is an assumption that if we do not observe improvement after a violation of the guidelines, such as non-compliance with laws and regulations, occurs, the transactional relationship may be subject to review.

Purchasing sites in each region have released the guidelines tailored to local conditions. We will continue to request that suppliers undertake initiatives in accordance with the guidelines. In April 2021, Toyota Motor North America (TMNA), our regional headquarters in North America, updated the existing guidelines and issued the Green Supplier Requirements. TMNA is reinforcing environmental management by including in the terms and conditions on compliance with requirements such as CO_2 reductions.

1 Green Purchasing: Prioritizing the purchase of parts, materials, equipment and services with a low environmental footprint when manufacturing products

Green Purchasing Guidelines Promoting Environmental Management in Cooperation with Suppliers p. 23

Training for Purchasing Group Personnel (Japan)

Toyota Motor Corporation conducts group training when new employees are assigned to the Purchasing Group to deepen their understanding of sustainability including the environment.

We also hold periodic study groups for buyers that communicate directly with suppliers.

Initiatives Utilizing the CDP[2] Supply Chain Program GRI 103-3

We introduced the CDP Supply Chain Program in FY2016 to support continuous environmental initiatives conducted with suppliers. The program enables us to determine supplier's risks, opportunities and their initiatives on climate change and water security.

Each year we create opportunities for environmental communication by holding briefing sessions and response guidance where we share information on social trends and Toyota's environmental policies and provide feedback on response results. The scope of subject suppliers has been increasing every year, and in FY2021, suppliers accounting for approximately 82 percent of the total purchasing value by Toyota Motor Corporation were covered by the program. Based on the self-assessment results, we confirmed that approximately two-thirds of suppliers had reduced CO_2 intensity (per net revenue) compared to the previous year.

2 CDP: An international NGO that encourages and assesses corporate disclosures on environmental actions based on calls from global institutional investors with high levels of interest in environmental issues

Main Results of the CDP Supply Chain Program (2020)

		Climate Change	Water Security
Number of responding companies		127 (up 20 from the previous year)	115 (up 13 from the previous year)
Response rate		96%	88%
Percentage responding "Yes"	Governance (board-level oversight, corporate policy)	93%	73%
	Identifying risks	87%	65%
	Integrating issues into business strategy	92%	66%
	Setting quantitative targets	96%	65%

Recognition of Supplier's Environmental Initiatives (Japan)

We established the Environmental Activity Awards in 2017 to commend suppliers that conduct exceptional environmental initiatives and has presented the awards every year.

Training Sessions with Suppliers (Japan)

Toyota and its suppliers have established a variety of opportunities for joint training on environmental issues. Since 2019, Kyohokai, which consists of 200 parts suppliers or more, established research groups that consider environmental topics. Working groups exist for four themes, actively exchanging information and holding discussions for mutual learning, such as by inviting speakers from leading companies and holding on-site review meetings.

In addition, Toyota holds periodic supplier briefings where we proactively share information on environmental trends and Toyota's environmental policies.

Members of the Kyohokai research groups toured the solar power generation verification site at the Motomachi Plant

Supplier Hotline

In accordance with the Toyota Code of Conduct and Basic Policies at Toyota Purchasing, Toyota strives to act in a fair and just manner in compliance with laws and regulations. We have established hotlines that guarantee anonymity so that information can be gathered from suppliers if there is an instance of conduct relating to the environment in violation of laws, regulations or good practice within the supply chain.

Participation in Initiatives (U.S., Europe)

In the United States, we participate in the Suppliers Partnership for the Environment[1] and promote environmental initiatives where suppliers, governments, NGOs and other stakeholders collaborate.
In Europe, as a member company of Drive Sustainability[2], in automobile industry partnership program established by CSR Europe[3], we collaborate to address key sustainability issues in the supply chain.
We also participate in the WBCSD[4] and apply what we learn through participation in a traffic flow improvement verification program in Thailand, and other projects, to our efforts to contribute to the realization of a sustainable society.

1 Suppliers Partnership for the Environment: A U.S.-based public-private partnership program for automobile manufacturers and suppliers to promote sustainability Suppliers Partnership for the Environment

2 Drive Sustainability: A European partnership NPO that promotes sustainability in the automobile industry Drive Sustainability

3 CSR Europe: A European NPO that operates a European business network to promote corporate sustainability

4 World Business Council for Sustainable Development: An NGO that conducts advocacy and verification projects to realize a sustainable society with participation of major corporations worldwide World Business Council for Sustainable Development

Ensuring Compliance with Regulation Concerning the REACH[5] and Other Global Regulations on Chemical Substances

Against a backdrop of rising interests in the Sustainable Development Goals (SDGs) and Environment, Social and Governance (ESG), countries and regions around the world are strengthening regulations related to chemical substances. Such regulations include the Chemical Substances Control Law[6] in Japan, and the Directive on ELV[7] and Regulation concerning the REACH of a European Union. Moreover, companies are expected to raise levels of corporate attitudes, such as chemical substance management structures and information disclosure, even further.
In addition to complying with laws and regulations, Toyota is improving structures and undertaking operational management in cooperation with all parties involved in conveying chemical substance information in order to disseminate and share the ideals of the SDGs and ESG.
In FY2021, we continued to enhance business management regulations, revise regulations based on the Global Automotive Declarable Substance List (GADSL) to reflect the latest laws and regulations in each country (setting content rate targets for each substance in consideration of regulatory requirements, etc.), conduct supplier awareness activities (366 companies) using self-assessment check lists to ensure thorough management of chemical substances, and expand activities to other regions. In the future, we will continue industry collaboration and global deployment and comprehensive implementation of action standards tailored to the cultures and industrial structures of each region.

5 Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals regulation: A regulation for managing chemical substances to protect human health and the environment

6 Chemical Substances Control Law (The Act on the Regulation of Manufacture and Evaluation of Chemical Substances): An act to prevent environmental pollution caused by chemical substances that pose a risk of impairing human health and interfere with the inhabitation and growth of flora and fauna

7 Directive on End-of Life Vehicles: A directive designed to reduce the load of End-of-life vehicles on the environment

Initiatives with Dealers and Distributors

Toyota has strong bonds of trust with its dealers and distributors built on shared values for products and services. In the area of environment, we set a new target of a 100 percent introduction rate for CO_2 reduction items at newly constructed and remodeled dealers, and completed formulation of action plans in all eight regions advancing the Seventh Toyota Environmental Action Plan. Additionally, based on the Environmental Global Policy in the Sales and Service Area established in 2016, we are implementing four initiatives (establishment of an environmental system structure, minimization of environmental risks, improvement of environmental performance and activities to make environment better with customers and society), as a strategy to reduce environmental footprint in store operations. We take measures according to the conditions in each region. For example, we launched the Eco-Dealership program in Asia in 2018 and use an original certification system to conduct evaluations and implement an awards program.
We set quantitative targets for CO_2 reduction in this carbon reduction program and provide support for energy-saving activities at model dealers in each country and have achieved significant results. These results are shared in the Energy Reduction Innovation Guidelines with all dealers that participated the program, and we promote measures for achieving the targets.

Incubating Start-up Companies Striving to Accelerate Carbon Neutrality GRI 203-1

Established the Toyota Ventures Climate Fund, a Global Investment Fund to Accelerate Carbon Neutrality

To achieve carbon neutrality, in addition to making our own efforts, we believe that we need to collaborate with like-minded partners. The Toyota Ventures Climate Fund, which was established in June 2021, will invest in promising early-stage companies around the world, that are eagerly working on solutions to drive innovation in carbon neutrality. It will be managed by the team at Toyota AI Ventures, a Silicon Valley-based venture capital fund, which company name was recently changed to Toyota Ventures. Toyota Ventures will serve as the fund manager (GP) on behalf of Toyota, with a total investment of 150 million U.S. dollars.

Invested in the Mirai Creation Fund III to Accelerate Carbon Neutrality

The Mirai Creation Fund III, established in October 2021 by SPARX Group Co., Ltd., aims for a total scale of 100 billion yen to invest in six core technology areas including carbon neutrality. The fund aims to help accelerate innovation by investing in companies and projects that possess technologies capable of leading growth for future generations. Through this fund, Toyota invested 10 billion yen to support growth and commercialization of companies with innovative technologies, and to obtain a wide range of information on new technologies and market trends in a timely manner to incorporate in business strategies.

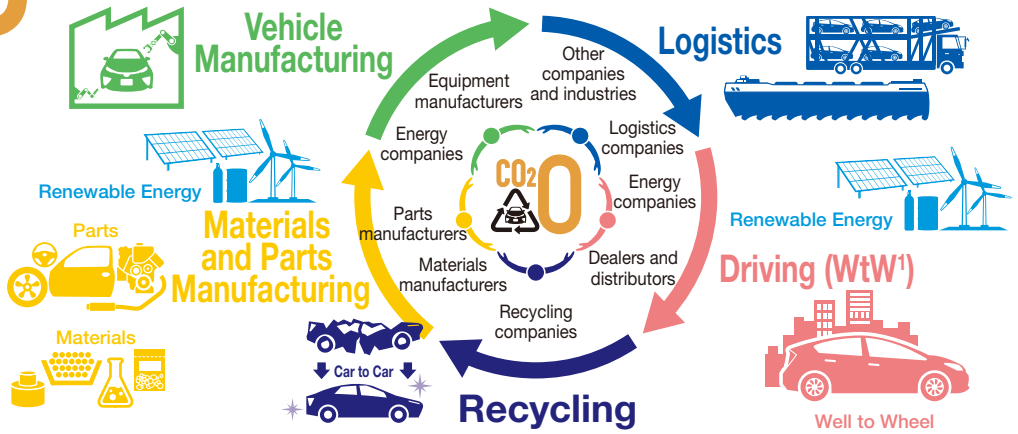
Challenge

Life Cycle Zero CO_2 Emissions Challenge

TCFD Strategy b | GRI 102-15, 103-1, 201-2, 305-3

Completely Eliminate All CO_2 Emissions Throughout the Entire Vehicle Life Cycle

Six Challenges



2025 Target		2020 Initiatives
Life cycle CO_2 emissions TCFD Metrics and Targets c	• Reduce CO_2 emissions by 18 percent or more throughout the entire vehicle life cycle compared to 2013 levels	• Steadily promoted life cycle CO_2 emissions reduction by environmental management for product development (since 2005) • Conducted assessments using the Eco Vehicle Assessment System (Eco-VAS) on 46 of the total 62 (74 percent coverage) new and redesigned models (models currently available for sale) in Japan. Achieved life cycle CO_2 emission levels in all subject models equivalent to or lower than those of reference vehicles (previous models or vehicles of the same class); e.g., reduced CO_2 emissions of the Yaris Cross hybrid electric vehicle model by 16 percent compared to vehicles of the same class.
Logistics	• **Japan:** Reduce CO_2 emissions by 7 percent by improving transport efficiency compared to 2018 levels (average of 1 percent reduction per year) • Japan⇔Other regions: Reduce CO_2 emissions by vessels for export (introduce 2 LNG-powered pure car carriers)	• Promoted continual *kaizen* activities including loading efficiency improvement, shortening of logistic routes and modal shifts • CO_2 emissions in Japan: 266,000 tons (down 8.9 percent compared to 2019 levels) Environmental Data p. 39-E
Suppliers	• Promote CO_2 emissions reduction activities among major suppliers	• Completed formulation of action plans for CO_2 data collection in each country and region globally. Commenced trials of data collection in some regions.
Dealers and distributors	• Achieve 100 percent introduction rate for CO_2 emissions reduction items at newly constructed and remodeled dealers	• Completed selection of CO_2 reduction items and formulation of introduction plans in each country and region globally

1 Well to Wheel: Includes CO_2 emissions during driving as well as CO_2 emissions during the production stage of fuel and electricity (CO_2 emissions vary depending on the power supply configuration and hydrogen production method, in the case of battery electric vehicles and fuel cell electric vehicles)

Contribution to SDGs

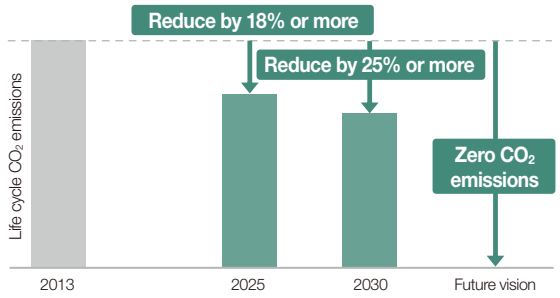
Fundamental Approach

Since momentum for reducing CO_2 emissions is rising recently, the international movement for achieving carbon neutrality by 2050, such as the ambitious increase of CO_2 reduction targets in each country, is spreading with remarkable speed.
Toyota has been promoting Life Cycle Zero CO_2 Emissions Challenge activities for years to completely eliminate CO_2 emissions not only during driving (TtW[2]), but throughout the entire vehicle life cycle including materials, parts and vehicle manufacturing, logistics, energy production, disposal and recycling.
Our specific measures to reduce CO_2 emissions include adopting low-CO_2 emitting materials during manufacturing, reducing size and weight of parts and introducing renewable energy. We are also reducing CO_2 emissions in the disposal and recycling stages by expanding use of recycled materials and creating designs that make it easier to dismantle vehicles. In the future, we will accelerate our measures for the development of technologies that contribute to CO_2 emissions reduction and create eco-friendly designs as we pursue “ever-better cars.”
We will also step up our efforts to reduce CO_2 emissions throughout the entire vehicle life cycle while engaging in even closer communication with parties in each stage of the value chain including suppliers and dealers as well as other stakeholders including partners, governments and industry organizations.

2 Tank to Wheel: CO_2 emissions during driving (CO_2 emissions during the production stage of the fuel and electricity are not included; TtW emissions are zero in the case of battery electric vehicles and fuel cell electric vehicles)

Value Chains Collaboration pp. 20–21

Zero CO_2 Emissions Throughout the Entire Vehicle Life Cycle in the Future

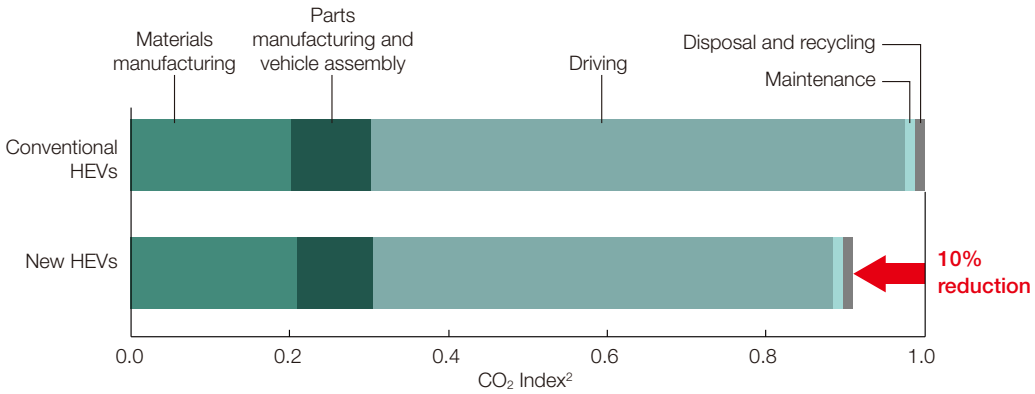


Promoting Environmental Management in the Vehicle Life Cycle

Toyota has been working to reduce CO_2 emissions throughout the vehicle life cycle with the aim of a totally clean car manufacturing that adopts LCA[1] methods. One such effort is the Eco Vehicle Assessment System (Eco-VAS), which was introduced in 2005. Eco-VAS is a management system that sets environmental targets during the vehicle development stage under the guidance of the chief engineer and takes steady measures to achieve those targets in order to reduce environmental impact through the life span of a vehicle. By performing comprehensive environmental assessments, we are contributing to enhancing the environmental performance of each vehicle and promoting environmental management throughout the entire vehicle life cycle.

1 Life Cycle Assessment: A comprehensive assessment technique to quantify a vehicle's impact on the environment (including global warming, acidification and resource depletion) in each stage from resource extraction to disposal and recycling

Eco-VAS Activity Examples: LCA Results of CO_2 Reduction in the Vehicle Life Cycle for New HEVs Launched in 2020



2 Calculated based on vehicle lifetime mileage of 100,000 km (10 years)

Promoting Environmental Management in Cooperation with Suppliers

CO_2 emissions from products and services purchased from suppliers account for a significant proportion of CO_2 emissions throughout the vehicle life cycle. Because of this, Toyota is strengthening its cooperation with suppliers and conducting environmental management that takes the entire life cycle into consideration. We are jointly undertaking CO_2 emissions reduction activities in all areas of the supply chain including introduction of energy-saving production equipment and production technologies, selecting development, design and raw materials that contribute to lower CO_2 emissions and reducing CO_2 emissions in logistics and at sales sites.

We are visualizing CO_2 emissions volumes of parts that are subject to Eco-VAS by investigating emissions volumes in each process and have started considerations of specific measures to reduce emissions. In the future, we will conduct investigations that extend to the upstream segments of the supply chain and expand the scope of subject parts in stages.

Green Purchasing Guidelines[3]

3 Green Purchasing Guidelines: Guidelines that Toyota requires all of its tier 1 suppliers to follow to promote environmental management in the supply chain

Supplying Vehicles According to Energy Situation

In order to reduce CO_2 emissions from vehicles during driving, it is important to select optimal vehicles according to local energy situations and the status of infrastructure development. Battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs) do not emit CO_2 during driving (TtW), but CO_2 emissions during the production stage of electricity used for charging and hydrogen used as fuel, varies depending on the production methods. The potential for reducing CO_2 emissions can be expanded even for vehicles equipped with internal combustion engines by developing clean fuels, such as biofuel and e-fuel, and hydrogen engines that generates power through the combustion of hydrogen.

Toyota will supply vehicles that customers need by expanding and enhancing low-CO_2 technologies and establishing a full lineup of electrified vehicles.

Use of the World's Largest Class LNG-powered Pure Car Carriers for Completed Vehicles Starts

The proportion of emissions from marine transport in the logistics segment is particularly large, we therefore began using two pure car carriers that run on LNG as the primary fuel introduced by two Japanese shipping companies (NYK Line and "K" Line) to transport completed vehicles from Japan to North America. These pure car carriers are the world's largest class ships of their type and can transport 7,000 vehicles each (standard vehicle conversion). By adopting LNG fuel and improving ship configuration, CO_2 emissions per transport unit are reduced by 25 percent to 40 percent, sulfur oxides (SO_x) are almost entirely eliminated, and nitrogen oxides (NO_x) are reduced by 80 percent to 90 percent compared to earlier diesel ships. The ships have extremely long life spans, so Toyota will continue working with shipping companies to consider means of reducing the environmental impact of marine transport, using the opportunity of ship renewal.

Pursuing Transport Efficiency and Reducing CO_2 Emissions in Logistics Activities

To reduce CO_2 emissions in logistics, Toyota is taking measures to improve transport efficiency by expanding the use of joint transport across suppliers through in-house logistics arrangements for production parts and using mixed transport with other companies for completed vehicles.
In 2020, CO_2 emissions in Japan were 266,000 tons (down 8.9 percent year on year) and substantially below the target value because of effects from COVID-19. In the future, we will continue and expand improvements in transport efficiency by cooperating with other companies such as joint transport while working to reduce CO_2 emissions even further by taking on new initiatives for the practical use of new technologies including 25-meter tandem trailers and hydrogen fuel cell electric trucks.

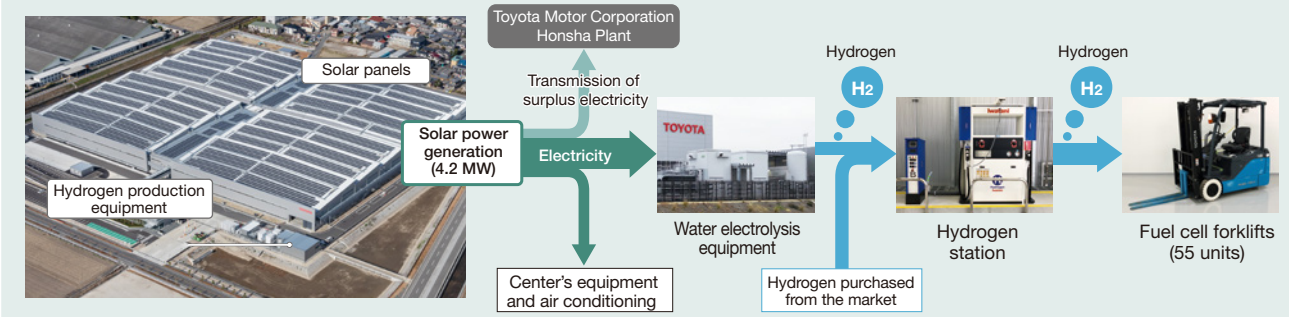
Environmental Data p. 39-E

A 25-meter tandem trailer being considered for introduction

Achieving Carbon Neutrality at the Oguchi Parts Center No. 2

The Oguchi Parts Center No. 2, which began operation in March 2021, is a cutting-edge logistics center that gives maximum consideration to energy savings including streamlining of equipment. Furthermore, a 4.2 MW solar power generating facility, Toyota Motor Corporation's largest such facility, was installed at the center, meeting electricity produced from renewable energy without any waste by delivering the surplus electricity to the Honsha Plant. In addition, this electricity is used to produce hydrogen from the electrolysis of water, which is then supplied to fuel cell forklifts at the facility. Electricity during nighttime and on rainy days and some hydrogen are purchased, but as a result of offsetting this against the surplus electricity that is delivered offsite, the center has achieved carbon neutrality with virtually zero CO_2 emissions.

Use of Electricity and Hydrogen Produced from Renewable Energy (Oguchi Parts Center No. 2)



Challenge CO_2 0

New Vehicle Zero CO_2 Emissions Challenge

TCFD Strategy b | SASB TR-AU-410a.3 | GRI 102-15, 103-1, 201-2

Reduce Global[1] Average CO_2 Emissions (TtW[2]) from New Vehicles by 90 Percent Compared to Toyota's 2010 Levels by 2050

Six Challenges

Contribution to SDGs

The Toyota bZ4X Concept, unveiled at Auto Shanghai in April 2021

	2025 Target	2020 Initiatives
Average CO_2 emissions from new vehicles TCFD Metrics and Targets c	• Reduce global[1] average CO_2 emissions (TtW[2] g/km) from new vehicles by 30 percent or more compared to 2010 levels	• Reduced global[1] average CO_2 emissions from new vehicles by 23 percent compared to 2010 levels by improving environmental performance and expanding vehicle lineups Third Party Verification 2
Sales of electrified vehicles SASB TR-AU-410a.2	• Make cumulative sales of 30 million electrified vehicles or more	• Achieved cumulative global sales of 16.98 million electrified vehicles, exceeding the target by 2020 of 15 million units Third Party Verification 3

Environmental Data p. 40-I

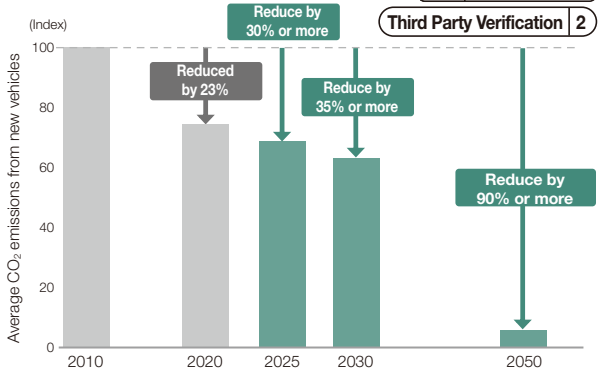
1 Countries & Regions: Japan, U.S., Europe, China, Canada, Brazil, Saudi Arabia, India, Australia, Taiwan, Thailand and Indonesia
2 Tank to Wheel: CO_2 emissions during driving (CO_2 emissions during the production stage of the fuel and electricity are not included; TtW emissions are zero in the case of battery electric vehicles and fuel cell electric vehicles)

Fundamental Approach

As the world moves to curtail temperature increase, Toyota sees this situation as both a risk and an opportunity and strives to reduce average CO_2 emissions per vehicle during driving by 90 percent compared to 2010 levels by 2050 under the New Vehicle Zero CO_2 Emissions Challenge.
Since the launch of the world's first mass-produced Prius HEV in 1997, based on the idea that "eco-friendly vehicles are only meaningful if they achieve widespread use and contribute to CO_2 reductions," we have worked to establish a full lineup of electrified vehicles including hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs) and fuel cell electric vehicles (FCEVs), thereby offering a variety of options to customers suited to the circumstances of the region. Following up on this, in addition to enhancing the fuel efficiency improving technologies, engine technologies and technologies that integrate these that we have accumulated, we are also working to develop and promote further electrification technologies.
In response to different operating environments and cruising ranges desired by customers as well as differences in the status of development of recharging infrastructure among countries and regions, we seek to provide powertrains that inspire customers to think, "this is easy to use" and "I want to drive this" based on a sustainable and practical approach, and we hope that this will lead to reductions in CO_2 emissions.

Average CO_2 Emissions from New Vehicles: Global[1]

TCFD Metrics and Targets c | GRI 302-5, 305-5 | Third Party Verification 2



Eco-friendly Vehicles Contribute to the Environment Only When They Come into Widespread Use—Sales Results of Electrified Vehicles

SASB TR-AU-410a.2 GRI 302-5, 305-5

Development of stricter environmental regulations relating to the sale of new vehicles has been accelerating in each country in recent years, but in Europe, a key market for Toyota, average CO_2 emissions from Toyota's new vehicles were better than the regulatory standards and the best level in the industry. We believe that this was the result of electrified vehicles—mainly hybrid electric vehicles (HEVs) and plug-in hybrid electric vehicles (PHEVs)—reaching 60 percent of all sales thanks to the improved fuel efficiency and enhanced marketability.

Also, global annual electrified vehicles sales reached a record high of 1.95 million units in 2020, and we achieved the Sixth Toyota Environmental Action Plan of global annual electrified vehicle sales of 1.5 million units and cumulative sales of 15 million units by 2020. Cumulative sales have reached 17.62 million units (as of March 31, 2021), and the cumulative CO_2 emissions reduction effect from the widespread use of electrified vehicles is approximately 143 million tons.

This result is due to Toyota providing a lineup of 58 diverse electrified models (as of March 31, 2021) of passenger cars and commercial vehicles comprising 46 HEVs, 4 PHEVs, 6 battery electric vehicles (BEVs) and 2 fuel cell electric vehicles (FCEVs).

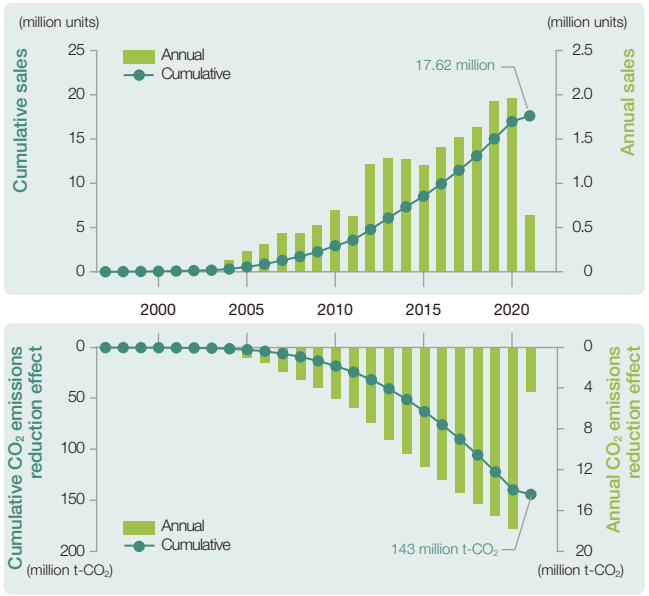
Going forward, we will continuously make technological innovations and will expand the lineup of electrified models to around 70 models by 2025 while enhancing mass production technologies.

Environmental Data p. 40-I

CO_2 Emissions Reduction Effects from Electrified Vehicles

(as of March 31, 2021)

Third Party Verification 3, 4



Measures to Reduce CO_2 for Vehicles Currently in Use—Development and Supply of Genuine Engine Oil That Improves Fuel Efficiency

GRI 302-5, 305-5

Toyota developed low-viscosity, high-performance genuine oil that improves fuel efficiency and has actively supplied it not only for new vehicles, but also for vehicles currently in use around the world, contributing to the achievement of carbon neutrality. We developed GLV-1 0W-8[1] genuine Toyota engine oil in 2020. The viscosity is approximately 25 percent lower compared to earlier products, improving fuel efficiency by approximately 0.7 percent. Supply started with the Yaris HEV and is being expanded to other models in stages.

Our low-viscosity technologies are also used in oil standards[2] that are becoming increasingly popular, and we are supplying genuine oil that improves fuel efficiency to many vehicles.

1 The JASO GLV-1 standard was obtained for SAE 0W-8 viscosity grade oil (the lowest viscosity oil standard)
2 ILSAC GF-6A 0W-20 and ILSAC GF-6B 0W-16 standards were obtained
1, 2 2020 JSME Medal for New Technology was awarded by The Japan Society of Mechanical Engineers

The newly developed low-viscosity engine oil

Toyota bZ Series of New BEVs Announced as Part of Full Electrified Vehicle Lineup

Toyota is advancing its plan to introduce 15 BEV models by 2025 and seeks to gain the acceptance of numerous customers in regions where demand for BEVs and supplies of electricity from renewable energy are high. Of the 15 models, we plan to introduce 7 models in the new Toyota bZ series. We announced the introduction plan and unveiled a concept version of the Toyota bZ4X, which will be the first model in the bZ series, at Auto Shanghai in China in April 2021. Toyota is developing this model in collaboration with Subaru Corporation and plans to begin phased global sales of the new SUV that takes advantage of the strengths of both companies by mid-2022. By coordinating with policies that encourage the use of renewable energies, Toyota hopes to expand the range of choice for customers, and contribute to the further reduction of CO_2 emissions.

Collaborative Efforts to Electrify Commercial Vehicles

In March 2021, Toyota, Isuzu Motors Limited (Isuzu) and Hino Motors, Ltd. (Hino) announced the formation of a new partnership in the commercial vehicle business. By integrating Isuzu's and Hino's commercial vehicle business foundations with Toyota's electrification technologies, the three companies will develop small battery electric and FC electric trucks. While working to reduce vehicle costs, we will accelerate initiatives to promote widespread use by advancing infrastructure-coordinated societal implementation, such as by introducing FC electric trucks to hydrogen-based society demonstrations in Fukushima Prefecture, Japan. By joining forces in the commercial vehicle segment as well, the automobile industry seeks to contribute to solutions to issues facing the transport industry and reduction of CO_2 emissions.

Joint press conference by Toyota, Isuzu and Hino

Challenge CO_2 0

Plant Zero CO_2 Emissions Challenge

TCFD | Strategy b

GRI | 102-15, 103-1, 201-2, 302-4

Achieve Zero CO_2 Emissions at Global Plants by 2050

Six Challenges

Contribution to SDGs

Blades for the wind power generators (22 MW) under construction at the Tahara Plant (left) and solar panels (23 MW) at the new Tianjin FAW Toyota Motor Plant in China (right)

	2025 Target	2020 Initiatives
Plant CO_2 emissions (TCFD | Metrics and Targets c)	• Reduce CO_2 emissions by implementing innovative technologies and daily *kaizen* and introducing renewable energy • Reduce CO_2 emissions from global plants by 30 percent compared to 2013 levels	• Introduced innovative technologies including a new type of paint atomizer (airless paint atomizer) that uses static electricity and promoted energy-saving through daily *kaizen* • CO_2 emissions was 4.9 million tons (down 22 percent compared to 2013 levels)
Renewable electricity	• Achieve a 25 percent introduction rate for renewable electricity	• Achieved an 11 percent introduction rate for renewable electricity. Maintained 100 percent renewable electricity introduction rate at all plants in Europe and also achieved it at all plants in South America. Installed solar panels at the new plant in China (23 MW).
Hydrogen	• Promote proactive technological development to utilize hydrogen	• Continuously conduct various verification tests to support the utilization of hydrogen. Developed stationary FC generator diverting on-board FC, water electrolysis-based machine for hydrogen generation and filling, etc. Established the Hydrogen Power Generation Park, a verification site of an in-house power generation facility.

<Organizational Boundary and Coverage> All plants of Toyota Motor Corporation and consolidated subsidiaries, and all Toyota vehicle production plants of unconsolidated subsidiaries (100% coverage)

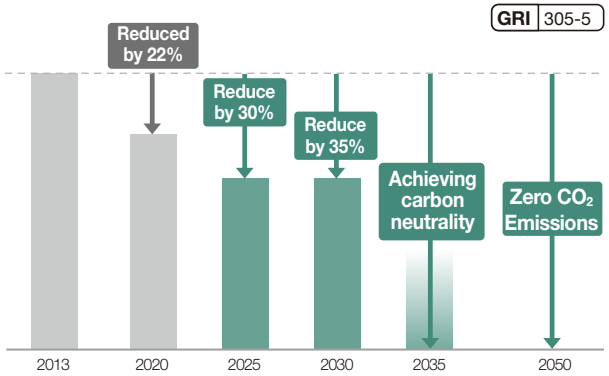
Fundamental Approach

Under the Plant Zero CO_2 Emissions Challenge, we are seeking zero CO_2 emissions in the vehicle manufacturing operations through the energy reduction initiatives such as daily *kaizen* and the introduction of innovative technologies, as well as the introduction of renewable energy and utilization of hydrogen, at all plants of Toyota and consolidated subsidiaries. Through daily *kaizen* and the introduction of innovative technologies, while the number of parts that emit CO_2 during manufacturing is increasing due to the popularization of electrified vehicles, we are optimizing production equipment and improving energy reduction programs to reduce the amount of energy used per vehicle by an annual rate of 1 percent or more. With regard to the introduction of renewable energy and utilization of hydrogen, we are working hand in hand widely with stakeholders not just internally, but also outside the company to build the necessary social infrastructure to support the widespread use of these energy sources. We are striving to achieve carbon neutrality at all global plants by 2035 and zero CO_2 emissions by 2050 by accelerating these initiatives.

CO_2 Emissions at Global Plants

TCFD | Metrics and Targets b

GRI | 305-5



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Reducing CO_2 Emissions in Production Activities

TCFD Metrics and Targets b

GRI 305-5

Toyota's plant manufacturing departments worked with production engineering and drive force departments to conduct energy diagnoses at production sites, propose improvements and implement measures. We continuously undertook energy-saving activities (internal ESCO[1] activities) and *yokoten*[2] of best practices. Also, the introduction of innovative technologies was expanded with a focus on painting processes and energy-saving was promoted by adopting steamless and airless processes and shifting to LED lighting. As a result, we reduced global CO_2 emissions (total) in 2020 to 4.9 million tons (down 22 percent compared to 2013 levels). We also conducted study sessions with Toyota Group companies and suppliers to share know-how on energy-saving measures, and that information has been reflected in *kaizen* implemented by those companies. We also observed other industries and are continuously seeking to discover new ideas for *kaizen*.

1 Energy reduction Support & Cooperation

2 *Yokoten*: Refers to sharing of best practices with other organizations

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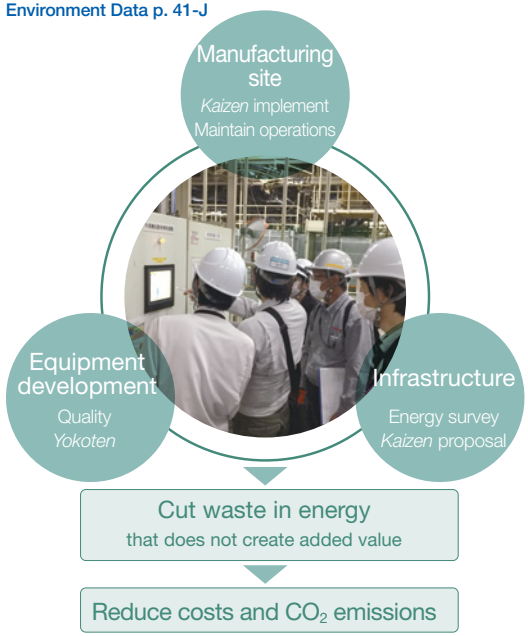
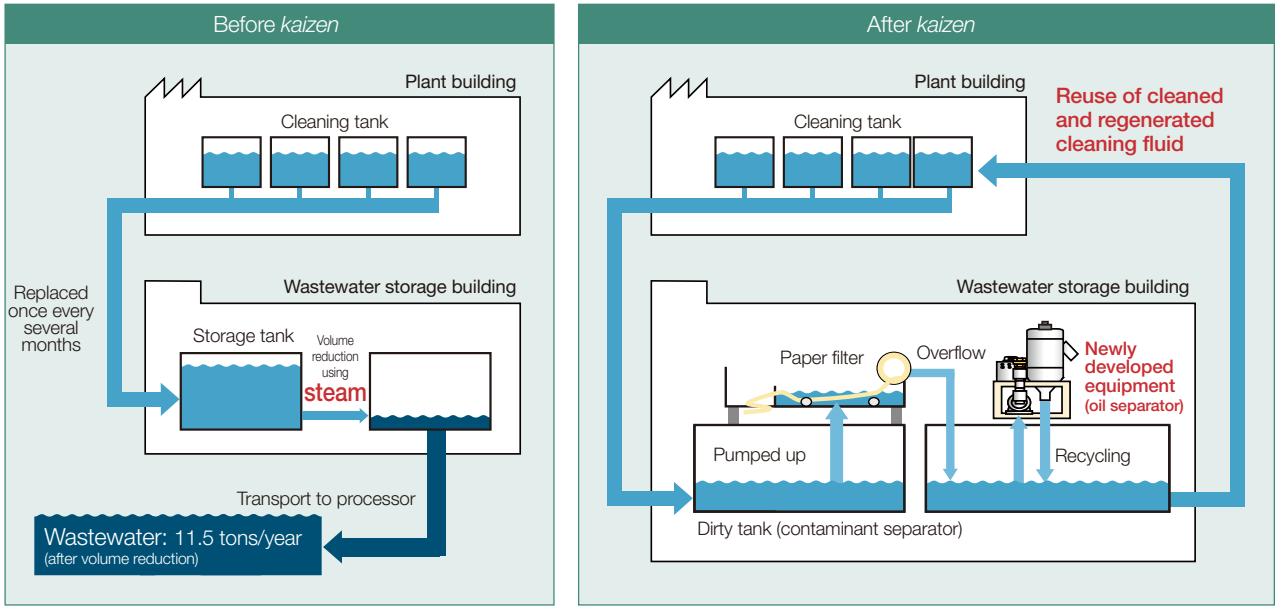


Concept of internal ESCO activities: Trinity of energy-saving improvements

Zero Steam and Zero Wastewater Achieved in Parts Cleaning Process

During the parts cleaning process at the Miyoshi Plant, wastewater from the cleaning process was reduced in volume by using steam at a rate of 12 kl per year of crude oil equivalent, and processing of 11.5 tons per year of wastewater was outsourced to processors. To address this, we developed a ultra-fast fine-bubble flotation separator that generates fine-bubbles to separate oil from contaminants and cleans and regenerates wastewater. This makes it possible to reuse all cleaning fluid[3]. This technology is highly applicable for other uses; the potential is expected to increase by about 60 times at other Toyota Motor Corporation plants. Deployment by suppliers and in other industries is also possible.
This technology won the ECCJ Chairman's Prize of the 2020 Energy Conservation Grand Prize awarded by the Energy Conservation Center, Japan.

3 The result of joint development with Chubu Electric Power Miraiz Co., Inc. and Kansai Automation Equipment Co., Ltd.



Introduction of Renewable Energy and Utilization of Hydrogen

Toyota is promoting the introduction of renewable energy, taking into consideration the characteristics of each region. We are currently actively introducing renewable energy power generation facilities at Toyota plant sites. In Japan, we installed wind power generators (22 MW, operation to begin in 2022) at the Tahara Plant, and in other regions, we installed solar panels at the new plant in China (23 MW, currently in operation). In addition, we maintained 100 percent renewable electricity introduction rate at all plants in Europe and also achieved it at all plants in South America.

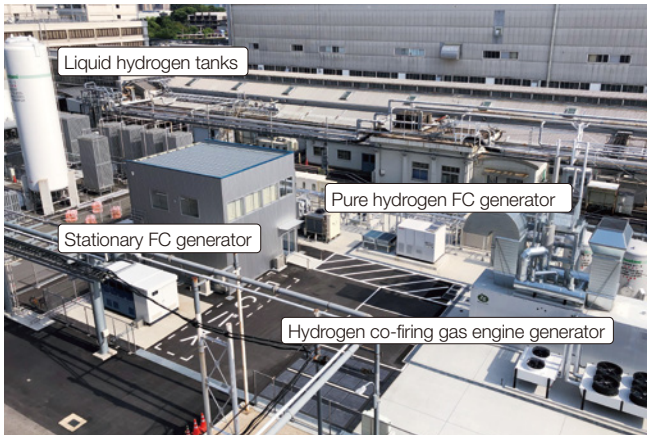
In conjunction with the increased use of renewable electricity in recent years, hydrogen holds great promise as a means of suppressing supply and demand variation in energy and for energy storage and transport. Toyota is leading the Hydrogen Utilization Study Group in the Chubu to create mechanisms for the use of hydrogen energy throughout society in collaboration with companies in other industries, contributing to the realization of a decarbonized society. With respect to the utilization of hydrogen at plants, we are developing hydrogen burners that can decarbonize the combustion process, expanding the use of fuel cell (FC) forklifts and promoting production and use of renewable energy-derived hydrogen at plants by introducing water electrolysis-based machine for hydrogen generation and filling (Motomachi Plant). Furthermore, we are installing hydrogen-fueled power generators and conducting verification testing. (Below: Shimoyama Plant; Right: Honsha Plant). Going forward, we will develop technologies for carbon capture and reuse and other technologies with the aim of achieving carbon neutrality at all global plants by 2035.

Self-supporting stationary FC generator diverting on-board FC (Shimoyama Plant)
Power generation using hydrogen is possible even in power outages

Operation of Hydrogen Power Generation Facility Starts at Honsha Plant to Expand Hydrogen Utilization

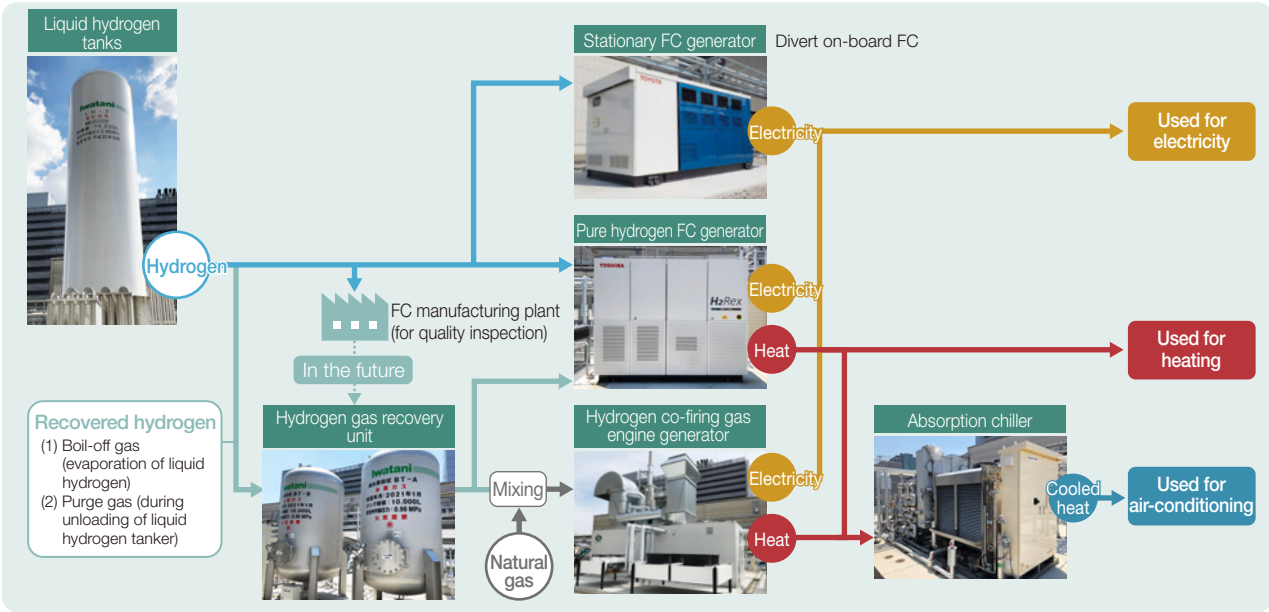
With the aim of achieving zero CO_2 emissions from in-house power generation facilities at our plants, we introduced three different types of power generating facilities at the Honsha Plant: a stationary FC generator diverting the Mirai's on-board FC, a pure hydrogen FC generator with high power generating efficiency that enables the use of waste heat, and a co-firing gas engine generator of natural gas and hydrogen. The combined generating capacity is 600 kW, and a portion of the hydrogen fuel used is recovered hydrogen that in the past was released. Verification tests are underway to achieve highly efficient power generation systems. The technologies gained from this hydrogen power generation facility will be rolled out to other plants with the aim for an early achievement of plant zero CO_2 emissions.

We also created a structure to use the hydrogen stored for power generation and automobile FCs for supply to the adjacent hydrogen station in the event of a disaster. By making it possible for company and other fuel cell electric vehicles (FCEVs) to refuel with hydrogen, their electric supply function can be used to support operations at evacuation centers in the region and for other purposes. Through this and other initiatives, we are tackling the challenges of creating a hydrogen-based society.



Hydrogen Power Generation Park, a verification site of an in-house power generation facility at the Honsha Plant

Energy Flow within the Hydrogen Power Generation Park (Honsha Plant)



Challenge

Challenge of Minimizing and Optimizing Water Usage

GRI 102-15, 103-1, 303-1, 303-2

Minimize Water Usage and Implement Water Discharge Management According to Individual Local Conditions

Six Challenges

A rainwater reservoir (left) and rainwater treatment equipment (right) at Toyota Kirloskar Motor in India

	2025 Target	2020 Initiatives
Water quantity	• Reduce water usage taking the water environment in each country and region into consideration • Promote wastewater recycling, rainwater use and various activities including daily *kaizen* • Reduce global water usage by 3 percent per vehicle produced compared to 2013 levels (reduce by 34 percent compared to 2001 levels) • Complete measures at 2 Challenge-focused plants where the water environment is considered to have a large impact	• Comprehensively introduced reduction technologies and undertook daily water-saving efforts, such as water recycling and reducing the amount of steam used in painting processes • In progress to reducing at a pace above target (down 8 percent compared to 2013 levels) Environmental Data p. 42-O
Water quality	• Thoroughly manage water discharge quality under internal standards that are stricter than regulatory standards • Continuously assess the impact of wastewater at all plants where it is discharged directly into the river	• Continuously manage water quality under internal standards that are stricter than regulatory standards • Assessed the impact of wastewater at all plants

<Organizational Boundary and Coverage> All plants of Toyota Motor Corporation and consolidated subsidiaries, and all Toyota vehicle production plants of unconsolidated subsidiaries (100% coverage)

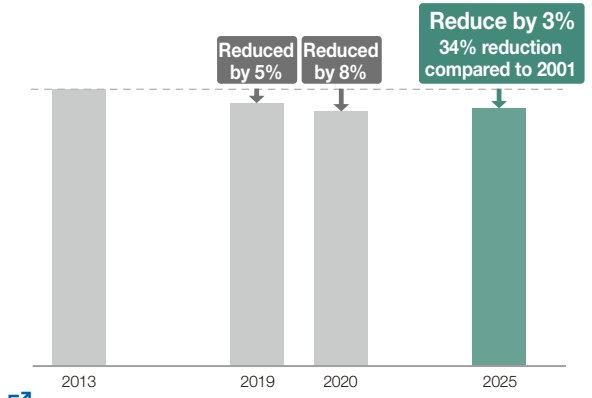
Contribution to SDGs

Fundamental Approach

It is said that the world's population will grow to 9.7 billion by 2050, water demand will increase 55 percent from current levels and 40 percent of the world's population is therefore expected to suffer water shortages*. Water problems such as increases in water stress in conjunction with rising populations and climate change as well as stricter regulations in response to deterioration of water quality in rivers and other water sources are important issues from the perspective of risk management in corporate activities. Water is essential in painting and other car manufacturing processes. This makes it imperative to reduce the impact on the water environment, to whatever degree possible.
While there are significant differences in the characteristics of the water environment depending on the region, we have two main common strategies to be tackled regardless of the region: thoroughly reduce the amount of water usage and purify wastewater thoroughly and return.
Toyota has been using rainwater, cutting water usage in production processes, recycling wastewater to reduce amounts withdrawn from water sources and returning high-quality water to local environments, prioritizing areas where we believe the impact on the water environment is significant.
In the future, we will continue to undertake measures that have a positive impact on local water environments, taking into consideration the local requests and water issues, through appropriate information disclosure and active dialogue with local communities and suppliers.

* According to Toyota data

Water Usage per Vehicle Produced Globally



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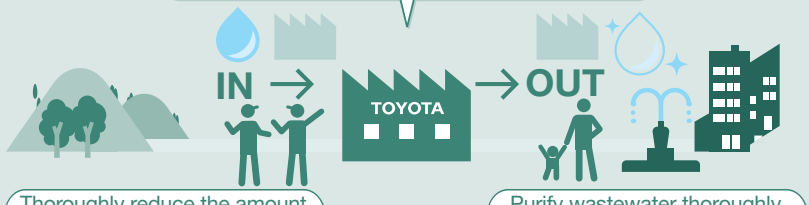
Measures Undertaken in Accordance with the Toyota Water Environment Policy

Although water-related issues and measures differ depending on the region, Toyota established the Toyota Water Environment Policy and takes action in order to achieve the Challenge of Minimizing and Optimizing Water Usage on a global level. Under the Toyota Water Environment Policy, we are assessing our impact on water environments and working to minimize those impacts from two perspectives: the input side, where we thoroughly reduce the amount of water usage, and the output side, where we purify wastewater thoroughly and return. We take action from three directions—the pursuit of environmental technologies, community-rooted operations and cooperation with society—and strive to become the No. 1 regional plant leading to prosperity throughout the entire society.

Toyota Water Environment Policy

Striving to consider the importance of water sustainability, Toyota will aim for realizing prosperous societies that will share a sound water environment to the future.

Become No. 1 regional plant leading to prosperity throughout the entire society



Thoroughly reduce the amount of water usage

Minimize the impact on local water resources by minimizing water withdrawal and utilizing rainwater

Purify wastewater thoroughly and return

Have a net positive impact on the environment by returning clean water in the local water environment

Water Usage Reduced Through Repeated *Kaizen* Activities (South Africa)

At Toyota South Africa Motors (Pty) Ltd. (TSAM), since 2018, efforts have been focused on reducing water used in the chassis electrodeposition painting process. In 2020, the conductivity of cleaning water used in the cleaning process was controlled and the timing of water supply and discharge was optimized through automation. By reusing cleaning water to the maximum degree possible, the amount of water used in the process has been significantly reduced. In addition, steady improvements are being made such as reducing water used for cleaning by preventing liquid leakage from valves and splashing in all production processes to keep the plant clean. In conjunction with these measures, rainwater collection tanks have been installed to reduce water usage by using rainwater in production processes and by other means. As a result of these improvements, total water usage reduction effects were 49,000 tons, a 43 percent reduction throughout all processes compared to before *kaizen*. Despite an increase in vehicle production volume, water usage throughout the plant was reduced by 2 percent compared to 2013 levels. These measures have been commended for the extensive analysis of each process and the repeated implementation of numerous *kaizen* activities, and TSAM was presented the Bronze Award of the 2020 Global ECO. Awards, which is given in recognition of the environmental initiatives inside Toyota.

Water usage reduction *kaizen* team members standing in front of rainwater collection tanks

Reduction of Water Usage According to the Actual Water Environment in Each Region and Water Quality Management

Toyota introduced innovative technologies in conjunction with planned upgrades to production lines, reduced the use of steam in manufacturing processes and implemented other measures, and as a result, in 2020, water usage was 36.8 million m^3 (down 16 percent year on year) and water usage per vehicle produced was 4.0 m^3 (down 2.5 percent year on year). We also assessed the impact of water environments at global plants, identified four Challenge-focused plants in North America, Asia and South Africa, and are now implementing comprehensive water management. With regard to the water quality discharged from plants, we assessed the impact on wastewater at each global plant where it is discharged directly into the river, set water discharge quality under internal standards that are stricter than regulatory standards and is continuously conducting water management. Moving ahead, we will continue striving to minimize our impacts on the water environment through water-saving and water recycling, and engage in activities that have positive effects on local water environments.

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Substantial Reduction in Water Usage Through Expanded Use of Recycled Water (China)

At Tianjin FAW Toyota Motor Co., Ltd. (TFTM), particular efforts are being put into raising the water discharge recycling rate and increasing the use of recycled water during vehicle production to reduce water withdrawal throughout its plants. In 2020, measures were taken to increase the use of recycled water including wastewater from its new plant, and a total of 484,000 tons of recycled water was used including 308,000 tons used on production lines (up 28,000 tons) and 176,000 tons used to irrigate green areas (up 32,000 tons). As a result, water withdrawal was substantially reduced, and water usage per vehicle was down 5 percent compared to 2014.

Wastewater recycling production facility

Recycled water is used to irrigate green areas on the plant site

Challenge

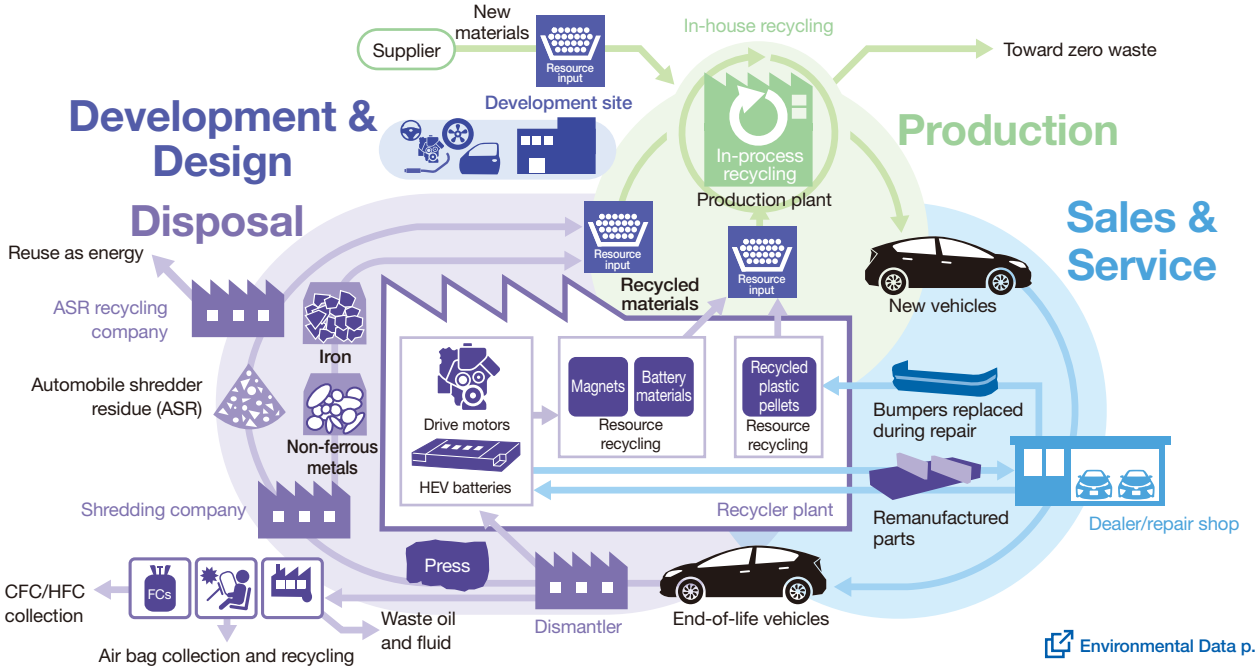
Challenge of Establishing a Recycling-based Society and Systems

GRI 102-15, 103-1, 306-2

Promote Global Deployment of End-of-life Vehicle Treatment and Resource Recycling Technologies and Systems Developed in Japan

Six Challenges

Contribution to SDGs



Fundamental Approach

Due to global population growth along with the pursuit of economic growth and convenient lifestyles, the pace of resource consumption is accelerating. If large-scale exploitation continues without change, natural resources will be depleted, and if waste increases due to mass consumption, appropriate treatment and recycling will be unable to keep pace, resulting in risks of environmental pollution.

To prepare for such circumstances, we launched and have been promoting the Toyota Global 100 Dismantlers* Project to establish social systems for appropriate treatment and recycling of End-of-life vehicles to prevent the environmental load caused by End-of-life vehicles. On the other hand, to create a resource recycling-based society, it is necessary to address the risk of resource depletion and to reduce substances of concern, as well as to address recycling throughout the entire vehicle life cycle through the business opportunities we create.

We aim to realize the ultimate recycling-based society, and is promoting the Toyota Global Car-to-Car Recycle Project so that we can utilize resources from End-of-life vehicles for manufacturing new vehicles.

* Dismantlers: Operators of vehicle dismantling businesses

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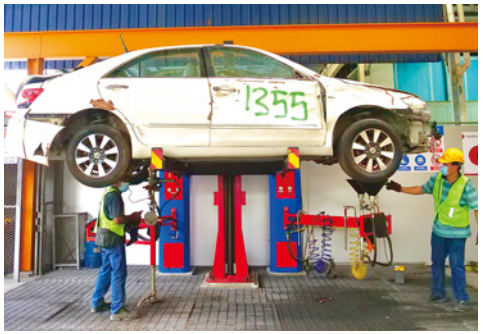
	2025 Target	CY2020/FY2021 Initiatives
Toyota Global 100 Dismantlers Project	• Complete setup of 15 model facilities for appropriate treatment and recycling of End-of-life vehicles • Continuously accelerate easy-to-dismantle designs ◆ Integrate easy-to-dismantle designs to respond to appropriate treatment and recycling of End-of-life vehicles and resource issues, and provide appropriate information (large batteries, fuel cell (FC), hydrogen tank)	• Completed setup of model facilities in Malaysia, Brazil, Argentina, Belgium and Japan (Belgium and Japan are sites for appropriate treatment and recycling of End-of-life FCEVs) • Continued to integrate easy-to-dismantle designs in new vehicles and increased provision of information to the dismantling industry operators through mass advertisements (trade papers) in Japan
Toyota Global Car-to-Car Recycle Project	• Establish a safe and efficient system for battery 3R (Rebuild, Reuse and Recycle), eyeing the widespread use of electrified vehicles ◆ Aim to maximize collection and detoxification of End-of-life batteries globally ◆ Start operating battery 3R throughout 5 regions—Japan, U.S., Europe, China and Asia • Develop technologies to utilize recycled materials (especially plastics) in accordance with the conditions in each region ◆ Promote utilization by technological development to optimally exploit recycled materials in Europe and to increase the supply of recycled materials in Japan	• Continuously promoted utilization of renewable resources and recycled materials (HEV batteries, motor magnets, plastic bumpers, etc.)

Toyota Global 100 Dismantlers Project to Establish Social Systems for Appropriate Treatment and Recycling of End-of-life Vehicles

GRI 203-1

When End-of-life vehicles are not properly disposed or dismantled, it may not only affect local environments, but also causes risks to the health and safety of local residents. To prevent these problems, we promote the establishment of social systems for appropriate treatment and recycling of End-of-life vehicles, using our long-established technologies and know-how to not impose environmental load. In the process, we also contribute to the prevention of global warming by collecting and properly treating of waste oil and CFCs/HFCs. In FY2021, we set up model facilities for appropriate treatment and recycling of End-of-life vehicles in Japan (Toyota Metal Co., Ltd.), Malaysia (Car Medic Sdn Bhd), Belgium (Comet), Argentina (Toyota plants) and Brazil (GWA). When Comet conducted a demonstration of appropriate fuel cell electric vehicle (FCEV) dismantling in accordance with a video manual on appropriate treatment and recycling, we checked via webcam to remotely confirm the effectiveness of the manual. In this way, we worked with local affiliates to clarify requirements for facilities, operations and waste treatment and recycling at the site, and established a system that enables remote confirmation of appropriate End-of-life vehicle treatment even remotely, using photos and videos.

Demonstration of hydrogen gas removal process for FCEVs (Belgium)



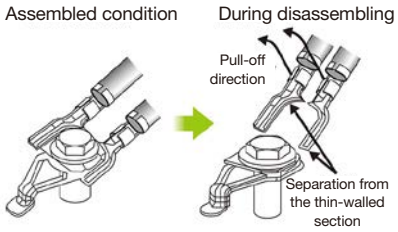
Treatment of waste oil and fluid from End-of-life vehicles (Malaysia)

Achieving Industry-leading Levels in Easy-to-dismantle Design for Effective Resource Recycling

In order to promote resource recycling of End-of-life vehicles, we continue to use easy-to-recycle materials, and have confirmed that vehicles introduced in Europe achieved a recyclability rate of 85 percent or more and a recoverability rate of 95 percent or more, including energy recovery.
Since launch of the Raum passenger car in 2003, we have been directly visiting dismantling companies around the world to investigate actual conditions. Based on this, we are actively adopting vehicle structures that makes it easy to dismantle and separate parts for new vehicles. With the new RAV4 PHEV, Harrier, Yaris Cross and Mirai launched in FY2021, we continue to integrate easy-to-dismantle designs to ensure safe and speedy dismantling operations. In light of recent circumstances, we placed advertisements in trade papers in Japan focusing on the ease of removing wiring harness, a representative example, in order to gain the understanding of more dismantlers concerning Toyota's eco-friendly designs.

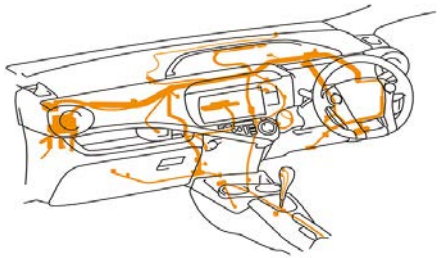
Easy-to-dismantle design

Examples of Easy-to-dismantle Design



Wiring Harness: Use of Pull-tab Type Ground Terminal

It is designed to be easily dismantled by simply pulling it like the lid of a can.



Wiring Harness Layout Innovation

Wiring harness can be separated with minimal interference to other parts.

Toyota Global Car-to-Car Recycle Project—A Resource Recycling Initiative that Considers the Entire Vehicle Life Cycle

SASB TR-AU-440b.2 GRI 203-1, 301-3

Toyota strives to reduce the generation of waste, and repeatedly uses reusable materials to improve resource efficiency in four stages of the vehicle life cycle: development and design, production, sales and disposal. We are also working to make waste recyclable.

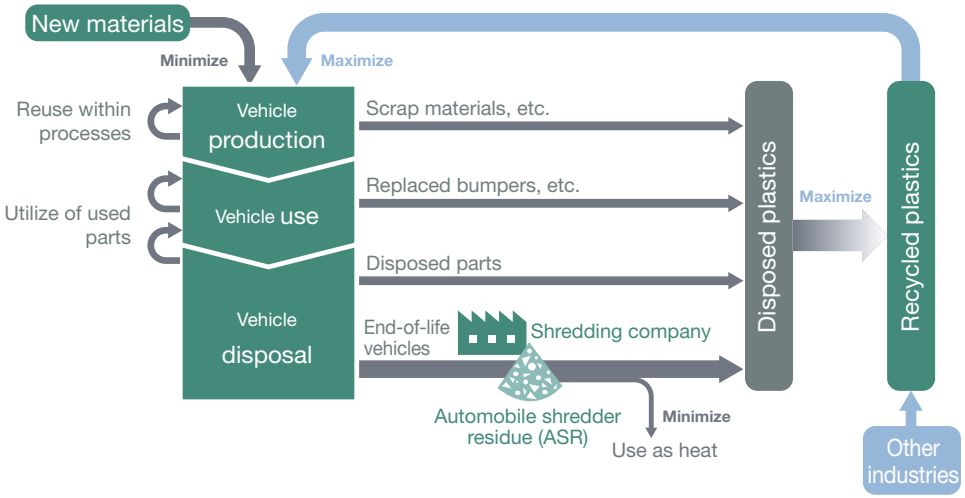
1. Resource Recycling of Plastics

In the lead up to 2050, Toyota aims to build a society that maximizes plastic recycling on a global scale. In addition to existing initiatives for collection and recycling of bumpers replaced during repairs at dealers, in order to reuse automobile shredder residue (ASR) from End-of-life vehicles as a material, which until now had been reused as heat, we are planning to use recycled plastic materials from ASR in new vehicles by utilizing crushing and sorting technologies of Toyota Metal Co., Ltd.

2030 Target

Increase the use of recycled plastics by more than three times compared to current levels by 2030, with the aim of building a society in 2050 that maximizes plastic recycling on a global scale (Scope: Vehicles produced in Japan and Europe)

Maximization of Utilization of Recycled Plastics in Toyota Vehicles

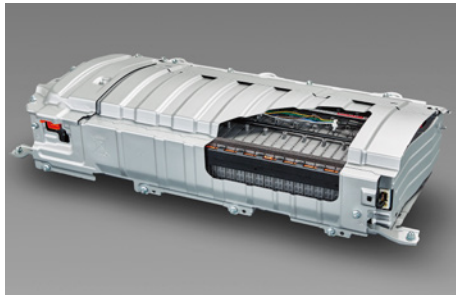


2. Resource Recycling of Rare Metals and Rare Earth Elements

With a view to curbing the use of natural resources, we promote the collection of rare resources used in electrified vehicles such as hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs) and fuel cell electric vehicles (FCEVs), and the reuse of recycled materials. We are collaborating with partner companies to establish a system for collecting and recycling HEV batteries and motor magnets, along with tungsten carbide tools and other materials used in production, aiming to achieve the ultimate goal of closed-loop recycling.

In order to make more effective use of limited resources, and to increase resource input efficiency, we are striving for car manufacturing that takes recycling into consideration, by feeding back results of these activities into the development and design stages.

Recovered End-of-life HEV batteries



New HEV battery

Challenge

Challenge of Establishing a Future Society in Harmony with Nature

GRI 102-15, 103-1

Connect the Reach of Nature Conservation Activities Among Communities, with the World, to the Future

Six Challenges

Contribution to SDGs

Scenes from activities promoting agroforestry at primary and middle schools in Kenya

Fundamental Approach

It is critical for humans to conserve forests and other natural environments in all regions for coexistence in harmony with nature. However, deforestation, fragmentation of habitats for various wildlife and loss of biodiversity are increasing across the world. These developments entail a range of issues including depletion of biological resources that are essential to society, causing natural disasters and driving global warming, and we believe that they pose risks to the sustainability of the entire society. Toyota launched programs promoting harmony with nature around the world and is taking action to expand “Connecting Communities” activities under the Toyota Green Wave Project, and is “Connecting with the World” by promoting activities for achieving harmony with nature and conserving biodiversity globally under the Toyota Today for Tomorrow Project in cooperation with international organizations and NGOs. In addition, we conduct environmental educational programs for employees, future generations and others, and carry out “Connecting to the Future” activities under the Toyota ESD* Project.

* Education for Sustainable Development

	2025 Target	2020 Initiatives
Toyota Green Wave Project	• Realize “Plant in Harmony with Nature”—6 in Japan and 4 in other regions • Promote activities to connect with local communities in collaboration with affiliated companies • Start activities promoting harmony with nature in collaboration with local communities and companies toward biodiversity conservation	• Implemented wildlife habitat maintenance and improvement measures at global plants and conducted indicator species surveys to confirm the effects • Implemented activities promoting harmony with nature such as creating forests at plant sites and conserving biodiversity in collaboration with Toyota Group companies and other affiliated companies
Toyota Today for Tomorrow Project	• Globally strengthen conservation of endangered species, which symbolize biodiversity in collaboration with NGOs and others	• Completed assessment of 29,830 species for the International Union for Conservation of Nature (IUCN) Red List and donated vehicles to conduct surveys and conservation activities of species listed as threatened on the IUCN Red List in Nepal, Argentina, Madagascar and other countries • Supported 27 projects of NPOs and other non-profit organizations and groups addressing biodiversity and climate change (17 in Japan and 10 in other regions)
Toyota ESD Project	• Implement globally unified initiatives to foster environmentally conscious persons responsible for the future ◆ Offer environmental education opportunities by utilizing biotopes and others in collaboration with the Plant in Harmony with Nature ◆ Foster environmentally conscious persons at both in-house and outside sites, including plants and the Forest of Toyota, by utilizing educational tools in harmony with nature for the next generation	• Conducted tree-planting activities participated by employees. Also, carried out multiple environmental education programs to the public and children at the Forest of Toyota and the Toyota Shirakawa-Go Eco-Institute.

Toyota Policy on Harmony with Nature

Toyota renewed the Biodiversity Guidelines formulated in 2008 as the Toyota Policy on Harmony with Nature in January 2021. This policy sets forth our approaches on activities that promote harmony with nature and will serve as the basis for future activities. We will expand the reach of activities promoting harmony with nature, including the conservation of biodiversity, from communities to the world in collaboration with various people throughout society.

Toyota Policy on Harmony with Nature

Toyota Policy on Harmony with Nature

Humans enjoy prosperous and fulfilling lives by harmonizing various elements of nature such as water and air as well as conserving biodiversity. However, as environmental issues such as climate change and water shortages interact and become more severe, this harmony of natural elements is disrupted, and biodiversity is being lost. To improve the current situation, Toyota seeks to realize a sustainable society in harmony with nature by fully utilizing the technology and know-how it has developed through various businesses.

1. Recognizing that nature underlies our life and economy through resource supply and climate stabilization, we will promote activities that harmonize various elements of nature and conserve biodiversity.
2. We will expand the reach of activities among communities and connect them with the world by not only acting spontaneously, but also collaborating strongly with society.
3. We will promote environmental education to change the awareness of employees and generations based on the recognition that the biodiversity that forms the foundation of our prosperous life is facing a critical situation.
   At the same time, we will offer related information to society through both in-house and outside activities.

Toyota Today for Tomorrow Project

Collaboration with IUCN, WWF and Other Organizations to Conserve Biodiversity

After entering into a five-year partnership agreement with the International Union for Conservation of Nature (IUCN) in 2016, we provided annual grants of approximately 1.2 million U.S. dollars, which is the largest scale grant provided by a private-sector company. This enabled the IUCN to enhance the IUCN Red List[1], a global indicator of wildlife species, and they conducted assessments of extinction risk of species. This comprehensive inventory of the global conservation status of animals, fungi and plants is effectively used, and plays an important role supporting implementation of the United Nations 2030 Agenda.

In 2016, Toyota became the first car company and Japanese company to sign a five-year Global Corporate Partnership agreement with the World Wide Fund for Nature (WWF). We have made 1 million U.S. dollar annual grants to support the Living Asian Forest Project, to conserve tropical forests and wildlife in Southeast Asia and helped improve the sustainability of natural rubber production.

1 The IUCN Red List of Threatened Species™: A list of threatened species throughout the world managed by the IUCN

Toyota Environmental Activities Grant Program: Agroforestry Activities at Primary and Middle Schools in Kenya

In 1999, Toyota was honored with the Global 500 Award from the United Nations Environment Programme (UNEP). To commemorate this, in FY2001, we launched a grant program to support the environmental activities of NPOs and other non-profit organizations and groups. Over the 20 years since the program was established, we have supported 440 projects in 57 countries and regions worldwide. One project promotes agroforestry[2], primarily at primary and middle schools, in semi-arid regions of Kenya where forest destruction is progressing with the aim of creating model agricultural villages in harmony with nature. The participating educators and students have increased the varieties of crops and trees growing at their schools and homes to start sustainable agriculture.

2 Agroforestry: Agricultural and forestry business whereby trees are planted, and livestock and crops are raised and cultivated between the trees

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Toyota Environmental Activities Grant Program

Toyota Green Wave Project

Initiatives of Toyota Technical Center Shimoyama Promoting Harmony with Nature and Local Communities

GRI 304-3, 304-4

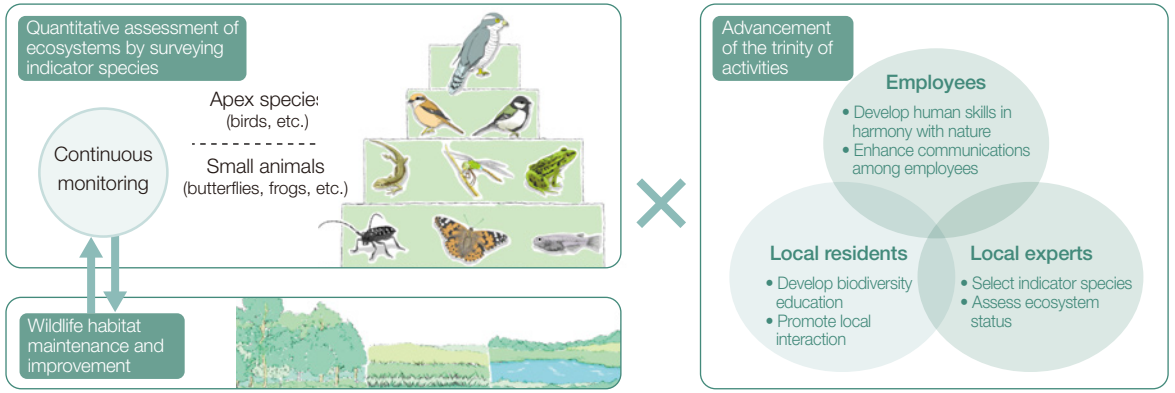
At the Toyota Technical Center Shimoyama, construction of which is proceeding, we are undertaking satoyama conservation and other measures based on the concept of a “technical center in harmony with nature and local communities.” In 2020, we invited experts to serve as the instructor of an environmental education program for local high school students (21 students participated) on the Japanese eight-barbel loach, which inhabits satoyama environments. Going forward, we will actively foster persons responsible for the future.

Conservation of Japanese eight-barbel loaches
Designated as an endangered species in the Red Data Book published by the Ministry of the Environment of Japan

Development of the Plant in Harmony with Nature (China)

As a part of the Plant in Harmony with Nature project, GAC Toyota Motor Co., Ltd. (GTMC) is communicating the importance of biodiversity conservation using a biotope to build good relationships with local ecosystems and promote harmony and coexistence between human and nature. In 2020, GTMC employees created a biotope as a site for experiencing nature and relaxing. Currently, the company is surveying and working to preserve the ecosystem for more than 90 designated species. The company established the China All-Toyota Harmony with Nature Working Group in November 2020 and is working to expand activities while sharing their know-how by conducting tours with other Toyota Group companies in China and other measures.

Overview of the Plant in Harmony with Nature



Toyota ESD* Project

Global Implementation of Environmental Education for the Next Generation

Toyota believes that good relationships with local communities has a positive impact on business. We see environmental education as an opportunity to engage in communication with local communities, and based on this, we implement the Toyota ESD Project in each region. This project emphasizes learning and action by members of the local community and employees. In Japan, we hold study sessions and other events for children, who will be responsible for the future, from a medium- to long-term perspective. For example, we distributed a booklet on endangered animals and held a coloring contest in collaboration with the Japan Environment Association.
Toyota Argentina S.A. (TASA) built a 1-hectare lagoon on its 21-hectare Toyota-Zárate Natural Reserve. The Reserve was set up originally in an attempt to realize Plant in Harmony with Nature, but it is now also utilized as a place for carrying out the ESD Project. To raise environmental awareness and teach about biodiversity, TASA holds educational workshops and other activities.

* Education for Sustainable Development

Toyota Argentina S.A. (TASA), Zárate Plant site
(bottom: Toyota-Zárate Natural Reserve)

Toyota-Zárate Natural Reserve’s lagoon