

BIODIVERSITY

Toyota Motor North America Position Statement



Released April 2018
Updated December 2019

“BIODIVERSITY” is one of Toyota’s four environmental focus areas in North America. We are protecting vulnerable species, preserving and restoring habitat, and sharing our know-how near and far. We are committed to operating in harmony with nature and building healthy ecosystems so that future generations may continue to enjoy the natural wonders of our world.

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TMNA'S BIODIVERSITY POSITION

Protecting life on land is a shared challenge that requires a shared response. By protecting and restoring terrestrial ecosystems, and halting and reversing land degradation and biodiversity loss, we are helping to build a healthier future for society, business and the planet.

TMNA Environmental Sustainability's BIODIVERSITY focus area relates to Challenge 6 of Toyota's Environmental Challenge 2050, which directs us to establish a future society in harmony with nature. In support of Challenge 6, TMNA will reduce environmental impacts, help protect the natural world and share its know-how with others, to help create net positive value for the benefit of our company and society. Toyota aims to create net positive value for BIODIVERSITY by engaging in and supporting efforts that conserve greater than 100 percent of the land we occupy across our North American operations. We will focus on our region as well as work with partners on a global scale. We recognize biodiversity issues present an urgent threat and we must be part of the solution. To make steady progress toward achieving our Challenge 2050 goal of Harmony with Nature, we will strive to:

1. Conserve natural habitat in North America and partner with third parties and other Toyota regions to protect globally recognized hotspots.
2. Protect threatened and endangered species living on or near our sites and support wildlife corridors.
3. Certify all major facilities to a recognized, high standard conservation certification.
4. Engage people in projects that protect biodiversity.
5. Assist our major suppliers and dealers with adopting these same goals.

Zero Impact	+	100% Protection	+	Share Know-How	=	Net Positive Value
Zero Habitat Loss Onsite	+	100% Indigenous Species Protection On-site	+	Preserve Natural Wonders	=	Conserving or restoring more land than we occupy

The table above represents our aspirational goals. TMNA will adopt policies and develop action plans and procedures that aim to achieve these goals in all aspects of our operations. We will incorporate biodiversity strategies (including the concept of offsetting negative impacts) during new construction, renovation and expansion projects.

TMNA's Approach to Harmony With Nature

Our BIODIVERSITY focus area relates to Challenge 6 of Toyota's Environmental Challenge 2050.

Toyota recognizes the importance of operating in harmony with nature. We will minimize the disruption of natural habitats as we plan, construct and manage our facilities, and actively enhance the natural balance of plants, animals and ecosystems. Here in North America, we developed an approach to conquering this challenge that involves three actions:

TOYOTA ENVIRONMENTAL CHALLENGE 2050 	 BIODIVERSITY
CHALLENGE 6 Ensure all Toyota facilities and processes operate in harmony with nature 	<p>Protecting Species:</p> <ul style="list-style-type: none">• Promote native species and remove invasive species• Support pollinator species <p>Conserving Habitat:</p> <ul style="list-style-type: none">• Achieve Conservation Certification® with Wildlife Habitat Council®• Participate in education activities that promote habitat conservation <p>Sharing Know-How:</p> <p>Conserve or restore more acreage than we occupy by engaging with:</p> <ul style="list-style-type: none">• Local communities• Partners

NA Mechanisms to Address Biodiversity

TMNA will take a systems approach that considers linkages among the four focus areas (Carbon, Water, Materials and Biodiversity). These are intertwined issues and should not be addressed in isolation.

We will consider the following mechanisms to address biodiversity risks and opportunities and help us create net positive value for biodiversity:

Products	Sites and Operations	Stakeholders
<ul style="list-style-type: none"> Sustainable sourcing of natural alternatives in parts and accessories 	<ul style="list-style-type: none"> Consider biodiversity value when siting new facilities or renovating and expanding existing facilities Energy and GHG reductions/ efficiency improvements Water conservation and quality Roof gardens Pollinator gardens Habitat restoration Planting native species Elimination of invasive species Transition from landscaping to habitat management Third-party conservation program certifications 	<ul style="list-style-type: none"> Supply chain and dealer outreach Community outreach Biodiversity offsets

GLOBAL SOCIETAL CONTEXT

Biological diversity – or biodiversity – is the term given to the variety of life on Earth and the natural patterns it forms. This diversity is often understood in terms of the wide variety and interdependence of plants, animals and microorganisms that inhabit the planet. So far, about 1.75 million species have been identified. Scientists’ estimates on the number of species range between 3 and 100 million.¹

Biodiversity includes genetic differences within each species, for example, between varieties of crops and breeds of livestock. Chromosomes, genes and DNA – the building blocks of life – determine the uniqueness of each individual and each species.

Another aspect of biodiversity is the variety of ecosystems such as those that occur in deserts, forests, wetlands, mountains, lakes, rivers and agricultural landscapes. In each ecosystem, living creatures, including humans, form a community, interacting with one another and with the air, water and soil around them.

The combination of life forms and their interactions with each other and with the rest of the environment has made Earth a uniquely habitable place for humans. Biodiversity provides a large number of goods and services that sustain our lives. For example:²

- Biodiversity is essential to global food security and nutrition and also serves as a safety net to poor households during times of crisis.
- Increased diversity of genes within species, e.g., as represented by livestock breeds or strains of plants, reduces risk from diseases and increases the potential to adapt to changing climates.
- More than 70,000 plant species are used in traditional and modern medicine.
- The value of global ecosystem services is estimated at \$16-\$64 trillion.

According to the United Nations, one million plant and animal species are on the verge of extinction. There are 36 “biodiversity hotspots” – regions with significant biodiversity that are threatened.³ The 36 areas represent just 2.3 percent of Earth’s land surface, but they support more than half of the world’s endemic plant species (found no place else) and nearly 43 percent of endemic bird, mammal, reptile and amphibian species.

According to WWF, humans are behind the current rate of species extinction, which is 100 to 1,000 times higher than nature intended.⁴ Populations of vertebrate species – mammals, birds, reptiles, amphibians and fish – have declined 52 percent over the last 40 years due to a variety of factors, including habitat destruction. The loss of so many species impacts the balance of nature and threatens the ecosystem services on which life depends.

Biodiversity resilience – the maintenance of ecosystem functions and services under substantial predicted future environmental change (such as from a changing climate) – is vital to humanity’s economic and social development. There is a growing recognition that biological diversity is a global asset of irreplaceable value to present and future generations. The United Nations (UN) has designated this decade (2011 to 2020) as the UN Decade on Biodiversity, which serves to promote a vision of living in harmony with nature.

¹ <https://www.cbd.int/convention/guide/>

² <https://data.iucn.org/ivb/about/biodiversity/>

³ A biodiversity hotspot is defined as region with at least 1,500 vascular plants as endemics and 30 percent or less of its original natural vegetation.

⁴ <https://www.worldwildlife.org/initiatives/wildlife-conservation>

SUSTAINABLE DEVELOPMENT GOALS

In September 2015, the UN announced its 2030 Agenda for Sustainable Development, a plan of action for people, planet and prosperity that establishes 17 [Sustainable Development Goals \(SDGs\)](#) and 169 targets. These goals and targets, agreed to by 193 countries, will stimulate action through 2030 in areas of critical importance for humanity and the planet. Businesses are expected to play a significant role in achieving the bold and transformative steps urgently needed to shift the world onto a sustainable and resilient path.

The UN SDGs recognize biodiversity issues as an area of critical importance.



UN Sustainable Development Goal 15: Life on Land

9 targets to protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Toyota's 6th Global Challenge aligns with the UN's 15th Sustainable Development Goal.

TOYOTA'S GLOBAL POSITION

Toyota Environmental Challenge 2050: HARMONY WITH NATURE



Toyota recognizes biodiversity as a global issue that must be managed locally, regionally and globally. If humans and nature are to coexist into the future, we need to conserve forests and other rich natural systems in all regions. Going forward, Toyota will promote activity at Group, region and organization level. Among the activities we are rolling out are the Toyota Green Wave Project⁵, which aims to connect regions with green corridors; the Toyota Today for Tomorrow Project, providing assistance for environmental activities that connect to the world; and the Toyota Education for Sustainable Development (ESD) Project, contributing to environmental education that connects to the future. Our aim is to establish a society where humans and nature coexist in harmony.

Through our commitment to respect for the planet, we aim to meet our 2050 goals by engaging the talent and passion of our people, who believe there is always a better way. Toyota will lead the way to the future of mobility and enrich lives around the world by implementing steady initiatives to attain sustainable development. Toyota will go beyond zero environmental impact to create net positive value for society.

⁵TMC has linked Green Wave Project activities to 10 of the 20 [Aichi Biodiversity Targets](#), which are part of a strategic plan for 2011-2020 adopted by the Conference of the Parties (COP) to the United Nations Convention on Biological Diversity (CBD). CBD is focused on the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources. CBD's 13th COP will be held in Cancun, Mexico on December 2-3, 2016.

TMNA CONTEXT

Risks & Opportunities in North America

Toyota recognizes a number of **risks** related to biodiversity that may significantly impact our operations in North America or hinder our ability to do business:

- Laws and regulations related to endangered species currently apply to our operations. New laws or changes to existing laws related to biodiversity issues could impact business continuity.
- The consequences of biodiversity degradation and loss can lead to a higher cost for inputs to business processes, or the disruption of elements of our supply chain.

Opportunities related to biodiversity include:

- Enhanced reputation, which can lead to increased market share and better relationships with stakeholders including NGOs and local communities. There is little expectation from the public for Toyota to act in this area, providing an opportunity for positive outreach.
- Enhanced loyalty of team members. Improving Toyota's environmental footprint and engaging more team members directly in biodiversity activities generates increased corporate loyalty. Biodiversity is more relatable to team members than most other environmental issues.
- Positive impacts to our ability to hire and retain qualified team members. Proactively addressing biodiversity and other environmental issues may make Toyota a more attractive employment choice.
- The use of new products found in nature for vehicle interiors (ECO plastics, kenaf, soy, etc.), which could replace parts that have a larger carbon footprint.

North American Perspective

The following factors place Toyota Motor North America (TMNA) in a key position to lead Toyota to achieve the 6th goal in Environmental Challenge 2050:

- Of the 36 [biodiversity hotspots](#), five are in North and Central America: California Floristic Province, Caribbean Islands, Madrean Pine-Oak Woodlands⁶, Mesoamerica and the North American Coastal Plain.
- Toyota owns more than 21,000 acres of land.
- By the end of 2019, programs at 13 North American sites have earned WHC Conservation Certification®.
- Toyota's North American sites are located along the migration pathway of the monarch butterfly. Seventeen sites have planted pollinator gardens to nurture monarch butterflies and other pollinator species.
- Many of TMNA's larger sites are managing biodiversity issues. For example, the manufacturing plant in Kentucky has an endangered plant species on its property that team members actively work to restore.

In the U.S., there are 501 endangered and 215 threatened animal species and 772 endangered and 172 threatened plant species.⁷

⁶ The Madrean Pine-Oak Woodlands are subtropical woodlands found in the mountains of Mexico and the southwestern U.S.

⁷ U.S. Fish & Wildlife Service's [Environmental Conservation Online System](#), accessed October 17, 2019

Pollinator Concerns in the U.S.

In the U.S., 30 percent of crop production depends on pollinators. Of this, honeybees are responsible for almost 80 percent of all crop pollination. The monetary value of honeybees as commercial pollinators is estimated at about \$15 billion annually.⁸

Declines in the diversity of flowering plants, loss and degradation of habitat, introduction of non-native species, toxicity and widespread use of pesticides, air pollution and climate change all play a role in the decline of pollinator populations. For example, the Monarch butterfly population has declined 90 percent over the past two decades.

In June 2014, President Obama issued a Presidential Memorandum directing an interagency Task Force to create a *Strategy to Promote the Health of Honeybees and Other Pollinators*. In May 2015, under the leadership of the U.S. Environmental Protection Agency (EPA) and U.S. Department of Agriculture (USDA), the Task Force released its Strategy, with three overarching goals:

- Reduce honeybee colony losses to economically sustainable levels.⁹
- Increase monarch butterfly numbers to protect the annual migration.
- Restore or enhance millions of acres of land for pollinators through combined public and private action.

TMNA participated in discussions related to the development of the Strategy.

⁸The estimated value of honeybee pollination in Canada is about \$2 billion.

⁹Note that the number of bee colonies worldwide has been increasing since 2006, but in 2015, 42 percent of colonies in the U.S. collapsed.