

2 ZERO HUNGER



SOMPO HOLDINGS | Innovation for Wellbeing  
Sompo Japan Nipponkoa

SOMPO JAPAN NIPPONKOA  
INSURANCE INC.

Keidanren  
Japan Business Federation



JAPAN

# Providing Weather Index Insurance using data from earth observation satellites

## RELATED SDGS GOALS



## SDGS 169 TARGETS

- 2.4 Ensure sustainable food production systems
- 1.5 Build the resilience of the poor & the vulnerable
- 13.1 Strengthen resilience to climate-related hazards & natural disasters

## PRIMARY COUNTRY

Myanmar

## OTHERS

Thailand, Philippines, Indonesia

## 1 OUTLINE OF A PROJECT/ GOOD AND SERVICE

**W**eather index insurance is an insurance product that pays out a contractually predetermined insurance amount when a weather index — such as for temperature, wind speed, or rainfall — fulfills certain conditions.

In Myanmar, we developed Japan's first weather index insurance that uses data from earth observation satellites and covers drought risk for rice and sesame farmers in the central arid region.

This insurance, developed in partnership with the Remote Sensing Technology Center of Japan (RESTEC), makes use of rainfall data obtained by earth observation satellites.

## 2 IMPACT ON SOCIETY

**T**his product contribute to built the resilience of the poor and those in vulnerable situation. Agriculture in South is a key industry that is also vulnerable to climate change. Aiming to provide weather index insurance to 30,000 farmers in Thailand and other Southeast Asian countries by 2025, we will move forward on our continued efforts in this field.



## URL

<https://www.sompo-hd.com/en/csr/action/community/content4/#02>





# Building a Secure Society by Utilizing Traffic Technology Innovation



## RELATED SDGS GOALS



## SDGS 169 TARGETS

3.6 Halve the number of global deaths & injuries from road traffic accidents  
12.2 Achieve the sustainable management & efficient use of natural resources

## PRIMARY COUNTRY

Japan

## 2 IMPACT ON SOCIETY

Tokio Marine Nichido contributes to increasing society's preparedness against traffic risk and the prevention of traffic accidents by offering insurance products and services that quickly capture the latest innovation in traffic technology.



## 1 OUTLINE OF A PROJECT/ GOOD AND SERVICE

For the first time as a major insurance company in Japan, Tokio Marine Nichido provides a telematics service called the "Drive Agent Personal" in retail business since 2017 for delivering further safety and security. When the device detects a serious collision, it automatically sends an accident information report, and can dispatch an ambulance if the driver is seriously injured or not responding through the communication function, etc. It also provides services such as driving diagnosis reports and support for accident prevention.

### URL

[https://www.tokiomarinehd.com/en/sustainability/theme1/traffic\\_safety.html](https://www.tokiomarinehd.com/en/sustainability/theme1/traffic_safety.html)



### URL

[https://www.tokiomarinehd.com/en/ir/library/annual\\_report/h10q7e00000013tj-att/20180830\\_e4.pdf](https://www.tokiomarinehd.com/en/ir/library/annual_report/h10q7e00000013tj-att/20180830_e4.pdf)







# Global expansion of water solution business with "RemixWater" technology



## RELATED SDGS GOALS



## SDGS 169 TARGETS

6.4 Increase water-use efficiency  
6.a Support capacity-building of developing countries in water- & sanitation-related activities

## PRIMARY COUNTRY

Republic of South Africa

## OTHERS

Any water scarce country which is interested in new water production method which has lower energy consumption and lower environmental impact.

## 1 OUTLINE OF A PROJECT/ GOOD AND SERVICE

"RemixWater" is an integration system of conventional desalination process and water recycle process to produce water which can be adapted industrial, domestic purposes in terms of water quality. Since 2016, Hitachi is executing four year demonstration project with eThekweni Municipality(City of Durban) in Republic of South Africa. Currently the plant is construction stage. This project is entrusted by NEDO(New Energy and Industrial Technology Development Organization) of Japan.

## 2 IMPACT ON SOCIETY

- Energy saving from more efficient pumping
- Low environmental impacts due to reduced brine salt concentration
- Expected to resolve water shortages in the region and be rolled out to other water-stressed areas



A sewage treatment plant in eThekweni is the planned site of the RemixWater demonstration project

### URL

[https://www.hitachi.com/businesses/infrastructure/product\\_site/water\\_environment/remix\\_water/index.html](https://www.hitachi.com/businesses/infrastructure/product_site/water_environment/remix_water/index.html)



### URL

<http://www.hitachi.com/New/cnews/month/2016/11/161118a.html>



### URL

[https://www.hitachi.com/sustainability/sdgs/business/index.html#sdgs\\_03](https://www.hitachi.com/sustainability/sdgs/business/index.html#sdgs_03)





# Development of Fuel Cell Electric Vehicles, “Ideal Eco-Cars”



## RELATED SDGS GOALS



## PRIMARY COUNTRY

Japan, United States, United Kingdom, Norway, Netherlands, Germany, Denmark, Sweden, Belgium, France, Switzerland

## OTHERS

Canada, Australia, Argentina, China

## 1 OUTLINE OF A PROJECT/ GOOD AND SERVICE

**F**CEV is an ideal eco-cars which discharges only water. Toyota uses its hybrid electric vehicle technology as core technology for FCEVs. In addition to excellent environmental credentials, FCEV provides fun to drive, convenience, and performance. MIRAI can be also used as a generator during disasters. Hydrogen can be produced from a wide range of primary energy sources, and stored as hydrogen for power supply. FCEV is an ideal eco car if combined with renewable energy sources.

## 2 IMPACT ON SOCIETY

Contributing to

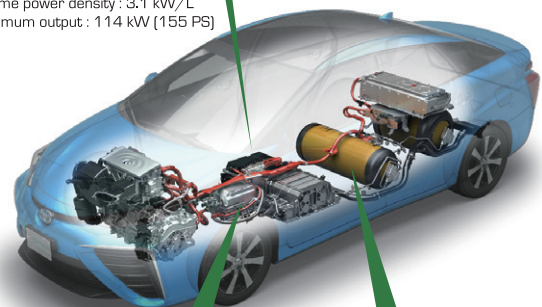
- Emission reduction by diffusion of FCEVs
- Energy diversification
- Effective utilization of renewable source energy by converting the electricity generated to hydrogen, it can be stored and easily transported to meet demand

### Fuel cell stack

Toyota's first mass-production fuel cell, featuring a compact size and world top level output density.  
Volume power density : 3.1 kW/L  
Maximum output : 114 kW (155 PS)

MIRAI

Toyota Fuel Cell System (TFCS)



### Fuel cell boost converter

A compact, high-efficiency, high-capacity converter newly developed to boost fuel cell stack voltage to 650 V. A boost converter is used to obtain an output with a higher voltage than the input.

### High-pressure hydrogen tank

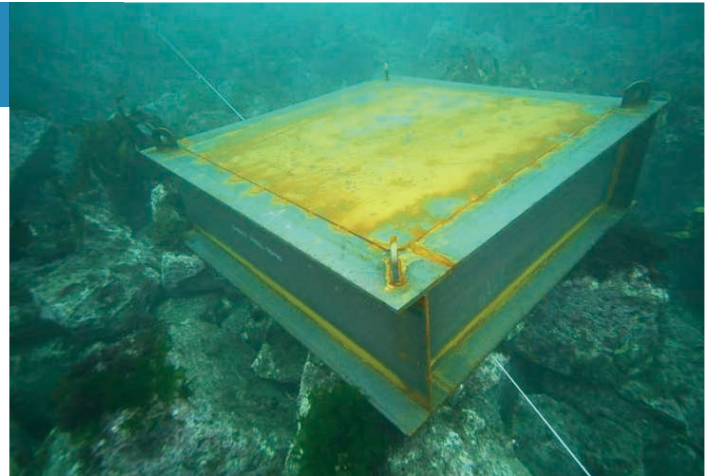
A compact, high-efficiency, high-capacity converter newly developed to boost fuel cell stack voltage to 650 V. A boost converter is used to obtain an output with a higher voltage than the input.

## URL

[https://www.toyota-global.com/innovation/environmental\\_technology/fuelcell\\_vehicle/](https://www.toyota-global.com/innovation/environmental_technology/fuelcell_vehicle/)



# Contributing to the SDGs through the use of iron and steel slag



## RELATED SDGS GOALS



## PRIMARY COUNTRY

Japan

## OTHERS

United States, UAE, Egypt, Australia, Qatar, Ivory Coast, Republic of Korea, Bangladesh, Philippines, Vietnam, Peru, Malaysia

Iron deficiency is considered to be one factor behind the phenomenon of shoreline denudation (loss of seaweed and other marine vegetation) along 5000 km of Japanese coastline. To help alleviate this problem, we developed ""Beverly Series"" iron supply units, which contain a mixture of iron and steel slag and humus in Oct. 2004.

## 2 IMPACT ON SOCIETY

An inevitable by-product of the steelmaking process, iron and steel slag consists of materials that melt and separate out when iron is reduced and refined during the iron-ore smelting stage. (The production of 1 ton of iron generates 0.4 ton of iron and steel slag.) However, rather than dispose of this material, we have harnessed the technologies, knowledge, and development prowess amassed through our steelmaking operations to date and are promoting useful applications for iron and steel slag in a wide range of other industries. (We have achieved a recycling rate of 99 percent for our industrial by-products.) From the perspective also of building renewable systems for a sustainable society, our achievements with the recycling of iron and steel slag and other by-products are aiding efforts to achieve the SDGs.

## URL

<http://www.nssmc.com/en/csr/report/index.html>



## 1 OUTLINE OF A PROJECT/ GOOD AND SERVICE

Our main operations utilizing iron and steel slag are as follows:

(i) Blast furnace cement

Blast furnace cement is a mixture comprising 40-45 percent pulverized iron and steel slag and conventional cement. It is utilized in a range of civil engineering applications including coastal and river embankment structures, roadways, and railways. It offers numerous benefits, among them (i) strength that increases with time; (ii) the suppression of alkali-silica reactions; (iii) durability under exposure to seawater and chemical agents; and (iv) contributions to reduced energy consumption and CO<sub>2</sub> emissions.

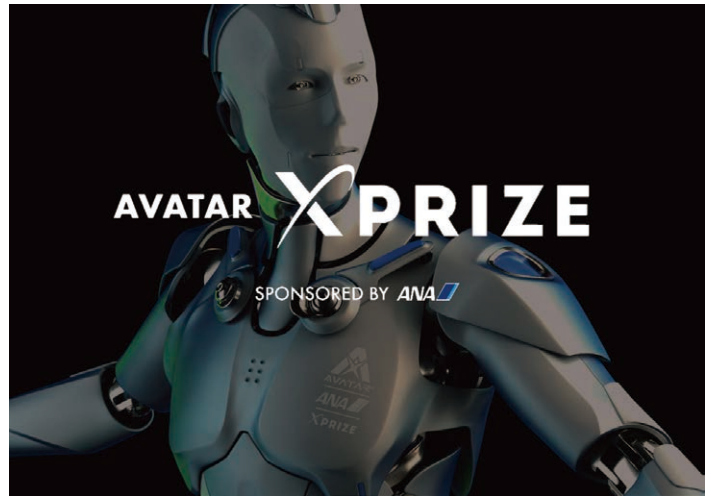
(2) ""Beverly Series"" iron supply units for the regeneration of fisheries and seaweed beds





JAPAN

# ANA AVATAR Program



## RELATED SDGS GOALS



## PRIMARY COUNTRY

Japan, USA

## OTHER

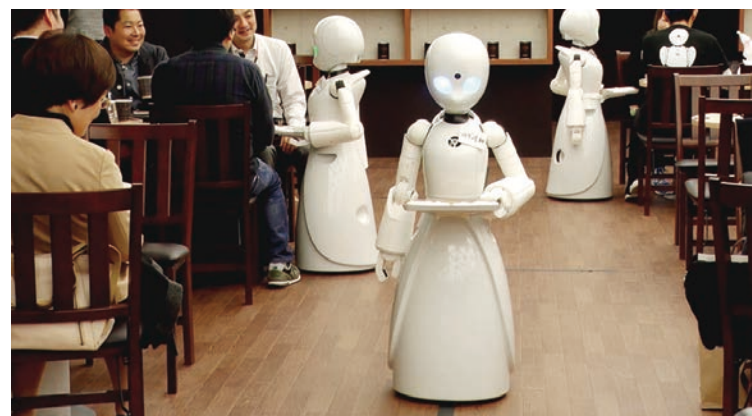
ALL

## 1 OUTLINE OF A PROJECT/ GOOD AND SERVICE

Combining technologies ranging from robotics to haptics to develop an avatar system will empower humanity with a new capability to overcome the physical barriers of distance and time to communicate and interact in remote, real-world environments. ANA launched a \$10 million global competition to create a high performance, general purpose avatar and accelerate development of avatar component technologies. These general purpose avatars will allow humanity to overcome the fundamental problem of physical access which has prevented us from solving many of the world's global challenges. In addition, ANA launched the world's first avatar test field in Oita prefecture, where avatar testing has commenced in the fields of education, health care, tourism, agriculture & fishing, and space exploration.

## 2 IMPACT ON SOCIETY

One Avatar unit can transport the skills of any doctor, teacher, or expert to the location of the Avatar, solving the bottleneck of physical access. Over 570 teams from 74 countries are competing in the ANA AVATAR XPRIZE.



## URL

<https://ana-avatar.com/>

