

YAKUSHIMA Zero-carbon



The Island Closest to Carbon Neutrality

YAKUSHIMA

Touring a Zero-Carbon Island



鹿児島県
Kagoshima Prefecture

TAKE
Free

Creating a Zero-Carbon Yakushima Island

Kagoshima Prefecture aims to make carbon neutrality a reality by reducing total greenhouse gas emissions to net zero by 2050.

Yakushima is gaining attention as an advanced region in decarbonization efforts toward achieving carbon neutrality.

The island is blessed with diverse and abundant forest resources, and nearly all of its electricity is supplied by hydroelectric power, which emits no carbon dioxide during generation. Consequently, the island is considered the closest to achieving carbon neutrality.

The Prefecture is utilizing this significant potential to promote the “Creating a Zero-Carbon Yakushima Island” initiative.

Why not learn about Yakushima’s Zero-Carbon initiatives and experience how we are working toward achieving carbon neutrality?

The “Creating a Zero-Carbon Yakushima Island” initiative also contributes to the SDGs.



*The SDGs are a set of seventeen goals for the whole world to achieve by 2030.

Contents

- ① Zero-Carbon and Hydroelectric Power 3
- ② Zero-Carbon and Forests 5
- ③ Zero-Carbon and
Creating a Sustainable Yakushima 7
- ④ Contributing Partners
of the “Zero-Carbon” Initiative 9
- ⑤ Zero-Carbon and
Local Production and Consumption 11

The following organizations kindly cooperated with our interview.
(Random order, titles omitted)

- Yakushima Town
- Yakushima Denko Co., Ltd.
- Kagoshima Prefectural Yakushima High School
- Yakushima Green Hotel
- Mitake Shuzo Co., Ltd.
- Shiroyama Kikaku Co., Ltd.
- Nippon Rent A Car Limited.

Zero-Carbon and Hydroelectric Power

“Clean energy that produces almost no carbon dioxide”

Hydroelectric Power in Yakushima



Rain and snow falling to the earth flow down rivers, pour into the sea, evaporate, and become clouds. Clouds bring rain and snow back to the earth. In this way, water is a renewable energy source that can be reused endlessly without ever running out.

Yakushima generates approximately 99.96% of its annual electricity from hydropower, a clean energy source that produces almost no carbon dioxide emissions, as of fiscal year 2023 (Reiwa 5).

Yakushima, with its annual rainfall of 8,000 mm in mountainous areas and average elevation of 600 meters, has long been recognized as a powerhouse of hydroelectric resources.

Yakushima Denko Co., Ltd. was established in 1952 with a view to developing these abundant hydropower resources and managing power-using industries on the island. Subsequently, it developed the Anbou River system and currently owns three hydropower plants.

The total power generation capacity reaches 58,500 kW, supplying this clean electricity to all households on the island and forming the backbone of Yakushima's daily life.

.....
Yakushima Denko Co., Ltd.

939 Miyanoura Yakushima Town TEL : 0997-42-0111
.....



Link between Zero-Carbon and Hydroelectric Power

～Utilizing electric vehicles to achieve zero carbon dioxide emissions～

When an EV runs on electricity generated by carbon-free hydropower, the carbon dioxide emitted by the EV is virtually zero. Kagoshima Prefecture is working to promote electric vehicles as a part of its effort to "Creating a Zero-Carbon Yakushima Island."

This includes providing official electric vehicles for the Yakushima Office, installing rapid charging stations to create an environment where electric vehicles can be used with confidence, and holding test drive events for EVs.



EV at the Kagoshima Prefectural Office



EV Test Drive Events



EV Hands-on Events (Power Supply)



EVs at the Yakushima Municipal Building

Charging stations at Yakushima Town Hall and other locations

Top Pick

EV Charging Stations

The island is well equipped with publicly accessible charging stations: four rapid chargers and eleven standard chargers.



Yakushima Town Hall
Standard Charging Station (1 unit)



Rapid Charging Station



For information on using charging stations, please scan this QR code.

Join us in
"Creating
a Zero-Carbon
Island" !

Going around Yakushima by an EV.

Please enjoy a "Zero-Carbon Trip" around Yakushima in an EV rental car.



► Nippon Rent A Car

Yakushima Airport Office
719-37, Koseda
Yakushima Town
TEL: 050-1712-2397



► One's Rent A Car

Yakushima Airport Office
413-66, Koseda
Yakushima Town
TEL: 0997-43-5195

Zero-Carbon and Forests

“Local production for local consumption of wood”
and “Carbon Dioxide Sequestration”

2019
Wood Utilization Excellent Facility Competition
Prime Minister's Award

Yakushima New Town Hall (Main building)



“With a vision that the Town Hall would be loved for hundreds of years to come——”

The inauguration ceremony for the Yakushima Town Hall was held on May 18, 2019. The new building consists of four structures: an administrative wing, a public service wing, a forum wing, and a council wing. It occupies a site area of 12,802 square meters and has a total floor area of 3,630 square meters. This two-story wooden building utilizes 1,032 cubic meters of timber, with the majority sourced from Yakushima.

Yakushima is famous for the estimated 7,200-year-old “Jomon Sugi” cedar. Cedars growing naturally at elevations above 500 meters, especially those estimated to be over 1,000 years old, are called “Yakushima cedar.” As they grow in protected old-growth forests, logging them is now prohibited. The wood used in the new building is Japanese cedar; Yakushima Jisugi planted after the war. The construction of the new building using Yakushima cedar is intended to leverage its unique characteristics, thereby contributing to the revitalization of the forestry industry and expanding sales channels.

Yakushima Town Hall

849-20 Koseda, Yakushima Town TEL: 0997-43-5900

Link between Zero-Carbon and Forest

～Absorbing and sequestering carbon dioxide to help prevent global warming～

In recent years in Japan, some forests have not been properly maintained through thinning and other methods due to factors such as depressed timber prices. Also, transporting wood imported from overseas emits carbon dioxide.

Approximately 90% of Yakushima is covered in forests, and efforts are underway to reevaluate the use of cedar and utilize it as construction timber. The use of domestic timber ensures that sales revenue is returned to the forests, thereby sustaining the forestry cycle: “plant → grow → use → replant.”

Trees absorb and sequester carbon dioxide, a major cause of global warming, through photosynthesis. To combat global warming, it is extremely important to revitalize the forestry industry and implement proper forest management.

The new Yakushima Town Hall will continue to store the carbon dioxide absorbed by the locally sourced Japanese cedar; Yakushima Jisugi, used in its construction for the next 100 years to come.



Forum Wing

Top Pick

Of the four buildings, you can freely visit the Forum Wing. The building has a pleasant cedar scent. Additionally, regular photo exhibitions and events are held here, so if you time your visit right, you might just be able to attend one yourself. (Photo: Assembly Wing)



Benches made from Yakushima cedar and other local cedars

Top Pick

Benches, desks and chairs made from Yakushima cedar wood (including Jisugi, Japanese cedars and hardwoods) are installed within the main building. Please take a seat and feel the warmth of Yakushima wood. You can also appreciate the differences between Japanese cedar and hardwoods!



Join us in
“Creating
a Zero-Carbon
Island”!

For a memorable journey, Yakushima crafts or wood products are made from Yakushima cedar.

Yakushima features products lovingly crafted by local artisans, using buried or wind-fallen Yakushima cedars and woodworking items utilizing “Jisugi”, Yakushima cedar. Trees grow by absorbing carbon dioxide from the atmosphere through photosynthesis, and as a result, they serve to prevent global warming. Even after being harvested and turned into timber or wood products, the carbon remains sequestered. Relax at home with the soothing scent of cedar while revisiting memories of your trip to Yakushima.



Prefectural Designated Traditional Crafts

Since fiscal year 1987, Kagoshima Prefecture has designated crafts and their producers that meet certain criteria based on the “Kagoshima Traditional Crafts Designation Guidelines.” These products may use the prefecture’s “Designation Mark” to indicate that they are indeed traditional crafts. Three crafts made from Yakushima cedar have also been designated.

Yakushima cedar Woodturning



► Crafted to highlight the distinctive quality of Yakushima cedar logs are trays, tea coasters, vases, and sweets containers.

Solid Yakushima cedar furniture



► Storage furniture crafted from Yakushima cedar solid wood boards (cut from a single piece of Yakushima cedar, not laminated) that have been thoroughly dried and assembled, highlighting the natural grain of Yakushima cedar.

Small Yakushima cedar crafts



► The timber for Yakushima cedar is sourced from buried logs, carefully dried over a period of four to five years, requiring extensive time and effort for completion. Buried timber is utilized to the fullest extent, effectively making use of the limited resource that is Yakushima cedar.

Zero-Carbon and Creating a Sustainable Yakushima

“Sustainable Event Creation and Regional Revitalization Leveraging
Yakushima’s Brand Power”

Kagoshima Prefectural Yakushima High School



Kagoshima Prefectural Yakushima High School, established in 1948, is the only full-time high school on the island. Our Business Information Course collaborates with various stakeholders both on and off the island for research activities.

Since the 2021 fiscal year, we have organized an annual “Eco Festival” event and worked on product development.

Through these events, we work actively every day to raise awareness about the various environmental issues occurring on Earth and about the SDGs, while also encouraging people to rediscover Yakushima, a World Heritage site at the forefront of decarbonization efforts.

Kagoshima Prefectural Yakushima High School
2479-1 Miyanoura, Yakushima Town TEL: 0997-42-0013

Link between Zero-Carbon Initiatives and Yakushima High School

～Sharing Yakushima's Sustainable Community Development Nationwide～

We compile local initiatives linked to events and SDGs as research findings and present them at the High School Student Commercial Research Presentation Conference.

The 2024 season brought a fourth consecutive prefectural championship, a third straight Kyushu championship, and a third consecutive appearance at the national tournament, earning high praise.



For more details, check the official Instagram of the Information Business Department at Yakushima High School!

Activity① (Community Interaction)

Together with event facilitators on the island, we organized the environmental events for the 2024 fiscal year. The event featured the sale of organic ingredients and environmentally conscious products from local businesses, as well as workshops utilizing waste materials, made possible through the cooperation of NPOs and Yakushima Town that have been addressing Yakushima's environmental issues. Many visitors learned about environmental issues and decarbonization efforts, while also enabling us to operate the event in collaboration with the local community.



Activity② (Zero Emission)

By analyzing the costs and environmental impact reduction for each event held, we are reviewing our event management methods. We strive daily to improve and realize "zero-emission events" that do not emit CO2 or waste, thereby contributing to the SDGs.

We held an environmental quiz contest to get event attendees interested in upcycling marine plastic waste!



Join us in
"Creating
a Zero-Carbon
Island" !

Local Production for Local Consumption and Food Loss Reduction Product Development

In collaboration with the Prefectural Yakushima Office and Yakushima Fureai Foods, we have developed "YAKUSHIMA Trail Mix", a portable hiking snack made from processed peels of discarded passion fruit and other byproducts. With a focus on local production for local consumption and reducing food waste, it is also filled with the desire to foster interest in Yakushima's nature and creatures, and to spread the island's charm to the world.

Available at "Pukari Do" souvenir shop in Koseda, Yakushima Town. A portion of sales is donated for mountain conservation.



Contributing Partners of the Zero-Carbon initiative

Yakushima Green Hotel

[Link to Zero-Carbon](#) Reducing carbon dioxide emissions through energy conservation, the promotion of electric vehicles, and the use of biomass boilers.



Yakushima Green Hotel believes that the corporate principles of “pursuing profit” and environmental work can be compatible, thereby implementing various eco-friendly activities such as energy conservation, water saving, and food recycling, while also working to reduce costs.

In 1993, the year Yakushima was designated a World Heritage Site, we converted our guesthouse into a hotel. We were shocked at how much the electricity bill had gone up at the time. Driven by the thought that “something must be done,” we began by reducing expenses through power saving measures and cutting down on unnecessary lighting, aiming to save water and reduce gas and oil costs. We also underwent an energy efficiency assessment, switched to LED lighting, upgraded to energy-efficient air conditioners, introduced electric vehicles and installed charging equipment.

With pride in being a World Natural Heritage Island, we consider it our duty to coexist with Yakushima’s nature, protect it, and pass it on to future generations. We will continue to engage in various eco-friendly activities.

【Special thanks: Mr. Nobuki Kikunaga, President, Kikunaga Kanko Ltd.】

Yakushima Green Hotel

788-110 Anbou, Yakushima Town TEL: 0997-46-3021

Activity leads to Zero-Carbon Island

EV Charging Stations

The hotel features a rapid charging station for EVs, as well as many other eco-friendly initiatives, like LED lighting!



Eco Hotel SORA

Eco-focused “Eco Hotel SORA”
To reduce CO2 emissions, we use LED lighting. We also pump well water and heat the boiler with firewood.



Mitake Shuzo Co., Ltd.

Link to Zero-Carbon

Reducing carbon dioxide emissions by using biomass to replace fossil fuels.



Mitake Shuzo Co., Ltd. is advancing initiatives to utilize the biomass energy inherent in shochu lees as an environmental conservation measure.

During the production process of shochu, shochu lees are generated. In the past, they were used as livestock feed or spread over farmland as fertilizer. However, as the number of cattle and pigs processed on Yakushima declined each year, attention was turned to biomass processing systems to stabilize shochu production.

Fermenting shochu lees produces methane gas. Utilizing this methane gas as fuel has enabled us to maintain optimal fermentation temperatures, cool the mash during shochu production, and reduce the fuel oil consumption of the water boiler by up to 10%. After methane fermentation, the effluent is separated into purified water and sludge at the water treatment facility. The purified water is discharged into rivers, while the sludge is sent to a composting center to be used as raw material for fertilizer.

【Special thanks: Mr. Yoshiro Baba, President, Mitake Shuzo Co., Ltd.】

Mitake Shuzo Co., Ltd.

2625-19, Anbou, Yakushima Town TEL: 0997-46-2026

Activity leads to Zero-Carbon Island

Bio-Processing Plant for Shochu Lees

Shochu lees undergo methane fermentation, and the separated sludge is used as a raw material for fertilizer and as boiler fuel.



Water Environment Conservation

Shochu "Mitake", born on Yakushima, is produced using the island's beautiful water. Efforts to preserve the water quality environment are also essential for shochu making.



Zero-Carbon and Local Production for Local Consumption

The Key Word is “Local Production for Local Consumption”

Local production for local consumption refers to efforts to consume agricultural, forestry, and fishery products produced within the region where they were produced, thereby reducing carbon dioxide emissions caused by long-distance transportation. Recently, local energy production and consumption is also gaining momentum in the energy sector. Utilizing locally generated renewable energy can reduce carbon dioxide emissions.

Using Yakushima cedar crafts like chopsticks and tableware in daily life also contributes to “Creating a Zero-Carbon Island.” Trees absorb carbon dioxide from the atmosphere through photosynthesis and use it for growth, thereby helping prevent global warming. Moreover, even when trees are cut down and turned into lumber or wood products, the carbon remains sequestered.

Let us create a Zero-Carbon Island through a lifestyle that harnesses the natural blessing of Yakushima!

Join us in
“Creating
a Zero-Carbon
Island”!

Let us enjoy the gifts of Yakushima!

On Yakushima, you can enjoy the delightful local cuisine known as “Yakushima Gossou,” made with locally sourced ingredients. “Yakushima Gossou” refers to menus that meet four specific criteria. Now, let’s set off on our journey to find “Gossou”!

“Gossou” means a feast or a special meal.

1 Using Yakushima’s Seafood



3 Using Yakushima’s Citrus Fruits



2 Using Yakushima’s Cattle



4 Using Yakushima’s Vegetables



Restaurant Panorama



Restaurant Itsuki



Curry Shop Hibiscus



Sushi Isono Kaori



Set Meal・Pasta Katagiri-San



Yakiniku Renga-Ya



Sushi Tavern Yashima



Eatery・Café Oasis

Special
website
here!



Year 2024 Kagoshima Decarbonized Society Model Creation Project
March 2025

Issued by Kagoshima Prefecture Global Warming Countermeasures Office
Created by Kagoshima Environmental Technology Association

★ For inquiries regarding this booklet ★

Kagoshima Prefecture Global Warming Countermeasures Office
Tel: 099-286-2586