COP29 Azerbaijan

Potential for City-to-City collaboration project to promote the spread of decarbonized infrastructure

Gorontalo Province, INDONESIA

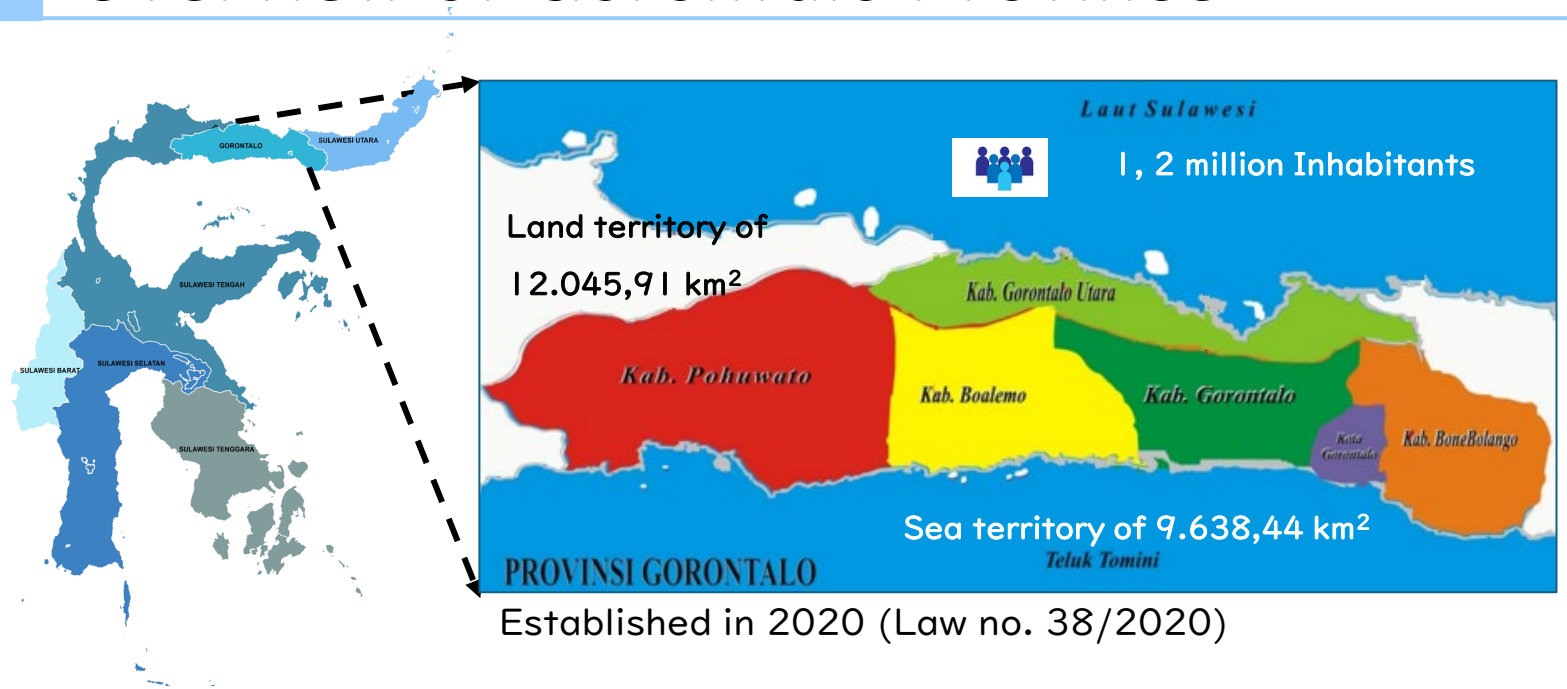
Ehime prefecture, JAPAN

Japan NUS Co., Ltd (JANUS)

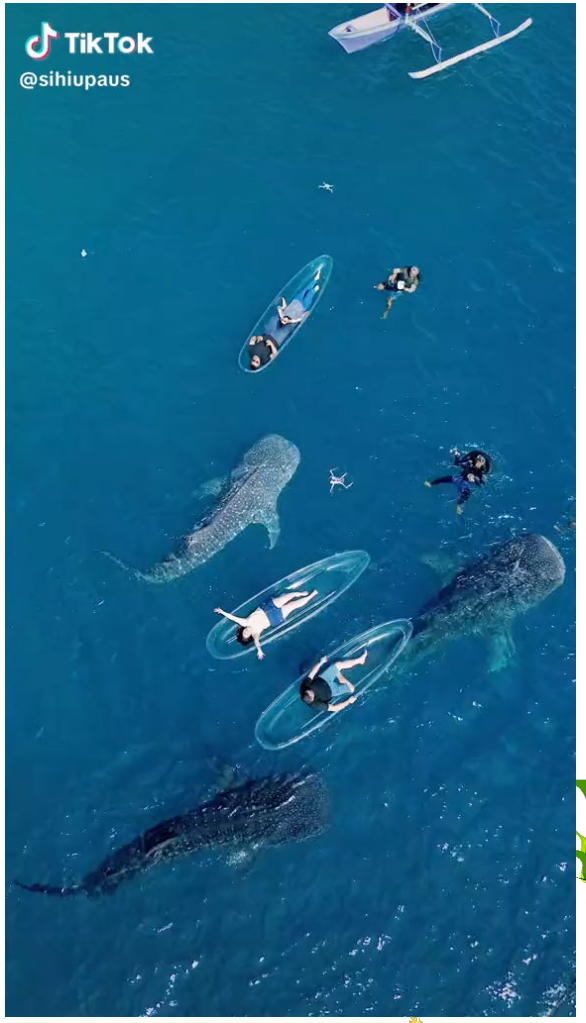
JANUS

November 2024

Overview of Gorontalo Province



Established in 2020 (Law no. 38/2020)



Olele Marine Park

Golden Mosque

Otanaha Fortress

Environmental Issues






- ✓ Waste Management
- ✓ Low Water Quality
- ✓ Deforestation
- ✓ Climate Change

Problems and Strategic Issues

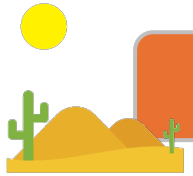
RPJPD Prov Gorontalo 2025 - 2045

Environmental Quality Remains Low

- **Environmental Quality Index** in 2023 Remains at 79.52%
- **Water Quality Index** at 58.07 (Low)

Decreasing Surface Area and Sedimentation of Lake Limboto

- One of Indonesia's 15 Critical Lakes
- From 2000 to 2015, the lake area decreased by 1,076 hectares, with an average shrinkage rate of 71.73 hectares or 1.79% per year



High Levels of Degraded Land

- Total Area of **Degraded Land**: 217,177 Hectares (within designated areas: 144,983 Hectares; outside designated areas: 72,149 Hectares)
- Uncontrolled agricultural activities on **sloped land** have resulted in land degradation, erosion, and sedimentation.

Sanitation and Clean Water Coverage Remains Low

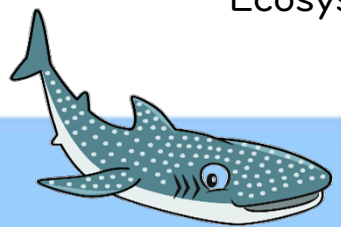
- Access to **Adequate Sanitation** by Households Stands at 78.58%
- Access to **Safe Drinking Water** by Households Has Declined Over the Past Three Years from 32.04% to 31.69%

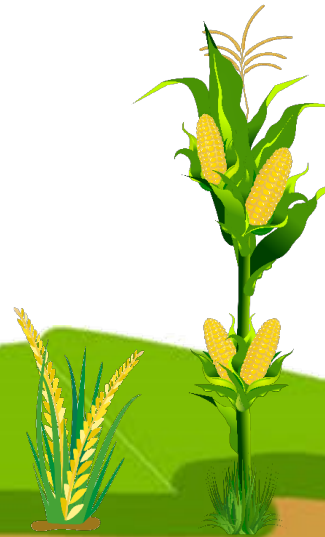
Decline in Land Carrying Capacity and Vulnerability of Marine Ecosystems

- **Land Use Change** and **Mining Activities** in the Long Term Will Impact Habitats and Biodiversity
- Degradation of Coastal, Marine, and Coral Reef Ecosystems

Vulnerability to Disasters and Climate Change Remains High

- Gorontalo Province is Classified as a **Disaster and Climate Change Vulnerable Region**
- **Disaster Risk Index:** 120.61 (Moderate)
- **Greenhouse Gas (GHG)** Emissions Tend to Increase, Reaching 1,407.27 Gg CO_2e (Gigagrams of Carbon Dioxide Equivalent) in 2022





Decarbonization Policy

Green Economy Implementation

Regional Green Economy Index: Targeted increase from 78.52 (2025) to 94.81 (2045)

Renewable Energy Share in Primary Energy Mix (%): From 16.43% (2025) to 74.32% (2045)

- Emphasis on energy efficiency implementation and the development and utilization of renewable energy sources
- Development of environmentally friendly transportation systems
- Promotion of circular economy practices, particularly in waste management, domestic/industrial waste processing, with concurrent landfill conservation efforts and hazardous waste treatment infrastructure development
- Sustainable management of agricultural and forestry land, alongside sustainable derivative products
- Realization of green investment across various sectors

Disaster and Climate Change Resilience

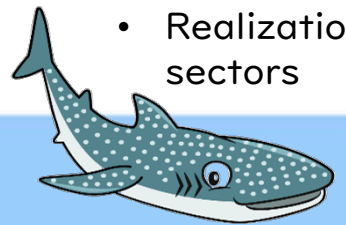
Disaster Risk Index (DRI): Target reduction from 120.61 (2025) to 79.24 (2045)

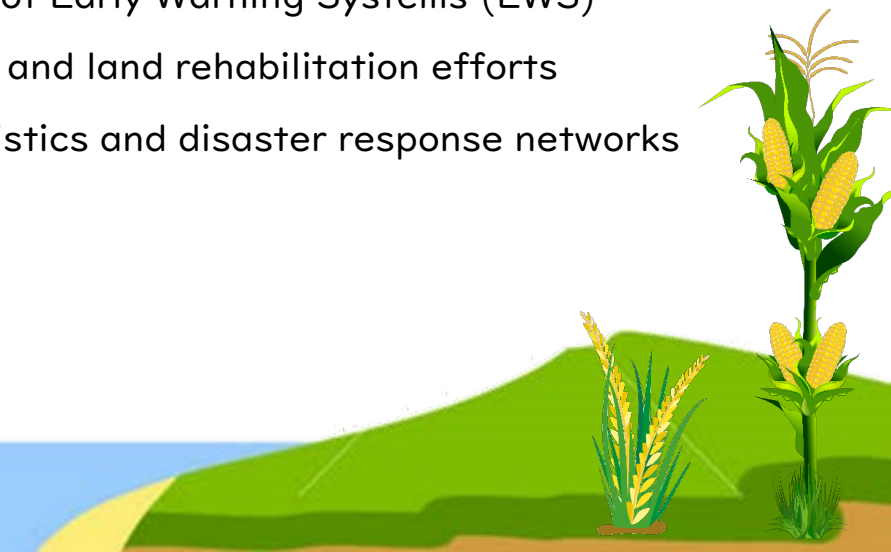
Greenhouse Gas (GHG) Emission Reduction Percentage:

Cumulative; 21.05% (2025) to 35.1% (2045), Annual;

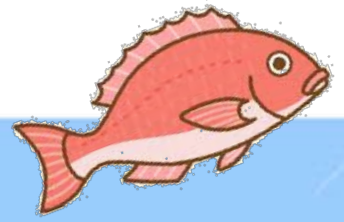
49.72% (2025) to 91.63% (2045)

- Development of infrastructure based on disaster vulnerability and climate change impact assessments
- Enhancement of energy efficiency and utilization of renewable energy sources
- Increased disaster and climate change resilience through the implementation of Early Warning Systems (EWS)
- Expansion of forest and land rehabilitation efforts
- Development of logistics and disaster response networks





Overview of Ehime Prefecture



Industrial structure of Ehime Prefecture

NO.1 in JAPAN Shipbuilding Industry Accumulation
NO.1 in JAPAN Towel Production

Matsuyama City

Along with Toyo region,
is the leading area for aircraft carbon fiber supply base

3.13 billion dollars

510,000 population

Imabari City

6.97 billion dollars

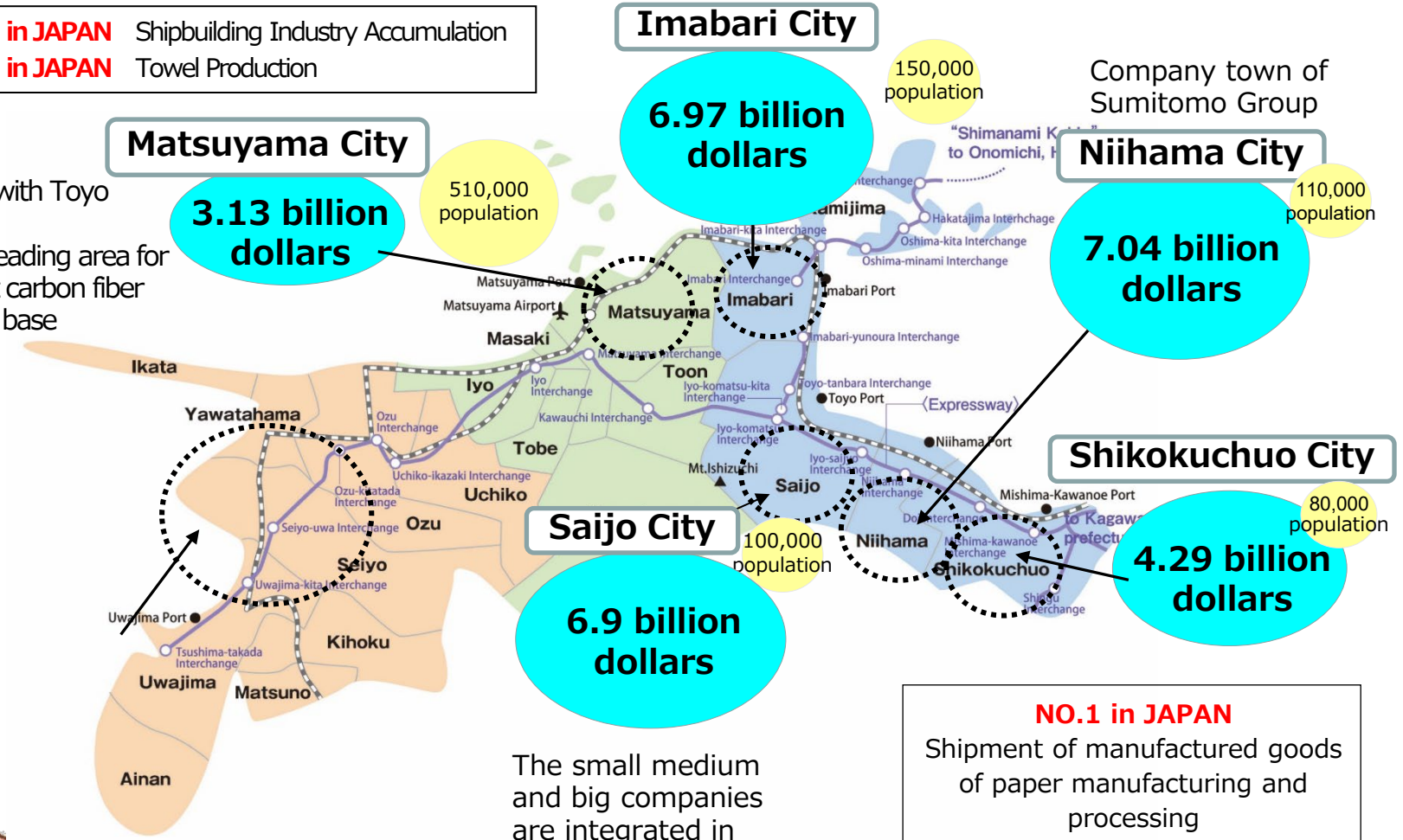
150,000 population

Company town of Sumitomo Group

Niihama City

7.04 billion dollars

110,000 population



Saijo City

100,000 population

6.9 billion dollars

The small medium and big companies are integrated in the industrial park in this city

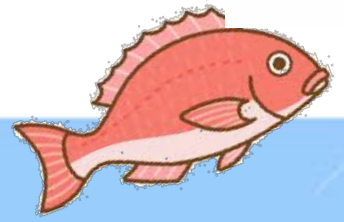
Shikokuchuo City

80,000 population

4.29 billion dollars

NO.1 in JAPAN
Shipment of manufactured goods of paper manufacturing and processing

The large scale of industrial district is located in **Eastern Ehime** (Toyo area)



Decarbonization Activities of Ehime Prefecture

Revision of the decarbonization plan for adaptation to the industrial structure

Establishment of a consortium by Ehime and local banks to support the decarbonization of local companies

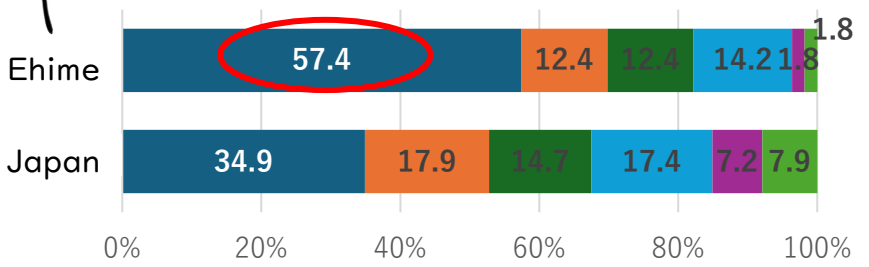
Energy conversion demonstration (hydrogen and ammonia)

Based policies of decarbonization plan

- ✓ Transition to a decarbonized lifestyle
- ✓ Realization of a decarbonized business style
- ✓ Promoting energy decarbonization
- ✓ Creating communities with low environmental impact
- ✓ Enhance environmental education and build partnerships

Consortium agreement signing ceremony (March, 2024)

60% of GHG emissions in Ehime come from **industrial sector**
(22% higher percentage than national average)



Economic cooperation policy

Focus on international cooperation to solve local environmental and development challenges in developing countries through the use of technology in Ehime

Building a relationship with local government

Discovery of challenges and needs

Technology proposals and developing projects by companies in Ehime

Ben Tre, Vietnam
(August, 2022)

Gorontalo, Indonesia
(January, 2023)

Tamil Nadu, India
(January, 2024)

Environmental Technologies in Ehime Prefecture

Ehime prefecture has many environmental technologies that represent Japan. They are also being developed overseas.

MIURA

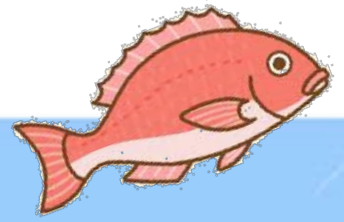
Boiler with high energy saving performance

DAIKI AXIS

Combined treatment septic tank

AIKEN KAKOKI

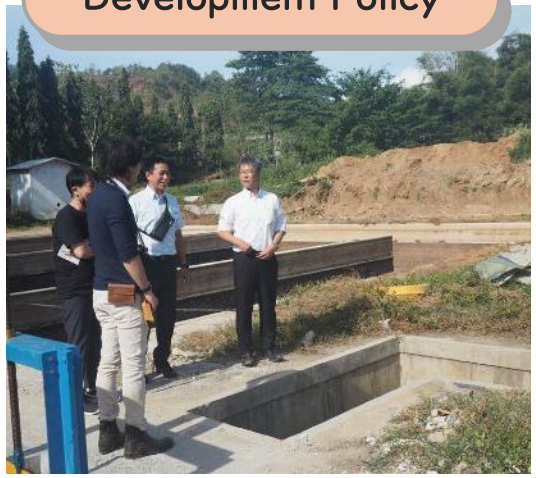
Highly efficient biogas energy recovery system from industrial wastewater



Project in progress

Developing business opportunities for companies in Ehime
and policy transfer through city-to-city collaboration project

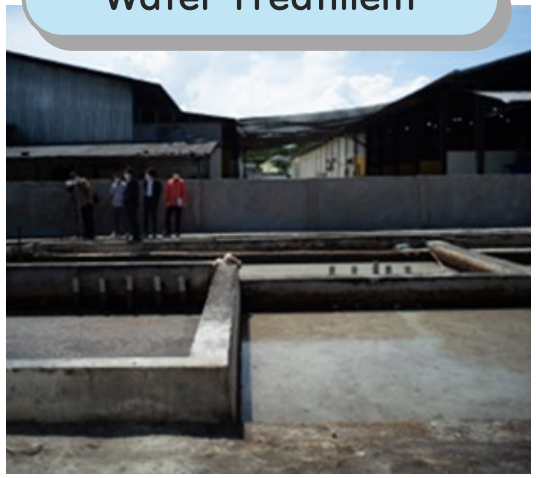
Development Policy



Leachate treatment project at final disposal site

Development policy based on Gorontalo provincial budget

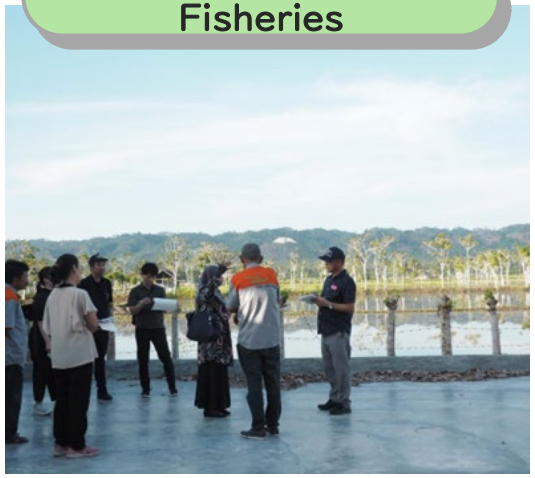
Water Treatment



Industrial wastewater treatment project by methane fermentation plant

Searching for demonstration site

Agriculture and Fisheries



Exchange projects in agriculture and fisheries fields

Field survey for making roadmap

Green Hospital

Green hospital plan

Request for support from Ehime prefecture

Strength of this city-to-city collaboration project

Ehime-Gorontalo City-to-city collaboration project has conditions promote the spread of decarbonized infrastructure:

Diverse Actor Engagement

Involving universities, companies, banks, government in the project

Expanding cooperation

Extending collaboration beyond decarbonization to other sectors

Strategic budget Utilization

Leveraging local and national government financial support for project success as well as Japanese government