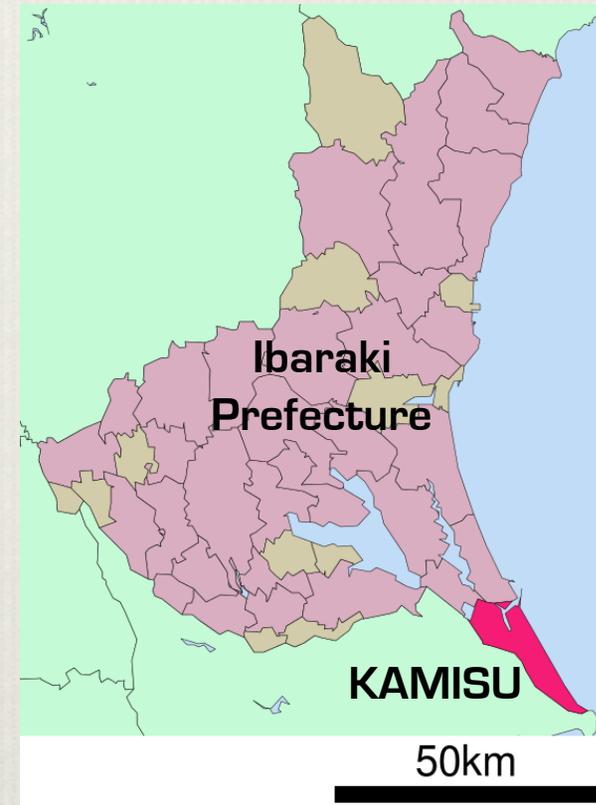




The Port of Kashima at Kamisu, Japan

Where is Kamisu?



Kamisu (神栖市 Kamisu-shi) is a port city located in Ibaraki Prefecture on the east coast of Japan.

As of March 1, 2008, the city has an estimated population of 93,551 and a population density of 635 persons per km². The total area is 147.24 km² (56.85 sq mi).

The Port of Kashima



The Port of Kashima is one of the world's largest artificially-excavated ports. The depth of outer port channel is 24m (26yd), the center channel is 19m (20yd) and both south and north channels are 10m (10yd).

The Port and Surrounding Area



Google Maps

History

Human-powered
water pump
in the Kamisu area
after World War II,
circa 1955-1958.



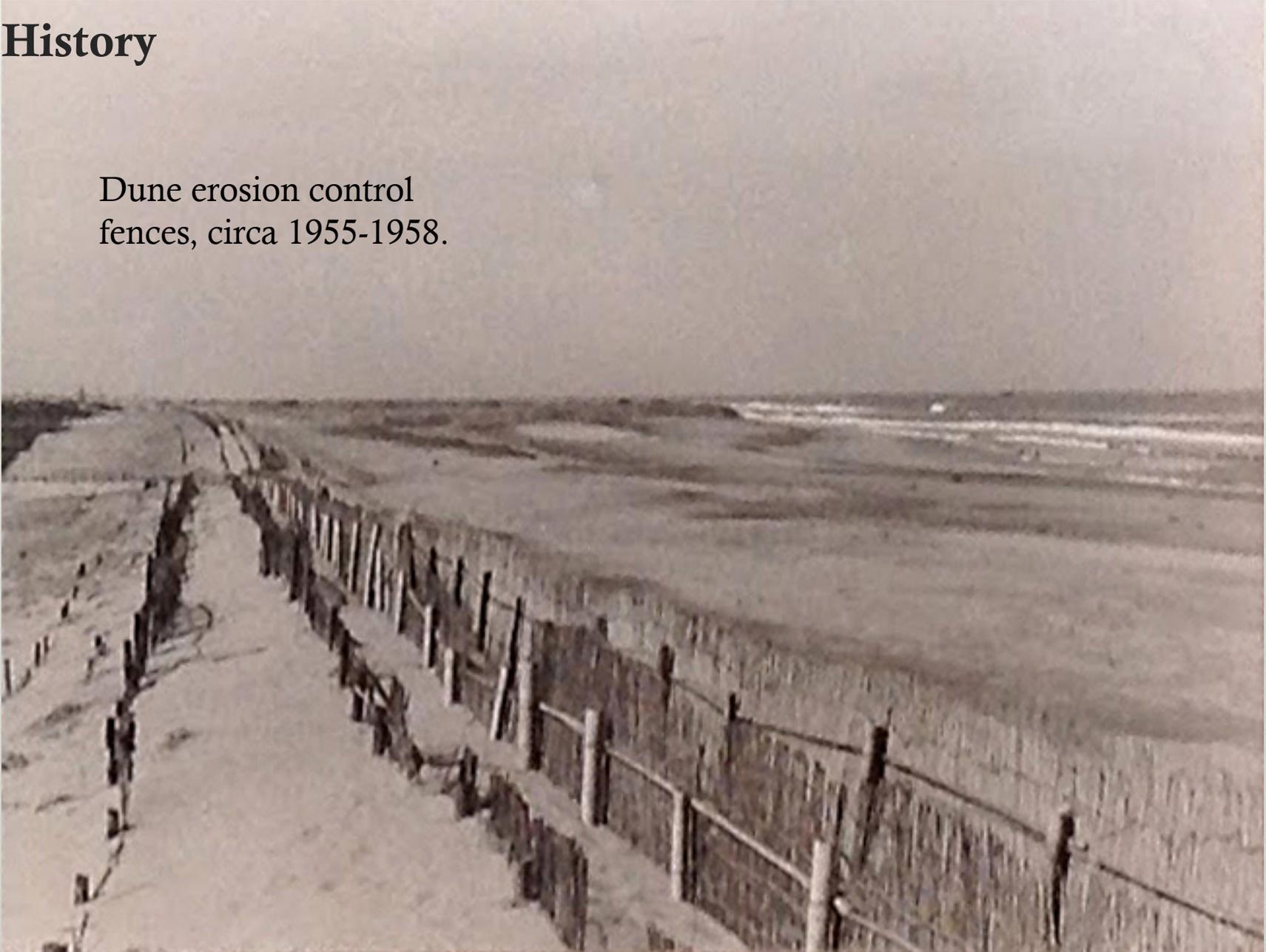
History



View east from the ocean to the Kamisu/Kashima area prior to port development, circa 1955-1958.

History

Dune erosion control
fences, circa 1955-1958.



History



Dredging the middle
channel of the port,
circa 1959-1969.

History



Dredging the south channel, circa 1959-1969.

The Port of Kashima



Cargo ship with spill containment boom.

About 13,000 ships come in and out of the port per year. The amount of cargo handled at the Kashima Port is about 65 million tons per year. Imported cargos make up 60% of total cargo handled. Common items are iron, stone, crude oil, coal, and corn.

The Port of Kashima



Cargo ship and tugs near harbor entrance.

There are 9 tugs at Kashima Port and they are operated about 7,000 times in a year.

The Port of Kashima

There are 4 public wharfs and 20 company-owned wharfs in the Kashima Port. Each wharf has their own equipment such as cranes and loading docks. Cargo handling machines differ for the types of cargo.



Gantry cranes for containers, called 'unloader' in Japanese for bulk items, the loading arms which connect pipelines between ground and ship for liquid items such as crude oil. At a company-owned wharf they handle their own products and materials. At the public wharf, many types of cargo are handled including containers, bulk grain and cargo over the size limit of containers.

The Port of Kashima



Ship hangars

The Port of Kashima



Grain silos

The Port of Kashima



Cargo ship in the port, wind farm in the distance

The Port of Kashima



Cranes in the port, wind farm in the distance

Hasaki Wind Farm

There are 43 windmills at the wind farm which generate 76,100 kW (Nov. 2015).



J.R. Tilghman

The windmills generate enough electric power for about 46,200 households. There are 38,879 households in Kamisu (July 2015). The amount of power generated by the windmills would cover the entire household electrical needs of Kamisu city, however it is actually sent to the Tokyo area.

Hasaki Wind Farm

Environmental assessments were required prior to construction to evaluate effects on wildlife.

Kamisu city officials cite that each windmill has an output of 2,000 kW and an estimated speed of 11.1-19.6 rotations per minute. Bird strikes are uncommon.



J.R. Tilghman

Hasaki Wind Farm

Kamisu was chosen because of its suitable location for wind power generation. The windmills were constructed by private enterprise.

According to research by the Japan Wind Power Association, it costs \$6 million USD to build an average windmill that generates 2,000 kW. Equipment costs make up 58.3% of the figure, and the rest is spent for engineering work, conveyance and assembling.



Hasaki Wind Farm

Murals adorn the sea wall along this stretch of coastline.

Kamisu city has an interest in renewable energy to protect the environment and address the issue of global warming, however, they do not have an exact plan yet.



Recreation

A double-deck touring boat, *Eureka*, takes passengers on a 45 minute trip around Kashima Port, passing enormous tankers and industrial facilities.



Recreation

A 52-meter-high (171 feet)

Observation Tower in Minato Park commands a breathtaking view of the Kashima coastal industrial area.

Nearby **Kashima Harbor Fishing Park** is a facility built at the mouth of the harbor for recreational fishing. There are charter boats, equipment rentals and restroom facilities.



The Port of Kashima at Kamisu, Japan

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Sources

The Port of Kashima, The City of Kamisu, Wikipedia

Photos

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