

An aerial photograph of Osaka, Japan, showing the city's dense urban landscape, the extensive Osaka Bay, and the surrounding mountains under a clear blue sky. The text is overlaid on the image.

# Overview of Osaka Port

~ Environmentally Friendly Port Development ~

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## (1) Introduction to Osaka

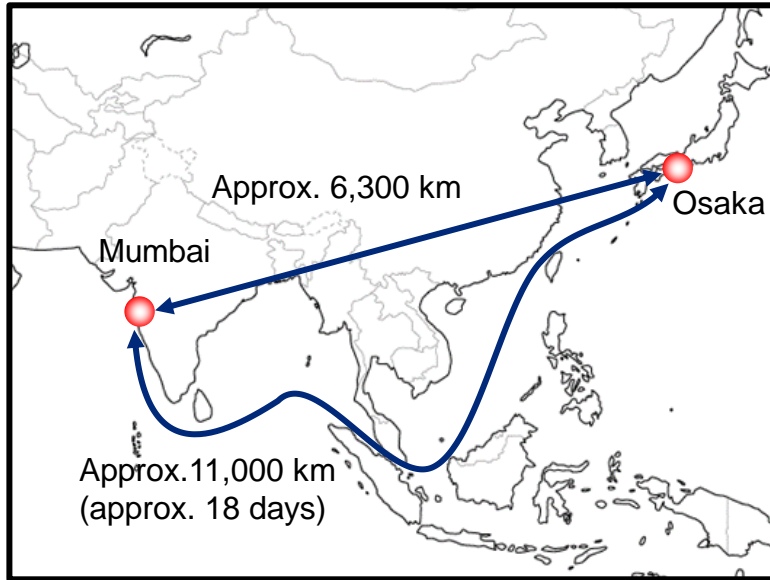
1. Outline of Osaka City

2. Relationship between Osaka Port and India



# Outline of Osaka City

## Population and economic scale of Osaka City, Trade value of the Port of Osaka, etc.

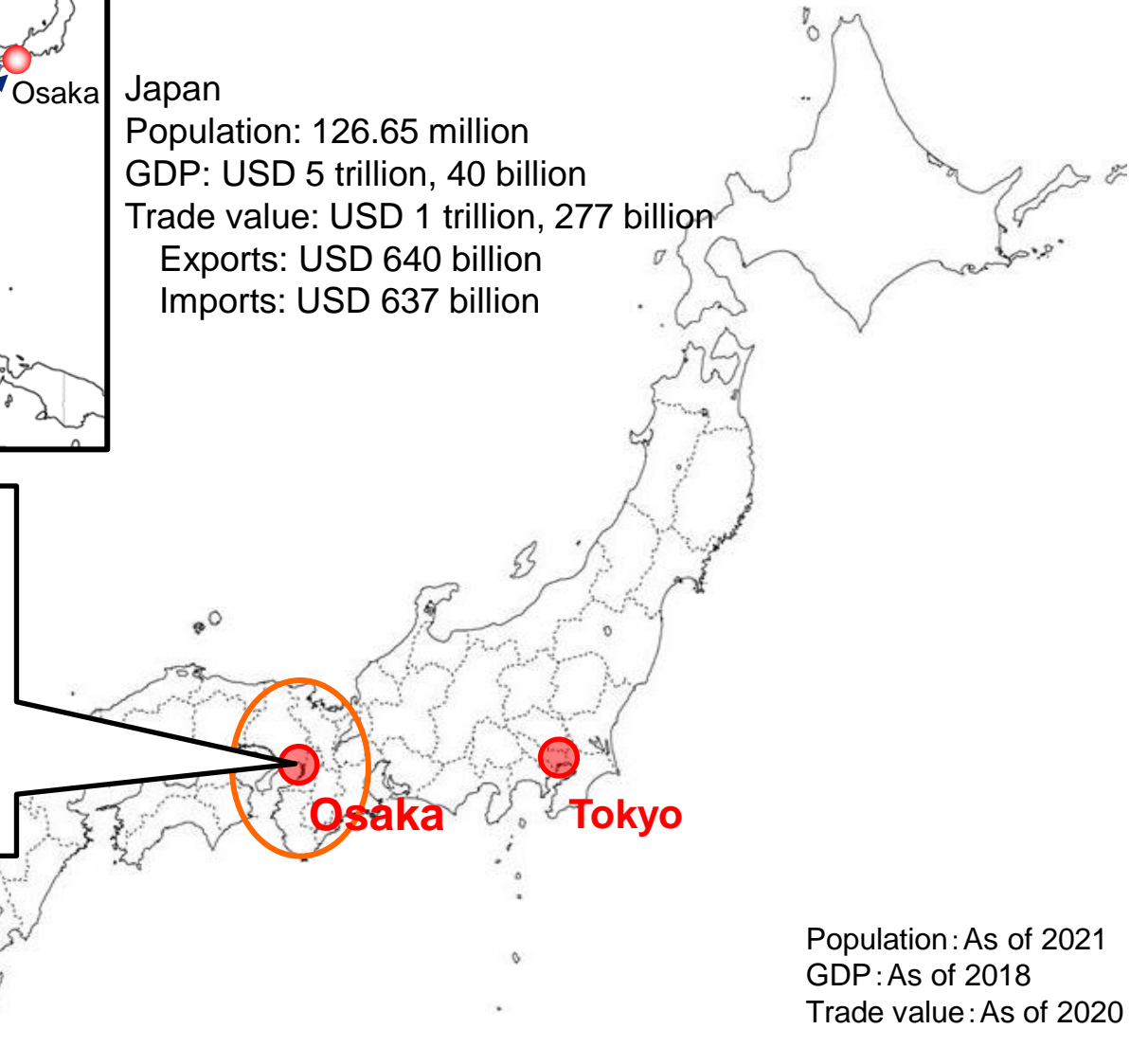


Japan  
Population: 126.65 million  
GDP: USD 5 trillion, 40 billion  
Trade value: USD 1 trillion, 277 billion  
Exports: USD 640 billion  
Imports: USD 637 billion

**Kansai Region**  
Population: 20.602 million  
GDP: USD 780 billion

**Osaka City**  
Population: 2.740 million  
GDP: USD 183 billion

**Port of Osaka**  
Trade value: USD 78 billion



Population: As of 2021  
GDP: As of 2018  
Trade value: As of 2020

# Relationship between Osaka Port and India (Progress to Date)

## ■ July 2017

Port Managers from Jawaharlal Nehru Port Trust (JNPT) and Other Asian Ports Participate in "Asia Global Ports Conference" to Commemorate 150th Anniversary of Osaka Port



## ■ November 2018, November 2019.

"International Conference on Supply Chain in India" was held in Mumbai. Osaka City, Global Environment Centre Foundation, Osaka Port Corporation and others participated.



2018 International Conference



At Mumbai Port Trust

## ■ November 2019

"Port of Osaka's Global Partner Ports Symposium" Jawaharlal Nehru Port Trust (JNPT), Port of Melbourne, HAROPA (Port of Le Havre), and Saigon Port Joint Stock Company participated in the symposium.



Chairman of JNPT and Director General, Osaka Ports and Harbors Bureau



Chairman of JNPT and Manager for port promotion dept., Osaka Ports and Harbors Bureau

## ■ December 2019

Jawaharlal Nehru Port Trust (JNPT) and Partnership Port Signed a Memorandum of Understanding for Partnership

## ■ February 2021

「1<sup>st</sup> Japan-India Business Webinar」was held.  
152 participants  
Theme: Promoting Partnership for the Environment and Port & Harbor Logistics Areas



View of the online seminar



President, SCM Program Company

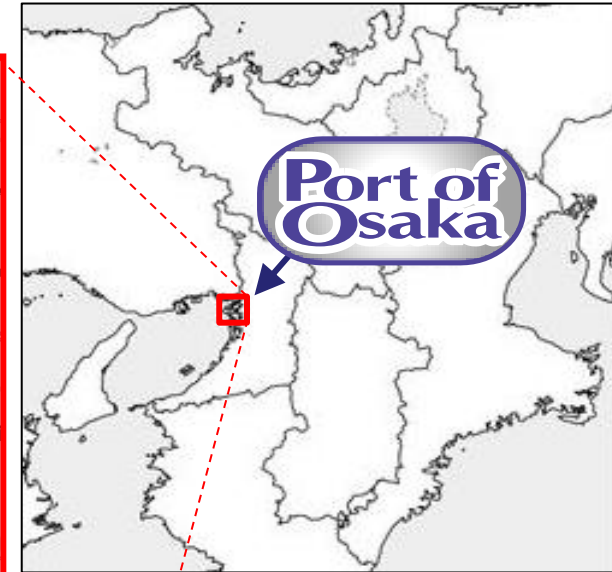
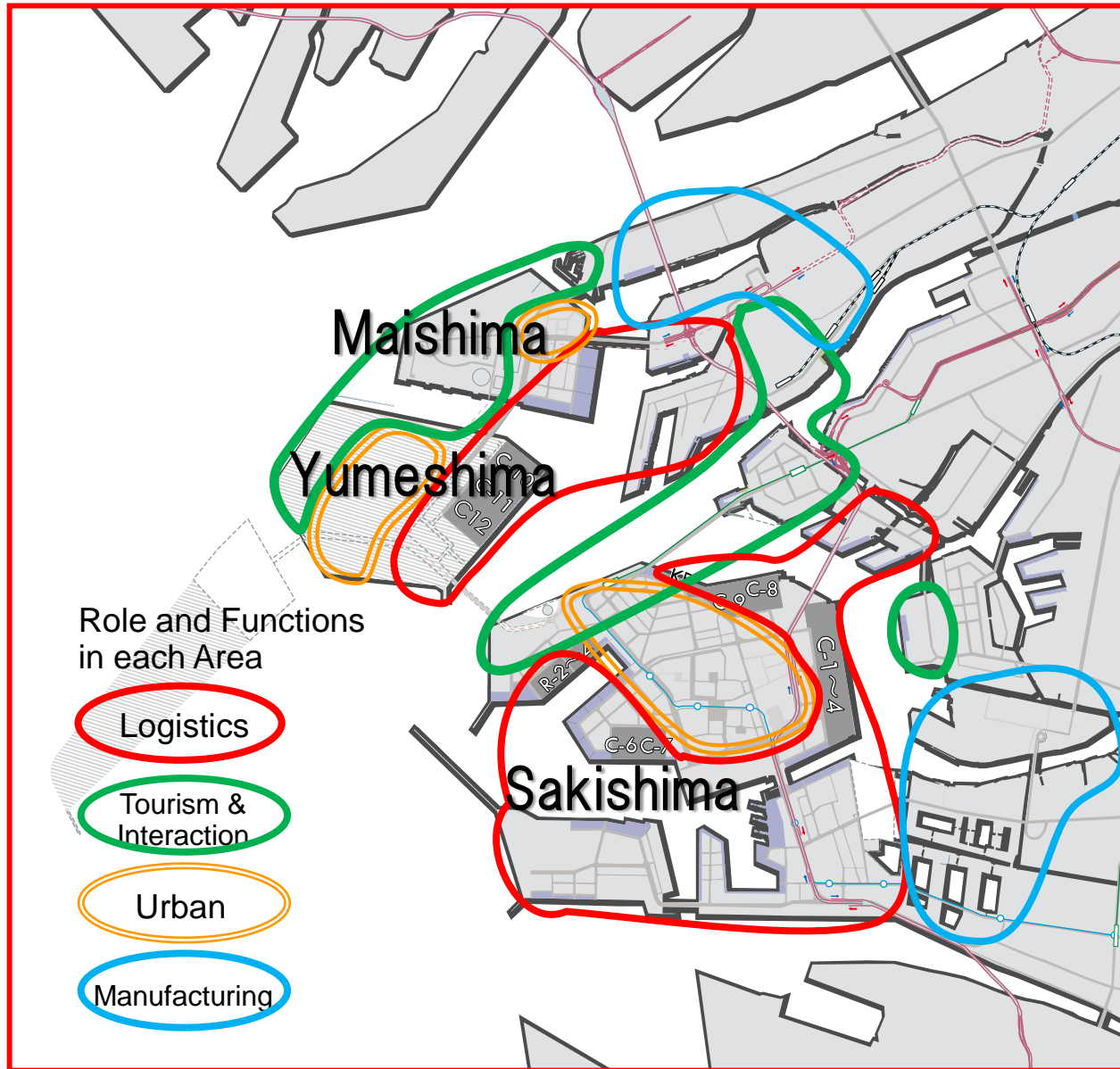
# Contents (2)

## (2) Introduction to the Port of Osaka

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# Land use of Osaka Port



# Outline of the Port of Osaka

Tempozan Passenger Terminal



A New Cruise Terminal  
(Plans to finish in 2024)



Container Terminals C1~4, 8, 9



Nanko Ferry Terminal



Maishima  
(Island)

Yumeshima  
(Island)

Sakishima  
(Island)

Container Terminals C10-12



Int'l. Ferry Terminal



Sunflower Terminal





# Container Services at the Port of Osaka

Centering on Asia, the port is linked to North America, Australia, and all other parts of the world.

● *Volume of container cargo*  
**213million TEU/year** (As of 2021)

**Routes of international containers**  
 (As of Nov. 2021) (services / month)

West coast of North America	8
Australia	10
Russia	4
Southeast Asia	76
Taiwan	74
Hong Kong	76
China	230
Korea	90

\* Number of routes includes redundancies

**306 monthly services**

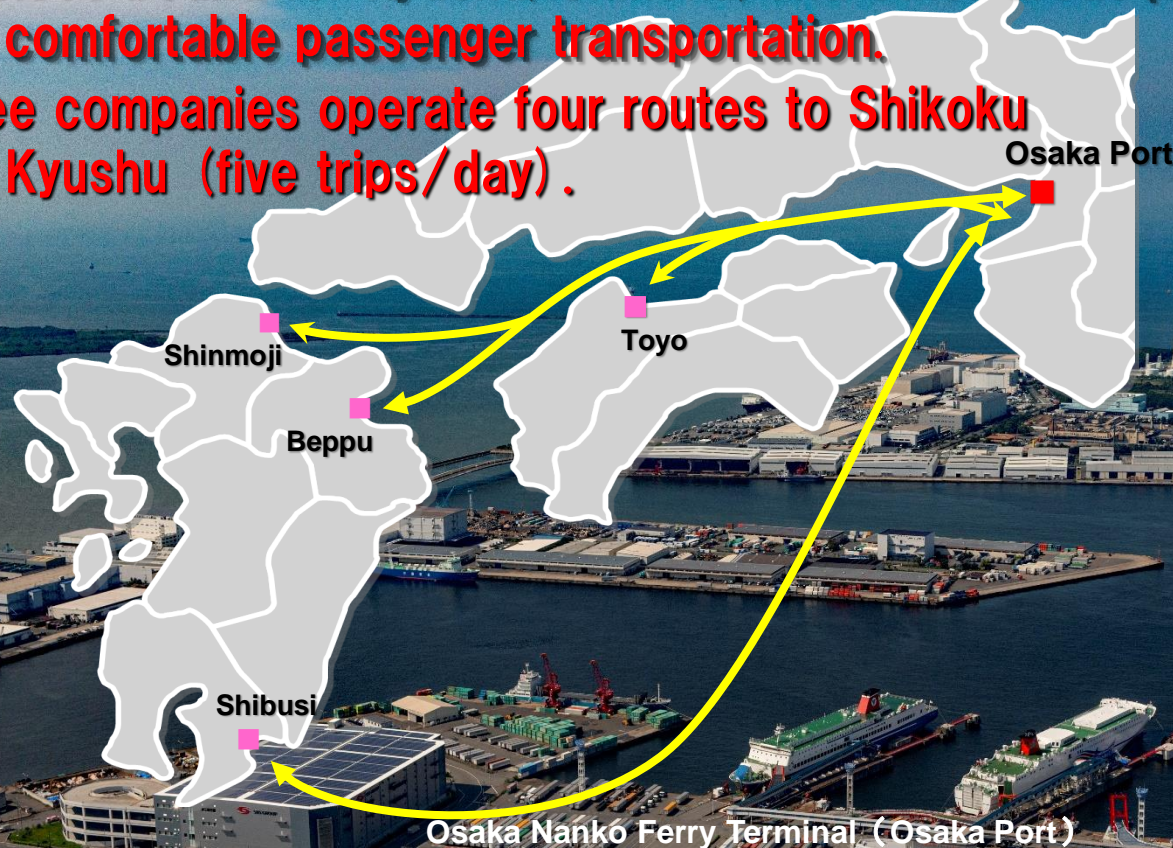
(Excluding redundancies)

Berth depth	Berth length
Over 15m	1,350m
13m to less than 15m	2,100m

# Domestic Ferry Routes at Osaka Port

Services bound for Kyushu, Shikoku, and other areas promote a modal shift and comfortable passenger transportation.

Three companies operate four routes to Shikoku and Kyushu (five trips/day).



	Shipping Company	Routes	Frequency	Designation	Remarks
Osaka port	Ferry Sunflower	Beppu	1 per day	R-5	End of 2022 to the first half of 2023: New large-scale ship scheduled to enter service (Japan's first LNG-fueled ferry)
		Shibushi	1 per day	R-3・4	May 15 and September 15, 2018. Large-scale newbuilding on board
	Meimon Taiyo Ferry	Shinmoji	2 per day	F-1、F-4	September 16, and November 30, 2015. Large-scale newbuilding on board December 22, 2021. Large-scale newbuilding on board March 28, 2022. Large-scale new shipbuilding on board
	Orange Ferry	Toyo	1 per day	F-3	August 25 and December 6, 2018. Large-scale newbuilding on board

# Highway network around the Port of Osaka

**Hanshin Expressway Yodogawa-Sagan Line**

- 2nd stage (Ebie - Toyosaki)  
To be opened in 2026
- Extension Part (Toyosaki - Kadoma)  
into operation in Apr. 2017

**Hanshin Expressway Yamatogawa Line**  
To be fully opened  
in Mar. 2020  
(Sanpo - Miyakenaka)



凡 例 Legend	
阪神高速道路 Hanshin Expressway	<ul style="list-style-type: none"> <li>○—○ 開通区間 constructed</li> <li>○- - -○ 工事・計画区間 under construction</li> </ul>
高速自動車国道 Expressway	<ul style="list-style-type: none"> <li>○—○ 開通区間 constructed</li> <li>○- - -○ 工事・計画区間 under construction</li> </ul>
自動車専用道路(国道) National Highway	<ul style="list-style-type: none"> <li>○—○ 開通区間 constructed</li> <li>○- - -○ 工事・計画区間 under construction</li> </ul>
一般有料道路 Highway	<ul style="list-style-type: none"> <li>○—○ 開通区間 constructed</li> <li>○- - -○ 工事区間 under construction</li> </ul>
その他の関連道路 Other Highway	—

# Container cargo volumes at Port of Osaka

## Foreign Trade container units handled

(Unit: million TEU)

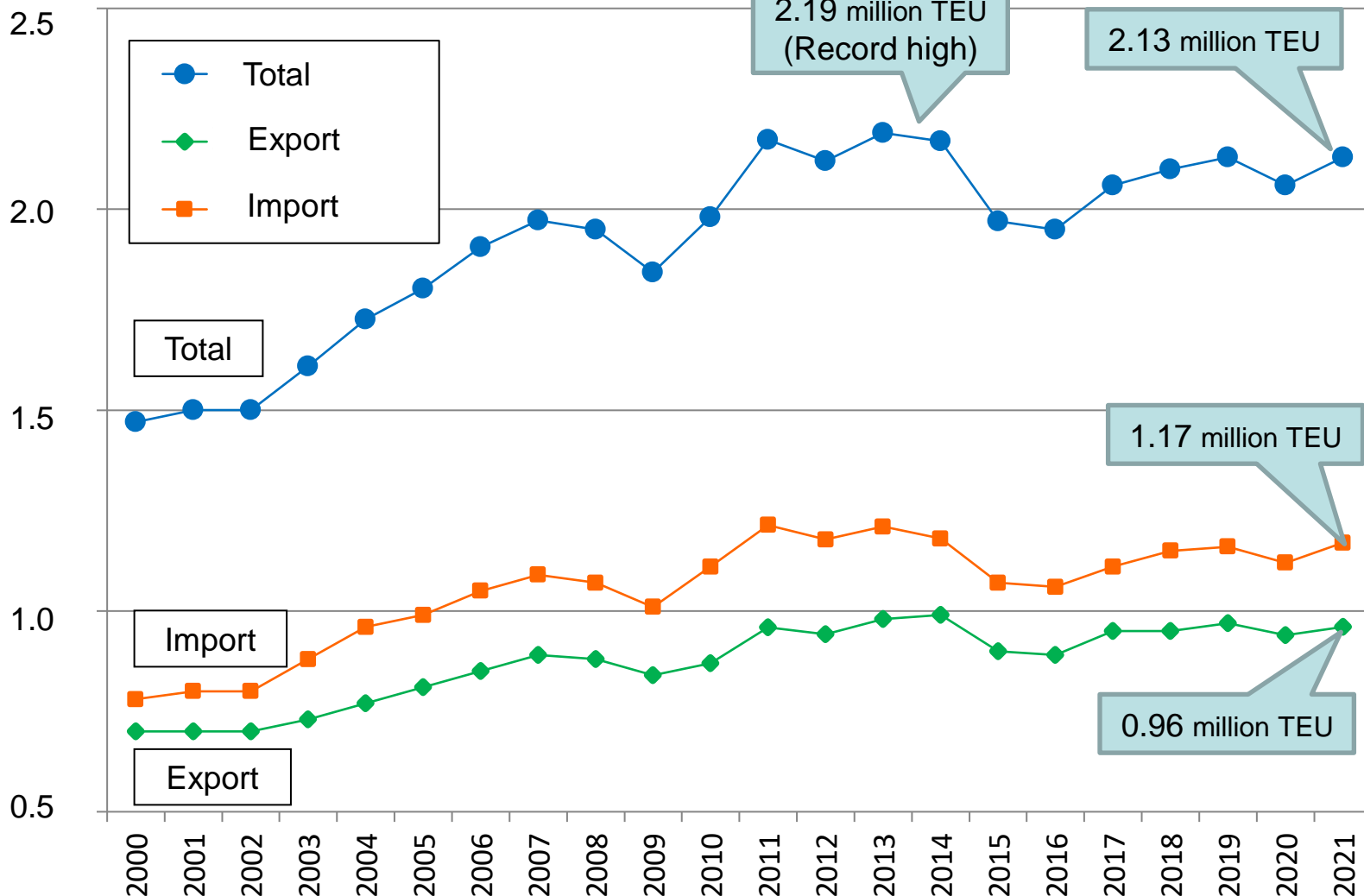
Exceeded 2million TEU for the past 5 years in a row!

2021 Units handled Year-on-year

**TOTAL**  
2.13 million TEU  
103%

**Import**  
1.17 million TEU  
104%

**Export**  
0.96 million TEU  
102%

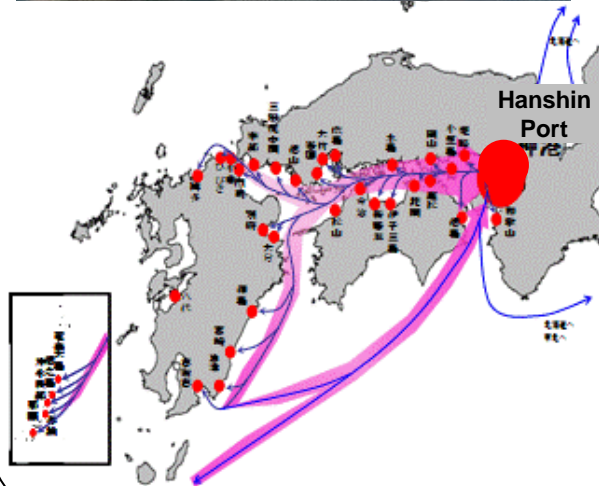


# Osaka Port's strategy for the Strategic International Container Port

## ① Collection of cargo

### ■ Further improvement of cargo collection networks

- Undertaking projects to attract cargos and conducting port sales activities



## ② Creation of cargo

### ■ Promotion of exporting “sho-ku” (which means “food”)

- Supporting logistics system for expanding exports of agricultural and fishery products

【Holding a seminar and business meeting on overseas food exports】

	5th	4th	3th	2th
Date	Jan.24-31 2022	Jan.28- 29 2021	Aug.2 2019	Aug.31 2018
Seminar	—	Online	Face to Face	
Participants	—	65	105	104
Meeting	Online	Online	Face to Face	
Suppliers	48	34	70	56
Trading Companies	8	8	9	10
Overseas Buyers	12	8	18	14
Success	96	10 / 69 (17 are continueing)	18 / 210 (18 are continueing)	14 / 176 (23 are continueing)

Seminar Scene



Scene of a business meeting



## ③ Strengthening the competitiveness

### ■ Strengthening the functions of port facilities

- Improvement and expansion of container terminals in response to the increasing size of container ships

#### ■ Expanding of Container Terminals in Yumeshima

Berth Length : 1,350m  
Berth Depth : -15m ~ -16m  
Yard Area : 59ha ⇒ 74ha  
Scheduled to be completed in FY2024



#### ■ Dredging to deepen the main channel

Width : 400m ⇒ 560m  
Depth : -15m ⇒ -16m  
Scheduled to be completed in FY2026

# Waterfront Development

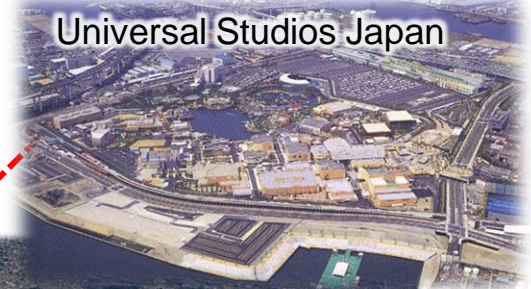
IR(Integrated Resort)



Sports Island



Universal Studios Japan



World Expo 2025  
〔 Osaka-Kansai World Expo 〕



Maishima

Yumeshima

Sakishima

Tempozan Harbor Village



0 0.25 0.5 1km

**IR approx. 70 ha**

1st Stage

2nd Stage

**World Expo 2025**

3rd Stage **Approx. 155 ha**

Development Stage	Main Facilities
<b>1st Stage</b> (Late 2020s)	Integrated Resort (MICE, Amusements facilities etc.)
<b>2nd Stage</b>	Expansion of entertainment functions, Introduction of recreation functions
<b>3rd Stage</b>	Long-stay accommodations leading to health and longevity by cutting-edge technology



# World Expo 2025 [ Osaka-Kansai World Expo ]



(Venue image)

Provided By: Japan Association for the 2025 World Exposition



- Main theme “Designing Future Society for Our Lives”
- Concept People’s Living Lab
- Period April 13 to October 13, 2025 (184 days)
- Estimated scale of Visitors Approximately 28,200,000
- Objective: To create a society that achieves the SDGs



MEET ME AT  
EXPO 2025!

# Environmentally Friendly Port Development

## Japanese Government's Moves toward Carbon Neutrality by 2050

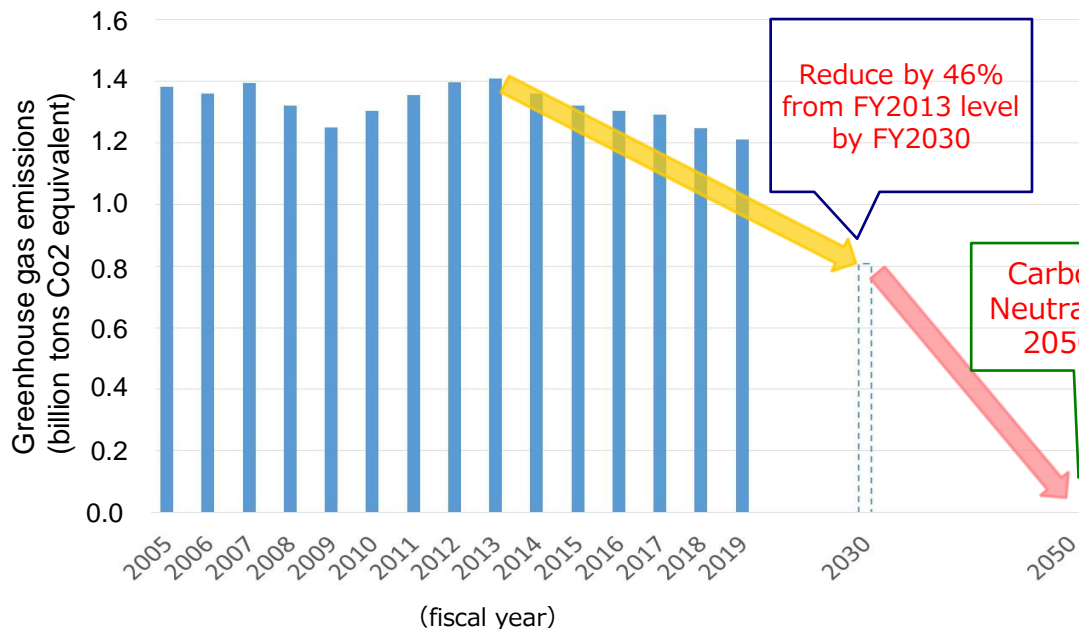
Prime Minister's speech at the start of a Diet session (October 26, 2020)

The target is to reduce greenhouse gas emissions to zero by 2050 as a whole, that is, to achieve a carbon-neutral, decarbonized society by 2050.

Global Warming Prevention Headquarters (April 22, 2021)

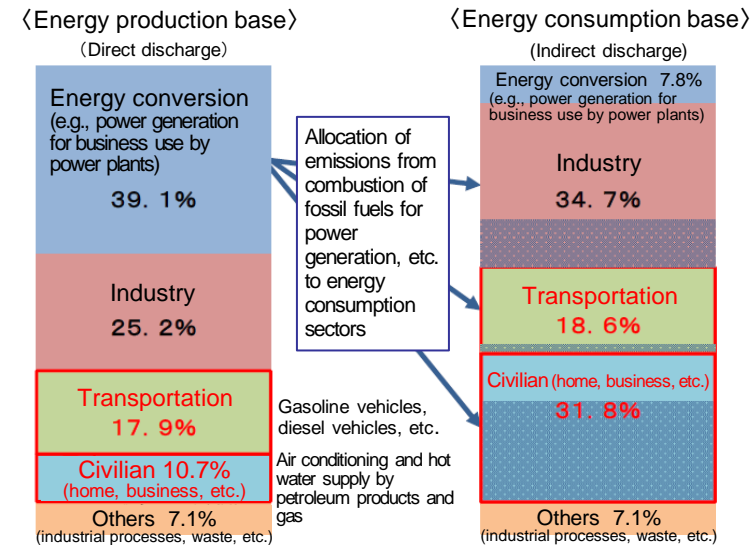
Consistent with the 2050 target, the ambitious target is to reduce greenhouse gas emissions by 46% from FY2013 levels by FY2030. Furthermore, Japan will continue challenging efforts to achieve the 50% mark. ⇒ Subsequently, these targets were placed in the Global Warming Prevention Plan (a Cabinet decision of October 22, 2021).

### Greenhouse Gas Emissions in Japan and Medium- and Long-Term Targets



Source: Global Warming Prevention Plan (Cabinet decision of October 22, 2021)

### CO2 emissions by sector (Total 1,108 million tons in FY2019)



Transportation: 86% automotive, 5% aviation, 5% marine, 4% rail  
 Civilian (home, business, etc.): 11% direct emissions from petroleum products and gas, 21% electricity use

Source: Prepared by the Policy Bureau of the Ministry of Land, Infrastructure, Transport and Tourism based on the National Institute for Environmental Studies "Japan's Greenhouse Gas Emissions Data (FY1990-2019)" (April 13, 2021).



# Environmentally Friendly Port Development

## Moves by the Japanese Government to Achieve Carbon Neutrality in the Port and Harbor Sector

In Japan, as an island nation, ports and harbors are the hubs of the international supply chain, with 99.6% of import and export cargo passing through them. Ports are also bases for coastal industries and major energy consumers, where many power plants and steel and chemical industries, which account for about 60% of CO2 emissions, are located.

Port and harbor areas have a large potential for CO2 reduction. Focusing on leading decarbonization efforts in port and harbor areas will be effective and efficient in helping Japan achieve carbon neutrality in 2050.

### Creating carbon-neutral ports

(Each port and harbor will prepare a CNP formation plan.)

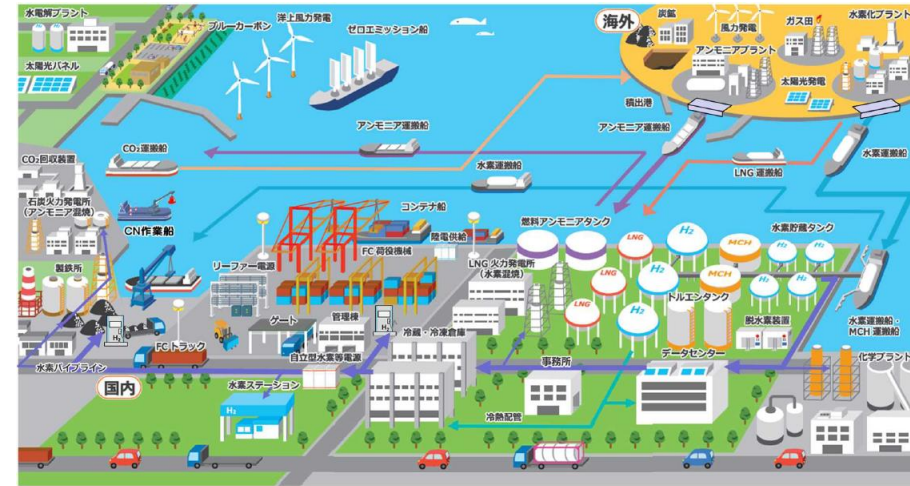


Fig. Image of CNP Formation

Source: Formulation Manual of Carbon-Neutral Port (CNP) Formation Plan (December 2021, Port and Harbor Bureau, Ministry of Land, Infrastructure, Transport and Tourism)

Table: Major Efforts toward Carbon Neutrality

Major Effort	Outline (Consideration)	Schedule of Introduction (Implementation)		
		Short Term ~2025	Mid Term ~2030	Long Term ~2050
Formulation of CNP formation plan	• Support for the development of CNP formation plans by port and harbor administrators	Implementation		
On-shore Power Supply	• On-shore power supply to ships at anchor	Introduction		
Low-carbonization and decarbonization of cargo-handling machinery	• Use of low-carbon and decarbonized cargo-handling machinery, such as RTGs and straddle carriers (e.g., applying hybrid or fuel cell systems)	Technology development and demonstration	Introduction	
Hydrogen fueling of heavy-duty vehicles	• Conversion of container tractor heads and other equipment used inside and outside ports and harbors to hydrogen fuel, and establishment of hydrogen stations at ports and harbors	Technology development and demonstration	Introduction	
Replenishment of ships with hydrogen, ammonia, etc.	• Establishment of a fuel supply system and forming bunkering bases in conjunction with the development and introduction of hydrogen- and ammonia-fueled ships.	Achieve commercial operation of zero-emission ships by 2028 (Green Growth Strategy)		Introduction
Promotion of port and harbor digitalization	• Aiming to shorten the gate processing time and eliminate waiting time by using the cyber port system, which is designed to digitize port logistics procedures, and by cross-checking the delivery information in advance under the Container Fast Pass (CONPAS) management.	Introduction ( 2021.4~ Full-scale operation of CONPAS begins at Minami-Honmoku Container Terminal, Port of Yokohama )		

Source: Summary of Budgets related to Port and Harbor Bureau (Port and Harbor Bureau, Ministry of Land, Infrastructure, Transport and Tourism)

# Environmentally Friendly Port Development

## ○ Formation of LNG bunkering environment

- October 2016 A decision on the start date of the international regulations to tighten the sulfur content of ships' fuel oil from the current 3.5% or less to 0.5% or less set for January 2020
- August 2017 Discussions and opinion exchanges with related parties started to form an LNG bunkering environment at the Port of Osaka
- November 2019 Mitsui O.S.K. Lines, Ltd. And Ferry Sunflower Limited  
A decision on Japan's first LNG-fueled ferry to be built and put into service on the Osaka-Beppu route  
  - 【Current ship】: Weighing 9,245 gross tons with a length of 153 meters and a width of 25 meters, fueled with heavy oil
  - 【New ship】: Weighing 17,300 gross tons with a length of 199.9 meters and a width of 28 meters, fueled with LNG/heavy oil
- April 2020 Establishment of a 10% reduction in port dues for LNG-fueled vessels (From Ferry Sunflower's news release)
- End of 2022 to early 2023 An LNG-fueled ferry service will start on the Osaka-Beppu route



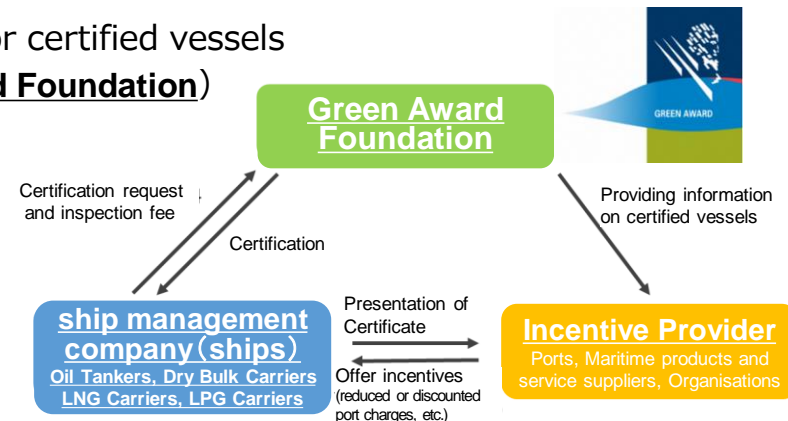
## ○ Promoting the use of ships certified under the Green Award Program

(a marine and port environment program)

- June 2020 Participation in the Green Award Program
- June 2020 Establishment of a 10% reduction in port dues for certified vessels  
(Target ship : All ships certified by the **Green Award Foundation**)

### < Green Award Program >

This is a program in which the Green Award Foundation certifies excellent ships that contribute to reducing environmental impact and safe operation. The program aims to protect the marine environment and ensure the safe operation of ships by providing incentives to certified ships through the participation of port administrators and private enterprises that support its objectives.



# Environmentally Friendly Port Development

## ○ Efforts to achieve Carbon Neutrality at the ports in Osaka

### **Established an Osaka “Minato” Carbon Neutral Port (CNP) Review Meeting and the first meeting was held on January 28, 2022.**

※The Review Meeting consists of the national government agency (Ministry of Land, Infrastructure, Transport and Tourism), local government agency (environment-related departments), shipping companies, port transport companies, land transport companies, warehouse companies, companies located in the vicinity, energy suppliers, etc.



The first Osaka “Minato” Carbon Neutral Port (CNP) Study Meeting on Jan 28, 2022.

### **Formulation of the Carbon Neutral Port (CNP) Formation Plan in Osaka (planned in FY2022)**

#### Structure of [the Carbon Neutral Port (CNP) Formation Plan]

- ① Target port and harbor characteristics
- ② Basic items in the CNP Formation Plan
- ③ Estimation of greenhouse gas emissions
- ④ Greenhouse gas reduction targets and reduction plans
- ⑤ Supply target and plan for hydrogen and fuel ammonia
- ⑥ Measures to enhance competitiveness of port and industrial locations
- ⑦ Roadmap
- ⑧ Implementation, progress management, and announcement of measures

# Summary

- ◆ Osaka : Japan's Second Largest City,  
Cooperation and Exchange with India
- ◆ Osaka Port: Excellent port facilities, shipping services,  
cargo collection measures, etc.  
Hosting of World Exposition, attraction of Integrated  
Resort, etc.
  - ➔ Playing an important role as an international logistics hub and  
international tourism hub
- ◆ Environmentally friendly port development
  - ➔ CNP formation, contribution to the realization of a decarbonized  
society



**Strengthening relations and expanding trade  
between the Port of Osaka and India**  
**Sustainable development of the economies and industries  
of both regions and their ports**



Osaka Ports and Harbors Bureau, Osaka City Government

<https://www.city.osaka.lg.jp/contents/wdu020/port/port/>

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# *Thank you very much!*



**Osaka**  
“Gourmet Capital of Japan”



**Osaka Aquarium KAIYUKAN**



**Osaka Castle**



**Umeda Sky Building**



**Dotonbori  
(Namba)**



**Tsutenkaku  
(Tower)**