

Exploring Tokyo Bay

Present problems and future prospects of Tokyo Bay

1. Tokyo Bay — The large foundation that supports the Tokyo metropolitan area

IKEMACHI Madoka, Deputy Director,

AKAGI Naohiro, Chief Official,

TODA Tetsuya, Port Planning Division, Port and Airport Department, Kanto Regional Development Bureau,
Ministry of Land, Infrastructure and Transport

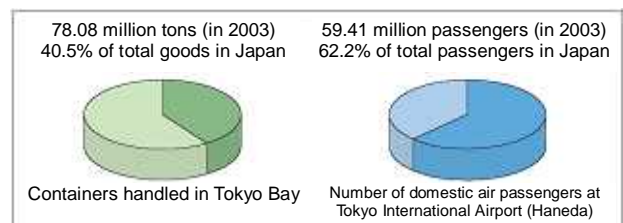
Few equals in terms of population and economic power

Just 50,000 km² in size, the Tokyo Bay area boasts a population of 40 million and produces 40% of Japan's GDP (¥ _____), making this relatively small region similar in population and economic power to France (population: ____; GDP: ____; size: 550,000 km²) and Great Britain (population: ____; GDP: ____; size: 240,000 km²).

Japan's gateway to global markets

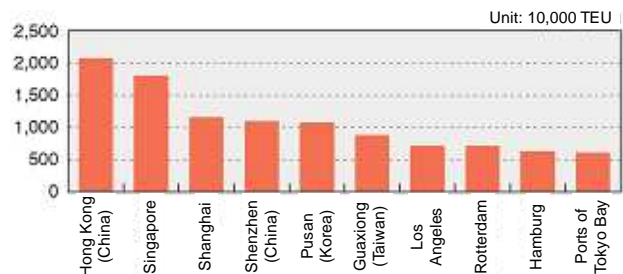
78 million tons of cargo, or about 40% of all domestic cargo, pass through Tokyo Bay each year. The bay is an extremely important gateway for both people and goods flowing into and out of the Tokyo metropolitan area. Approx. 670 maritime vessels enter and leave the bay each day, making these waters some of the most congested in the world. As a comparison, the Strait of Malacca, an international shipping lane between Indonesia and Malaysia, sees only half that number of vessels each day.

The economies of East Asia, particularly China's, are rapidly developing, causing concern that Japan's ports and harbors will fade in importance and become feeder ports off the main routes, resulting in increased physical distribution costs in Japan.



Sources: Ports and Harbors Bureau of the Ministry of Land, Infrastructure and Transport, "Statistics of Ports and Harbors 2005"
Civil Aviation Bureau of the Ministry of Land, Infrastructure and Transport, "Air Traffic Statistics 2005"

Fig. 1 Flow of goods and people



Sources: Ports and Harbors Bureau of the Ministry of Land, Infrastructure and Transport, "Statistics of Ports and Harbors 2005", and statistics of each port

Fig. 2 Top ten international ports in terms of container-handling capacity (2003)

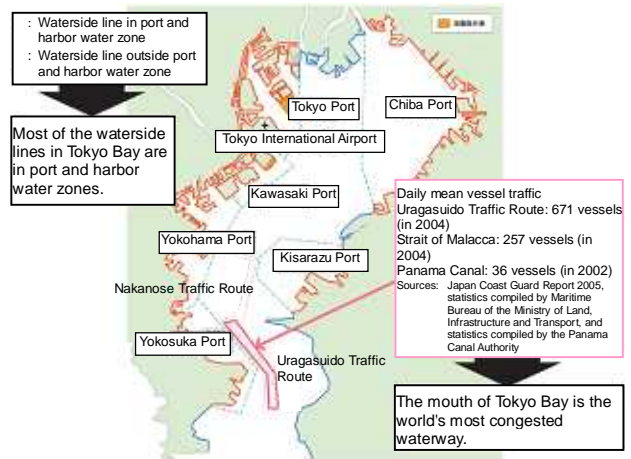
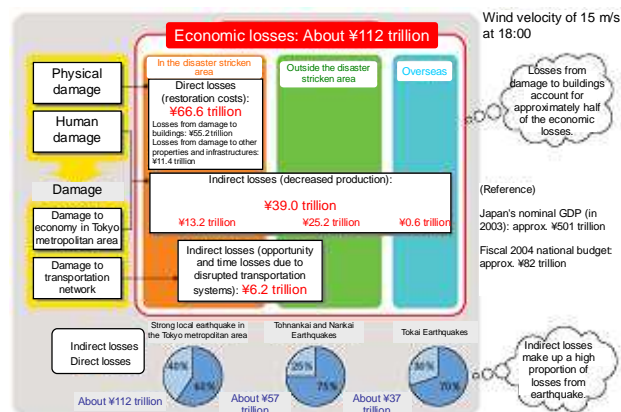


Fig. 3 Waterside lines in Tokyo Bay and number of incoming and outgoing vessels

Disaster management — Predicted major earthquake in Tokyo metropolitan area will also impact Tokyo Bay

A major earthquake is predicted for the Tokyo metropolitan area, which is the political, administrative, and economic center of Japan and home to more than ____ people. The Central Disaster Management Council has estimated that a magnitude 7.3 earthquake in this area would create 5.4-5.7 million refugees, strand 6.5 million commuters, and cause ¥112 trillion in economic losses. In the event of a major earthquake, marine transportation will be vital for commuting and physical distribution.



Source: Cabinet Office (Official in charge of disaster management), Predicted Strong Local Earthquake in The Tokyo Metropolitan Area (Overview)
http://www.bousai.go.jp/syuto_higaisoutei/pdf/higai_gaiyou.pdf

Fig. 4 Extensive economic damage from the predicted M7.3 Tokyo Bay Northern Part Earthquake

Environment — Tokyo Bay is unsuitable for living things

Tokyo Bay is an enclosed body of water surrounded by a large population and many industries, both of which pour large quantities of water pollutants into the bay. Tidal flats help purify polluted waters and serve as habitats for all manner of living things, but the bay's tidal flats have mostly disappeared due to large-scale land reclamation projects. As a result, the bay is extremely vulnerable to pollutants.

While the overall water quality has improved in recent years, the waters at the head of the bay are still in poor condition (COD: 3 mg/l or higher).

Seaweed and mullet, which can live even in water of relatively bad quality, do not thrive in these waters.

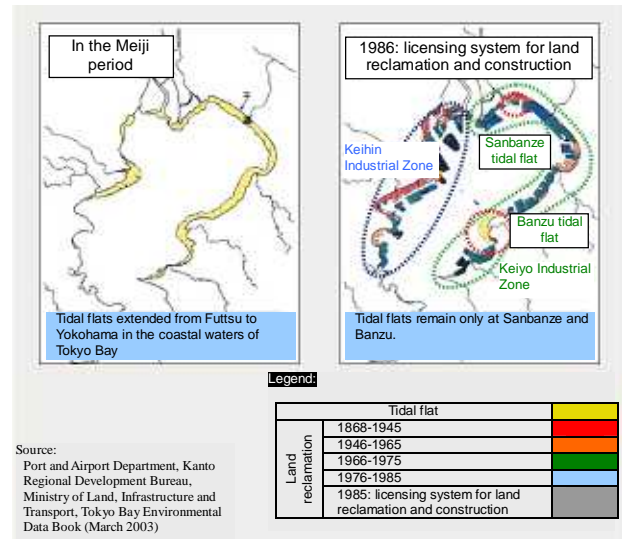


Fig. 5 Tidal flats have disappeared as land is reclaimed from the sea

Life — Tokyo Bay as a place for recreation and work

Tokyo Bay is a base for the supply of energy and resources throughout Japan. The shores of the bay are lined with manufacturing industries, including steel and chemical industries, as well as tanks for oil storage and power generation and silos for food and animal feed. These industries serve as important bases for production and employment in the Tokyo metropolitan area.

At the same time, waterfront housing complexes such as Minato Mirai 21 in Yokohama and Odaiba in Tokyo are home to many of those who live, work, and play in the Tokyo metropolitan area.

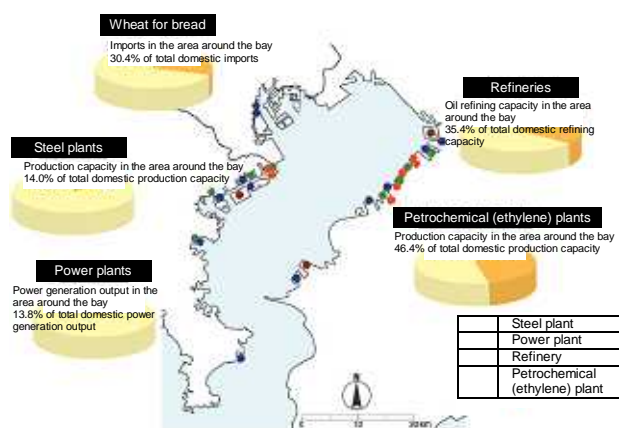


Fig. 6 Tokyo Bay – the engine that powers Japan’s economy

Basic policy for ports and harbors in the Kanto region — Changing Gears at the Ports

With the current state and problems of Tokyo Bay in mind, the Port Planning Division of the Port and Airport Department, Kanto Regional Development Bureau, formulated basic policies for the ports and harbors of the Kanto region. These policies, collectively called “Changing Gears at the Ports” sets ten-year goals for the ports and harbors of the Kanto regio and provides the means to achieve the goals, including twenty-one numerical targets, four pilot programs, and a port and a harbor management system.

An advisory panel chaired by Hitoshi Ieda, a Professor at Tokyo University, and composed of experts in various fields prepared a flow chart of the steps needed to achieve the policy target. They also set goals, policies and action plans for physical distribution, disaster management, environmental protection, and lifestyle.



We plan to achieve the goals of these policies by sharing information about the current state and problems of Tokyo Bay with those involved with the ports and harbors. We will post detailed information about the basic policies of Changing Gears at the Ports, including the text, numerical targets, and flow chart, on the website of the Port Planning Division of the Port and Airport Department,



Kanto Regional Development Bureau, and ask the public for their opinions about the basic policies .



([http://www.pa.ktr.milit.go.jp/kyoku/03info/](http://www.pa.ktr.milit.go.jp/kyoku/03info/03kisya/keikaku/kantou-kihonhoushin.html)





[03kisya/keikaku/kantou-kihonhoushin.html](http://www.pa.ktr.milit.go.jp/kyoku/03info/03kisya/keikaku/kantou-kihonhoushin.html))

Implementing a cooperative type port and harbor management system	A port and harbor management system based on the PDCA (Plan-Do-Check-Action) cycle will be implemented in order to manage the progress and achievement of the goals. Many people from different backgrounds are expected to be involved.
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Physical distribution—Contributing to an energetic economy and society	
Goal	Reduce physical distribution costs in order to maintain and improve competitiveness in international markets and the relocation of industries
Example numerical targets	Increase the number of standard international services at Keihin and other ports by approx. 30% Increase to four the number of berths for the world's largest container vessels at Keihin and other ports (seven numerical targets for physical distribution)
Example policies	Utilize diverse transportation modes  Utilize domestic container feeders Utilize railroad transportation Utilize barge transportation
	Reduce transportation costs due to congestion  Tokyo Bay Rinkai Road Phase II
Pilot programs	Development and implementation of the "Plan for Advancing Physical Distribution in the Ports and Harbors (tentative name)"

Environment—The harmonious coexistence of people and nature in beautiful, safe and bountiful Tokyo Bay	
Goal	Revive Tokyo Bay to restore the bay's bountiful natural resources
Examples of numerical targets	Increase by about 40% the number of collaborative activities and the participation by different people Increase by about 20% the area for important tidal flats and the shallow ground for living things (four numerical targets for environment-related goals)
Example policies	Participatory efforts in regard to environmental issues  Sowing eelgrass in collaboration with an NPO
	Preservation and regeneration of tidal flats  Preservation and regeneration of tidal flats
Pilot programs	Development and implementation of the "Environmental Plan for Tokyo Bay 2006 (tentative name)"

Disaster management—Ensuring safety, security, and stability in the Tokyo metropolitan area	
Goal	Implement comprehensive disaster management and safety control measures to reduce the damage caused by earthquakes and other disasters
Example numerical targets	Allow core wide-area disaster management bases to function at two locations in the event of major earthquakes In the event of a major earthquake, secure approx. 30% of the normal level of international marine container volume (six numerical targets for disaster management-related goals)
Example policies	<p>Early restoration and support by civil and business activities</p>  <p>Manual for dealing with disasters (Port and harbor business continuity plan [BCP])</p> <p>Relief supplies transportation training</p>
	<p>Establish core wide-area disaster management bases in the event of a disaster</p>  <p>Kawasaki Port, Higashi Ohgishima</p>
Pilot programs	Development and implementation of a "Manual for Cooperative Activities to Deal with Disasters (tentative name)" as first collaborative step toward realizing the goal (transportation of relief supplies, maintenance of physical distribution functions, and support of stranded commuters)

Life — Maintaining a world-class culture and adopting an active lifestyle	
Goal	Make waterfront areas attractive and supportive of affluent and fulfilling lifestyles
Example numerical targets	Create peaceful and beautiful coastal scenery at 100 locations Eliminate old and inefficient national quays for vessels that support industries in the waterfront areas (four numerical targets for life-related goals)
Example policies	<p>Create landscapes collaboratively</p>  <p>Floating island</p>  <p>Invite the public to choose the top 100 landscapes via the website</p>
	<p>Create waterside spaces</p>  <p>Beach volleyball at the waterside</p>  <p>Beach at the head of Tokyo Bay in Chiba Prefecture</p>
Pilot programs	Develop and implement the "Program for Improving Peoples' Lives and Enhancing Appeal (tentative name)" as first collaborative step toward realizing the goal

* The content of the article is based on the authors' opinions.