

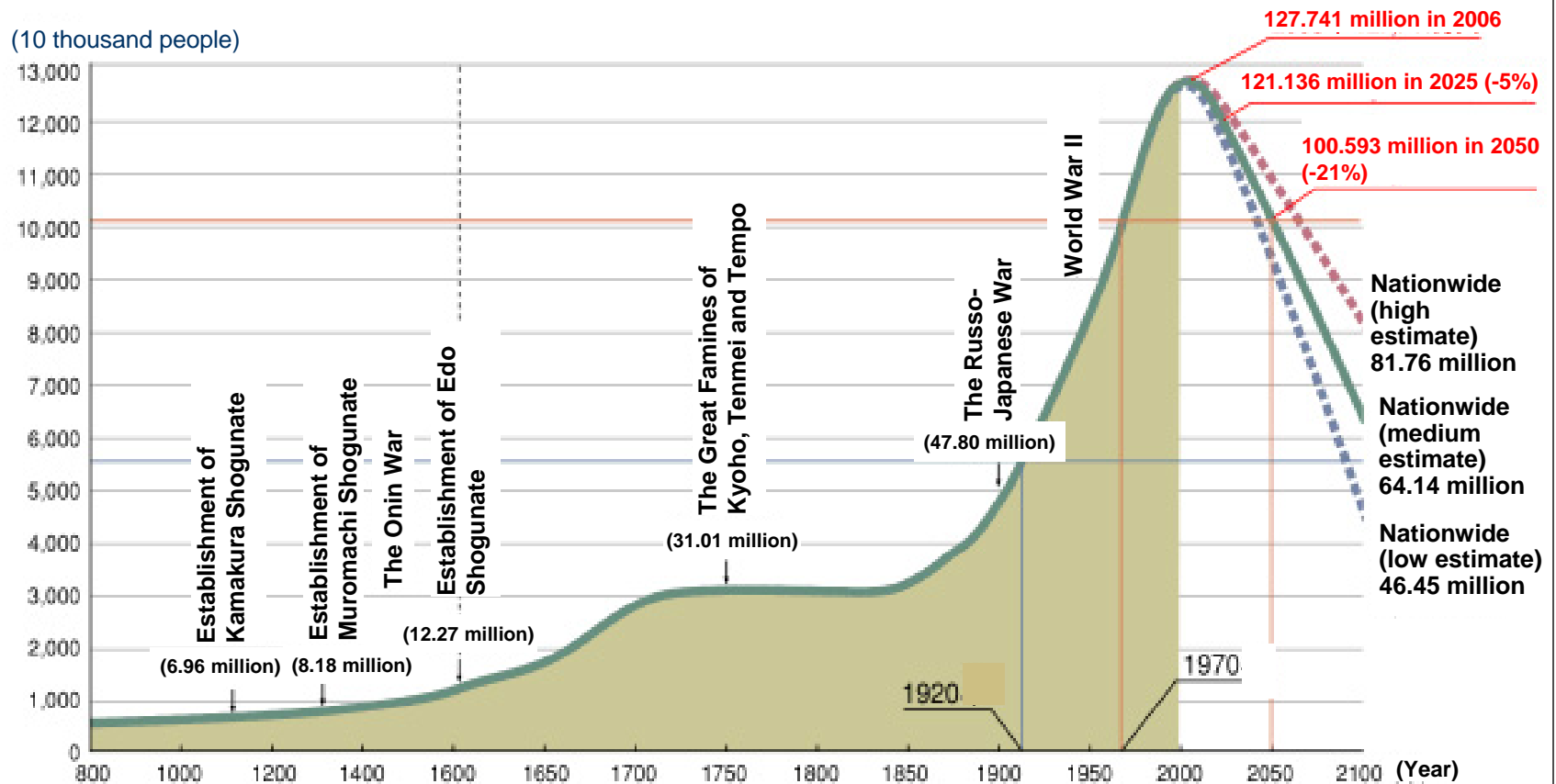
# **Development of National Infrastructures Open to Asia and the Role of Fukuoka**

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# I. Five Conditions for Changing the Economic Environment

- 1) Advanced mobility (information digitalization, acceleration of Internet use, containerization, reduction of geographical barriers and introduction of SCM)
- 2) Change of industrial structure (decrease in employee ratio of primary and secondary industries, increase in employee ratio of tertiary industry, and development of service economy)
- 3) Change in population structure (rapid decrease in population and the aging society)
- 4) Development of knowledge economy (shift from land, capital and labor to knowledge)
- 5) Development of globalization

# Japan's Population: 800 – 2,100

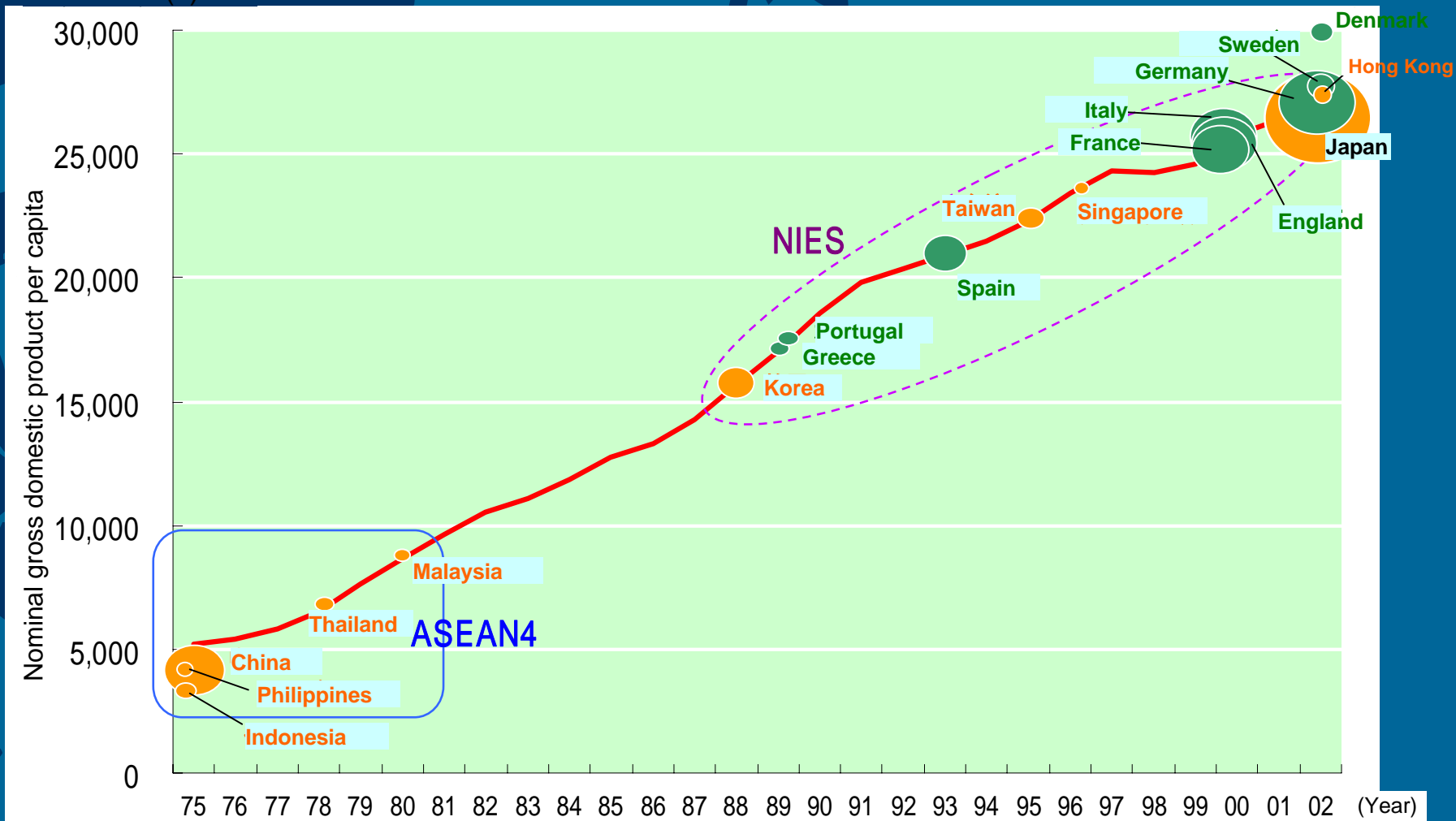


Source: Prepared by the Ministry of Land, Infrastructure and Transport, based on the Population Census by the Ministry of Internal Affairs and Communications, the Population Projections for Japan (estimate as of January 2002) by the National Institute of Population and Social Security Research, and the Long-term Time-series Analysis of Population Distribution Change in the Japanese Archipelago (1974) by the National Land Agency

Note) In the graph above, the analysis document by the National Land Agency was used for data up to 1950, the Population Census for data of 2000, and Population Projections for Japan for data of 2050 and 2100.

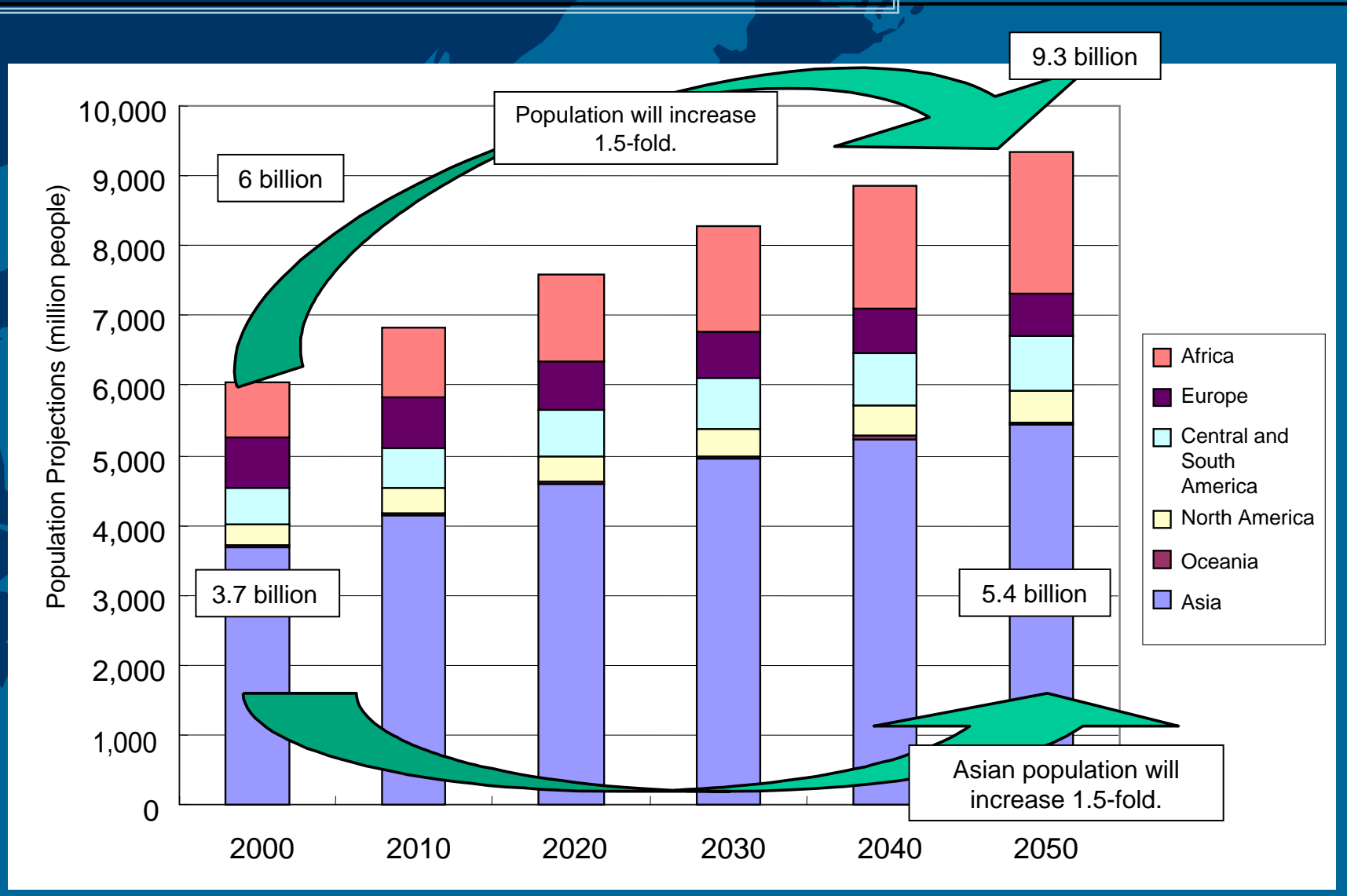
# Income Level in terms of Purchasing Power Parity

U.S. dollar(s)



# World Population Projections by Region

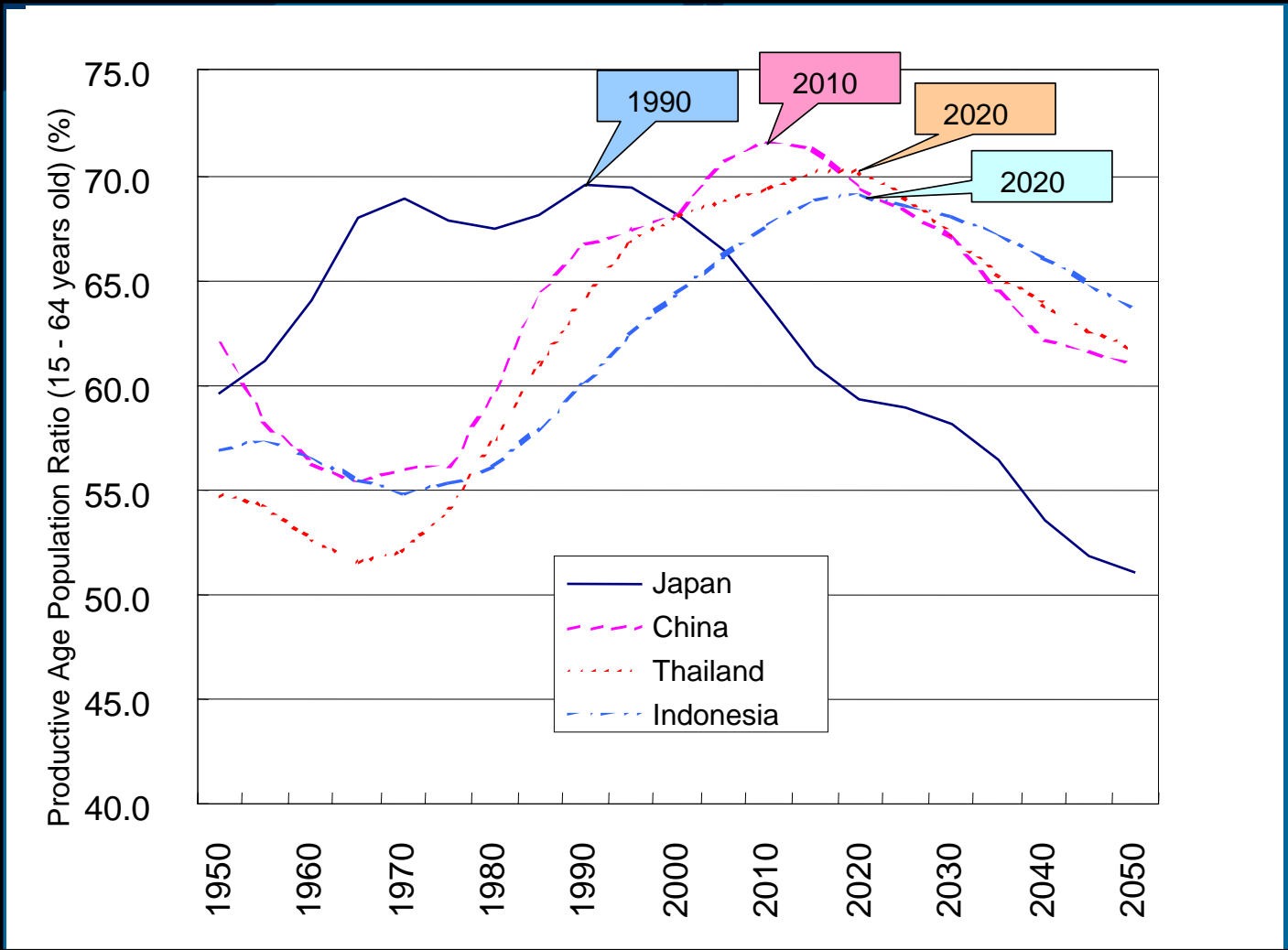
It is necessary to consider the possibility that the combination of Asian population increase and the westernization of Asian diets due to economic development may influence world food supply and demand.



It is likely that the productive age population ratio in East Asia will peak in 2010 - 2020. It is necessary to consider that even East Asia's fast development has its own limits, and therefore to seek interaction and collaboration with all of East Asia.

# Productive Age Population Ratio Changes in Asia (Projection)

Productive Age Population Ratio Changes in Asia (Projection)



## II. Prepare for the Asian Age

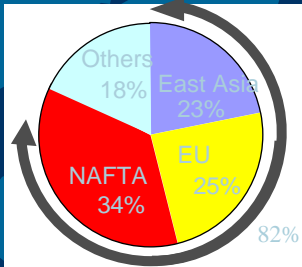
- 1) Reduction of the domestic market (decrease in population, development of service economy and increase in imports)
- 2) Dissolution of the concepts "Domestic" and "International" (shift from "geographically close but economically distant" relation to "both geographically and economically close" relation, and approximation of systems)
- 3) Development of Asian market
- 4) Japan's competitive edge (the advanced country's sophisticated market, content, materials, manufacturing equipment of global competitiveness, and excellence at technology integration)
- 5) Integration of Asian and Japanese industries

# Concentration into the three major economies

The GDP of East Asia grew 1.69 times from 1990 to 2000, rivaling that of the EU's 15 countries; thus, the world economy is being concentrated into three major economies. Japan, located about 10 thousand km from both New York and Paris, has served as a gateway to East Asia.

## ◆ Gross domestic product (2000)

Ratio of each economy



Average growth ratio in 1990s

Global average	3.0%	China	8.3%
Japan	2.6%	N I E S	7.5%
Europe	2.6%	ASEAN4	6.8%
U.S.	2.1%		

## ◆ Three major economies

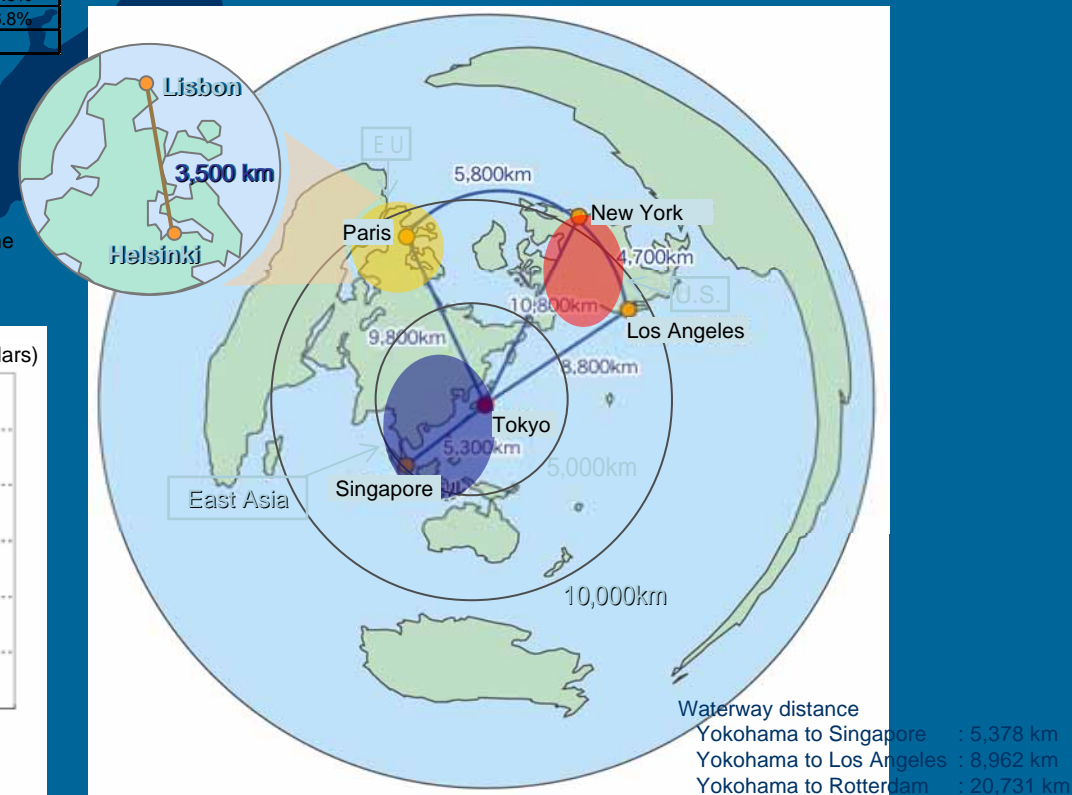
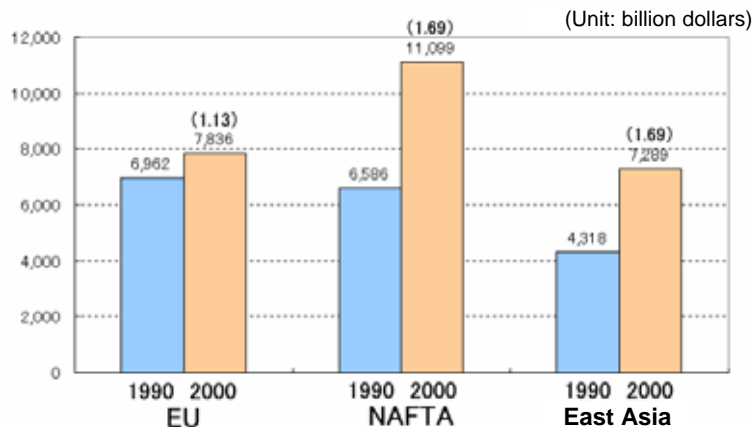
Japan, about 10,000 km from both New York and Paris, is almost equidistant from those cities. Furthermore, Tokyo is about 5,000 km from Singapore, a distance almost equal to that between New York - Paris and New York - Los Angeles.

The international transportation system comprises mainly two systems: transportation to Europe and the U.S., and to Asia.

Note) This graph is based on World Statistics by the Statistics Bureau, Ministry of Internal Affairs and Communications.

Data for East Asia comprise sum value of Japan, China, N I E S (Korea, Taiwan, Hong Kong and Singapore) and ASEAN 4 (Indonesia, Thailand, Malaysia and the Philippines). NAFTA data comprise sum value of U.S., Canada and Mexico.

## ◆ GDP development of East Asia, NAFTA and EU (1990 - 2000)

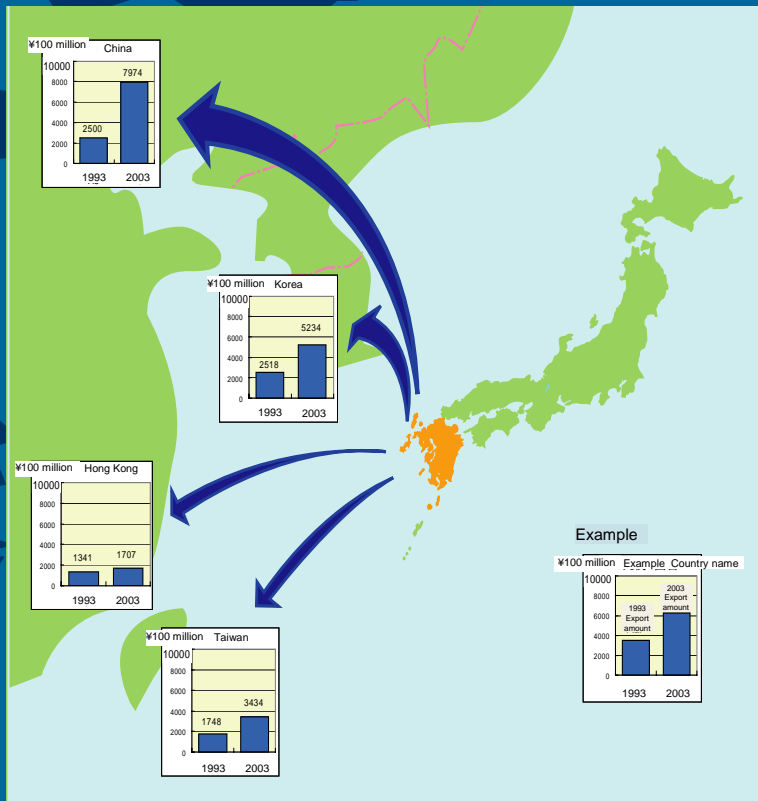




# Economic Link between East Asia and Kyushu Region

- In 2003, the Kyushu region accounted for 6.6% of Japan's total exports and imports from East Asia, after the nation's three major metropolitan regions. Moreover, the region's growth rate nearly doubled from 1993 to 2003, surpassing the national average.
- In comparison to trade with other countries, trade with China is increasing especially rapidly, from ¥250 billion to ¥797 billion.

Amounts of Kyushu region trade with East Asia



Trade amounts with East Asia by region

Unit: ¥100 million

	1993	Share in nation 1993	2003	Share in nation 2003	Growth ratio - 1993/2003
National total	234,077	100.0%	441,976	100.0%	188.8%
Hokkaido	1,244	0.5%	2,737	0.6%	220.1%
Tohoku	1,999	0.9%	5,416	1.2%	271.0%
Hokuriku	917	0.4%	2,846	0.6%	310.3%
Koshinetsu	1,274	0.5%	3,349	0.8%	262.8%
Kanto	100,022	42.7%	199,423	45.1%	199.4%
Tokai	30,375	13.0%	56,209	12.7%	185.0%
Kinki	67,189	28.7%	111,529	25.2%	166.0%
Chugoku	12,415	5.3%	24,690	5.6%	198.9%
Shikoku	2,798	1.2%	5,335	1.2%	190.7%
Kyushu	14,113	6.0%	29,065	6.6%	206.0%
Okinawa	1,732	0.7%	1,378	0.3%	79.6%

Source: Based on Trade Statistics by Ministry of Finance

Source: Based on Trade Statistics by Ministry of Finance

¥100 billion

# Change in Port Ranking

1983

(Unit: thousand TEU/year)

	Port name	Amount handled
1	Rotterdam	2,314
2	New York/New Jersey	2,065
3	Hong Kong	1,837
4	Kobe	1,623
5	Kaohsiung	1,479
6	Singapore	1,274
7	Antwerp	1,000
8	Seattle	950
9	Keelung	943
10	Hamburg	930
11	Yokohama	925
...	...	...
13	Pusan	884
...	...	...
19	Tokyo	698
...	...	...
33	Osaka	356
...	...	...
45	Nagoya	254
...	...	...
114	Shanghai	83

1993

(Unit: thousand TEU/year)

	Port name	Amount handled
1	Hong Kong	9,204
2	Singapore	9,046
3	Kaohsiung	4,636
4	Rotterdam	4,161
5	Pusan	3,071
6	Kobe	2,696
7	Hamburg	2,486
8	Los Angeles	2,376
9	Yokohama	2,168
10	Long Beach	2,079
...	...	...
17	Tokyo	1,538
...	...	...
22	Nagoya	1,155
...	...	...
27	Shanghai	900
...	...	...
37	Osaka	680
...	...	...
-	Shenzhen	78

2003

(Unit: thousand TEU/year)

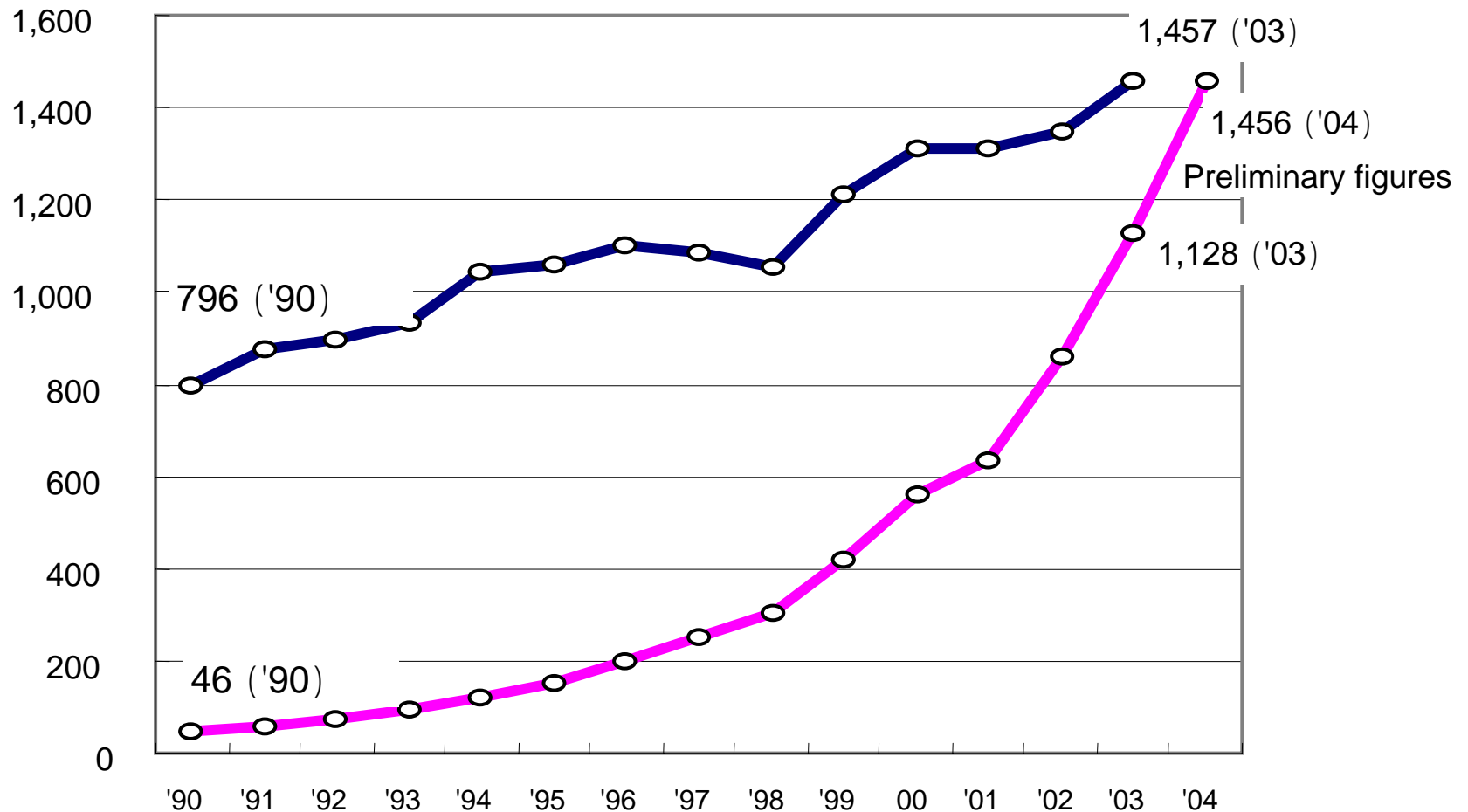
	Port name	Amount handled
1	Hong Kong	20,449
2	Singapore	18,100
3	Shanghai	11,280
4	Shenzhen	10,615
5	Pusan	10,408
6	Kaohsiung	8,840
7	Los Angeles	7,179
8	Rotterdam	7,107
9	Hamburg	6,138
10	Antwerp	5,445
...	...	...
17	Tokyo	3,314
...	...	...
27	Yokohama	2,505
...	...	...
31	Nagoya	2,074
32	Kobe	2,046
...	...	...
47	Osaka	1,610

# Development of Shanghai Port

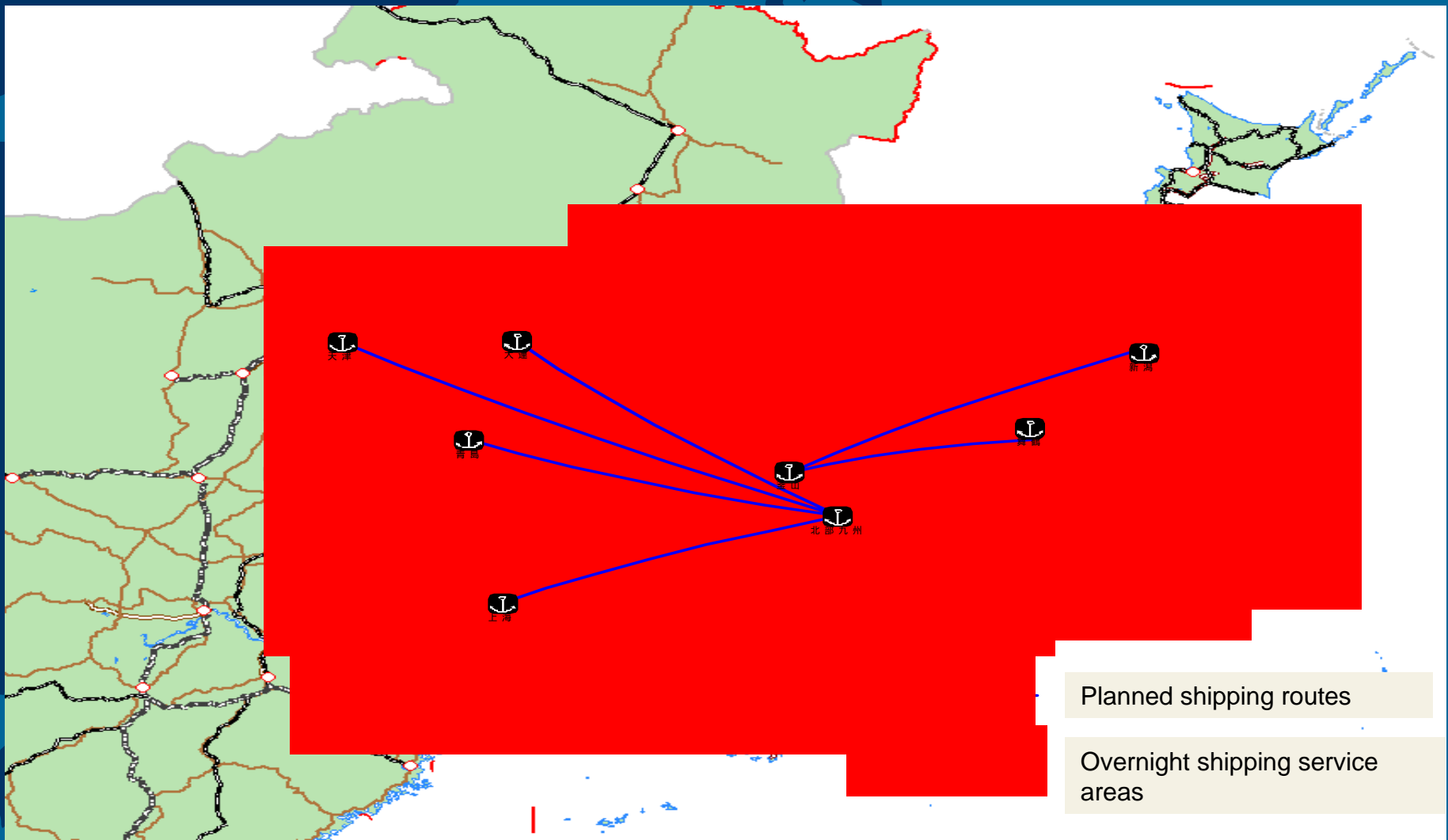
(Unit: 10 thousand TEU/year)

Japan total

Shanghai port



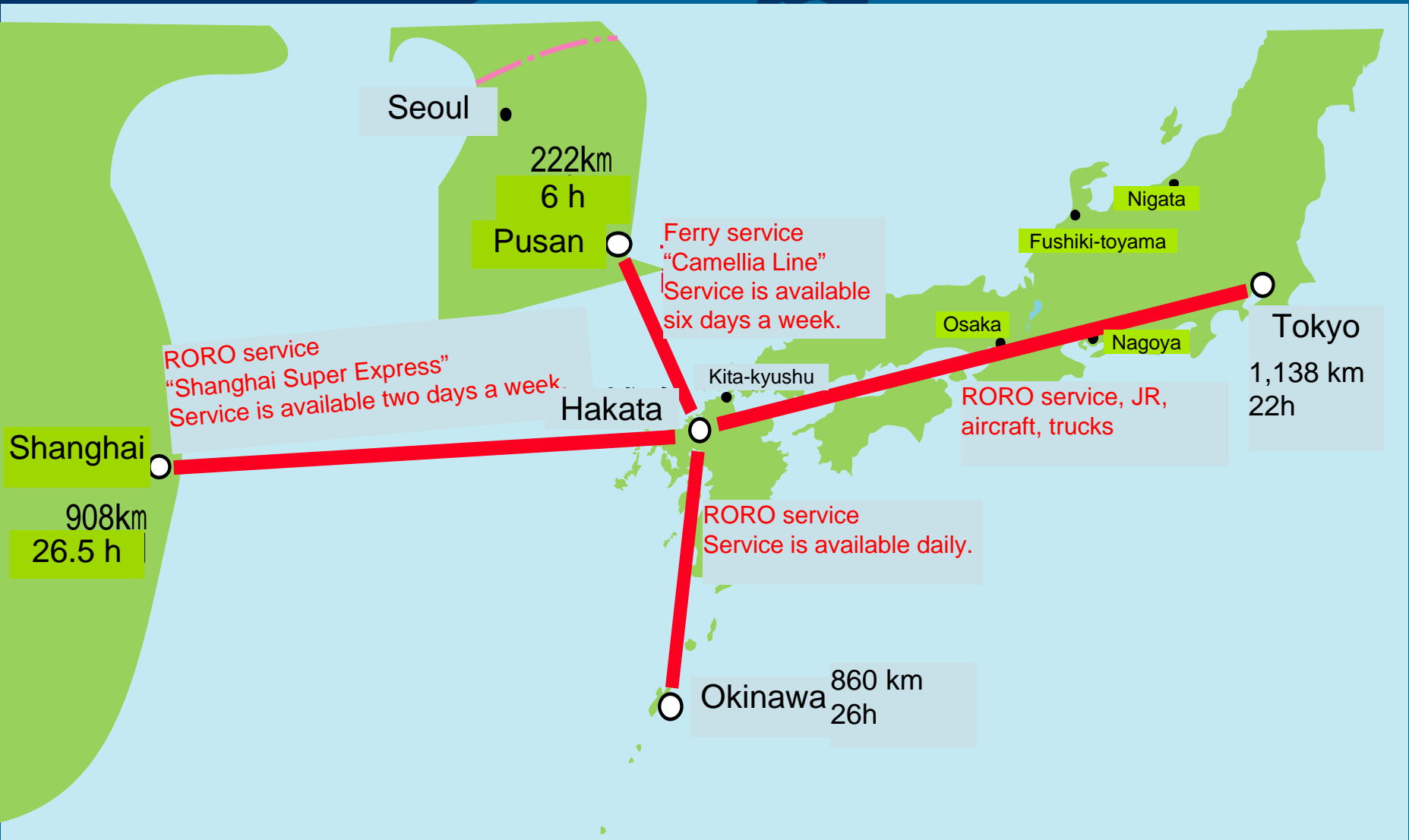
# Overnight shipping service areas



Planned shipping routes

Overnight shipping service areas

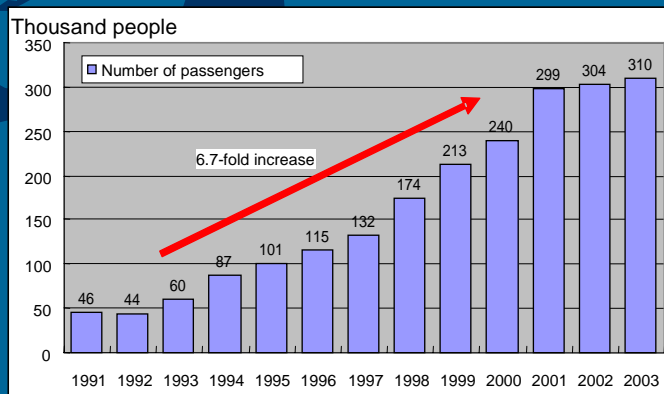
# Examples of International and Domestic Distribution Systems Integration



# Advantages of Passenger Transport by Water

- The number of passengers served annually by an international high-speed vessel that connects Fukuoka and Pusan in three hours increased six fold, from approximately 50,000 in 1991 (immediately after service launch) to approximately 310,000 in 2003.
- This is because, although the service is inferior to air travel in terms of shipping time and speed, it is superior in terms of convenient access to cities, operating frequency and fares.

Passengers between Fukuoka and Pusan (passengers of Beetle Service)



Source: JR Kyushu's web site and Beetle Service's pamphlet

The Beetle Service, an international high-speed vessel (between Hakata and Pusan)



This international high-speed vessel connects Fukuoka and Pusan in three hours.

The Beetle ship service, invested in by JR Kyushu, is available three times a day (round trip). In 1995 the Mirejet, Korea, also launched a ship service; as of 2004, a total of five ship services are now available each day.

Comparison between means of transportation: Fukuoka - Pusan

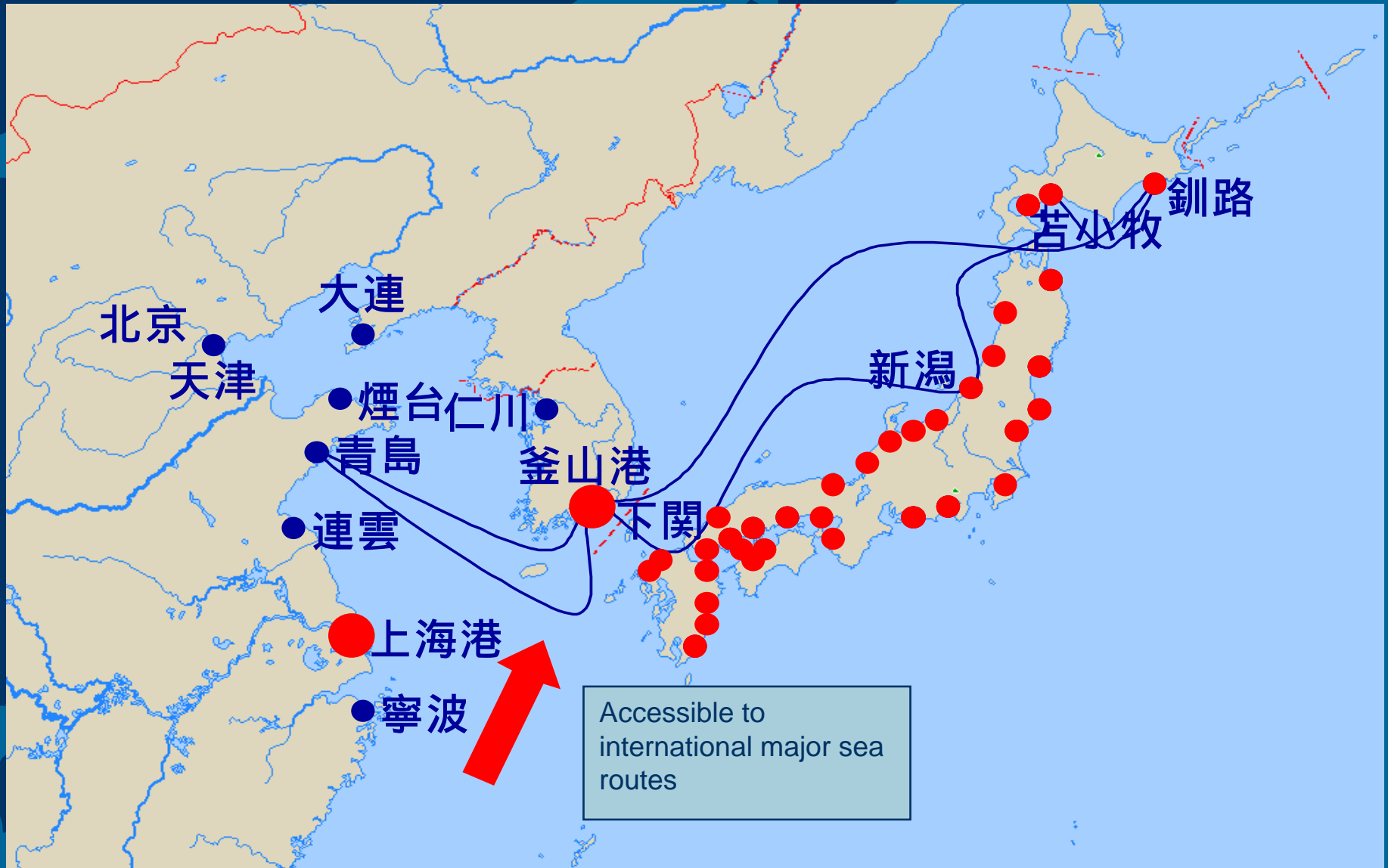
		Airplane	High-speed vessel
Access	Fukuoka	Means	Subway
		Time	5 minutes
	Pusan	Means	Bus
		Time	60 minutes
Service frequency	Regular	1.3 services/day	5 services/day
	Maximum		8 serviced/day
Number of operating companies		2	2
Passenger capacity		106/253	222/215
Transport capacity		284 passengers/day	1,089 passengers/day
Fare (regular ordinary one-way fair)		¥19,700	¥13,000
First and last departure times		15:40, 17:45	8:45, 14:45
Others		Flights are available only in the evening	Jet Foil service is prohibited after 18:00; the Foil's last departure time is therefore set earlier than those of other ship services.
			Foil-borne speed – 45 knot (approx. 83 km/h)

Note) Nine flights are available per week; flight daily frequency was calculated on this basis.

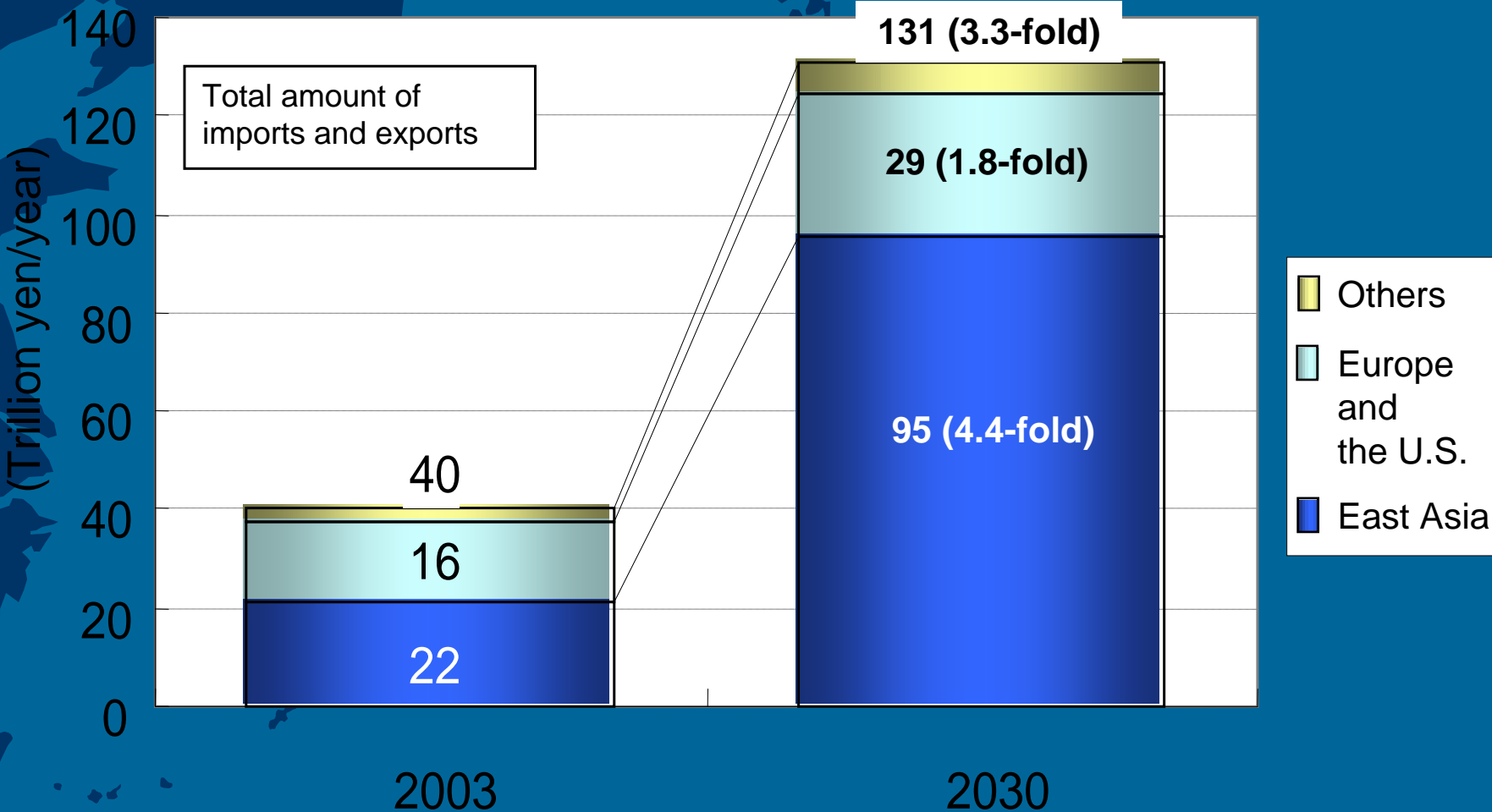
Access: Arrival and departure places are Hakata Station for "Fukuoka" and Pusan Station for "Pusan", respectively.

Source: JTB Timetable (October 2004), JR Kyushu web site and pamphlets of Beetle and Kobee services.

# Examples of Pendulum Transport Services in East Asia

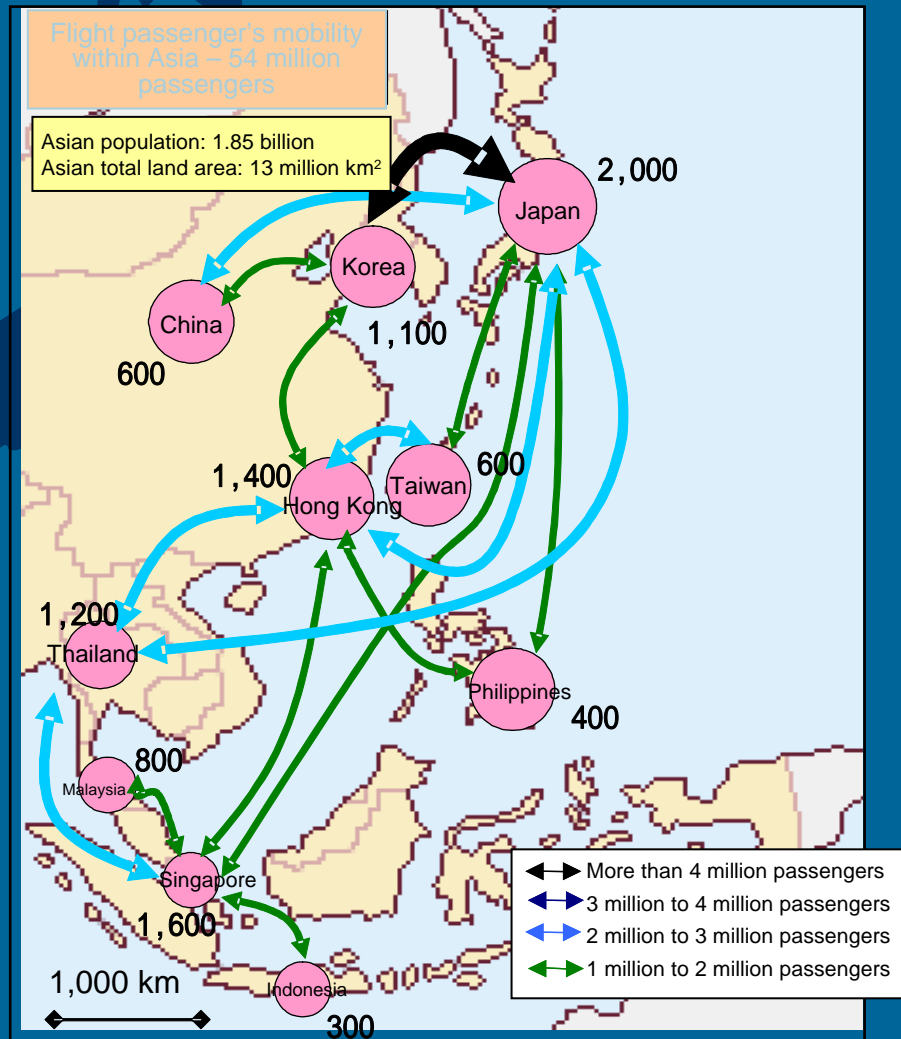
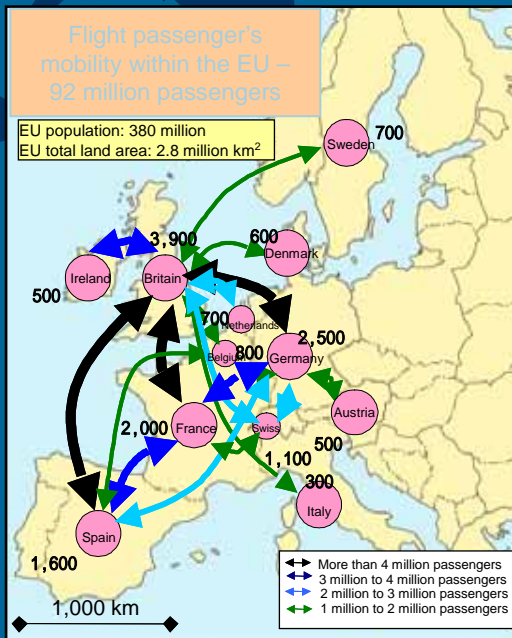


# Japan's International Container Cargo Volume Projection





In the EU, with a population of 380 million, 92 million passengers annually fly within the region. In Asia, with a population of 1.8 billion (six-fold of the EU) 54 million passengers (0.6-fold of the EU) annually fly within Asia. However, the number of such East Asian passengers is likely to increase rapidly due to the region's economic development and other factors.



Source: On-Flight Origin and Destination (2000) by ICAO

# Attractive European Cities

## Top 30: European cities where companies want to set up operations\*

Ranking	City name	Country name	Population (10 thousand)
1	London	Britain	704
2	Paris	France	212
3	Frankfurt	Germany	64
4	Brussels	Belgium	96
5	Amsterdam	Netherlands	71
6	Barcelona	Spain	145
7	Madrid	Spain	282
8	Berlin	Germany	342
9	Milan	Italy	130
10	Munich	Germany	120
11	Zurich	Swiss	34
12	Dublin	Ireland	48
13	Manchester	Britain	43
14	Geneva	Swiss	17
15	Lisbon	Portugal	56
16	Dusseldorf	Germany	57
17	Prague	Czech Republic	120
18	Stockholm	Sweden	72
19	Lyon	France	41
20	Hamburg	Germany	56
21	Glasgow	Britain	61
22	Warsaw	Poland	162
23	Budapest	Hungary	187
24	Vienna	Austria	160
25	Copenhagen	Denmark	65
26	Rome	Italy	265
27	Oslo	Norway	50
28	Moscow	Russia	840
29	Helsinki	Finland	54
30	Athens	Greece	77

\* List from "European Cities Monitor 2003," a survey conducted by Healey & Baker, the world's largest real-estate consulting firm. The firm conducted an inquiry survey among 501 major European companies.

Locations of European cities



Cities with population of less than 500,000

Cities with the population of 500,000 to less than 1 million

# Passenger Mobility within Day-trip Range in Europe and East Asia



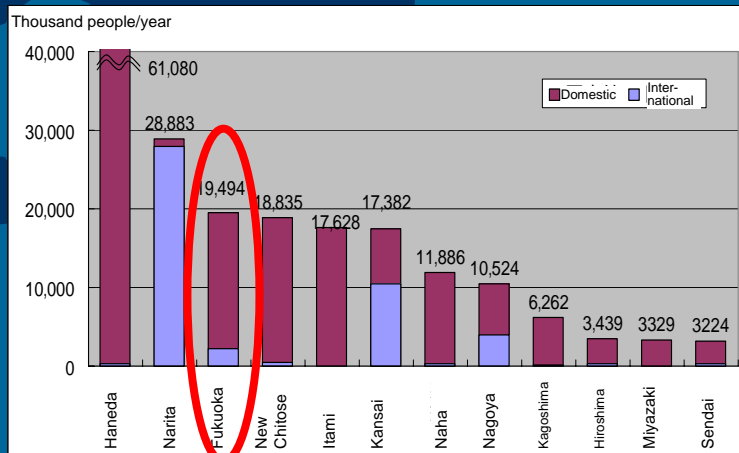
\*1) Area within day-trip range:  
 Destination cities where a passenger can spend at least six hours from flight arrival to departure, provided that passenger's local airport departure is at 6:00 a.m. or later, with return by 24:00.

Source: based on On-flight Origin and Destination  
 Japan : JTB Timetable (April 2004)  
 Asia : OAG Timetable (January 2003) and other documents.

# Fukuoka Airport Use Condition (National Comparison of Passenger Numbers and Flights)

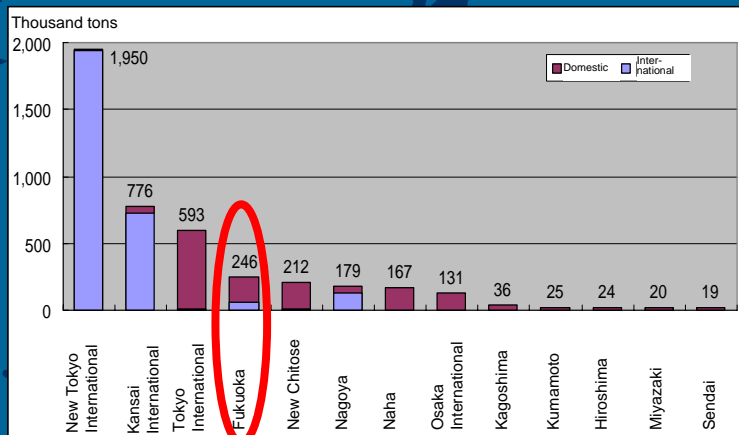
- Fukuoka Airport handles large numbers of passengers and cargos, after airports of three major economies.
- At Fukuoka Airport, compared with Narita, Kansai and Nagoya Airports, flights to Asia account for a large proportion of total flights.

Japan's top airports – number of passengers (2002)



Source: based on Aviation Statistics 2004 by Japan Civil Aviation Promotion Foundation

Japan's top airports – cargo volume by airport (2002)



Source: based on Aviation Statistics 2004 by Japan Civil Aviation Promotion Foundation

International flights of major airports

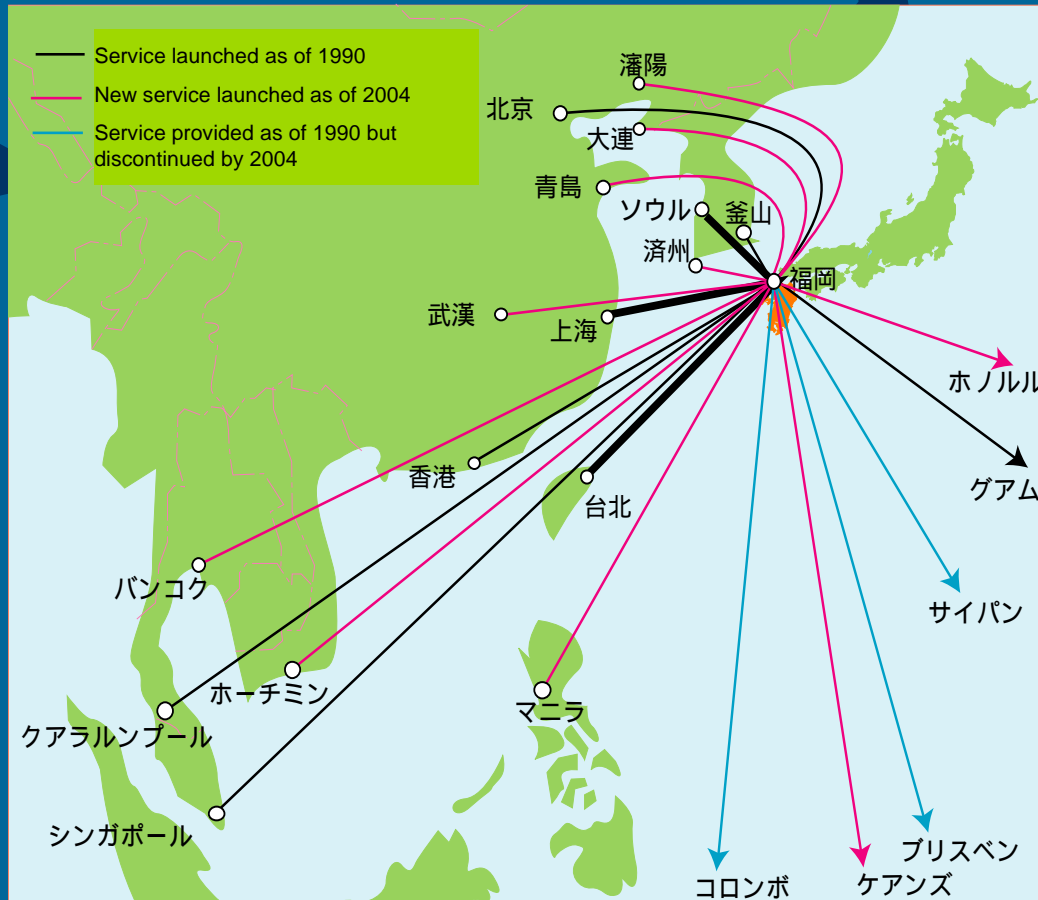
Airport	International flight passenger number (thousand/year)	International flights cargo volume (thousand ton/year)	Number of flights (flights/week)	Asian flights of total (flights/week)	Ratio of Asia flights
Narita	27,861	1,942	1,405	765	54%
Kansai	10,545	722	566	379	67%
Nagoya	3,993	132	204	142	70%
Fukuoka	2,211	63	164	147	90%
New Chitose	516	5	25	21	84%
Sendai	396	4	20	16	80%
Hiroshima	302	2	22	22	100%

Source: based on JTB Timetable of October 2004 (data for Fukuoka based on November issue), and Airport Control Condition Survey by Ministry of Land, Infrastructure and Transport

# Fukuoka Airport Use Condition (International flight destinations and numbers)

- Fukuoka Airport offered 76 flights to 12 foreign cities per week in 1990; as of 2004, the Airport has increased that number by 80, to 156 flights to 22 cities per week.
- Of particular note is that of the 80 flights, 45 (approx. 50%) are to Chinese cities.

International flights from Fukuoka Airport



Destination cities		2004	1990
Korea	Seoul	28	19
	Pusan	9	14
	Cheju	5	-
	<b>Total</b>	<b>42</b>	<b>33</b>
China	Beijing	7	2
	Shanghai	28	2
	Shenyang	2	-
	Dalian	7	-
	Tsingtao	3	-
	Wuhan	2	-
	Taipei	21	14
	Hong Kong	7	4
<b>Total</b>	<b>77</b>	<b>22</b>	
East Asia	Singapore	5	3
	Kuala Lumpur	3	2
	Bangkok	5	-
	Ho Chi Minh	3	-
	Manila	4	-
	Colombo	-	2
Europe and U.S.	Honolulu	7	-
Others	Guam	7	4
	Saipan	-	6
	Cairns	3	-
	Brisbane	-	4
<b>Total</b>		<b>156</b>	<b>76</b>

# Preparation for the Age of Active Interaction

- 1) The international container cargo volume handled in Japan is expected to triple in 2030.
- 2) The growth rate of the international flight passengers and cargoes is expected to exceed that of international container cargoes.
- 3) Integration of the Asian industry system and that of Japan is further developed.
- 4) International transportation will become “Semi-domestic transportation.”
- 5) It is necessary to make active use of geographical advantages.
- 6) It is necessary to consider Fukuoka Airport’s capacity issues.





**Thank you very much for your kind  
attention.**

**I would like to take this opportunity to express  
my appreciation to the Ministry of Land,  
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