The National Spatial Strategy

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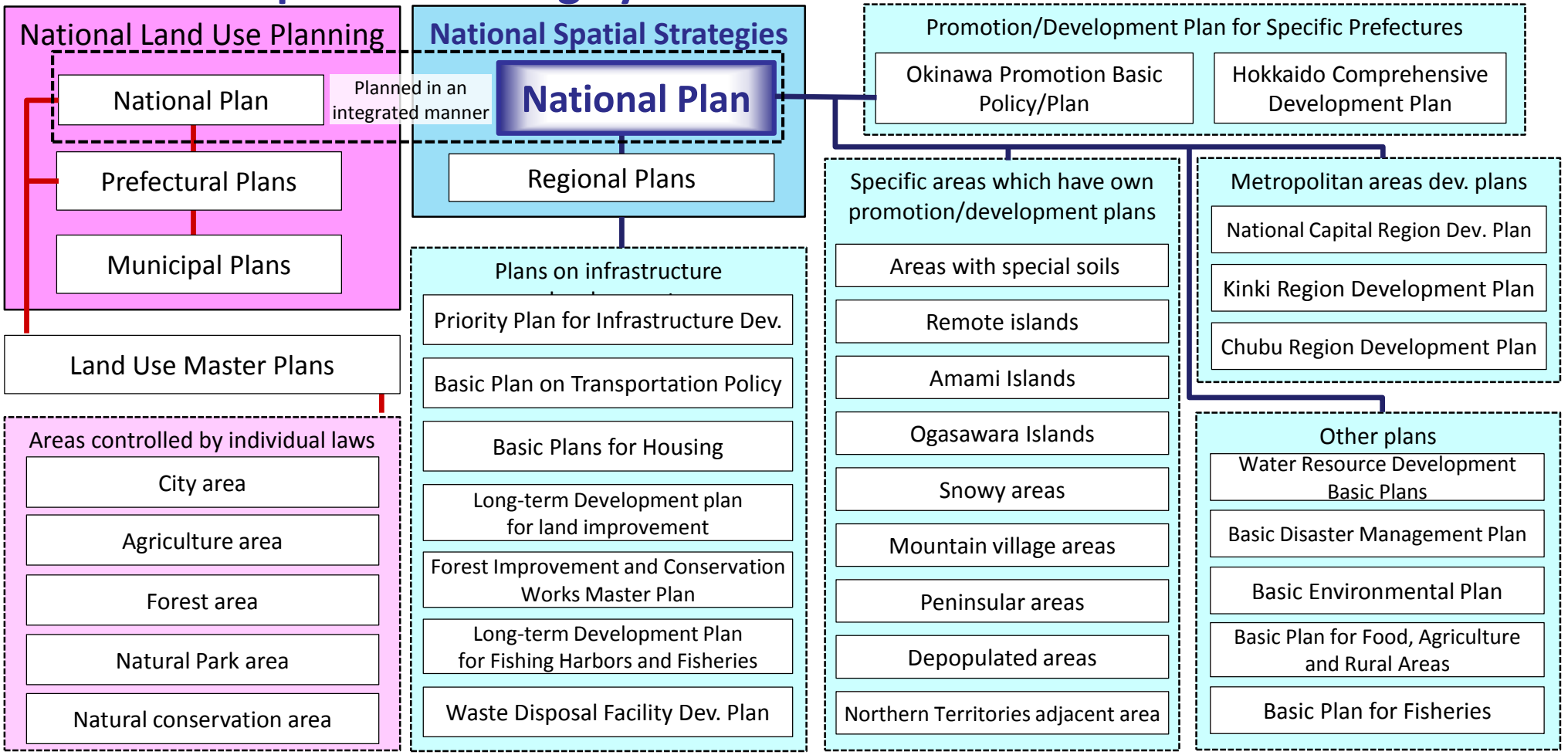
National Spatial Planning System

国土交通省

➢ Role of National Spatial Planning

An engine to promote ideal national development by unifying the directions of wide-spread policies regarding spatial planning, *e.g.* regional development, industry, culture, tourism, transport, telecommunication, energy, infrastructure, disaster prevention, environment, land and resources, landscape, mutual assistance community development

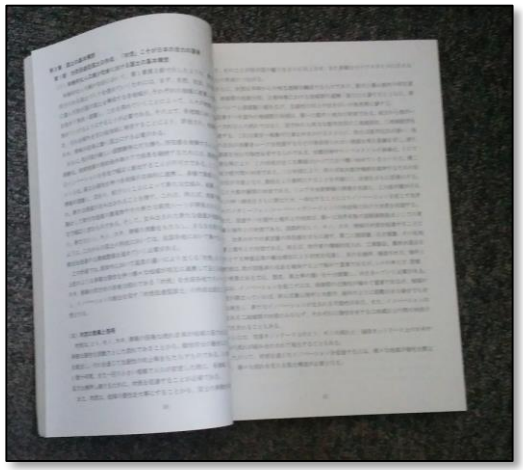
➢ National Spatial Planning System



About the National Spatial Strategy (National Plan)

A comprehensive and basic plan to promote the use, improvement and conservation of National Land

- Based on the "National Spatial Planning Act" (Act No. 205, 1950, former "Comprehensive National Development Act" amended and renamed in 2005)
- Coordinator: National Spatial Planning and Regional Policy Bureau, MLIT
- Plan duration: approx. 10 years
- Procedures needed to finalize the National Plan:
  - Asking for and reflecting opinions from the public
  - Consultation with the heads of related administrative organs
  - Hearing the opinions of the prefectures and designated cities government ordinance
  - Studied and deliberated by the "National Land Development Council" in MLIT
  - Cabinet decision
- Post-creation:
  - After a few years later from cabinet decision, MLIT conduct a policy assessment (policy review) based on the Policy Evaluations Act



History of the National Spatial Planning

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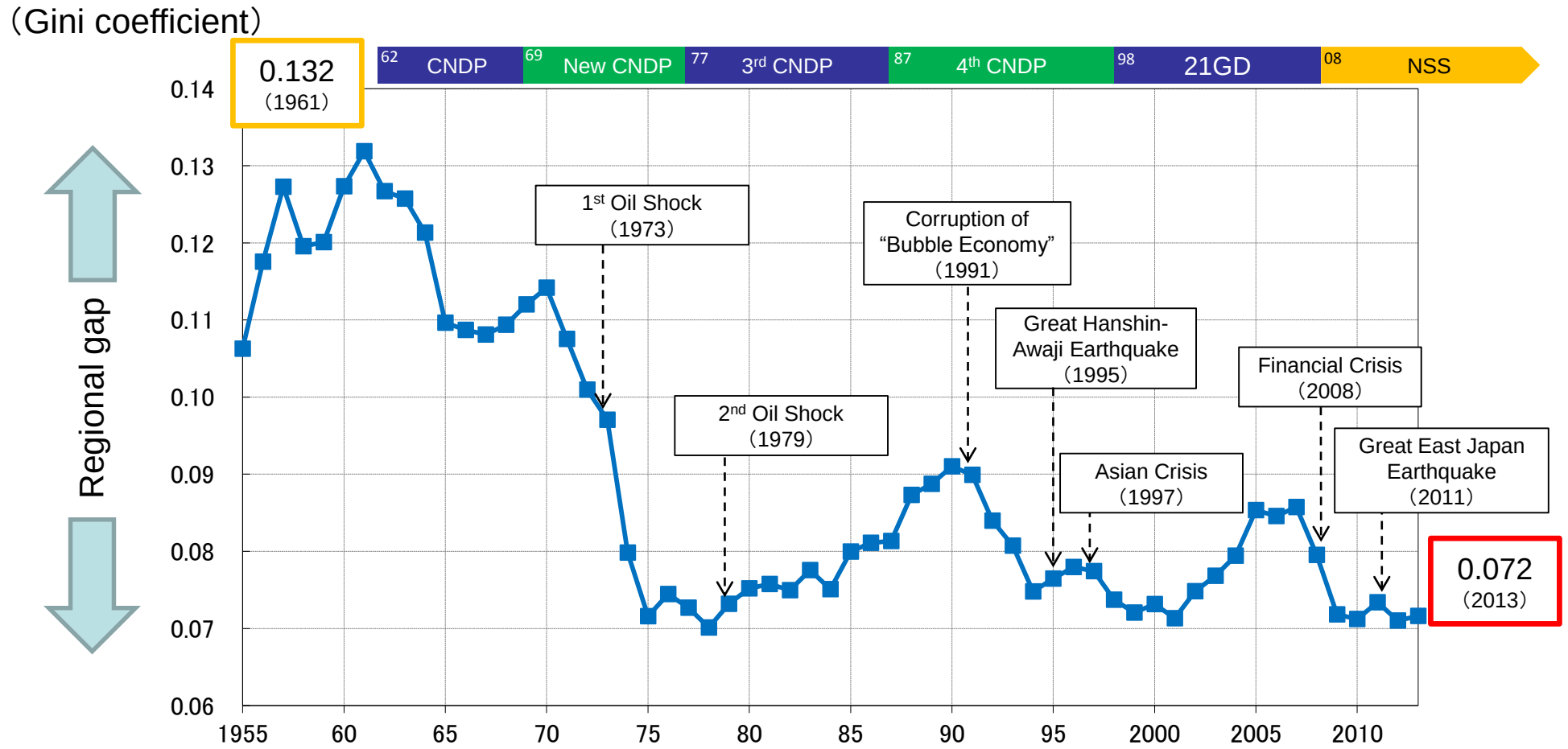
	Comprehensive National Development Plan	New Comprehensive National Development Plan	3rd Comprehensive National Development Plan	4th Comprehensive National Development Plan	Grand Design for the 21st Century	National Spatial Strategy (National Plan)	2nd National Spatial Strategy (National Plan)
Cabinet Decision	Oct. 5, 1962	May 30, 1969	Nov. 4, 1977	June 30, 1987	March 31, 1998	July 4, 2008	Aug. 14, 2015
Background	1.Transition to high growth economy 2.Overpopulation and disparity in income 3.National income-doubling plan (Pacific Belt Zone Project)	1.High growth economy 2.Concentration of population and industry in metropolitan areas 3.Advancement of information technology, globalization, and technical renovation	1.Stable economic growth 2.Signs of decentralization of population and industry 3.It became obvious that national resources and energies are limited	1.Concentration of population and various functions in Tokyo 2.Employment issues in non-metropolitan areas are more serious for reasons such as drastic structural changes in industry 3.Advancement of full-scale globalization	1.Global age (Global environmental issues, mega-competition, and exchanges with Asian nations) 2.Decreasing population and the aging society 3.Information-oriented society	1. Great turning point for socio-economic conditions (population decrease/aging, globalization, and development of information and communication technology) 2. Change/diversification of values of Japanese people 3. Conditions surrounding national land (single-polar single-axial land structure, etc.)	1. The current of the times and issues surrounding the national land (rapid population decrease and declining fertility rates, unprecedented aging, impending catastrophes, aging of infrastructures, etc.) 2. Change in the values of Japanese people (growing sense of “rural regression,” etc.) 3. Change in national space (increase in low-use/unused land, vacant houses, etc.)
Target year	1970	1985	About 10 years from 1977	Around 2000	2010 - 2015	About 10 years from 2008	About 10 years from 2015
Basic Objectives	Well-balanced development between regions	Creation of a rich environment	Improvement of the general living environment	Formation of a multipolar country	Prepare the basics for a Multi-axial structure	- Construction of national land where various regional blocks develop autonomously - Creating national land that is beautiful and comfortable to live in	Promotion of Active Interaction-led Spatial Development
Development method	Development of regional hubs Decentralization of industry is needed to achieve the objectives of this plan. Efforts must be made to develop regional hubs, by organically relating them to and promoting interaction with the existing production mass in Tokyo and other metropolitan areas, with a new transportation and communication network. Such development shall be performed by maintaining the characteristics of the peripheral areas and achieving a chain reaction that promotes regionally balanced development.	Large-scale project development Promote large-scale projects by developing transportation networks, such as the Shinkansen (bullet train) and expressways, to mitigate the uneven use of land and solve problems such as overpopulation, depopulation, and regional disparities.	Stable settlement concept Promote development of non-metropolitan areas while controlling the concentration of population and industry in metropolitan areas. Make efforts to achieve a well-balanced use of the national territory while responding to the issues of overpopulation and depopulation, with the aim of creating a better living environment for citizens.	Interactive network concept Establish a multipolar pattern territory with the following initiatives: 1. Promote a creative/innovative improvement of each area of national territory by maximizing regional characteristics 2. Develop backbone transportation, information, and communication networks nationwide in accordance with the national program or initiatives led by the national government 3. Establish various interaction opportunities through a joint effort between the national government, each regions, and private institutions.	Participation and Cooperation This plan conceives the participation of diverse entities and cooperation between regions as the basis for national and regional development. [Four Strategies] 1. Build nature-rich residential areas (small cities, agricultural and fishing areas, hilly and mountainous areas) 2. Renovate metropolitan areas (renovation, renewal, and effective use of spheres in large cities) 3. Form regional cooperation corridors (regional partnership taking the form of axis) 4. Form international spheres of interaction on a large scale (which has global interactive functions)	[Five strategic objectives] 1. Exchange and cooperation with East Asia 2. Creation of sustainable regions 3. Creation of disaster-resilient, flexible national land 4. Management and inheritance of beautiful national land 5. Creation of regional areas based on the "new public" as an axis	Multilayered and resilient “Compact City and Networks” [Specific direction] 1. The national land that shines locally and acts globally (creating regional areas with diversity, etc.) 2. National land management and infrastructures that support safety and security, and economic growth 3. Participation and cooperation to support creation of national land (fostering actors and creating the society of mutual assistance)

Gini coefficient on the prefectural income per capita

- According to Gini coefficient, regional gap had declined during the rapid economic growth period (60s-70s).
- The gap had been on the increase around the economic bubble period, and then fell down again.
- It came to rise again from the beginning to mid 00s, and then reduced late 00s before/after financial crisis

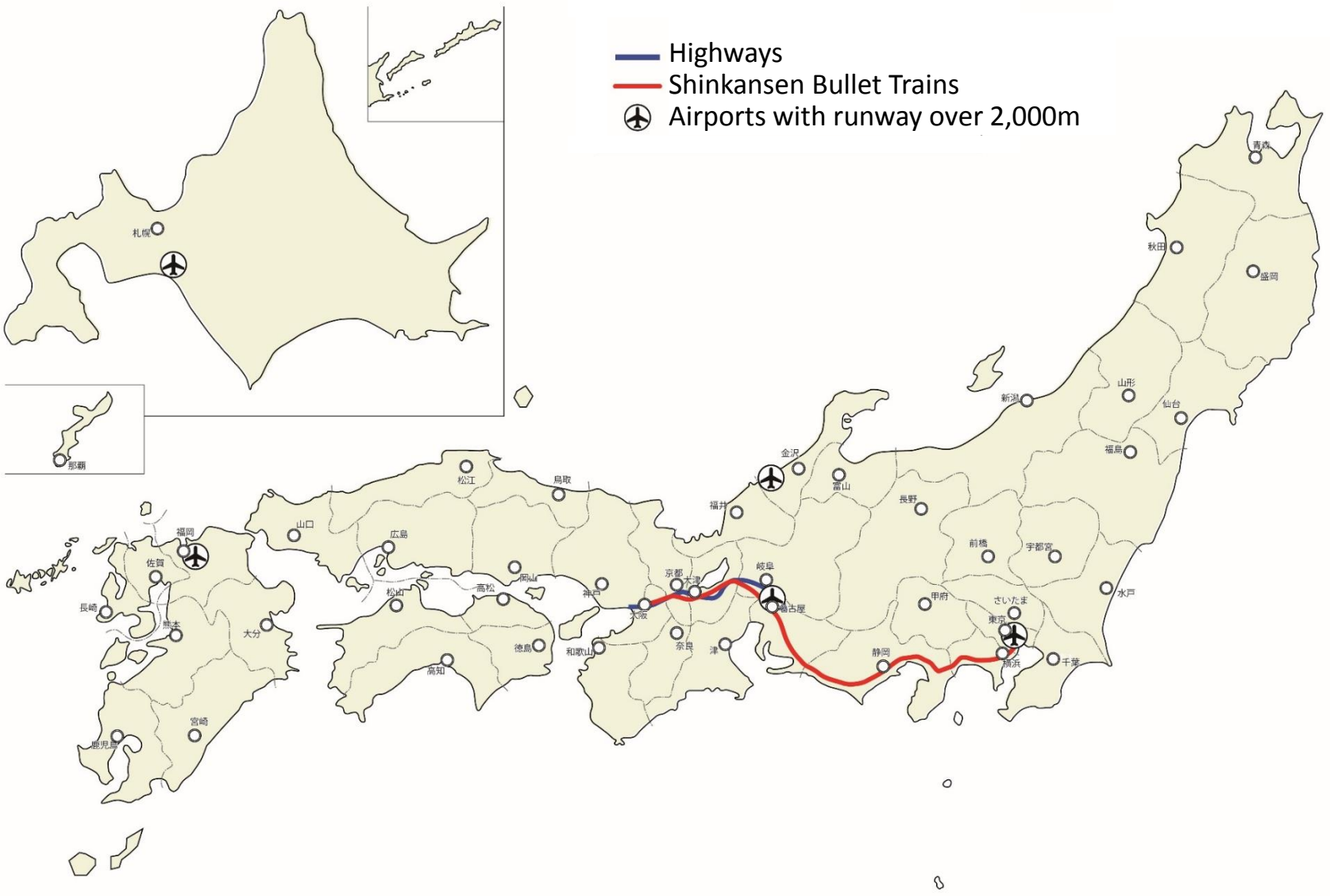


Source: Data Prepared by National Spatial Planning and Regional Policy Bureau, MLIT, from "Prefectural Accounting" (Cabinet Office), and "Population Census", "Population Estimates" and "Japan's long-term statistical series" (Ministry of Internal Affaires and Communications)

Note 1: Gini coefficient is an indicator to show income or wealth distribution, which ranges from 0 (minimum inequality) to 1 (maximum).

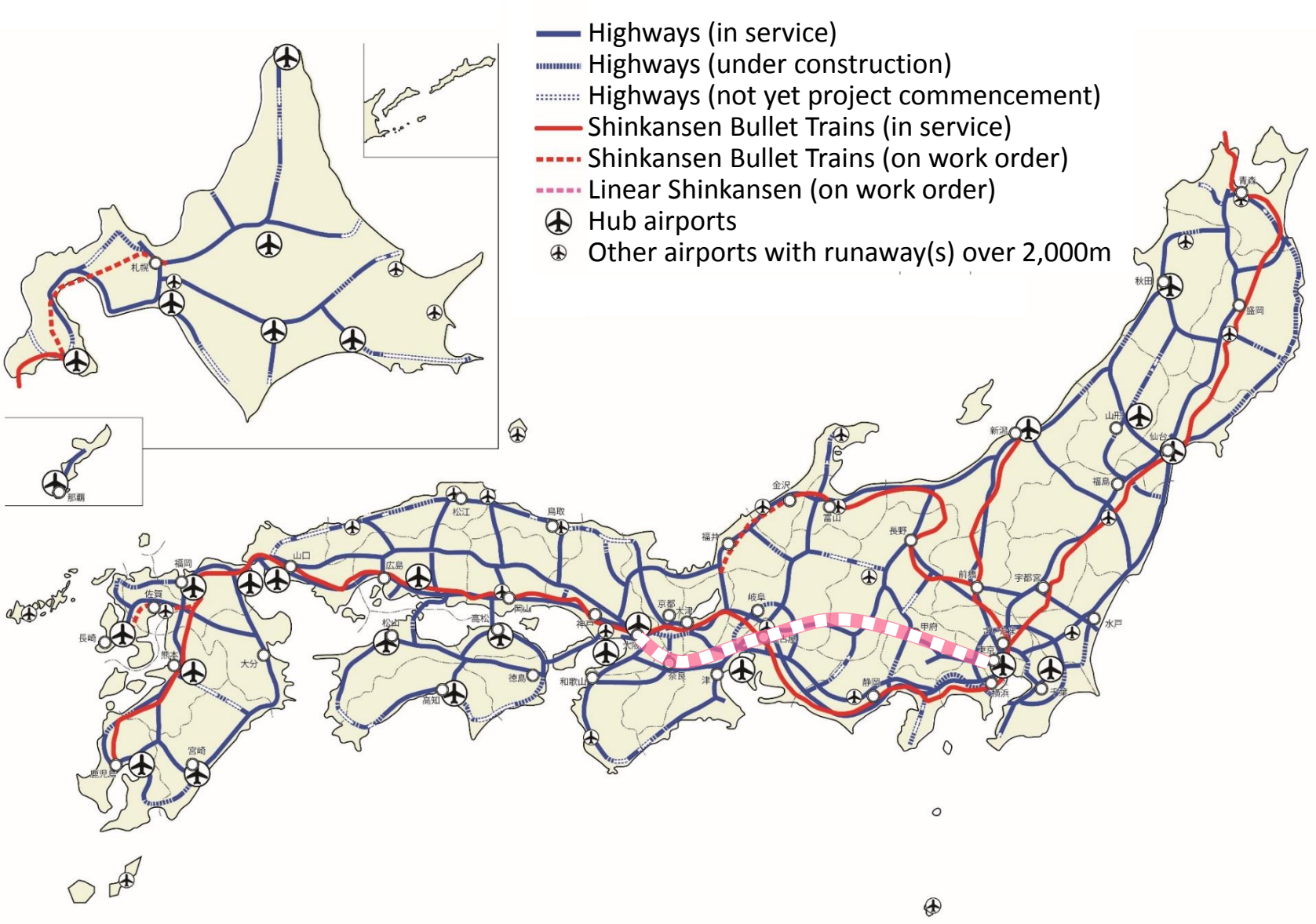
Note 2: Data on prefectural income is based on 68SNA (from 1955 to 1989) and 93SNA (from 1990).

Development of Express Traffic Network (As of 1965)



Source: Prepared by National Spatial Planning and Regional Policy Bureau, MLIT (as of 3rd March, 1965)

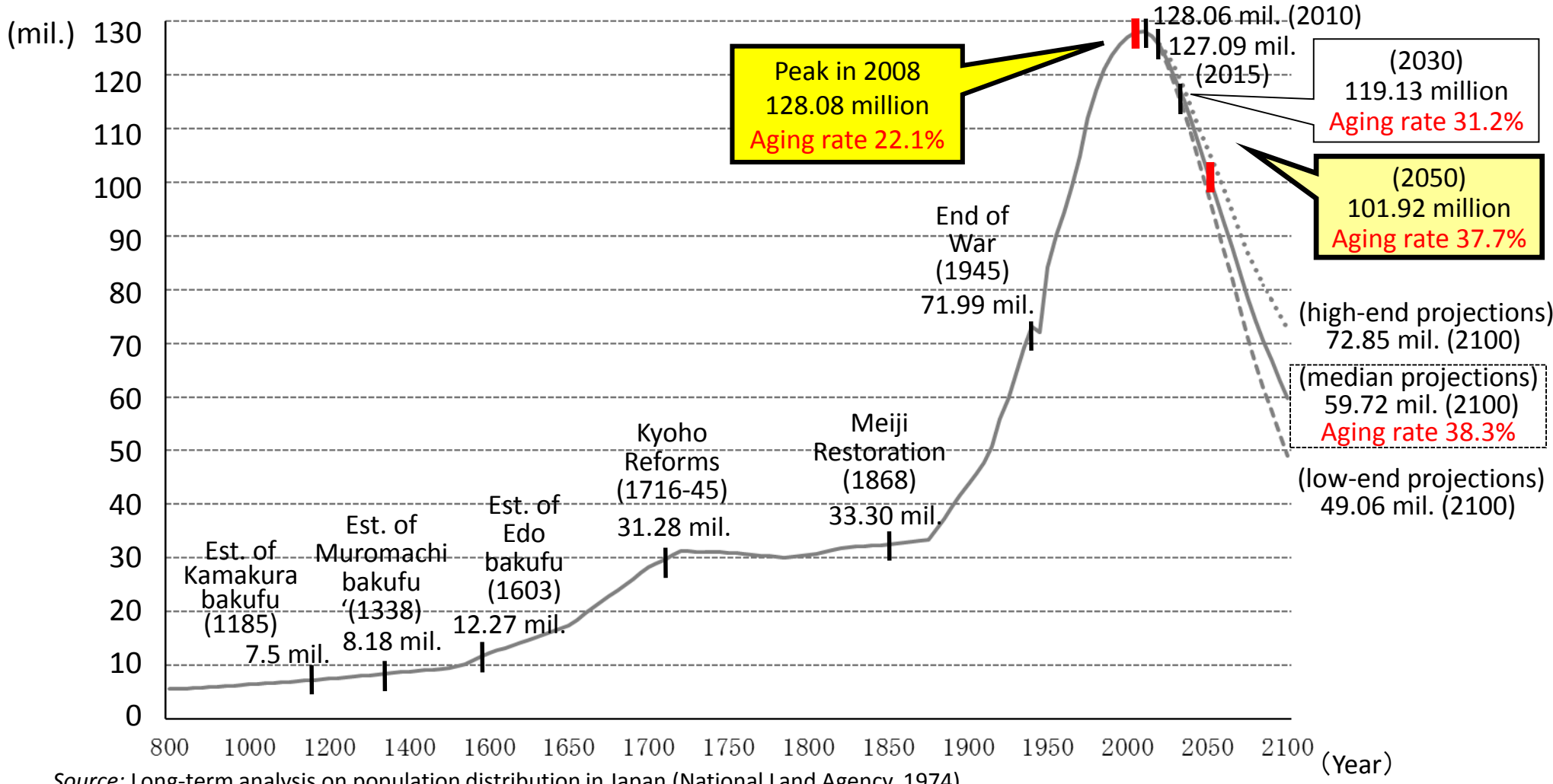
Development of Express Traffic Network (As of 2018)



Source: Prepared by National Spatial Planning and Regional Policy Bureau, MLIT (as of 1st June, 2018)

Long-Term Population Trends in Japan

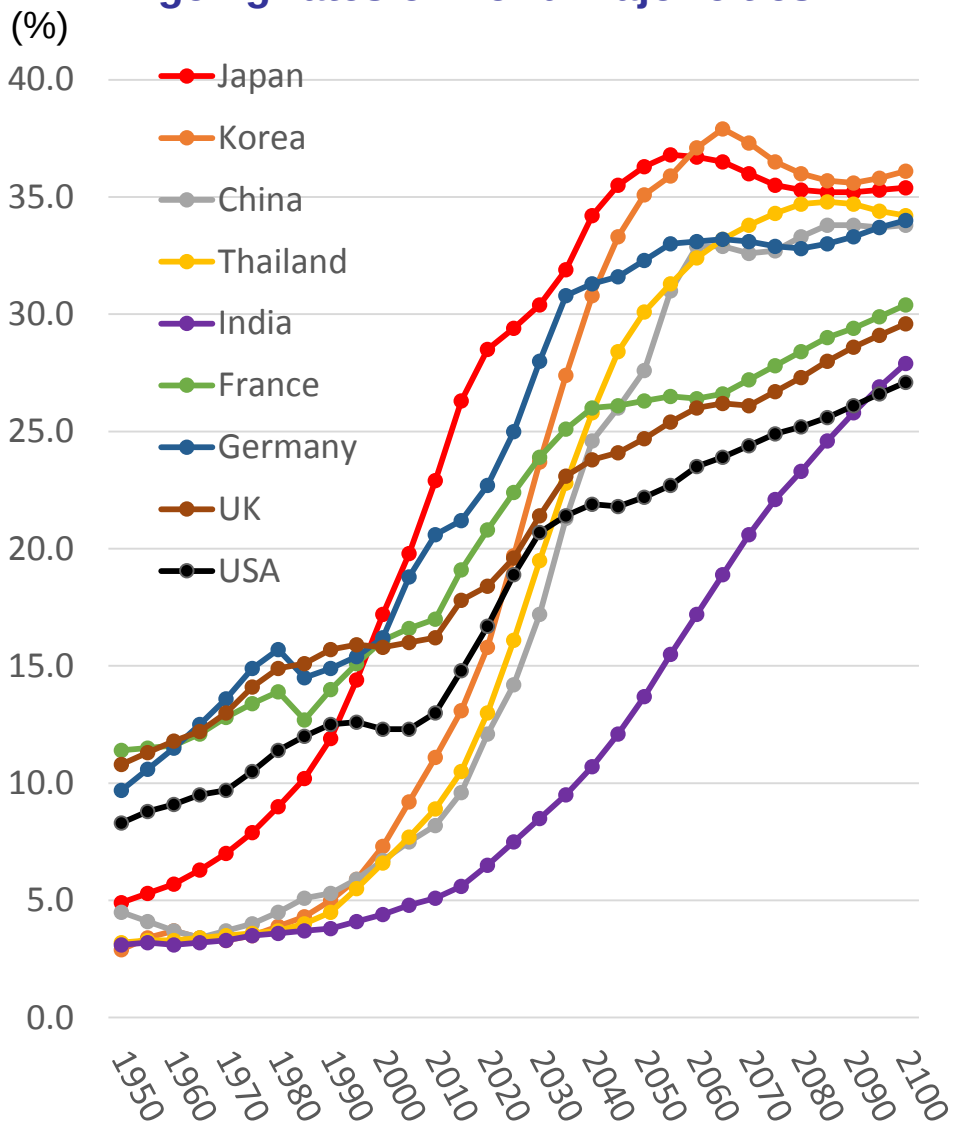
- The total population of Japan is likely to return to the level of a century ago (around the year 1850) over the next 100 years.
- This change is a very rapid decline that is unparalleled in a thousand years.



Source: Long-term analysis on population distribution in Japan (National Land Agency, 1974)
Note: The data from 1920 and later is based on "Population Census", "Population Estimates" and "Population interpolation estimated from 2005 and 2010 census results" (Ministry of Internal Affairs and Communications), and "Population Projections for Japan (estimated in 2017)" (IPSS).

Global Trends of Ageing

Ageing rates of world major cities



Source: UN World Population Prospects, The 2015 Revision

Average life expectancy of major countries

	1950	2015	2055	2100
Japan	62.17	83.31	88.69	93.73
Korea	47.92	81.43	88.39	93.60
China	43.39	75.43	83.49	89.94
Thailand	50.80	74.14	81.13	87.03
France	67.05	81.85	87.65	92.77
Germany	67.52	80.66	86.72	91.96
UK	69.28	80.45	86.20	91.04
USA	68.58	78.88	84.58	89.33

Source: UN World Population Prospects, The 2015 Revision

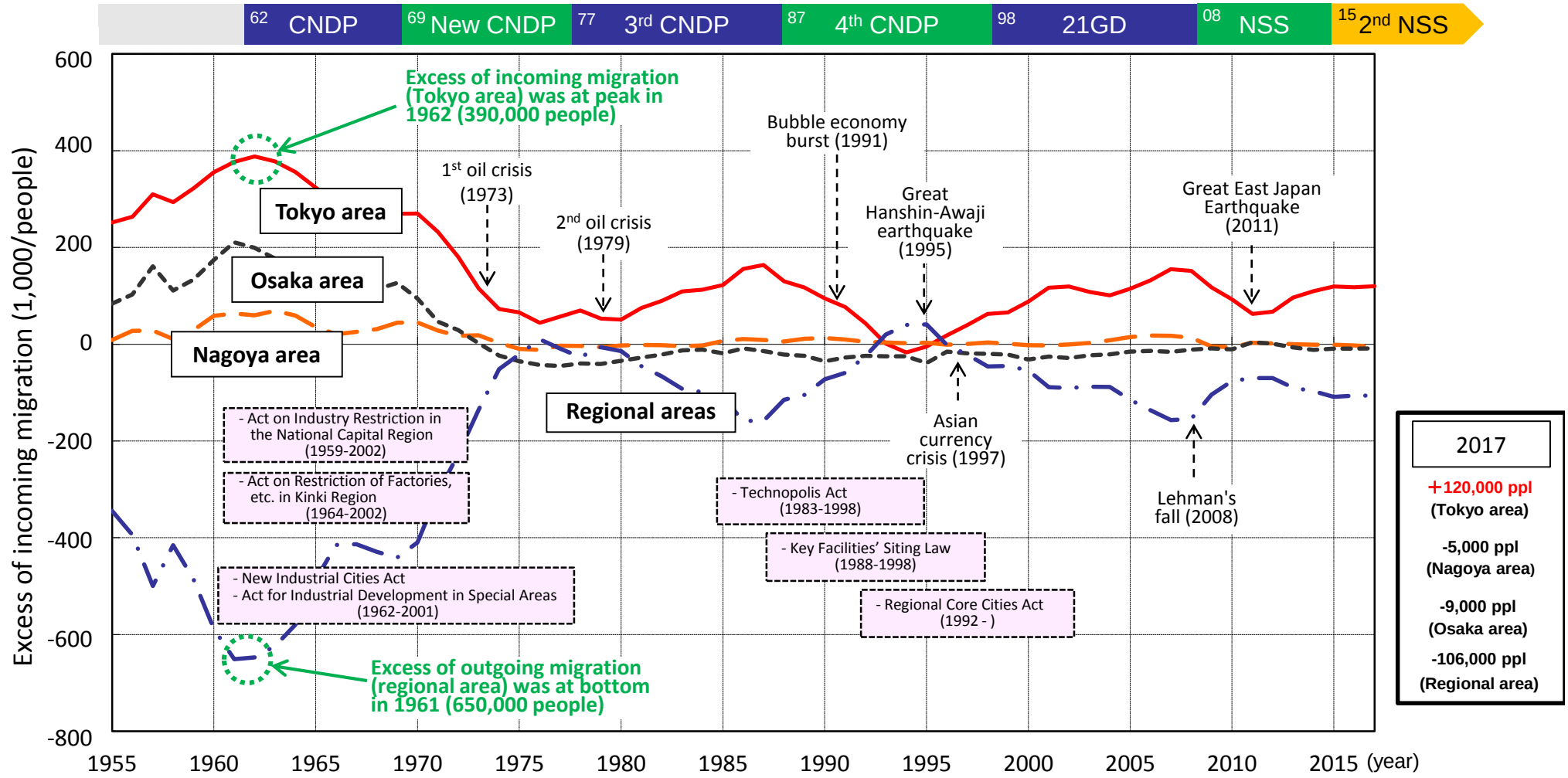
Ages half of those born in 2007 will reach

Japan	**107**
USA	104
France	104
UK	103

Source: The 100 YEAR LIFE Lynda Gratton, Andrew Scott 2016

Demographic trends in three metropolitan areas and regional areas

- During the period of high economic growth, the population flowed into the three metropolitan areas.
- The population inflow settled down around1980, but afterward it flowed into the Tokyo area up to around the economic bubble period.
- After the burst of the bubble economy, the outgoing migration of the Tokyo area temporality exceeded the incoming migration, but the inflow increased again in the 2000s.

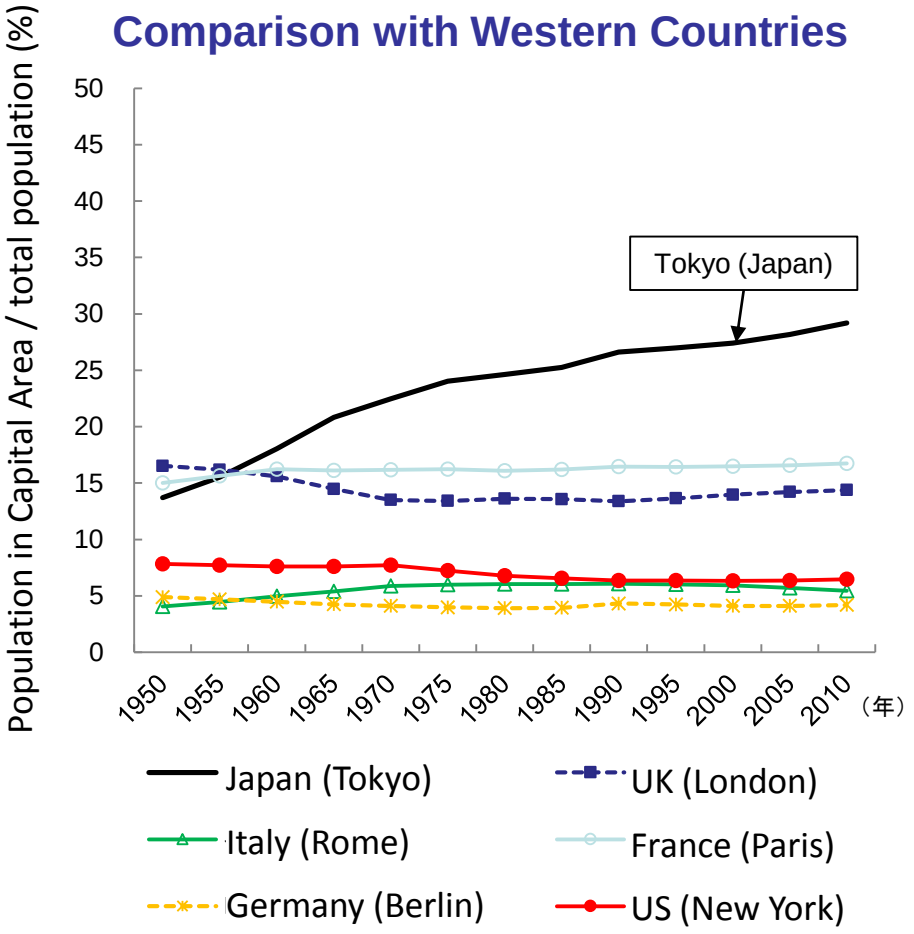


Source: Data prepared by National Spatial Planning and Regional Policy Bureau, MLIT, based on the "Basic resident register migration report" (Ministry of Internal Affairs and Communications).
Note: The above areas are classified as follows:
Tokyo Area: Tokyo Metropolis and Saitama, Chiba and Kanagawa Prefectures Nagoya Area: Gifu, Aichi, and Mie Prefectures Osaka Area: Kyoto, Osaka, Hyogo, and Nara Prefectures
Three Metropolitan Areas: Tokyo, Nagoya, and Osaka Areas Regional Area: regions other than the Three Metropolitan Areas

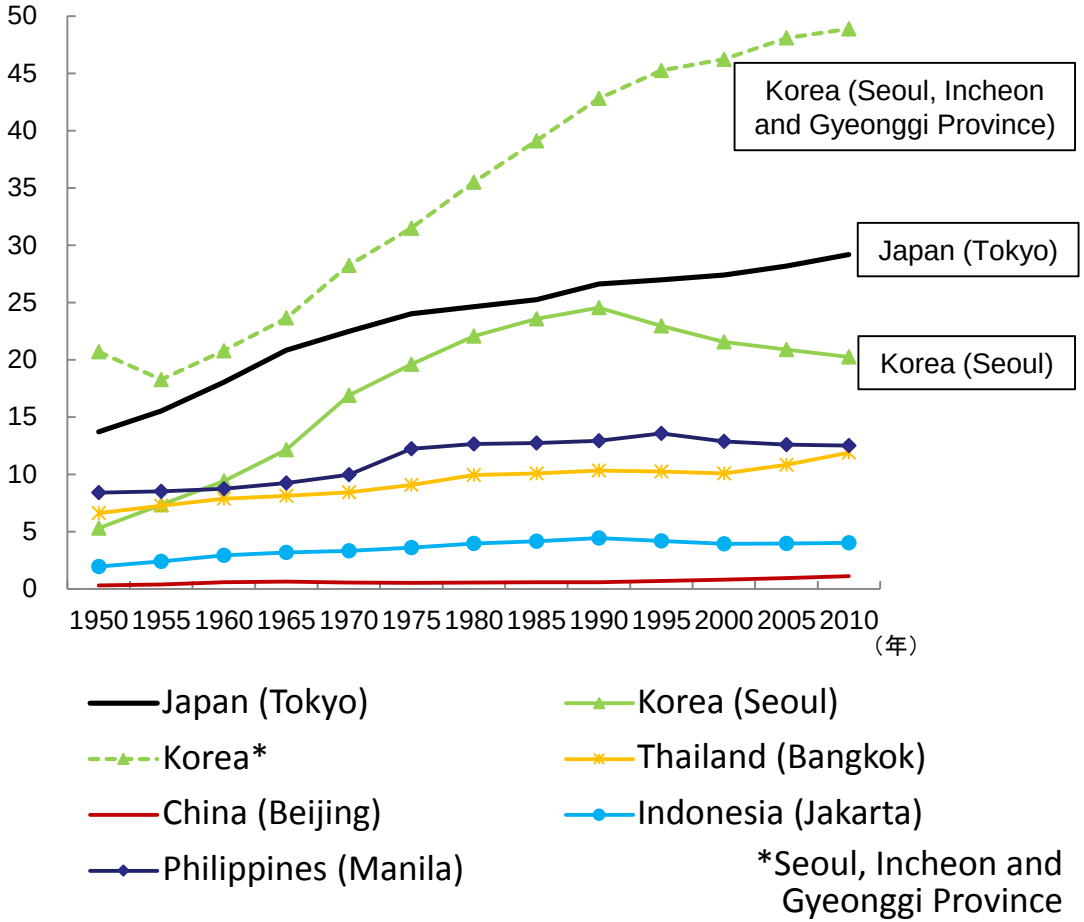
Int'l Comparison of Population Concentration to Capital Areas

➢ The level of population concentration to the capital area in Japan is higher compared with those of other major countries.

Comparison with Western Countries



Comparison within East Asian Countries



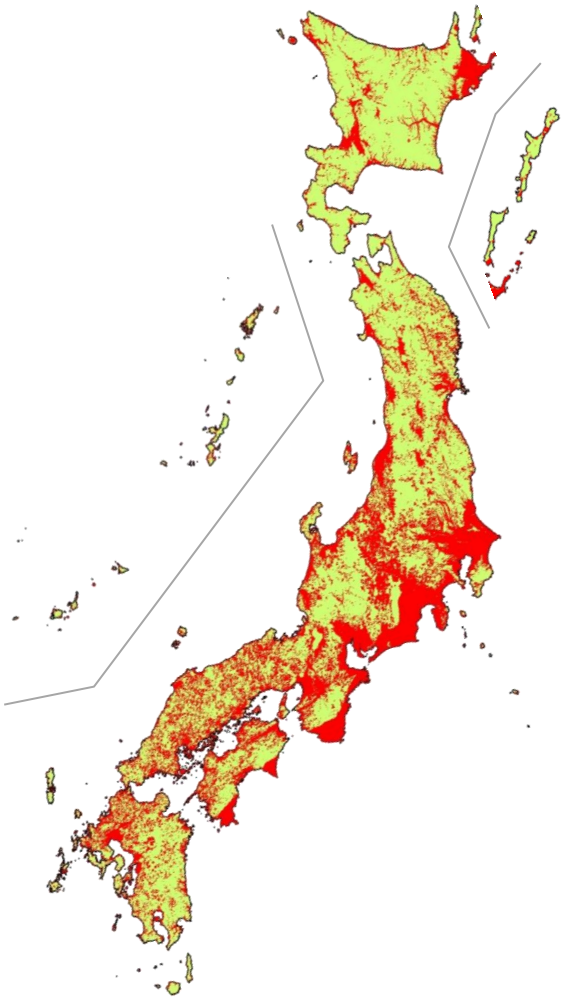
Source: UN World Urbanization Prospects The 2011 Revision

Note 1: Figures of Berlin, Seoul and Incheon are municipal populations, and those of other cities and Gyeonggi Province are regional populations.

Note 2: Definition of Tokyo is based on "Kanto Metropolitan Area" of "Population Census 2005" (Ministry of Internal Affairs and Communications) which consists of Tokyo Special Ward, Saitama, Chiba, Yokohama and Kawasaki Cities, and surrounding municipalities.

Disaster risk areas and the resident population of the areas

- The disaster risk areas spread across the nation, with approx. 35% of the national land corresponding to any type of disaster risk area.
- However, the population exposed to the disaster risks (2010) accounts for 70% or more of the total, which indicates a biased distribution of population in the disaster risk areas.



Superimposed map of the five disaster risk areas

Target disaster	Risk area size (% to national land area)	Population in risk area (2010, % to total population)
Flood	Approx. 20,000 km^2 (5.3%)	36.71 mil. (28.6%)
Landslide disaster	Approx. 59,200 km^2 (15.7 %)	613,000 (4.9%)
Earthquake disaster (damage by seismic intensity)	Approx. 44,300 km^2 (11.7 %)	58.88 mil. (46.3%)
Earthquake disaster (damage by liquefaction)	Approx. 48,700 km^2 (12.9 %)	57.43 mil. (44.8%)
Tsunami disaster	Approx. 19,000 km^2 (5.0 %)	26.10 mil. (20.4%)
Any of the five disasters	Approx. 131,400 km^2 (34.8 %)	94.42 mil. (73.7%)

Note 1: Definition of the risk area of each disaster is as follows:

[Flood]: In the "estimated flooded area data" in National Land Numerical Information, areas indicating a flood depth > 0.

[Landslide disaster]: In the "Landslide hazard points data" in National Land Numerical Information, areas such as danger areas related to debris flow, landslide, and steep slope failure. The data partially includes point and line data and therefore was converted into area data based on the national average area of each point.

[Earthquake disaster (damage by seismic intensity)]: In the Probabilistic Seismic Hazard Maps published by the Headquarters for Earthquake Research Promotion, areas whose probability of being hit by earthquakes of intensity 6 or over is 25% or over.

[Earthquake disaster (damage by liquefaction)]: areas from which meshes that are academically considered to have high risks of liquefaction are extracted from the detailed topographical classification meshes and the mesh gradients in the Japan Engineering Geomorphologic Classification Map.

[Tsunami disaster]: The tsunami inundation area calculated by simple numerical calculation. Since the "tsunami inundation estimates" based on the Act on Regional Development in Tsunami Disaster are not yet set across the country, simple estimates are used instead.

Note 2: For the population in risk areas, the population in a mesh (1 km) overlapping with risk areas was extracted from the population distribution in the 2010 Census regional mesh statistics (provided by Ministry of Internal Affairs and Communications). If a risk area boundary was present in the mesh, area-proportional distribution was used.

Towards Revision/Upgrading of Monitoring Methods

Positioning by c.m.
from quasi-zenith satellites

G-Space Information Centre

Gathering and Provision of
World Geodetic System Data
etc.

- Data on Traffic Network
- Mesh data on population estimates
- Hazard map, etc.

Detailed in scale of 500 m²

Self-driving

Distribution of goods by unmanned aircraft

Overlaying of data

Population mesh data, and spatial planning related data, etc.

Private Sector

Local Authorities

"Visualization of National Land Information"

Monitoring of Spatial Development

- Micro-perspective regional analysis
- Macro-perspective comparative analysis of municipalities and prefectures
- International comparison based on World Geodetic System
- Policy making

Examples of the Monitoring Indicators

➢ Focusing on the active two-way flow, *convection*, of people, goods, money and information arising between distinctive regions. The following is the monitoring based on the occurrence and motive force of the *convection*.

Concept	Monitoring Indicators [Definition of indicator] (Source)	Current Value
Establish and take advantage of **Small Stations consolidating core functions**	***Number of small centers*** [The number of small centers currently established] (Cabinet Office)	**1,260 (Oct. 2016)**
Formation of **compact city** in local cities	***Number of municipalities announcing a land optimization plan*** [Number of municipalities that developed and announced a land optimization plan] (MLIT)	**124 (May. 2017)**
Development of a vibrant economy and living area with a **Collaborative urban area for regional hub**, etc.	***Number of areas with a cooperative center urban plan*** [Number of areas that formulated a cooperative center urban plan] (MIC)	**23 (Mar. 2017)**
Strengthening the competitiveness of the **transport-export industry**	***Agricultural, marine products and food export*** [Export amounts of agricultural, marine products and food from wide area blocks] (MOF)	**745.1 billion yen (2015)**
- Promotion of **regional-oriented innovation** - Fostering a town for growing entrepreneurs	***Number of certified projects using local resources*** [Number of local resource utilization projects that were certified based on the Act on Promotion of Business Activities by Small and Medium Sized Enterprises Utilizing Local Resources]（SME）	**1,677 (Dec. 2016)**
Promotion of local migration or relocation, **two-residence lifestyle**, & living and working in two areas	***Proportion of young generation amongst the users of The Furusato Kaiki Shien Center*** Proportion of young generation (30s or younger] (Furusato Kaiki Shien Center)	**45.9% (2016)**
Development of **Tokyo metropolitan area to be a model global city** to overcome competition between international cities	***Global Power City Index*** （Institute for Urban Strategies The Mori Memorial Foundation）	**Tokyo: 3rd ranking (2016)**
Establishment of **smart wellness housing and cities** in metropolitan areas	***Number of UR estates working on regional medical welfare centers*** [Number of UR estates starting to establish regional medical welfare centers] (Urban Renaissance Agency)	**47 (Jan. 2016)**

Example of Regional Analysis by Overlaying Multiple Data/Info

- In terms of ≪points per 1 km^2≫, the points where the population will decrease to half or less account for 60% or more.
- According to the analysis by overlaying population and urban facilities location data by 1km sq. mesh, villages located close to local authorities or their branches, or primary schools have possibilities to survive, even in non-urban areas.

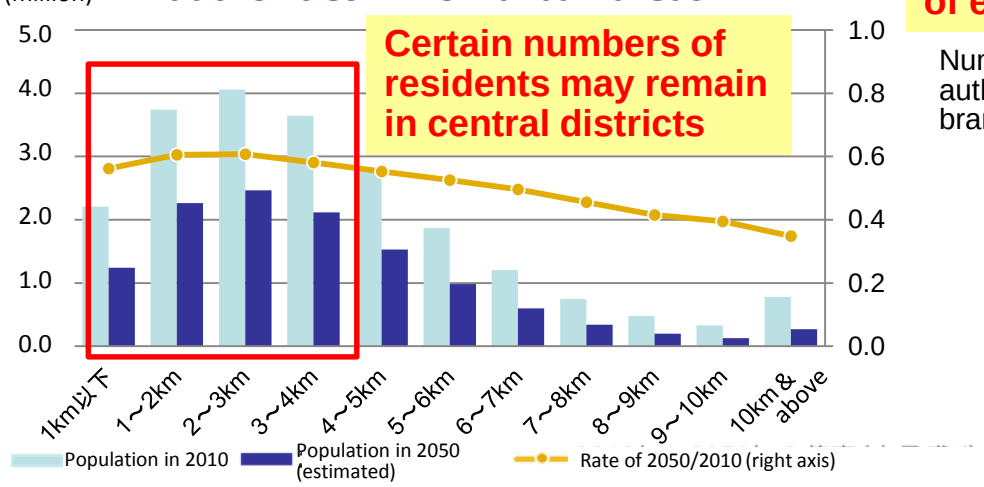
  ⇒ Access to basic services are significant for villages to survive.

Estimated Population

	Population in 2010	Population in 2050	Rate of Decrease	Rate of decrease/increase by 1 sq km mesh				
				Decrease 50% and more			Decrease less than 50%	In-crease
					Disappear-ance of residents	Decrease of residents 50% and more		
Nation-wide	128.06m	97.08m	▲24%	63%	19%	44%	35%	2%

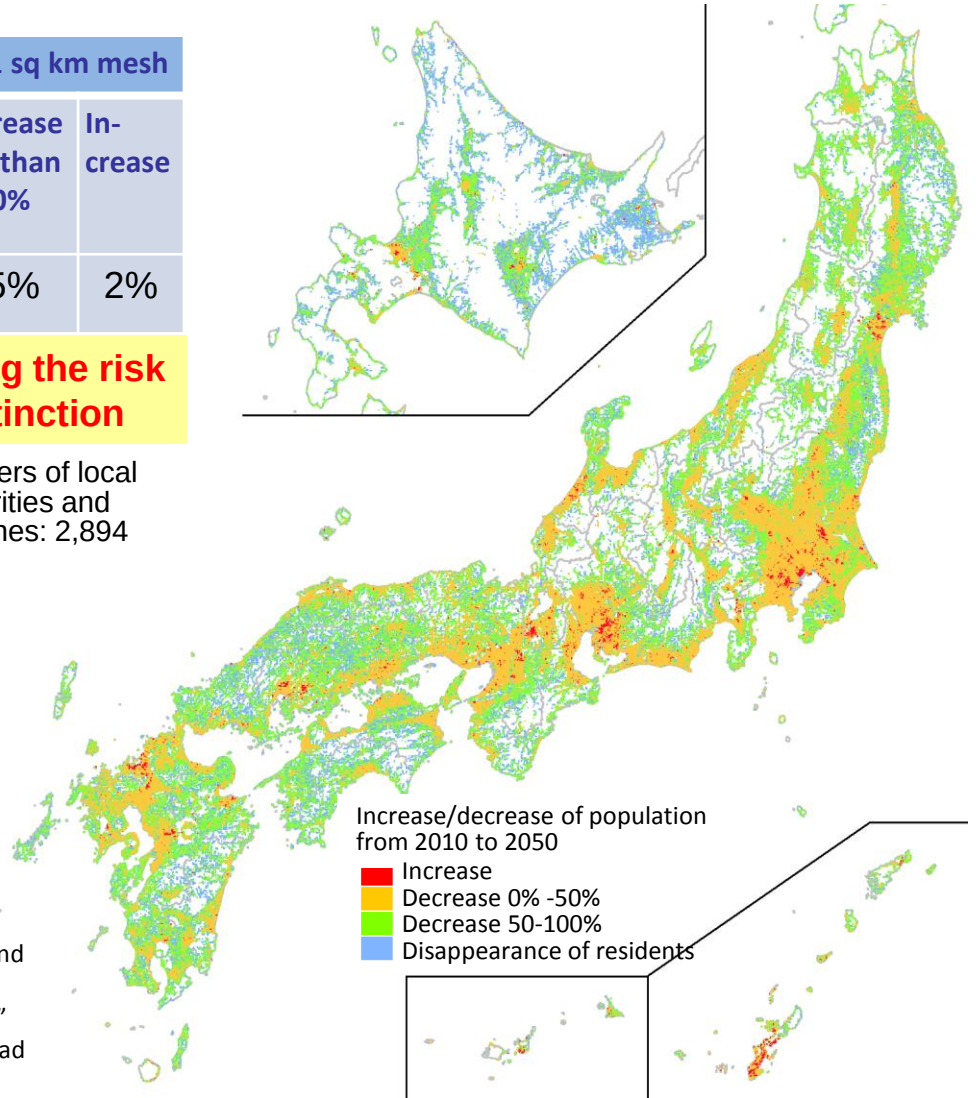
Facing the risk of extinction

Population by the distances from local authorities in non-urban areas



Certain numbers of residents may remain in central districts

Numbers of local authorities and branches: 2,894



Source: "Grand Design of National Spatial Development towards 2050" (MLIT, July 2016)

Note: Population data prepared from "Population Census 2010", (Ministry of Internal Affairs and Communications) and "Population Estimation by mesh units" (MLIT). Data on zoning and locations of local authorities and branches are from "National Land Numerical Information" (MLIT), and distance from local authorities/branches to each 1km sq. mesh from "Distal Road Map" (DRM).