

Grand Design

of National Spatial Development towards 2050, Japan

Creation of a country generating diverse synergies among regions

Ministry of Land, Infrastructure, transport and tourism, MLIT,

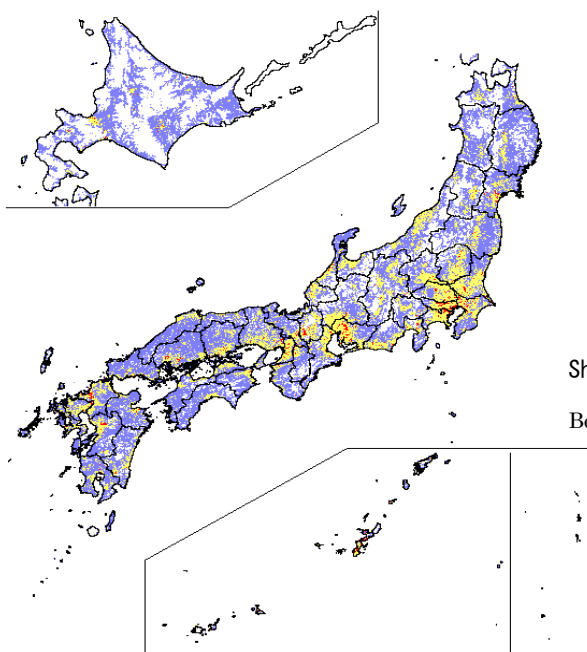
- Raising awareness of the challenges facing Japan: an unprecedented population decreasing society, as well as natural disasters
- Defining the future spatial development vision towards 2050

Trends and challenges facing Japan

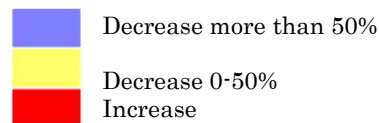
- Progressive demographic shrinking and low fertility rate
- Hyper-aging society
- Heightening of city versus city competitions and globalisation
- No time to lose to prepare for mega disasters and aging infrastructure
- Threats to supply food, water and energy and global environmental problems
- Technological innovation including those of ICT

- In 2050 compared to 2010, more than 60 % of the inhabited grid squares will lose half or more population, and 20 % of the grid squares will become non-inhabited.
- Those gaining population, located mainly in metropolitan areas, are limited to less than 2 %.

[Population in 2050 compared to that of 2010]

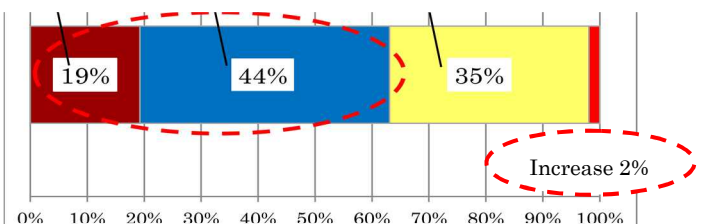


Share of 2050/2010



Share of the grids by projected population decrease ratio (2010-50)

Become uninhabited Decrease 50 % or more Decrease 0- 50 %



Source: Estimation by MLIT by using Census data,

“Compact” and “Networks” as the key

“Compact” and “Networks” as the prerequisite

① Effective service delivery of high quality

Effective service delivery in a population decreasing society requires geographical “compactification”, which may however lead to a shrinking of regions and markets. It would thus be necessary to achieve agglomeration advantages by networking regions, adapted to the urban functions of the individual areas.

② Creation of new values

Networking will help intensify interaction of human-being, goods and information, which will encourage generating innovation. Spatial development based on the concept of “Compact and networks” will facilitate **reshaping of the territorial structure so that productivity of the whole country could be upgraded.**

Diversity and collaboration as the precondition of regional development

① Individual regions will re-examine their **diverse assets** and resources

② **Collaboration across regions** will encourage interaction of human being, goods and information.

The concept of “Compact and network” or geographical “compactification” of agglomerations and networking,

-helps to achieve diversity and collaboration,

-involves **a transport revolution and an information revolution** of the next generation, which will facilitate overcoming the constraints of distance, leading to bridge material flows and knowledge and information flows.

The more individual regions become diversified, the more intensified the interaction will become, which will give rise to “constructive dialogues”

→ *Convexion generating synergies*

“Constructive dialogues” will not start with an absence of diversity, just as convexion will be triggered by gaps in temperature.

→ *Fostering diversity is therefore key for regional innovation*

Three Key Concepts of Regional Development

Diversity

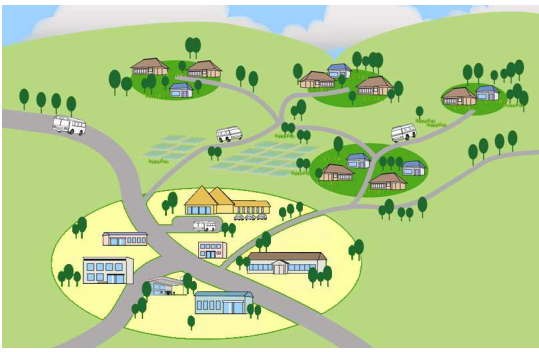
Connectivity

Resilience

Basic Strategies

- 1) Locating “**Small Stations**” as the basic units of regions and “**High-Grade Links of Cities**”
- 2) Developing future industry clusters, and searching for creative cities and regions, towards territorial development seeking for “**Proactive compact**”
- 3) Designing a “**Super-Mega-Region**” nurturing new links
- 4) Making maximum use of both the Japan Sea regions and the Pacific Rim regions, and encouraging exchanges between the **Dual-Corridors**
- 5) Promoting tourism, illuminating diverse treasures of the regions
- 6) Creating urban-rural demographic flows by demonstrating joys of rural life
- 7) Regenerating local communities, friendly both to young and “silver” generations
- 8) Creating beautiful and disaster-resilient cities and regions
- 9) Achieving smarter-use of infrastructure
- 10) Establishing a society envisioned together with the private sector and fostering innovation
- 11) Nurturing locally based actors working for inclusive development in regions
- 12) Seeking for flexible solutions in overcoming energy constraints and environmental problems including the creation of strategic sub-systems

“Small Stations” in rural regions as the key for service delivery and regional innovation



Concentrating basic services delivery hubs supporting life, including daily shopping and medical services at former elementary schools, or town halls.

Sustaining regions by the networks of transport and information

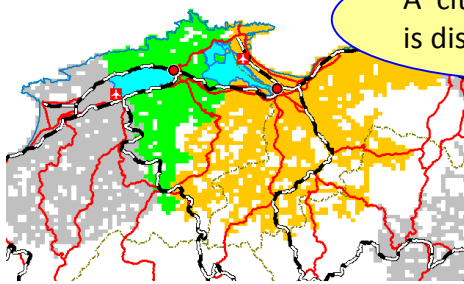
Creating new employments in collaboration with the existing “roadside stations”, as centres of regional innovation, or diverse actors producing local specialties by bridging primary, secondary and tertiary industries, the “sixth industries”, and promoting locally based renewable energy generation.

High Grade Linking of Cities achieving agglomeration economies

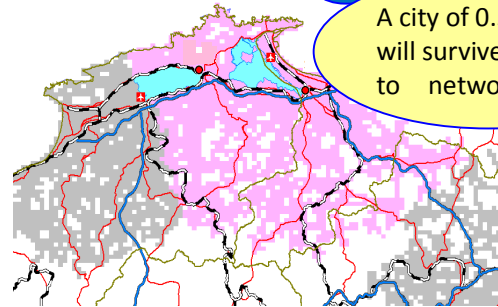
[Case1: Absence of highway]

[Case2: Cities tied with highways]

Centre city of FUR	Functional urban regions		➔	Centre city of FUR	Functional urban regions	
	2010	2050			2010	2050
Matsue City	220,000	156,000	➔	Matsue City & Yonago City	560,000	373,000
Yonago City	326,000	209,000			560,000	373,000



A city of 0.3million is disappearing



A city of 0.3million will survive thanks to networking

- 1) FUR is defined as the area within 60 minutes by car based on 1 km grid square, from the centre city with more than 0.1million population of 2010 census
- 2) Estimated population in 2050 is that of grid square by MLIT.

Super Mega Region

Chuo Shinkansen (Maglev trains) will be used just like a metro linking mega cities

~An inter-city trip will become just like travel in a city~

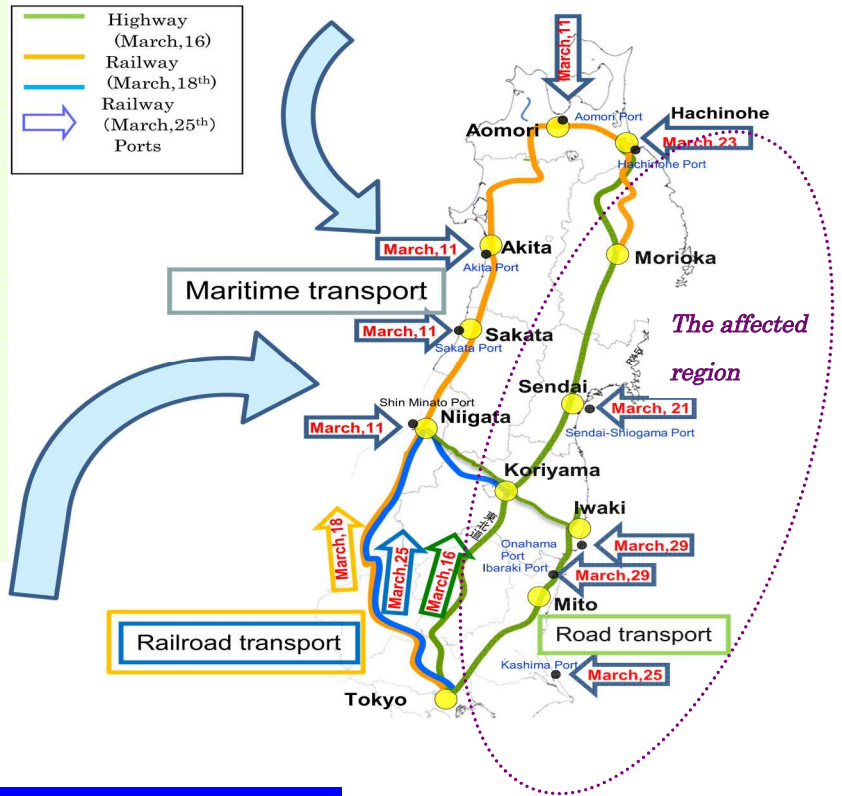


Spatial Development based on Dual-Corridors: The Japan Sea and the Pacific Rim

Post-disaster transport of gasoline and light oil through multi modal transport options

In the process of rescue and recovery operation after the Great East Japan Earthquake in 2011 that hit the Pacific Rim of northern Japan, relief supplies were mainly transported to the affected regions through roads, railways and ports located at the opposite side of the Japan Sea rim region and inland areas.

Achieving diversity of transport measures across the Japan Sea and the Pacific corridors is a key for building a resilient region.



Goal : Cities and regions in the future

An integration of **two-dimensional material space** at the surface of the earth and **knowledge and information dimensions** creating a tri-dimensional space

A country nurturing numerous small scale synergies, which accelerate innovations, inducing dynamic waves.

Everything will be connected to internet and precise navigation, weather forecast, and distribution will be made available

Knowledge and information dimension

Global Exchange

Global Exchange

Global Exchange

Material dimension

Global Exchange

Accelerating exchanges by adding basic information of cities and transport networks to those on attractiveness and transport services

Metro-regions and cities in regions:

Creating population flows heading for regions, which will change the course of demographic concentration into Tokyo.

Next steps

The official process of revising the statutory National Spatial Strategy including national and regional plans, has been launched based on the Grand Design.