Measures on Compact City in Japan

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Table of Contents

1. Demographic Trends in Japan
2. Challenges and Policy Direction
3. Compact City Measures
4. Efforts for Policy Coordination
1. **Demographic Trends in Japan**
Japan’s national population is expected to decline by approximately 20% in the next 30 years.
While the growth of the elderly population is slowing, the age 15~64 population is expected to decrease 30%.

Note: Fukushima Prefecture was excluded from the total, as city level estimates were not available.

Source: Census, National Institute of Population and Security Research (March 2013 estimates)
In local cities, extreme population decline of approximately 20-30% is expected within the next 30 years. While the growth of the elderly population is slowing, the age 15~64 population is expected to decrease more than 30-40%.

Cities with population of appx 100 thousand

- Peaked in 2000 at 20.84 million
- -22% since 2010 (-4.47M)

Cities with population of appx 50 thousand

- Peaked in 1985 at 19.56 million
- -40% since 2010 (-4.17M)

Note: Fukushima Prefecture was excluded from the total, as city level estimates were not available.
Source: Census, National Institute of Population and Security Research (March 2013 estimates)

"100 thousand population cities" = Cities with population of 50-150 thousand, excluding 3 major metropolitan areas and prefectural government cities.

"50 thousand population cities" = Cities with population of less than 50 thousand, excluding 3 major metropolitan areas and prefectural government cities.
In large cities, the striking increase in the elderly population is a significant challenge.
- 2.5 million increase in the urbanized areas of the 3 major metropolitan areas, as well as 3.4 million increase in the suburban areas.

### Demographics - Large Cities

#### 3 major metropolitan areas (urbanized areas)
- Peaked in 2015: 23.40 million
- 2010: Total population 23.16M
- 2040: Total pop 21.25M, -8.2% since 2010, -1.90M

#### 3 major metropolitan areas (suburban areas)
- Peaked in 2015: 34.38 million
- 2010: Total pop 34.30M
- 2040: Total pop 30.38M, -11% since 2010, -3.92M

### Demographics

- Large Cities

<table>
<thead>
<tr>
<th>Ages</th>
<th>Population Unit (10 thousand)</th>
<th>2010</th>
<th>+51% since 2010 + 2.46M</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-14</td>
<td>2.78M (12%)</td>
<td>2.78M</td>
<td></td>
</tr>
<tr>
<td>15-64</td>
<td>15.55M (67%)</td>
<td>17.91M</td>
<td></td>
</tr>
<tr>
<td>65+</td>
<td>4.83M (21%)</td>
<td>7.29M</td>
<td></td>
</tr>
</tbody>
</table>

- Source: Census, National Institute of Population and Security Research (March 2013 estimates)

※ 3 major metropolitan areas (urbanized areas) = urban areas and urban development zones of the Capital, Kinki and Chubu metro areas.
※ 3 major metropolitan areas (suburban areas) = suburban areas of the Capital and Kinki metro areas.
2. Challenges and Policy Direction
In many cities:
- Rapid depopulation and demographic aging is underway, regional industry is stagnating, and vitality is waning.
- Houses, stores, etc. are being built in suburbs, urban areas are expanding further into the surrounding greenfield, and low population density areas are being developed.
- Facing dire financial circumstances, it may become difficult to provide local services to support urban dwellers.

In order to achieve urban sustainability, progress to change urban form is essential, taking entire city structure into account.

**Population in Prefectural Capital cities**
(excluding the three major metropolitan areas and ordinance-designated cities)

<table>
<thead>
<tr>
<th>Year</th>
<th>Population (10,000 people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>30</td>
</tr>
<tr>
<td>2010</td>
<td>30</td>
</tr>
<tr>
<td>2040</td>
<td>30</td>
</tr>
</tbody>
</table>

**<Average population per city>**

1970 to 2010
Roughly 20% population has increased

Same level as 40 years earlier in 1970

**Densely Inhabited District (DID) area of prefectural capitals**
(excluding the three major metropolitan areas and ordinance-designated cities)

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (km²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>20</td>
</tr>
<tr>
<td>2010</td>
<td>40</td>
</tr>
</tbody>
</table>

**<Average DID area per city>**

1970 to 2010
DID area has doubled

Source: Census, National Institute of Population and Security Research (March 2013 estimates)
Demographics and urban areas of a typical case of local cities

~ Case of city A (population appx. 100 thousand) ~

Trends in population and density of DID

1960: 107 thousand
2010: 105 thousand
2040: 80 thousand

Ages 0 - 14
Ages 15 - 64
Ages 65 and above

DID population density (person/ha)

Source: Census, National Institute of Population and Security Research (March 2013 estimates)
Current situation: Low population density of urban extensions; difficult to provide and maintain local public transportation

Urban expansion - population decline

- Dispersion of low density urban areas
- Reduction in public transportation users
- Decline in transportation service providers
- Degradation of service quality of public transportation

Looking ahead: A compact city linked by convenient public transportation

Compact city + Network

Concentrate service facilities and housing, and increase density

Development of a sustainable public transport service

Better public transport services linking local cores

Circular transportation system in city center

Feeder lines such as community bus

Improve transit hubs

Demand-driven ride shares / taxis

Walkable/bike-friendly development

Guide urban functions (medical, welfare) to key areas

Guide residential facilities near public transportation

Zoning

Public transportation system

Positive effect
Toyama City officially addressed the necessity of “compact city” at its master plan. Based on this plan, it is trying to revitalize city center and public transportation system.

**Master plan**

**Principle:** Compact city with public transportation line and key facilities
- Zoning of residential advancement, and set up target population at there
- Set up local cores where major functions should be concentrated
- Set up key public transport lines and a plan of their improvement and maintenance

**Improvement of Light Rail Train (LRT) and transit hubs**
- LRT and feeder buses are connected at stations.
- Redundant bus routes were reviewed and streamlined.
  - **Commutation ticket for elderly people to go**
    - For city residents aged more than 65 years old, ticket fare is capped 100 yen to access city center.
  - **Supports for new housing near public transportation**
    - Municipal housing is developed in designated areas.
    - Subsidies are given to housing construction in designated areas.
      - Apartments: ¥700,000 yen/unit
      - Detached house: ¥300,000 yen/unit

→ Population inflow turned positive from 2012 at near public transportation area.

**Former elementary schools were rebuild to elderly care facilities**
- Kadokawa elderly care center (July 2011 opening)

**Target:** population ratio in residential promotion area among total city population
- 28% (2005) → 42% (2025)
Current State and Issues - Large Cities

Current Situation Concerning and Challenges Faced by Large Cities

- In large cities,
  - Elderly people (particularly those over 85 years old) will rapidly increase, mainly in suburban areas.
  - There is a concern that elderly population growth will rapidly boost the demand for medical and nursing care and these services cannot be satisfactorily provided.
- Under such circumstances, it is necessary to promote the desirable allocation of medical care and welfare facilities with the use of existing stock in order to realize integrated community care system including in-home medical and nursing care.

### Rapidly increasing elderly

<table>
<thead>
<tr>
<th>Elderly population (2010 to 2040)</th>
<th>Unit: million</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2010(A)</td>
</tr>
<tr>
<td>Greater Tokyo</td>
<td>65~74old</td>
</tr>
<tr>
<td></td>
<td>75~84old</td>
</tr>
<tr>
<td></td>
<td>Over 85</td>
</tr>
<tr>
<td>Greater Nagoya</td>
<td>65~74old</td>
</tr>
<tr>
<td></td>
<td>75~84old</td>
</tr>
<tr>
<td></td>
<td>Over 85</td>
</tr>
<tr>
<td>Greater Osaka</td>
<td>65~74old</td>
</tr>
<tr>
<td></td>
<td>75~84old</td>
</tr>
<tr>
<td></td>
<td>Over 85</td>
</tr>
</tbody>
</table>

* Tokyo area: Tokyo, Saitama, Chiba, and Kanagawa Prefectures
* Nagoya area: Aichi, Gifu, and Mie Prefectures
* Osaka area: Osaka, Kyoto, Hyogo, and Nara Prefectures


### Deterioration in and shortage of welfare facilities

<table>
<thead>
<tr>
<th>Welfare facilities by completion year (Tokyo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approx. 20% are over 30-years-old buildings</td>
</tr>
<tr>
<td>19%</td>
</tr>
<tr>
<td>81%</td>
</tr>
</tbody>
</table>

Source: Surveys by Tokyo Council of Social Welfare

<table>
<thead>
<tr>
<th>Number of users of facilities covered by long-term care insurance (estimates) and the capacity of the facilities in 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo area</td>
</tr>
<tr>
<td>2025 users</td>
</tr>
<tr>
<td>376</td>
</tr>
<tr>
<td>Nagoya area</td>
</tr>
<tr>
<td>222</td>
</tr>
<tr>
<td>Kansai area</td>
</tr>
<tr>
<td>103</td>
</tr>
</tbody>
</table>

Source: Prepared based on “FY2012 Annual Report on National Capital Region Redevelopment”
The government promotes “compact city” where life support services such as medical and nursing care services are readily accessible in spheres of daily lives.

It is important to provide the effective and efficient services of welfare and health care to the inhabitants in the large amount of area by integrally developing the welfare and medical care policy with the induction of the residence and urban functions.

Problems

While elderly population is increasing, there are not enough medical and welfare facilities nearby residential districts.

Re-allocation of Life support facilities

- To rebuild old hospitals or welfare facilities, additional FAR (floor area ratio) will be provided

- New condominiums on upper floors

- Hospital on lower floors

Example - A hospital can rebuild without big borrowing by tying up with a condominium developer.

Provision of medical and nursing services at home are available and people can continue to live in their homes.
At Toyo-Shiki-Dai housing complex, Kashiwa city, Tokyo University (Senior age Research Institute) and Urban Renaissance Agency (UR) cooperated and improved a medical welfare facility designed to care for persons who live at their own homes and a child care support facility in the redevelopment of UR’s apartments.
About 50% of the total amount of CO₂ emissions derives from urban activities, for which urgent countermeasures should be taken because of tangible impact on global warming.

“Business” and “household” sectors, in particular, have far more CO₂ emissions than any other sector and the emissions have amounted to 110% of those in the base year.

Source: Ministry of the Environment “Greenhouse gas emissions in 2013” (Revised values)
As seen in the comparison between Maebashi and Kochi, CO₂ emissions have a huge impact on the differences in city/regional structures. A shift to a compact city structure is necessary and low carbonization that will coincide with the shift should also be considered.

- Although the cities of Maebashi and Kochi are almost the same in terms of area and population, Maebashi has a greater expanse of low-density built-up areas and a higher rate of dependence on automobiles.
- As a result, annual CO₂ emissions per capita in the transport sector are about 40% higher in Maebashi than Kochi.

Maebashi City

\[ \text{CO}_2 \text{ emissions per capita} = 1.21 \text{ tons} \]

Kochi City

\[ \text{CO}_2 \text{ emissions per capita} = 0.87 \text{ tons} \]

As seen in the comparison between Maebashi and Kochi, CO₂ emissions have a huge impact on the differences in city/regional structures. A shift to a compact city structure is necessary and low carbonization that will coincide with the shift should also be considered.

*1 CO₂ emissions per capita is only for the transport sector.

Source: Environmental White Papers 2006
3. Compact City Measures
Purpose of Network-based Compact City

Challenges of Urban Area

- Current urban trend
  - Depopulation and Aging
  - Urban Sprawl

■ Deterioration of functions supporting urban lives
  - Difficulty in maintaining medical, welfare, and commercial service
  - Shrink of the public transportation network and deterioration of the quality of the service

■ Regional Economic Decline
  - Regional industrial stagnation
  - Increase of vacant lands and stores, decline of downtown

■ Strict Governments’ Finances
  - Increasing social security costs
  - Addressing the aging infrastructure

Effects of Compacness

Maintenance and improvement of urban livability

- Maintaining community services
- Improving accessibility to local services
- Social participation by the elderly
  - Making urban Environment to safe and comfortable for the elderly and households with children

Revitalization of regional economy

- More productive in service industries, such as public transport, medical care, welfare and commerce.
  - Maintaining and improving business environment

Reduction of administrative cost

- Reducing the maintenance cost of for infrastructure
- More efficient in administrative service
- Maintaining land value and the revenue of property tax
- Controlling social security cost through health enhancement
  - Financially sustainable urban management

Less burden on global environment

- More efficient use of energy
- Reducing CO₂ emission
  - Realization of urban structure with low carbon emission
Based on the Act on Special Measures concerning Urban Reconstruction and Act on Revitalization and Rehabilitation of Local Public Transportation Systems amended in 2014, the local municipalities are expected to guide houses and community amenities into key areas and to develop a sustainable local public transportation network which connects these areas, while taking the entire city structure into account.

In order to encourage the municipalities to guide community amenities into designated districts, the Japanese Government provides incentives such as budgetary support for creating and implementing such plans.

Community amenity advancement district
- Identify the areas where certain amenities are encouraged to be sited
- Promote establishment of urban functions (such as welfare, healthcare, commerce.)
  - Provide tax and financial incentives to service-attracting facilities
  - Relax floor area ratio requirements, etc. for rebuilding welfare and healthcare-related facilities
  - Effective use of public real estate and unused/underused land
- Walkable city
  - Support development of pedestrian walkways
- Lenient control of community amenity siting outside the districts
  - Prior notification of community amenity development outside the districts, followed by consultation with local municipalities.

Residential advancement district
- Establish areas that attract residents and maintain population density
- Improving living conditions within districts
  - Enable housing developers to make proposals on urban planning and landscape planning
- Lenient control of residential developments outside the districts
  - Prior notification of a large residential development outside the district, followed by consultation with local municipalities.

Working Toward “Network-based Compact City”

Guide and concentrate community amenities to key areas
- Reinforce public transportation services
- Walkable/bike-friendly development
- Encourage more housing near public transportation

Siting Optimization Plan (created by cities)
- [Amended Act on Special Measures concerning Urban Reconstruction]
  (Enacted Aug 1 2019)

Polycentric network-based Compact City

Local public transportation networking plan
- [Amended Act on Revitalization and Rehabilitation of Local Public Transportation Systems]
  (Enacted Nov. 20 2014)

Regional public transportation reorganization plan
- (created by local government, with consent from the operators, etc.)

Approval by MLIT (Minister)
- Improve related laws and establish new incentives, such as budgetary support.

Positive cycle

Integration

Siting Optimization Plan
- Local public transportation networking plan

Regional public transportation reorganization plan
- Circular transportation system
- Feeder lines such as community buses
- Demand-responsive bus (taxi)

Encourage more housing near public transportation
4. Efforts for Policy Coordination
In promoting compact city policy, there is a need for a comprehensive consideration of related measures such as revitalization of city centers, realignment of public facilities, integrated community care systems, etc, taking into account its integration and synergy.

In receiving the Cabinet decision on “Comprehensive Strategy for Overcoming Population Decline and Vitalizing Local Economies” (on December 27, 2014), the Compact City Development Support team, comprised of 10 related ministries was established in March 2015 (MLIT serves as coordinating ministry).

So that the efforts to compact city development is implemented more smoothly, relevant ministries and agencies are strengthening cooperation regarding related measures, in order to support municipalities.
In regrouping public real estate, the convenience for citizens and efficiency of public investments need to be improved, therefore coordination with Compact City Development is vital.

Example:
- Consider public facilities like city halls as key city functions; concentrate these facilities into local cores
- Utilize under-used public land as seed site for necessary facilities

MLIT released the “Guidelines for the productive use of public real estate for urban development” in April 2014.

Local governments:
- face population decline and aging society
- will experience increased costs in maintenance and improvements of public facilities

Taking this into consideration, there is a need to manage public facilities comprehensively and systematically.

- Based on requests by the Ministry of Internal Affairs and Communications, 98% of local governments will have developed a plan by FY2016
- With the goal of mainly reducing the financial burden, improvements and maintenance of public facilities will be implemented systematically

※Public real estate accounts for $\frac{1}{4}$ of Japan’s assets
[City of Toyama] Case of community development with PRE on old elementary school sites

Promotion of Compact City
→ *Promoting Compact City* by vitalizing public transportation and encouraging people to live near public transport facilities

Development of necessary urban function
- Vitalize the downtown area by utilizing closed elementary school sites *for necessary urban functions*

<table>
<thead>
<tr>
<th>Prior land use</th>
<th>Current or future land use</th>
<th>Procurement</th>
<th>Land owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atago E.S.</td>
<td>Toyama Yuho H.S.</td>
<td>Public</td>
<td>Prefecture</td>
</tr>
<tr>
<td>Yasunoya E.S.</td>
<td>Toyama Chubu H.S. Sub-ground</td>
<td>Public</td>
<td>Prefecture and City</td>
</tr>
<tr>
<td>Sogawa E.S.</td>
<td>Hub facility for regional medical and care (in consideration)</td>
<td>In Consideration</td>
<td>City</td>
</tr>
<tr>
<td>Hachininmachi E.S.</td>
<td>City education center (temporary)</td>
<td>Use of existing facility</td>
<td>City</td>
</tr>
<tr>
<td>Hoshii-cho E.S</td>
<td>Kadokawa care prevention center etc.</td>
<td>Public own and private operation</td>
<td>City</td>
</tr>
<tr>
<td>Gobanmachi E.S.</td>
<td>Chuo E.S.</td>
<td>PFI</td>
<td>City</td>
</tr>
<tr>
<td>Shimizumachi E.S.</td>
<td>Supermarket, pharmacy, community center, etc.</td>
<td>PPP with proposal</td>
<td>City(The city is a fixed-term leaseholder on private facilities</td>
</tr>
</tbody>
</table>

Source: City of Toyama

Example: Coordination on reorganization of public real estate ~Toyama city~
### Integrated community care system

**Re-examination of medical and care structure in the region**

Aims to provide a **integrated community care system** that integrates medical, care, preventative, residential, and life support, by 2025

(Necessary services will be provided within a range of 30 minutes in spheres of everyday life)

<table>
<thead>
<tr>
<th>Medical</th>
<th>Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>Emergency/recovery/chronic treatment</td>
</tr>
<tr>
<td>Family doctor/clinic with beds</td>
<td>Home care</td>
</tr>
<tr>
<td>Hospital in corporation in the area</td>
<td>Home care at center</td>
</tr>
<tr>
<td>Dental clinic/pharmacy</td>
<td>Small-sized care with multiple functions</td>
</tr>
<tr>
<td>Integrated care</td>
<td>Short period support at center</td>
</tr>
</tbody>
</table>

**Regional inclusive care centre**

- Care manager

**Life support & care prevention**

- Home care, care at center
- Short period support at center
- 24-hour home care
- Integrated service (small-sized care with multiple functions + home care)
- Care preparedness support

### Healthy Japan 21 (Phase 2) 2013-

**Comprehensive promotion of improvement of citizens’ health**

Through improved daily life habits and social environment, development of a society where citizens from all walks of life can support one another and live healthy.

- **Increase healthy life expectancy**
  - Correction of health disparities
  - Improvement of QOL

- **Improve social environment**
  - Reduction of low social functioning due to fall, fracture, or dementia
  - Securement of improvement and equity of access to service with detachment of trainers or opening of health event

- **Increase in municipalities developing urban environment easy to do exercise**
  - Resolution of regional gap on infrastructure, such as public transportation, sidewalk, or health enhancement facility

- **Increase 1,500 steps per day**
  - A person doing exercise at least an hour per week increases by 10%

- **Advocating importance and joy of exercise**
  - Supporting workplaces, regions, and businesses

### Integration of medical, care, preventative, residential, and life support services (Goal: by 2025)

- Compact City development, where daily life services such as medical and care facilities are easily accessible, is critical.
- In May 2013, MLIT established the "Health, medical, welfare, and urban development research group" consisting of academia, local governments, the Cabinet, and the Ministry of Health, Labor, and Welfare, and developed the "The guideline for promoting urban development integrated with Health, medical and welfare"
Urban policy in Japan has focused on controlling the development pressure in the suburb with regulatory approaches. Given the rapid depopulation, the effort of transforming urban sprawl area into the compact urban form as well as with inductive approaches, is needed, taking the entire city structure into account.

Therefore, the government introduced “Siting Optimization Plan” scheme in 2014 and promote to guide and concentrate residential and urban functional locations with the moderate development control and inductive methods such as the economic incentive and the deregulation.

Urban compactness is, through clustering residential and community amenities and realizing “Economies of Density”, an effective policy method of achieving multiple goals: maintenance of livability, revitalization of regional economy, and reduction of administrative costs by making public services more efficient.

276 municipalities are taking action to develop the siting optimization plan (as of March 2016).

To increase effects of the compact city policy, an integrated approach, coordinating urban planning with relevant policy fields, such as medical care, welfare, public transportation, housing, and realignment of public facilities, is essential.

To support municipalities, a main actor for urban policy, to develop effective strategies based on the integrated approach, the “Compact City Support Team” which is constituted by ten governmental agencies was set up. Through this framework, the government will support municipal efforts in the following methods.

- Striving to enhance policies in accordance with challenges and needs
- Identifying excellent efforts as a best practice, and providing the persuasive information about the specific cases and the effects
Thank you for your attention!

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Ministry of Land, Infrastructure, Transport and Tourism
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