

Case Study— Japan: Efforts at the Municipal Level

Japan's Green Growth Plan & Strategies

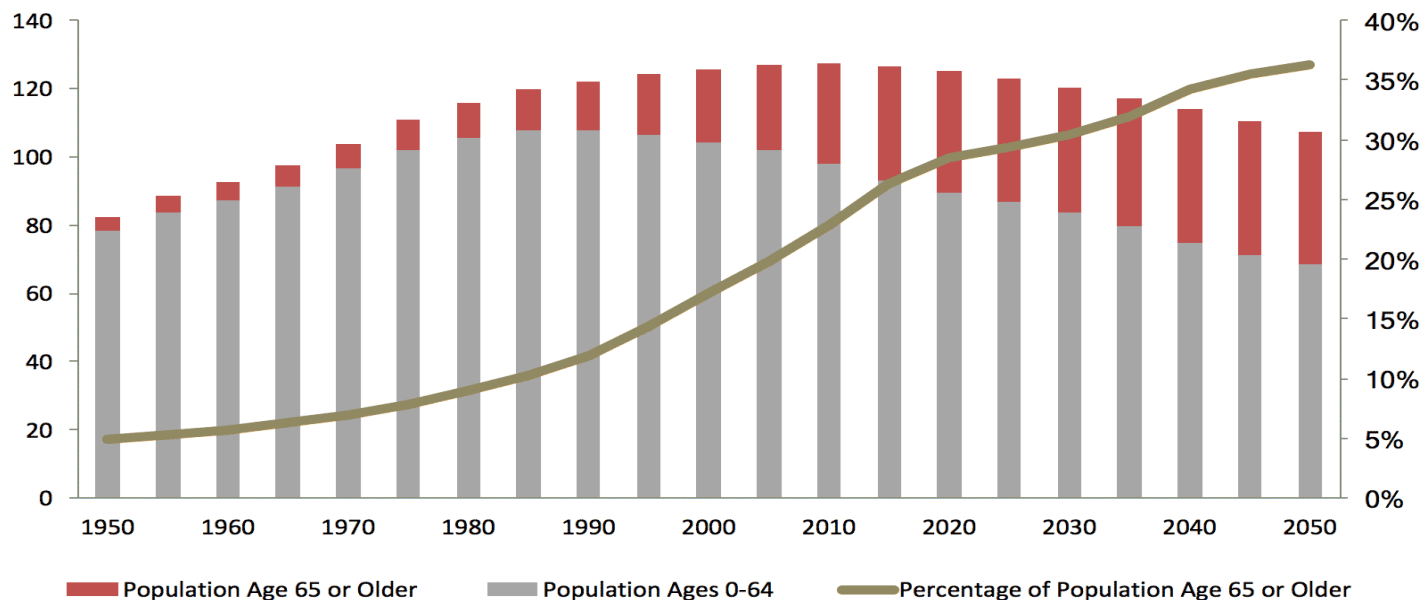
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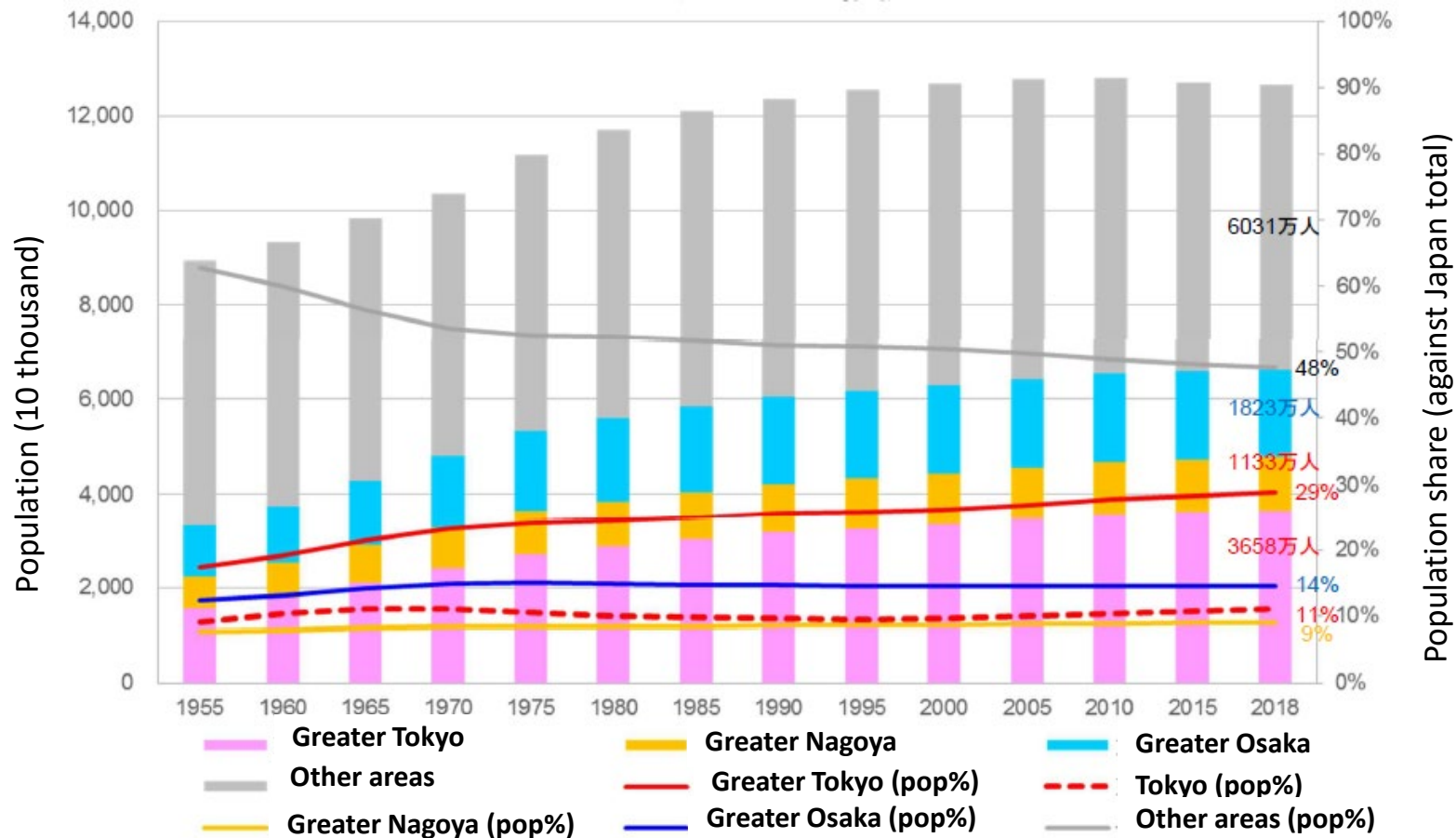
Background: Declining local economy with declining birthrate and an aging population

- Efforts for decarbonisation and achieving SDGs should simultaneously address these serious problems of Japan.



Source: <https://www.aarpinternational.org/initiatives/aging-readiness-competitiveness-arc/japan>

● Extreme concentration in Greater Tokyo Area (Tokyo, Chiba, Saitama, Kanagawa)



AI-based Public Policy Studies and the Vision of Localization Society (Hiroi and Fukuda 2021)

- Professor Hiroi of Kyoto University conducted a collaborative research with Hitachi (provided AI technologies) aiming to provide policy recommendations for realizing sustainable future. The first research output was published in 2017 and has received wide attention.
- Focused on 8 topics: ①Population, ②Finance, ③Regions, ④Environmental resources, ⑤Employment, ⑥Income disparity, ⑦Health, ⑧Happiness
- For these 8 topics, experts identified 149 social drivers and causal relationship models among them were developed. Using AI, around 20,000 simulations between 2018 and 2052 were conducted.

Hiroi and Fukuda 2021: Key findings

- The most important policy decision is to select either “Urban Centralised Future” or “Local Decentralised Future”. This decision must be made around latter half of 2020s.
- Local Decentralised future is desirable for sustainability. However, if local economy is not properly functioned there are risks of unsustainable situation environmentally or financially after latter half of 2030s. To avoid such risks continuous policy efforts to improve local economic circulation through
 - ✓ **Environmental taxation,**
 - ✓ **Local employment policy,**
 - ✓ **Promotion of local renewable energy,**
 - ✓ **Provision of better public transportation,**
 - ✓ **Cultural and moral support to strengthen communities, and**
 - ✓ **Social security to promote local asset accumulation.**

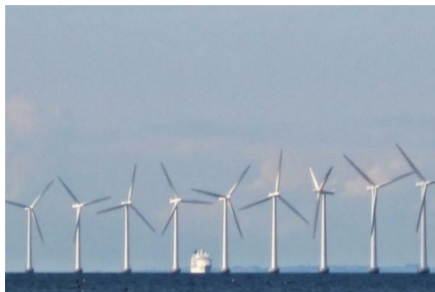
Regional Decarbonisation Roadmap (adopted in June 2021)

- Regional Decarbonisation Roadmap presents the process and concrete measures for regional decarbonization, which will also be a growth strategy for the region, with a particular focus on initiatives and measures to be implemented by 2030.
- At least 100 decarbonized regions will be created by 2030.
- Specifically, appropriate measures such as renewable energy, energy conservation, use of EV/PHEV/FCV, and use of carbon-neutral fuels will be combined according to regional characteristics and climate.
- List up 8 priority measures and 3 basic policy measures



Regional Decarbonisation Roadmap : 8 priority measures (1/2)

- ① Self-consumption solar power generation, including roof-mounted solar power generation
- ② Location of renewable energy sources that coexist with the local community and benefit the local community
- ③ Thorough energy conservation and procurement of electricity from renewable energy sources in public facilities and other commercial buildings, and induce ZEB conversion at the time of renewal and renovation.
- ④ Improve the energy-saving performance of homes and buildings.



Regional Decarbonisation Roadmap : 8 priority measures (2/2)

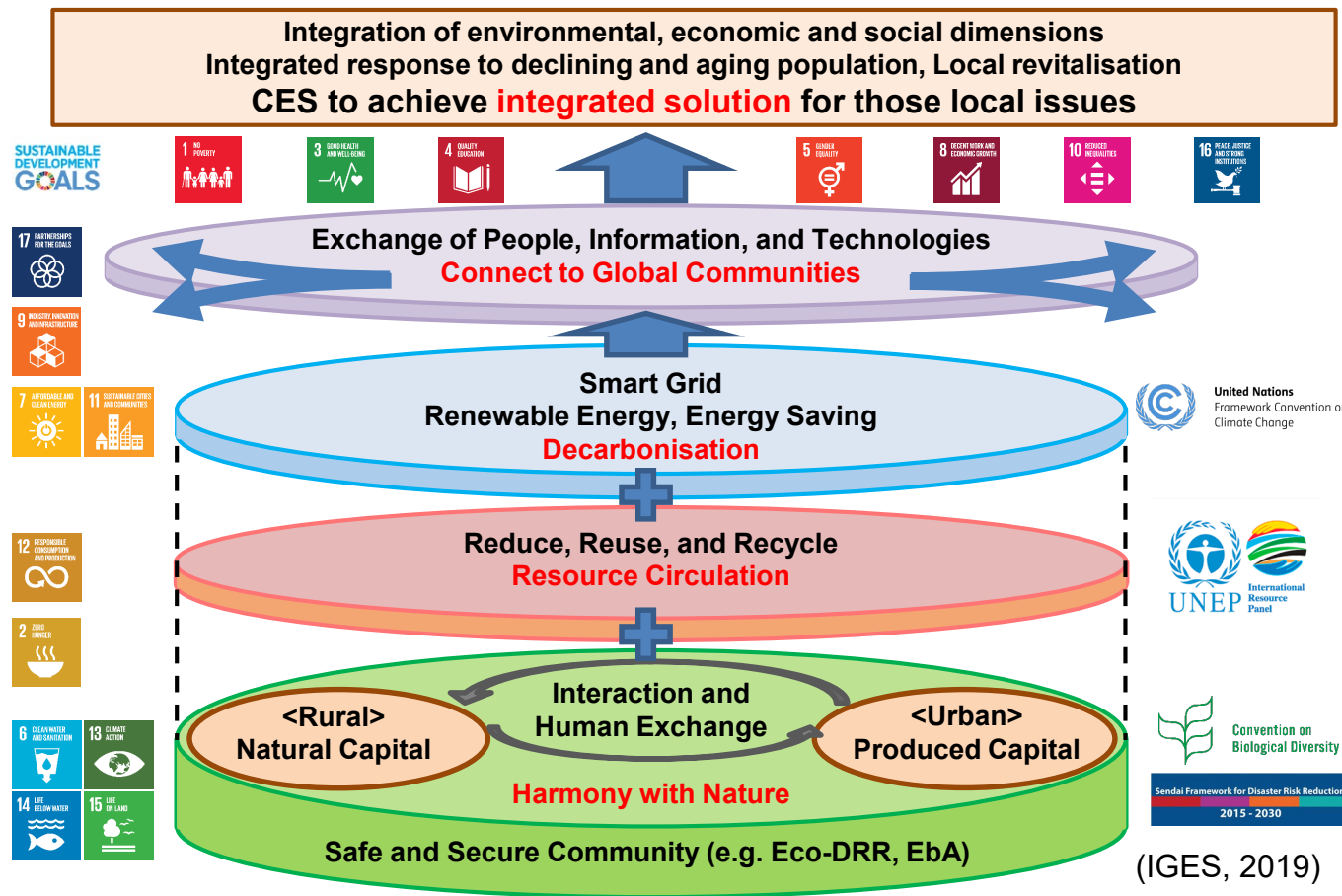
- ⑤ Zero carbon drive (renewable energy x EV/PHEV/FCV)
- ⑥ Transition to a circular economy through the advancement of resource recycling
- ⑦ Decarbonized urban development through compact plus networks, etc.
- ⑧ Improvement of productivity and sustainability of food, agriculture, forestry and fisheries industries



These 8 priority measures are supported by the following 3 basic policy measures:

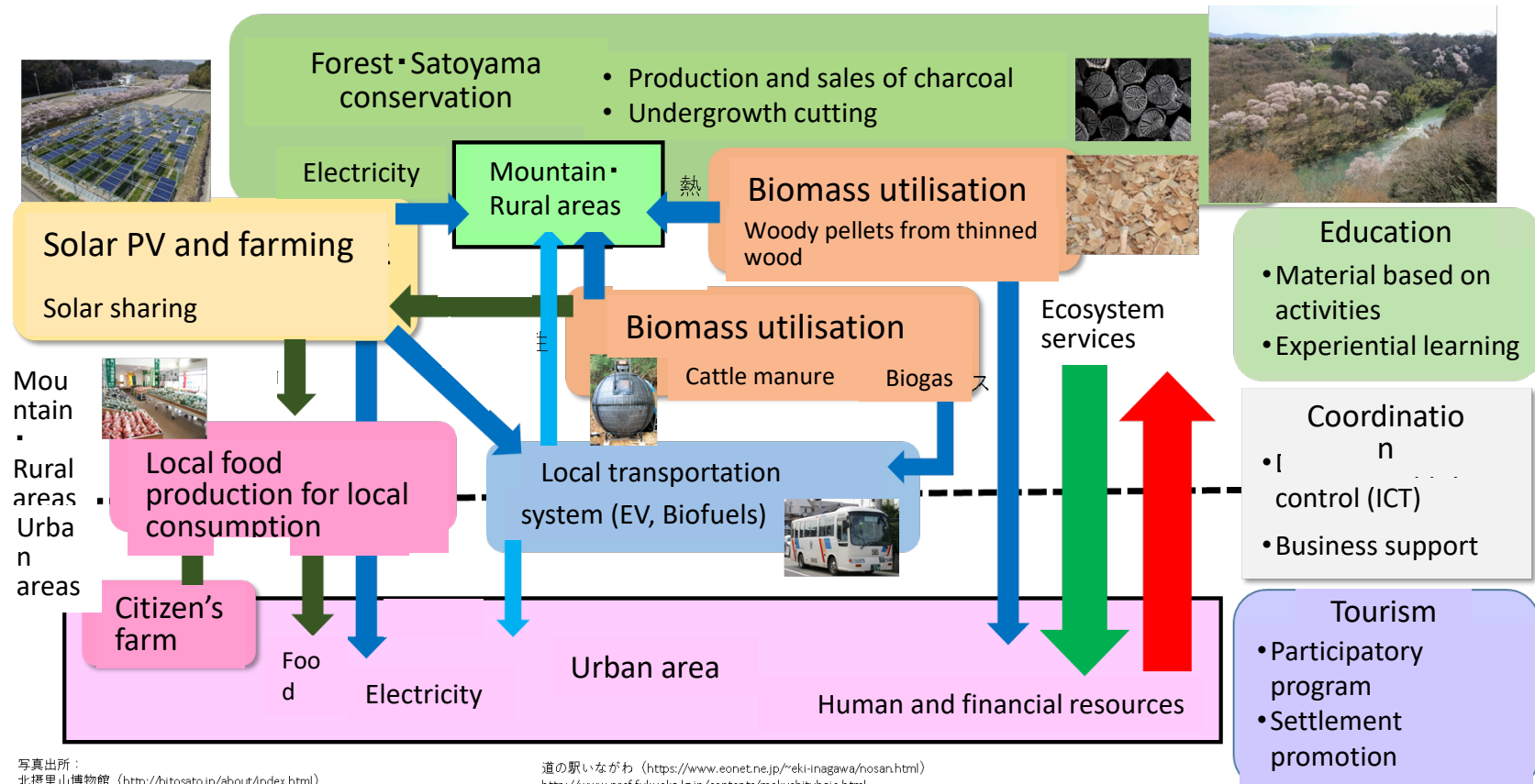
- ① Establishment of regional implementation systems and active support from the government,
- ② Lifestyle innovation through green and digital technologies, and
- ③ Innovation of rules to make the whole society decarbonized.

Circulating and Ecological Sphere (CES)



(IGES, 2019)

Hokusetsu R-CES: Activities



写真出所：
 北摂里山博物館 (<http://hitosato.jp/about/index.html>)
 神戸新聞NEXT (<https://www.kobe-np.co.jp/rentoku/shingokoku/P20181209MS00075.shtml>)
 一般社団法人西谷ソーラーシェアリング協会 (神戸新聞社提供)

道の駅いながわ (<https://www.eonet.ne.jp/~eki-inagawa/nosan.html>)
<http://www.pref.fukuoka.lg.jp/contents/mokushitubaio.html>
 川西市コミュニティバス (http://bu.ycp.jp/b_kinki/b_kawanishi-shi-c.htm)
 神戸大学：地域に分散する未利用バイオマスからのバイオガス創生 (<http://www.kobe-u.ac.jp/report/environmental/2018/5-3-5.html>)

Thank you for your kind attention.