

Sustainable Lifestyles and Resilient Livelihoods in the Post-Pandemic Transitions

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Introduction

- Systemic transitions toward decent living
- 1.5-Degree Project
 - Carbon Footprint and our daily living
 - Citizen's discussion and household "challenge"
 - Making sense of transitions

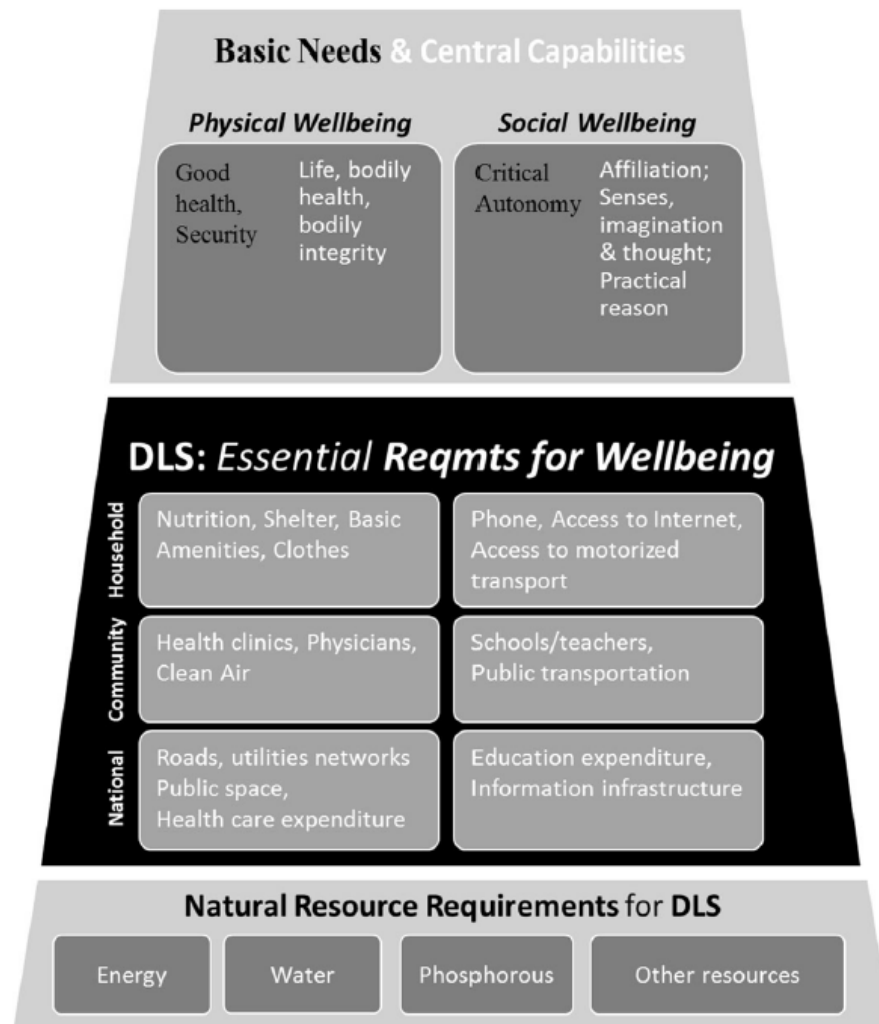
Systemic transitions toward *decent living*



| Demand for service | Nutrition | Manufactured products | Mobility | Mobility | Mobility | Shelter |
|-------------------------------|--|---|--|---|---|---|
| Socio-cultural factors | Shift in dietary choice with reduced animal protein; avoid food waste; avoid over-consumption | Avoid short life span products | Avoid long haul flights; shift to trains wherever possible | Currently not applicable | Teleworking or telecommuting; active mobility such as walking and cycling | Social practices in energy saving; and lifestyle and behavioural changes |
| Infrastructure use | Enhance the role of choice architectures & information; financial incentives; waste management; recycling infrastructure | Reuse and recycling | Currently not applicable | Currently not applicable | Public transport; shared mobility; compact city; spatial planning | Compact cities; built environment; living floor space rationalisation; architectural design; feedback control systems |
| Technology adoption | Currently not applicable | Access to materials-efficient services; access to energy-efficient and CO ₂ -neutral materials | Adoption of energy-efficient technologies; technologies with improved aerodynamics | Adoption of energy-efficient technology/systems | Electric vehicles; efficiency technologies | Adopting energy-efficient solutions; shift to renewables |



Systemic transitions toward *decent living*



2.6 billion have little or no access to energy for clean cooking

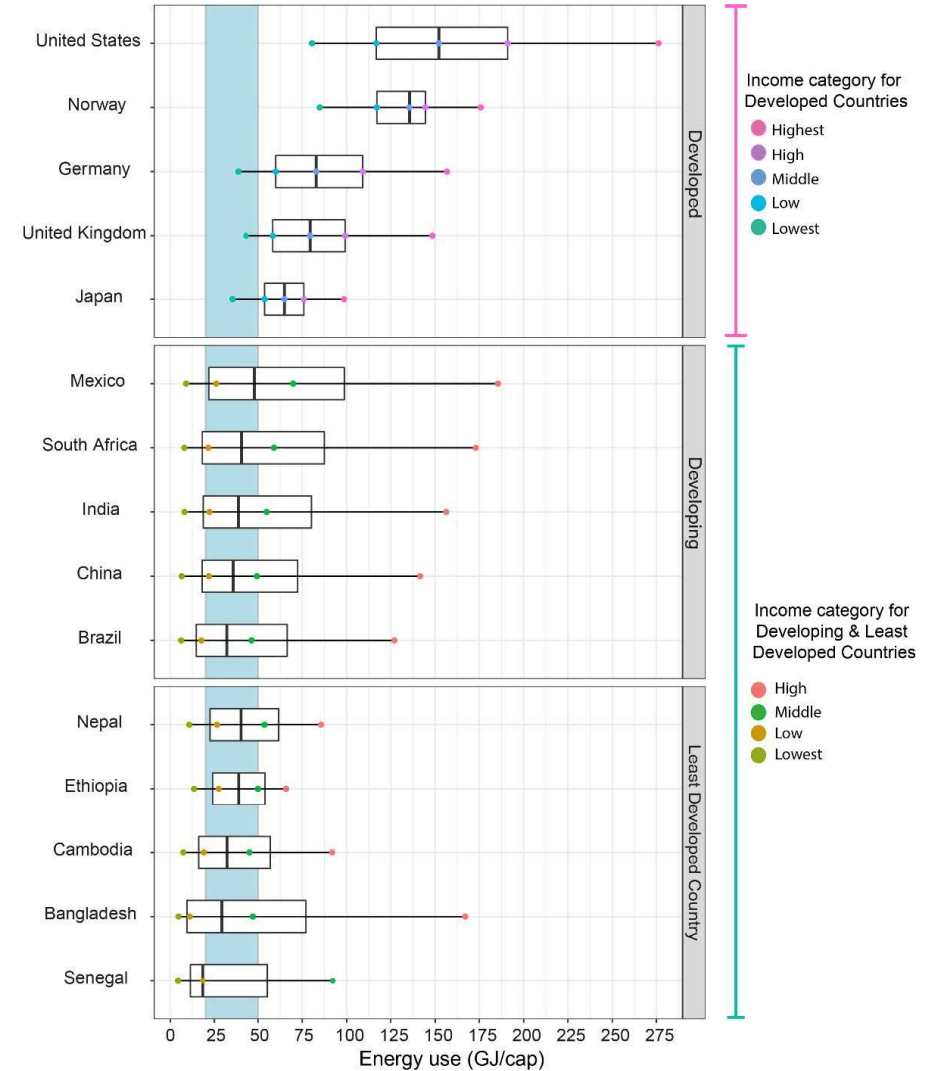
1.2 billion lack energy for cleaning, sanitation and water supply, lighting, and basic livelihood tasks

IPCC AR6 WGIII Ch.5 P-19

Systemic transitions toward *decent living*

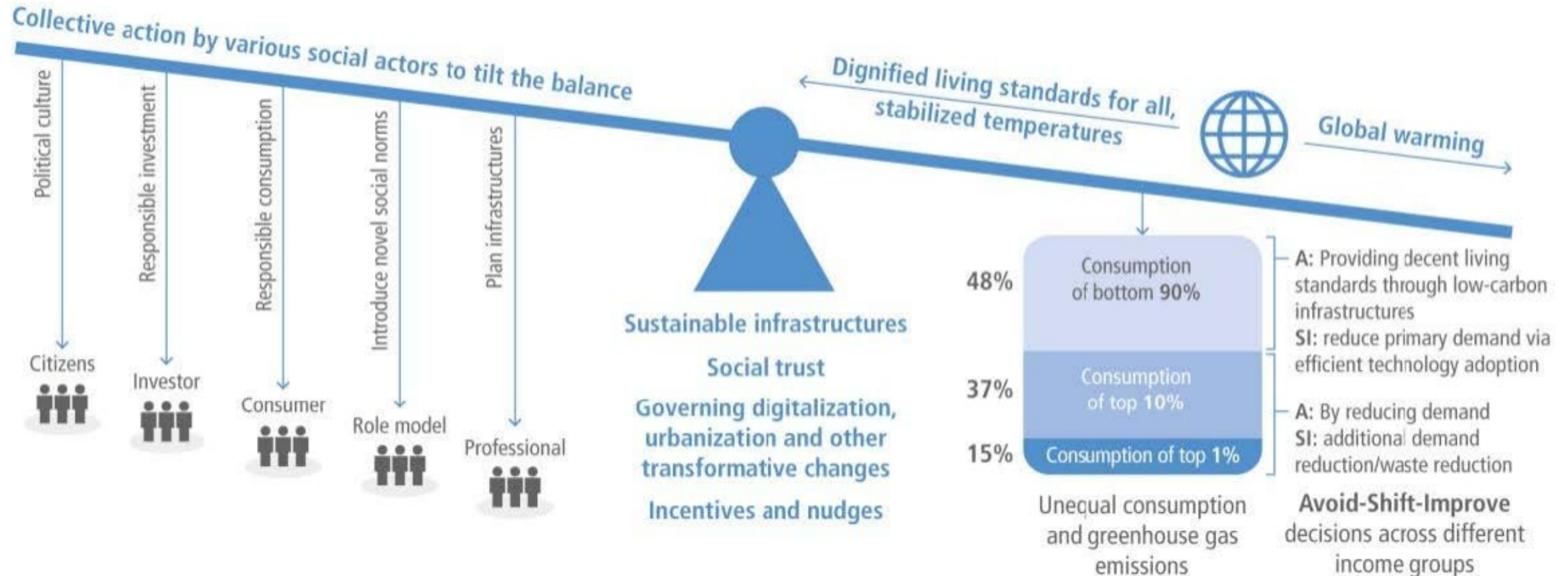
Economic growth in equitable societies is associated with lower emissions than in inequitable societies and income inequality is associated with higher global emissions

IPCC AR6 WGIII Ch.5 P-21



Systemic transitions toward *decent living*

Tilting the balance towards less resource intensive service provisioning

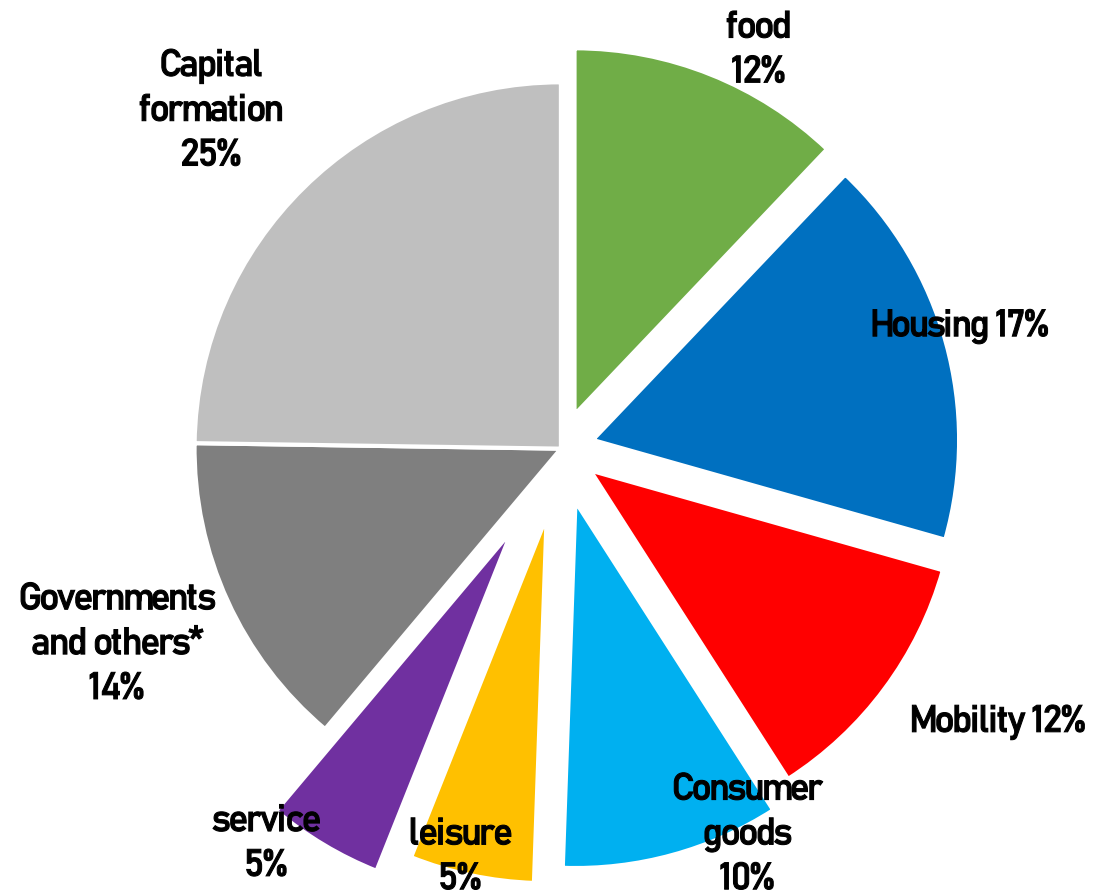


In search of sustainable and resilient living beyond pandemic

1. Systemic change is needed, not just behavioral changes
2. Local socioeconomic systems delivering essential services are already threatened
 - Long-lasting stresses: Shrinking population and economy, Climate Change...
 - Short-term shocks: Natural disaster, Pandemic, War, Economic crisis

How to help local actors drive systemic changes,
while their living conditions are already endangered?

Toward Decarbonised Living: 1.5Degree Project



*政府・家計外・非営利団体消費・在庫純増の合計

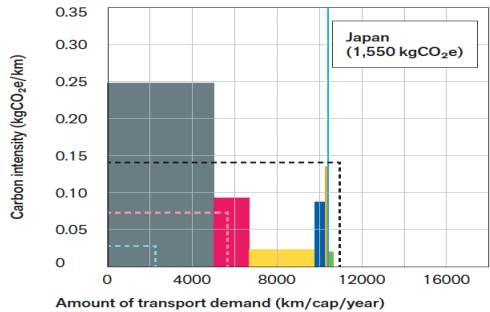
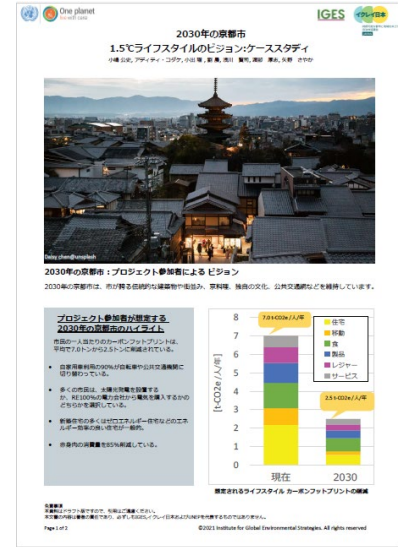
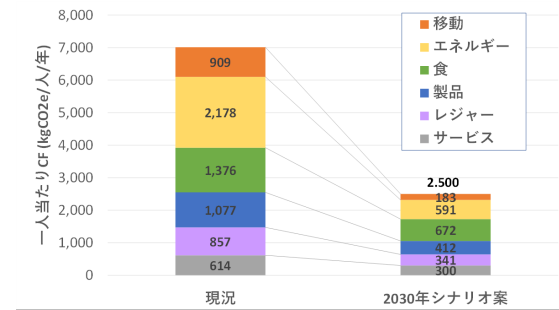
出所:南齊規介(2019) 産業連関表による環境負荷原単位データブック(3EID) 国立環境研究所; Nansai et al. (2020) Carbon footprint of Japanese health care services from 2011 to 2015. Resources, Conservation & Recycling, 152.; 総務省(2015) 平成27年産業連関表に基づき発表者作成

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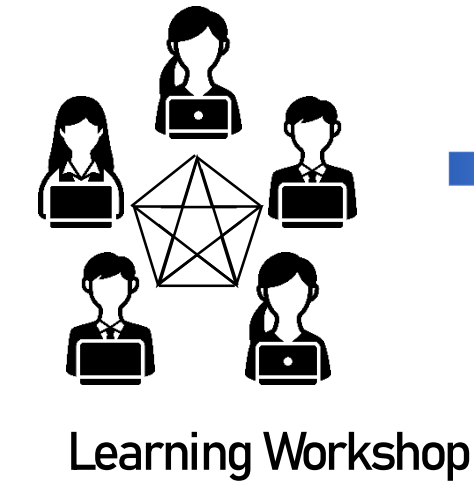
Develop workshop tools



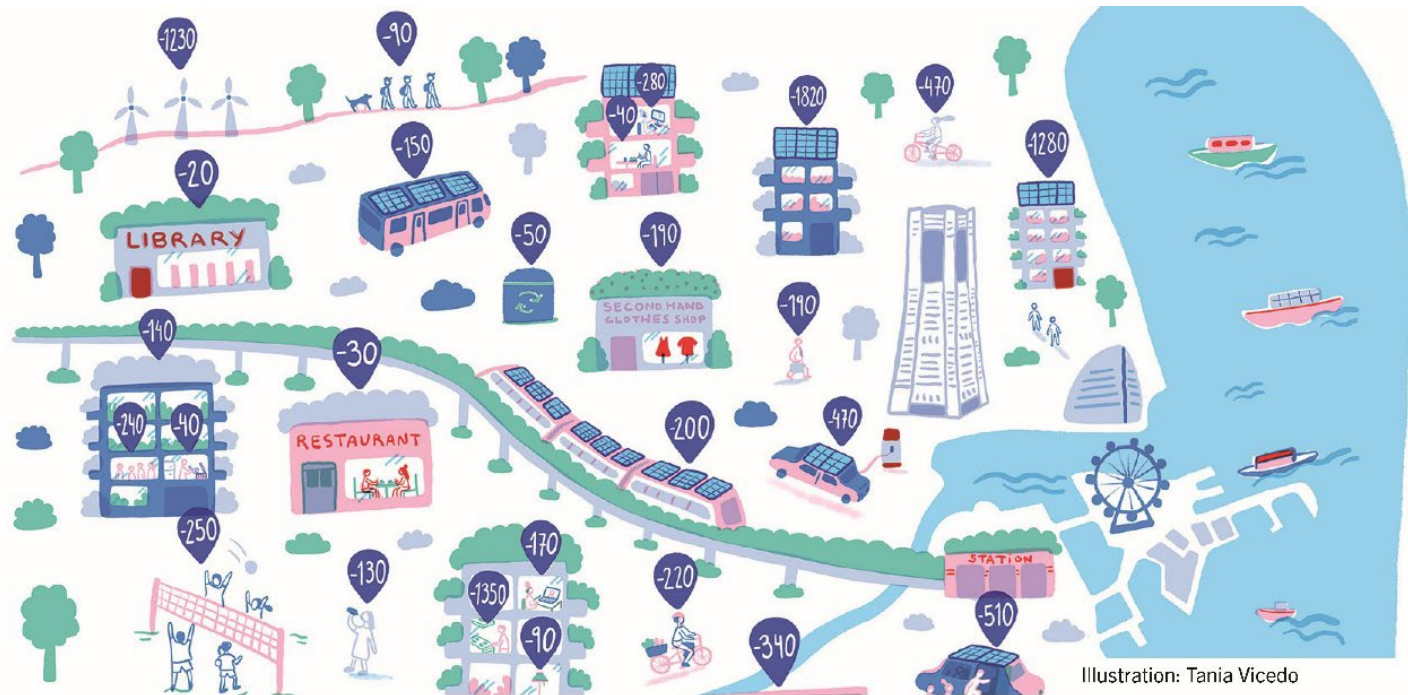
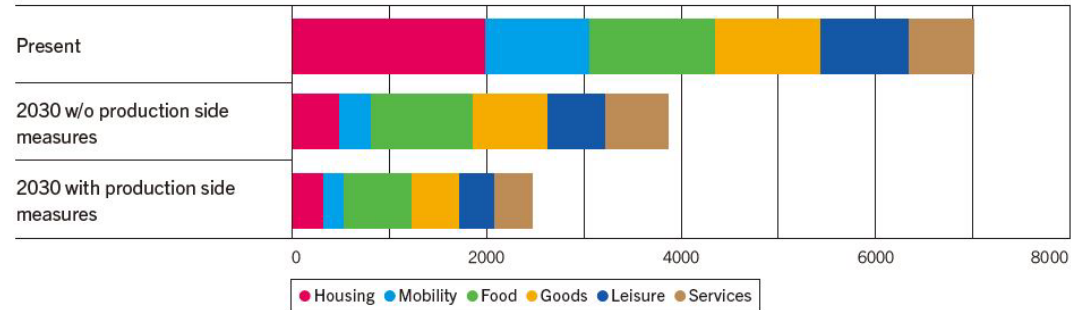
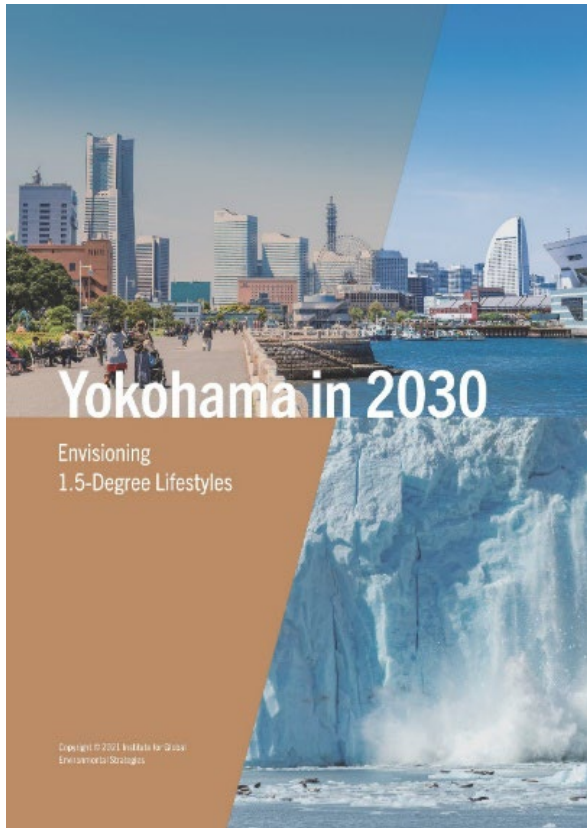
Develop city visions



Estimation of existing carbon footprint in a city

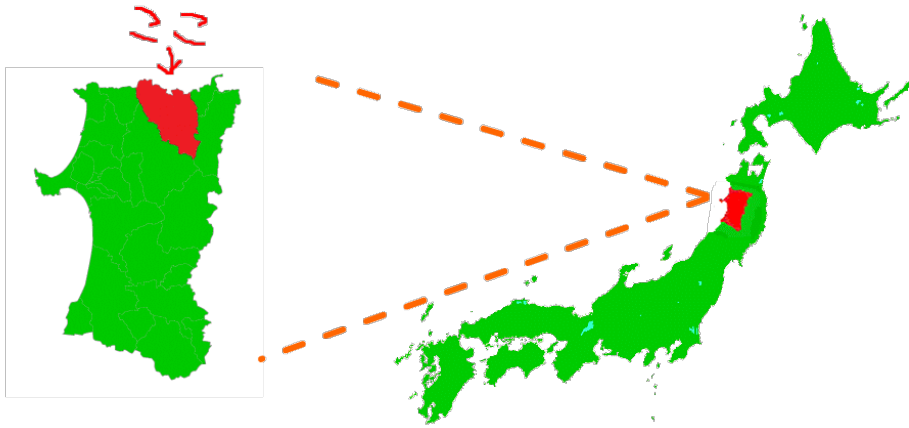


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Toward Decarbonised Living: 1.5Degree Project A Case of Odate City, Akita, Japan

Former Mining City, Now Rapidly-Depopulating Area

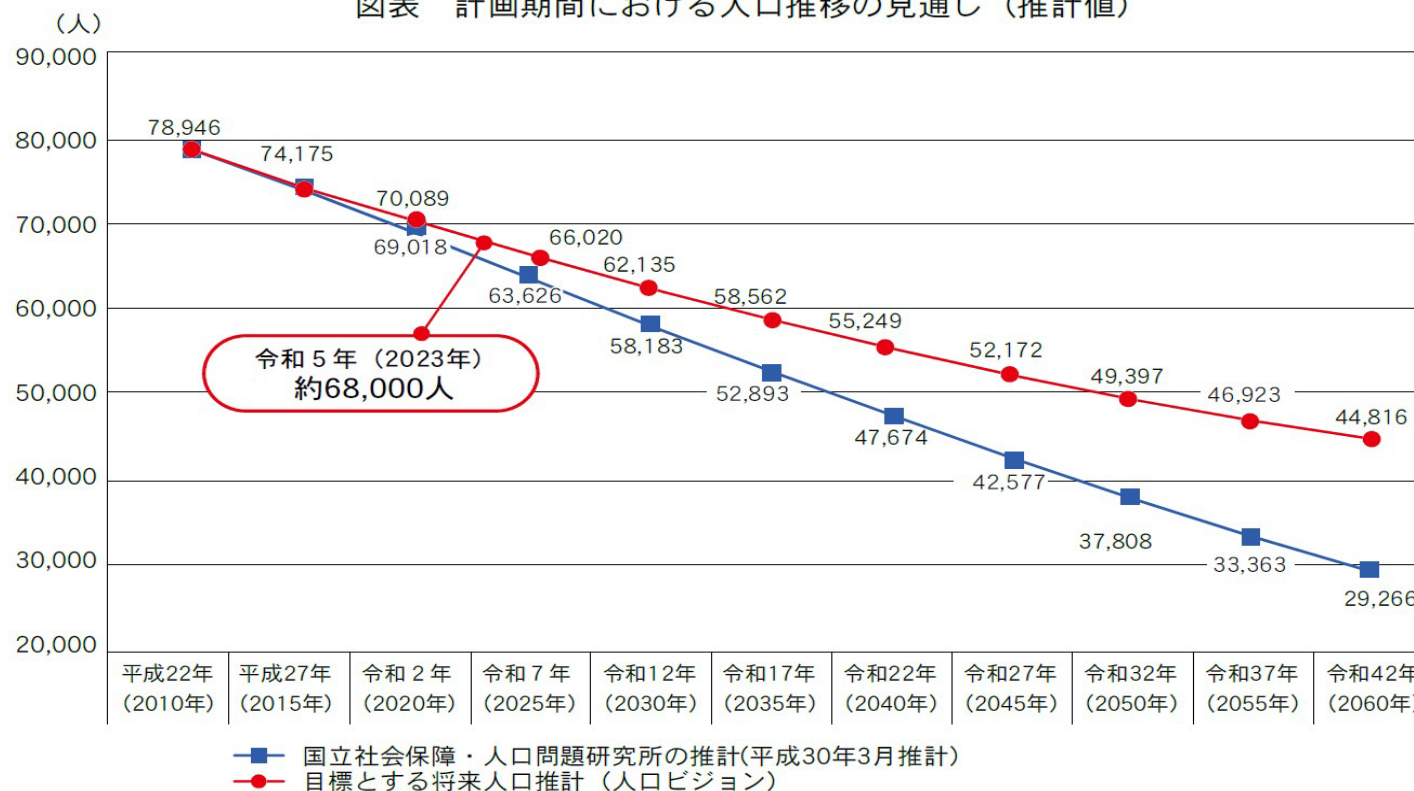


画像：大館市ウェブサイト

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Former Mining City, Now Rapidly-Depopulating Area

図表 計画期間における人口推移の見通し（推計値）

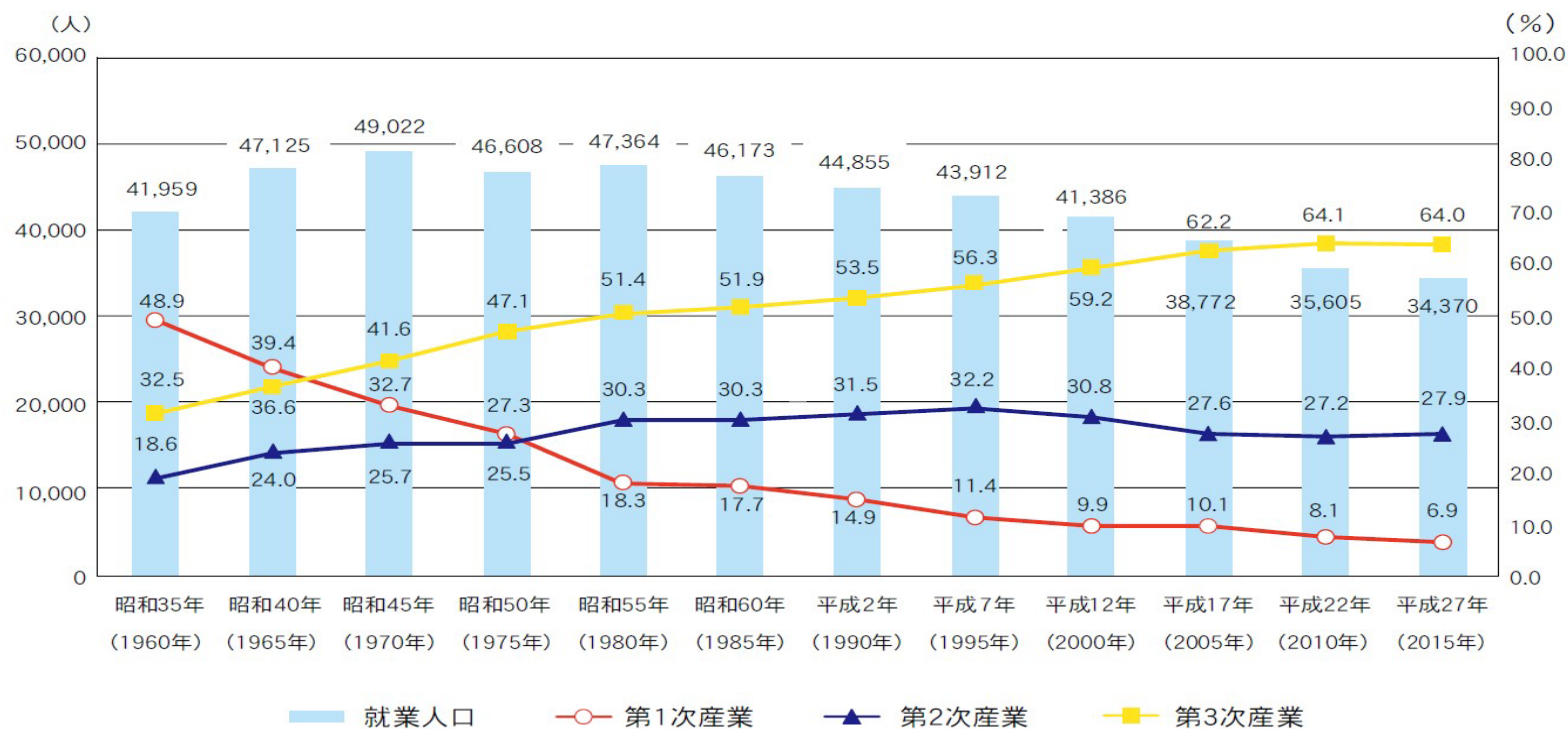


出典：第2次新大館市総合計画後期基本計画（令和2年度～5年度）

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Former Mining City, Now Rapidly-Depopulating Area

図表 産業別就業者数の推移



資料：国勢調査

出典：第2次新大館市総合計画後期基本計画（令和2年度～5年度）

Toward Decarbonised Living: 1.5Degree Project

A Case of Odate City, Akita, Japan

1st Workshop: Participants' Initial Thoughts on Decarbonised Living

| | Attractive | Not Attractive/Not Suited |
|---|---|---|
| Ride Sharing Car Sharing | <ul style="list-style-type: none">• Want to try, ride sharing may reduce traffic jam for commuting• Looks interesting, may be good to help older people's mobility in future | <ul style="list-style-type: none">• Difficult in the city• These measures will accelerate the shrink of public transport |
| Use public transport Use bicycle | <ul style="list-style-type: none">• I already use bicycle when I move to nearby places• I use train and bus to go to school | <ul style="list-style-type: none">• The city has limited public transportation• It is more costly than private vehicles. |

Toward Decarbonised Living: 1.5Degree Project

A Case of Odate City, Akita, Japan

1st Workshop: Participants' Initial Thoughts on Decarbonised Living

| | Attractive | Not Attractive/Not Suited |
|--|---|--|
| Live closer to schools or workplaces Develop a compact city | <ul style="list-style-type: none">• Shorter commuting will give us more free time | <ul style="list-style-type: none">• Those who already purchased houses can't move• May need to force some people (in the remote areas) to move to the city center and abandon the local society |
| Set up solar panels at home Switch to RE100 Electricity | <ul style="list-style-type: none">• Perhaps possible• The city may also be able to use micro hybrids | <ul style="list-style-type: none">• Solar panels will lead to deforestation |

Toward Decarbonised Living: 1.5Degree Project

A Case of Odate City, Akita, Japan

1st Workshop: Participants' Initial Thoughts on Decarbonised Living

| | Attractive | Not Attractive/Not Suited |
|---|--|---|
| Reduce meat consumption and introduce vegetarian diet / meat alternatives | <ul style="list-style-type: none"> I can do this if not everyday | <ul style="list-style-type: none"> We can reduce meat consumption, but not entirely I feel meat alternatives less satisfactory though its taste and nutrition should be the same... This may threaten local cattle producers |
| Eat local and seasonal food; reduce waste; Save snacks, alcohol, smokes | <ul style="list-style-type: none"> We can support local farmers and reduce CO2 Seasonal foods are tasty We can improve our health | <ul style="list-style-type: none"> I don't want to save alcohol We want to improve our dietary balance, but not every day... |

Toward Decarbonised Living: 1.5Degree Project

A Case of Odate City, Akita, Japan

1st Workshop: Participants' Initial Thoughts on Decarbonised Living

| | Attractive | Not Attractive/Not Suited |
|--------------------|------------|--|
| Reduce long travel | | <ul style="list-style-type: none">• This will lead to fewer visitors, resulting in a serious damage to the economy and society |
| Reduce flights | | |
| Online homecoming | | <ul style="list-style-type: none">• Nonsense. We should see face-to-face, that is how homecoming works. |

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A Case of Odate City, Akita, Japan

Household Challenge: Learning from 2-week trial of alternative practices

What was good

What was not good/challenging

Use public transportation / bicycle

I could move without asking my family all-time, I felt good to ride my bike in the morning



When I went home late, I felt scary



Eco-driving

I could do it for a planned move, but it was difficult in an urgent move

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A Case of Odate City, Akita, Japan

Household Challenge: Learning from 2-week trial of alternative practices

What was good

What was not good/challenging

Family members gather and save cooling/heating energy

We could gather in a room and increased communication



Cheap renovation of houses for better insulation

It was fun to do self-renovation

It took time

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Household Challenge: Learning from 2-week trial of alternative practices

What was good

What was not good/challenging

Save alcohol and smoking

When I saved alcohol, I felt better in waking up



It was challenging to control my temptation to drink



Reduce food waste

I was more careful in buying food items during the period to avoid wasting. Thus I could also save costs

Try meat alternatives

I tried to buy meat alternatives but could not find during the "challenge" weeks

Toward Decarbonised Living: 1.5Degree Project

A Case of Odate City, Akita, Japan

2nd Workshop Reflecting on the challenges & possible solutions

| | Challenges | Possible Solutions |
|---|---|--|
| Ride Sharing Car Sharing Use public transportation | <ul style="list-style-type: none">• Many old people can't ride nor drive• <i>Mobi</i> (ride-sharing service) started but run in a limited area, and is difficult to use the app.• Buses are already reduced | <ul style="list-style-type: none">• Secure & grow the operators & drivers of the ride sharing service• Need a study workhop for <i>mobi</i>• Shopping support service is desired |
| Use EV | <ul style="list-style-type: none">• EVs are still too expensive• Charging stations are scarce• Charging takes time | <ul style="list-style-type: none">• Cheaper EVs• More charging stations and sharing of information |

Toward Decarbonised Living: 1.5Degree Project

A Case of Odate City, Akita, Japan

2nd Workshop Reflecting on the challenges & possible solutions

| | Challenges | Possible Solutions |
|--|--|---|
| Live closer to schools or workplaces Develop a compact city | <ul style="list-style-type: none">• Public services are scattered in the city• I feel worried about losing hometown by developing a compact city• The city already has many abandoned houses• Less and less farmers | <ul style="list-style-type: none">• Matching of houses, farm lands, etc. across generation• Subsidies to support zero-carbon renovations of abandoned houses |
| Set up solar panels at home Switch to RE100 Electricity | <ul style="list-style-type: none">• Initial cost is expensive• Concerns about safety | <ul style="list-style-type: none">• Need more information• Sharing of solar systems among neighborhoods instead of individual houses |

Toward Decarbonised Living: 1.5Degree Project

A Case of Odate City, Akita, Japan

2nd Workshop Reflecting on the challenges & possible solutions

| | Challenges | Possible Solutions |
|---|---|---|
| Reduce meat consumption and introduce vegetarian diet / meat alternatives | <ul style="list-style-type: none">• Meat alternatives are not available• Meat alternatives were more watery and was not tasty (as long as they are cooked like meats)• Concerns about the safety/contaminants | <ul style="list-style-type: none">• Need recipe using alternatives |
| Eat local and seasonal food; reduce waste; Save snacks, alcohol, smokes | <ul style="list-style-type: none">• It was not easy to identify which food items can save CO2 | <ul style="list-style-type: none">• Visualisation of CO2 reduction effect• Need a market/place where consumers can buy food items that can't be sold in the ordinary shops |

Toward Decarbonised Living: 1.5Degree Project

A Case of Odate City, Akita, Japan

2nd Workshop **Re-valuating the merits of decarbonisation**

Alternative mobility → Secure older people's basic needs

Making the city compact → More lively interactions

Car & Space Sharing → Cross-generation exchange

Renovation for Insulation → More comfort

Smaller houses → More interaction in the family

Revisiting the diet → Health & Support local farmers

More knowledge; Started thinking climate as our issues

Low carbon living through pursuit of local wellbeing – not as patience

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A Case of Odate City, Akita, Japan

2nd Workshop **Proposing action points**

Opportunities & Sites for experiencing alternatives

EV, Ride Sharing, Car Sharing

Renewable Energy, Zero Energy Houses

Alternative Diets

Matching Systems of Unused Resources

Abandoned farms & houses

Repair & Repurposing Center for unused products

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A Case of Odate City, Akita, Japan

2nd Workshop **Proposing action points**

Study Workshops on specific topics

Ride Sharing

Low cost renovation

Alternative Diets

Exchanges with local farmers

Study & Discussion Workshops at schools, workplaces, communities for exploring the future visions of the city

In search of sustainable and resilient living beyond pandemic

1. Tapping into real-world concerns for essential services, instead of jumping into Carbon Reduction
2. Identifying what they can/can't by testing in the real world
3. Revisiting the merits & costs of alternatives for themselves and other members of the local society
4. Seeking ways forward to use their learnings for/with others



Making sense of “transitions” in their living world through learning by doing