

Sustainable Cities and Communities





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by helping inhabitants

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Transport and Mobility,
central to sustainable
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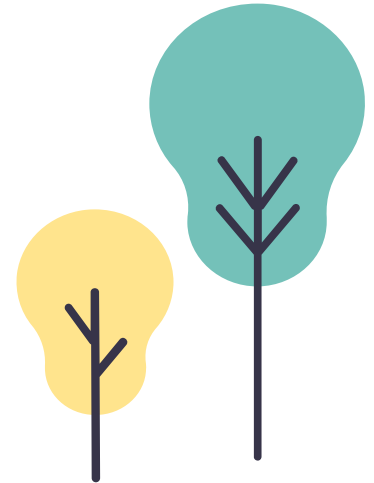
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Here you could describe the
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01 SAFE AND AFFORDABLE HOUSING

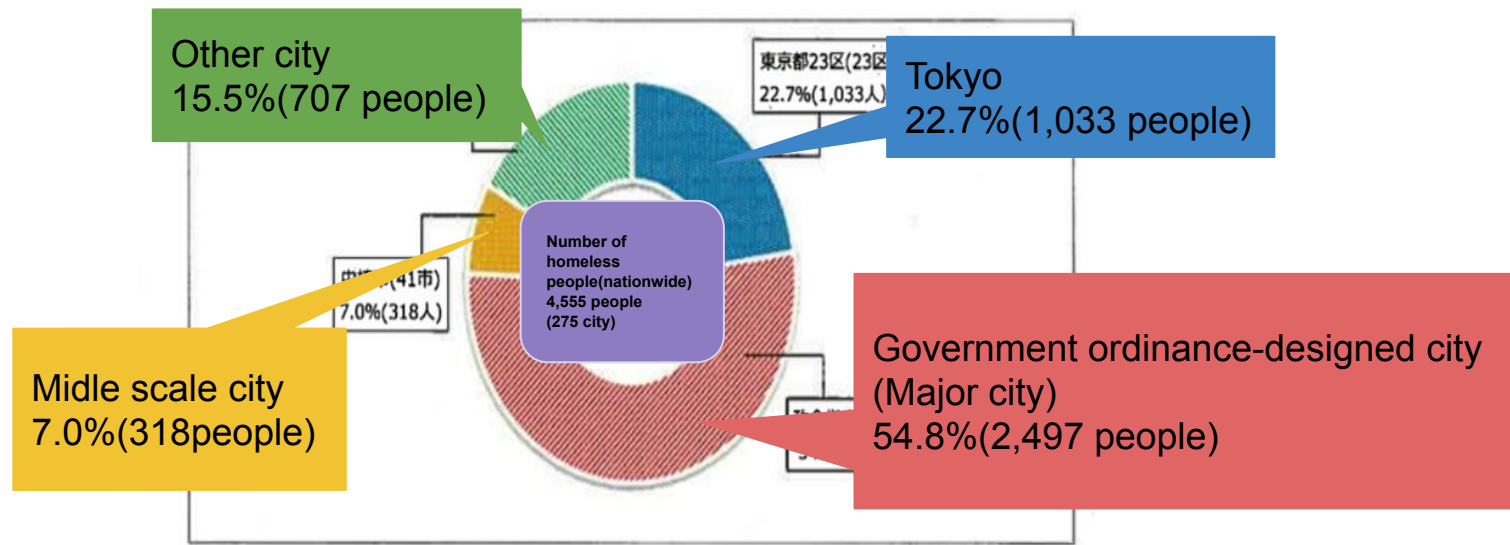


SAFE AND AFFORDABLE HOUSING

By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.

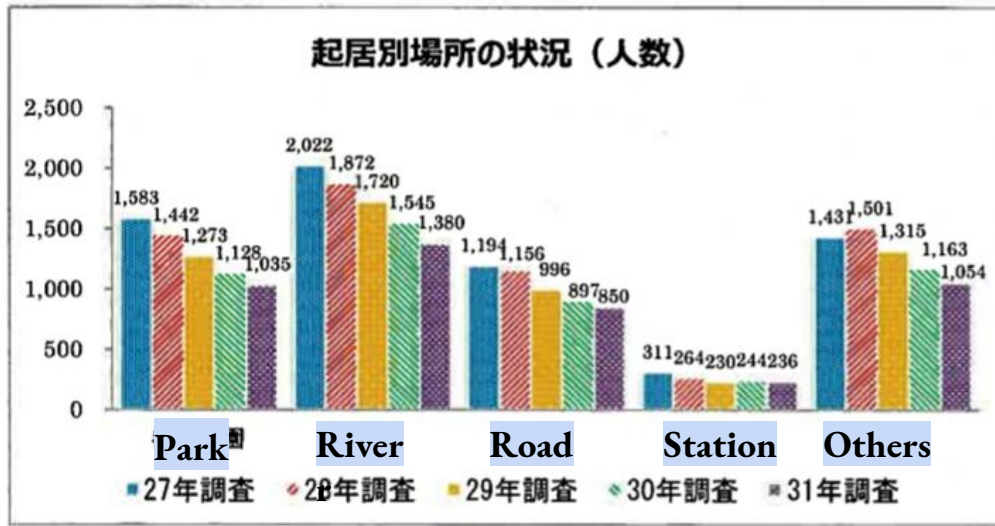
How to upgrade?

Distribution of homeless people throughout Japan(2015~2019)



How to upgrade?

Number of homeless people by location



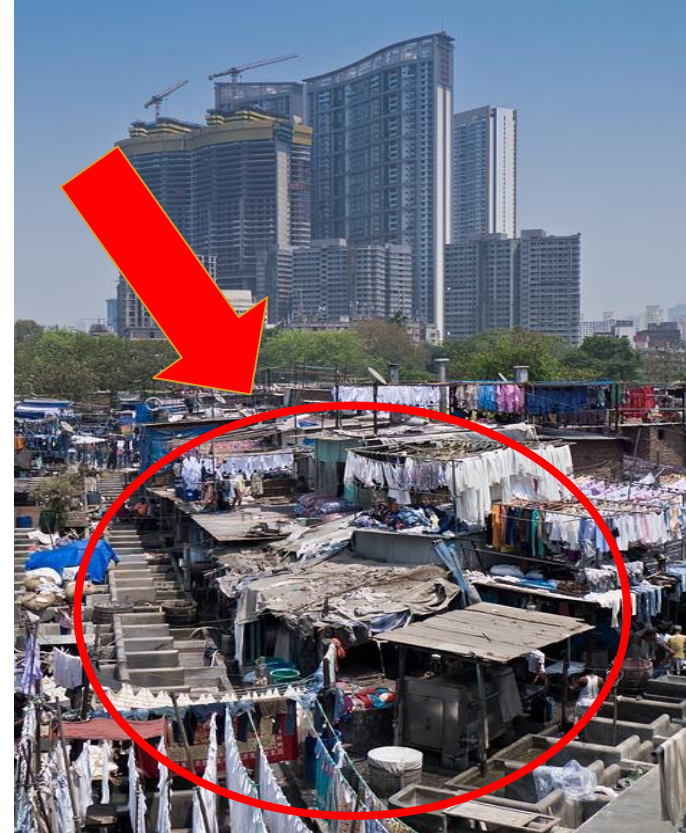
Shinjuku station

■ 2015 ■ 2016 ■ 2017 ■ 2018 ■ 2019

Upgrade the slam

- The slum population will reach 2 billion by the 2030s.
- Not only external support
- Resident participation type

We need to have a sense of ownership



AFFORDABLE AND SUSTAINABLE TRANSPORT SYSTEMS

Safe, affordable, accessible and sustainable transport systems for all.

Sustainable transportation can enhance growth and improve accessibility.

Better integration of the economy while respecting the environment.



Improving social equity.

Improving road safety.

Expanding public transport.

Attention to the needs of persons with disabilities and older persons.

Aim: Global greenhouse gas emissions.



REDUCE THE ENVIRONMENTAL IMPACT OF CITIES (11.6)

Special attention to air quality and municipal and other waste management.

Clean energy, committed to cut CO₂ by 40%.

Construction and Demolition waste- Concrete, bricks, gypsum, wood, glass, metals, plastic, solvents, asbestos and excavated soil to recycle.

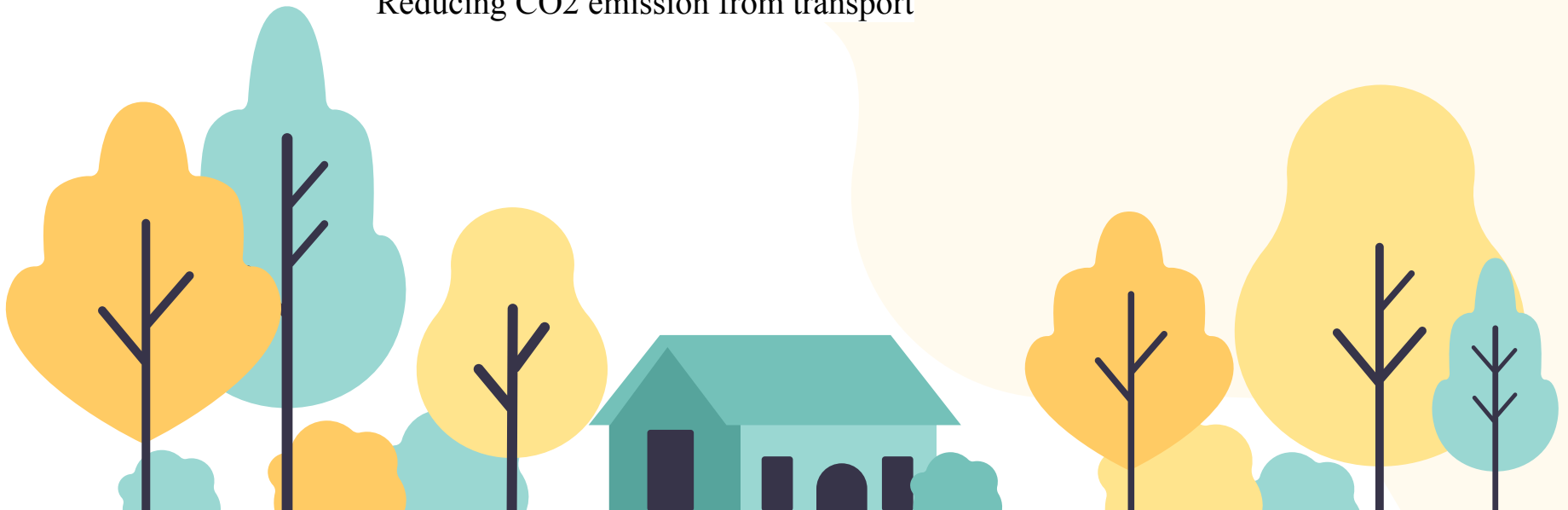


Green public Procurement, choose environmentally friendly goods, services and works.

Landfill waste for hazardous, non- hazardous and inert wastages.

Management of environmental noise.

Reducing CO2 emission from transport



03 URBANIZATION

TARGET 11.3



**INCLUSIVE AND SUSTAINABLE
URBANIZATION**

source: The Global Goals For Sustainable Development

FUKUOKA CITY

EX. 2
Sustainable Cities in Japan



Population: 1,401,212

Area: 340.6km²

FUKUOKA CITY

Fukuoka Method

Fukuoka Method provides an affordable solution to upgrade open-dumping sites

How to dispose of garbage



Make a clear city.

70% of city introduce
"FUKUOKA Method"

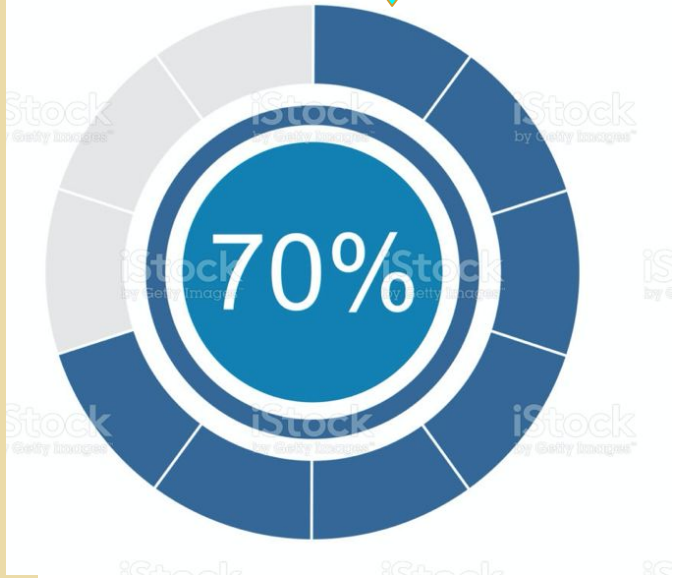
The diagram illustrates the Fukuoka Method for landfill cell construction and leachate management. The top part shows a cross-section of a landfill cell with a 'Landfill' area containing 'Solid waste' and 'Landfill liner'. A 'Leachate collector pipe' is shown at the bottom of the cell, leading to a 'Leachate adjustment pond'. The bottom part shows a detailed view of the 'Leachate adjustment pond' with a 'Waterproofing' layer and a 'Gas Ventilation system'. The bottom right shows a flowchart of the 'Leachate treatment process'.

Leachate treatment process:

```

graph LR
    A[Pre-treatment (200~3000°C)] --> B[Pre-treatment (1~10)]
    B --> C[Microbial treatment (1~1000000)]
    C --> D[Discharge]
    E[Reactive additives] --> C
  
```

Below the flowchart, it is noted: 'Semi-aerobic landfill and anaerobic landfill'.



05 Reduce the Adverse Effects of Natural Disasters



By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.



Necessity of international cooperation in disaster prevention fields.

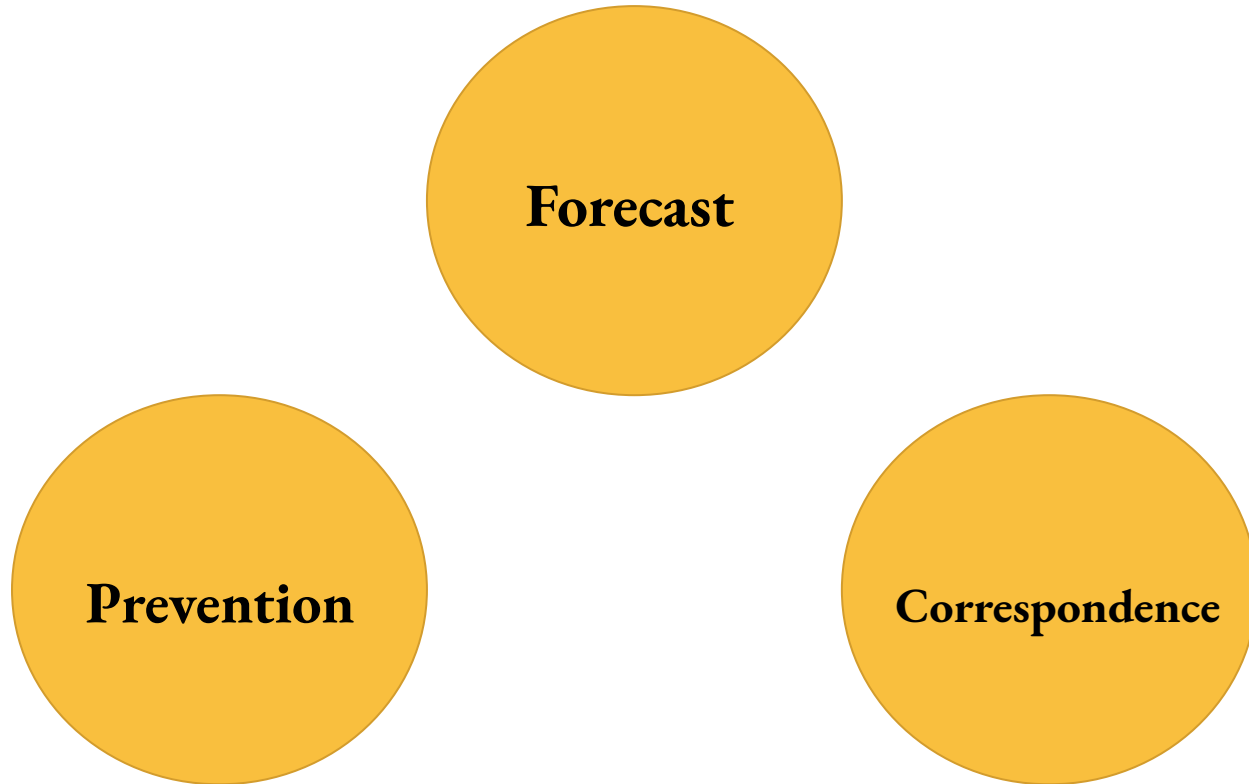
Sendai Framework for Disaster Risk Reduction 2015-2030

→It is a disaster prevention framework adopted internationally.

In this disaster prevention framework, we aim to reduce the risk and loss of disaster in all aspects of disasters.

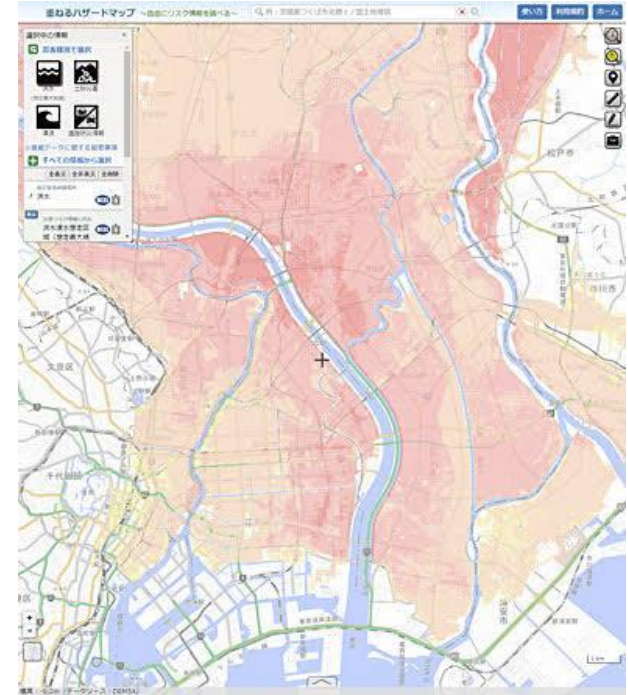


Disaster prevention measures



Forecast

Hazard map

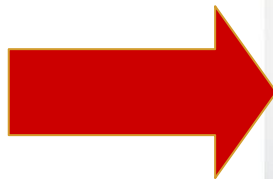


Hazard map is a map of damage caused by a disaster and a map of the extent of damage.

Prevention

Minimize the risk of disaster

Replace old concrete-block walls with fences that are unlikely to fall.



Seismic strengthening in a house.



Fixing furniture and appliances for fall-prevention.

TARGET 11.7



**PROVIDE
ACCESS TO
SAFE AND
INCLUSIVE
GREEN AND
PUBLIC
SPACES**

Promotion of public transportation.

Many older people can't drive their own car, so there are many situations where they feel inconvenient in their daily life, such as shopping and hospital visits.



Creating a town to live on foot.

→ Maintenance of sidewalk and bicycle roads and barrier-free.



Braille block



slope



Bicycle-only road

PLANS AND POLICIES



ACCESS TO PUBLIC RESOURCES

Access to quality education, public transportation, safe health care centres, safety and good air quality



URBAN RENEWAL ACTIONS

Renovation of public spaces into self sustained ecosystem as well as modern irrigation and waste manangement practices



FAVOURING ETHICAL CONSUMPTION

Promote and encourage ethical consumption, local food production and fair trade that both supports local supply chains and are environmental friendly



REDUCTION OF CO2 EMISSION

Long term shift towards using renewable energies, vertical gardens, alternative means of transport and house hold committment to water and energy saving



REDUCE, REUSE AND RECYCLE

Raise awareness about the importance of recycling and responsible consumption, and create

Infrastructure that allows for minimal waste.



THANKS