

# Toward climate-proofing spatial planning

## Key issues, challenges, and future agenda

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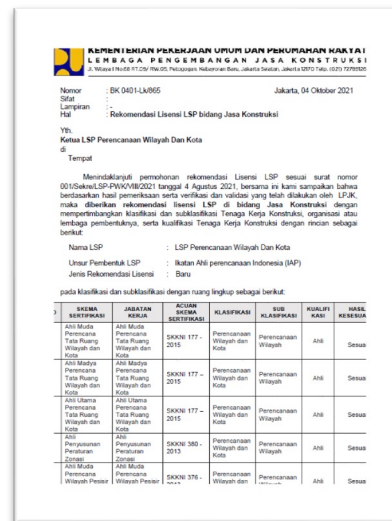


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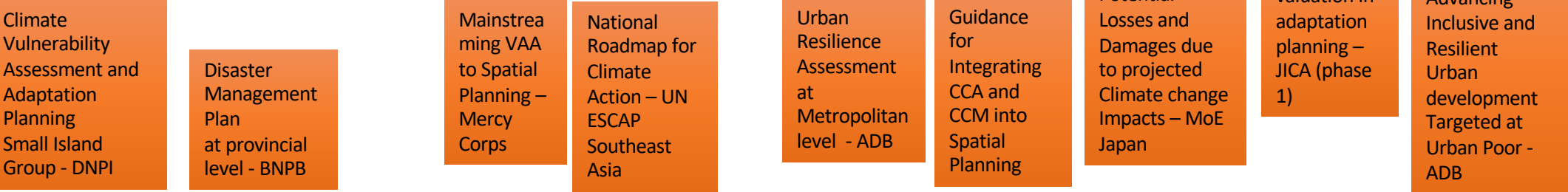
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# HAS' Climate change-related Research and Planning practices

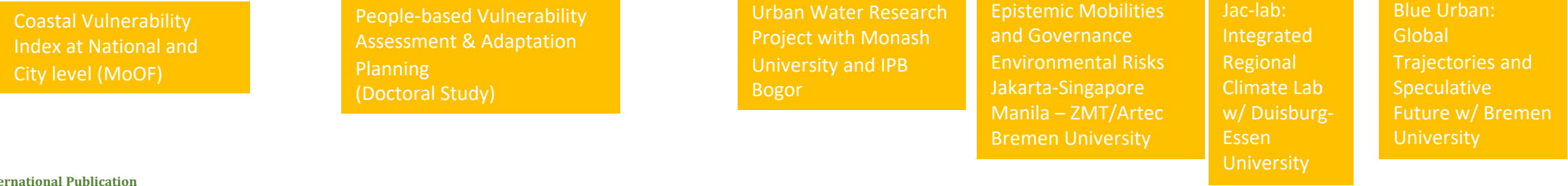
## International Network



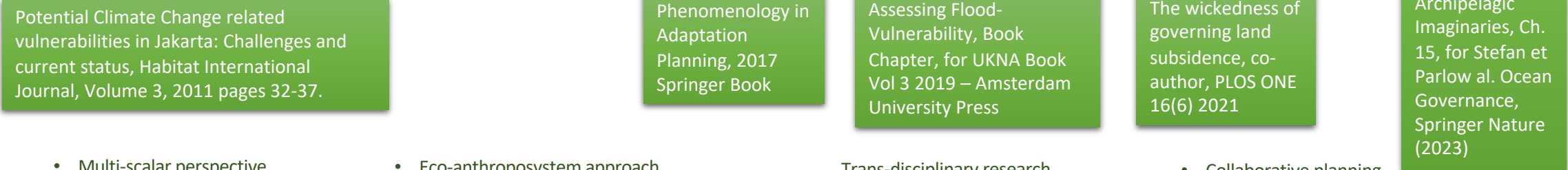
## Consultancy Projects



## Research Projects



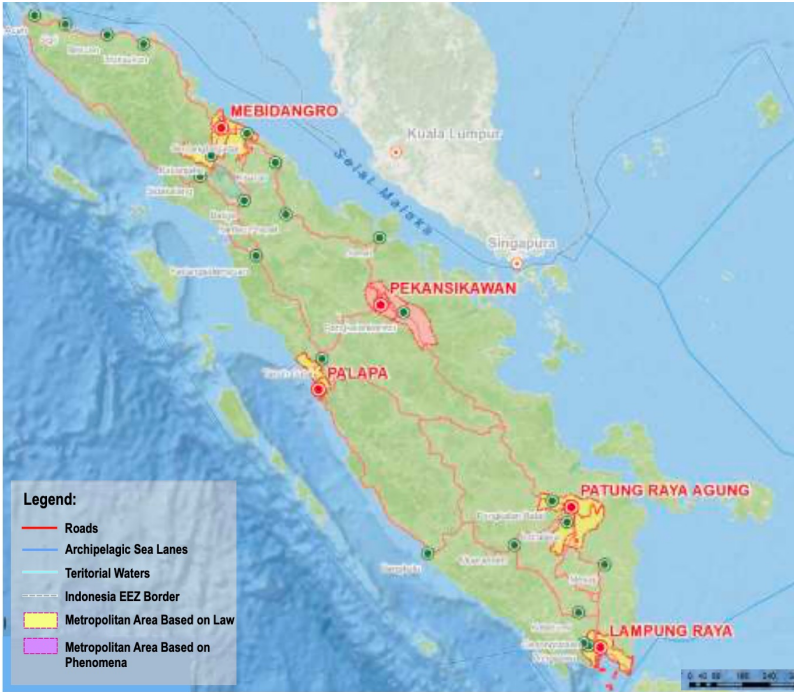
## International Publication



- Lesson learned**
- Multi-scalar perspective
  - Eco-anthroposystem approach
  - Trans-disciplinary research
  - Collaborative planning



# Metropolizing Archipelagic Indonesia: Avoiding uniformity, promoting structured diversity



Utilizing the Rapid Urbanization

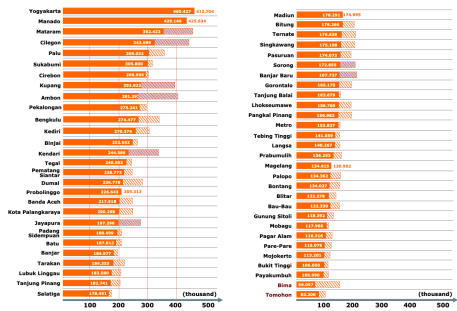


Figure 1.11 Population in Medium Cities  
Source: Modified from IPS data, 2010 and 2016

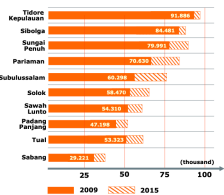


Figure 1.12 Population in Small Cities  
Source: Modified from IPS data, 2010 and 2016

medium cities in six years. The percentage of medium cities, 58 percent, was more than half of all autonom

Meanwhile, there are ten small cities identified in Indonesia. Most small cities are dominated by new autonomous cities which are formed from the expansion of regency or district. Some of these cities are Subulussalam, which is the expansion of Nias Regency and Tual, which is the expansion of Southeast Maluku Regency. The island of Tidore is a small city with the biggest population, with 96,979 inhabitants and Sabang with the smallest population, with 33,215 inhabitants.

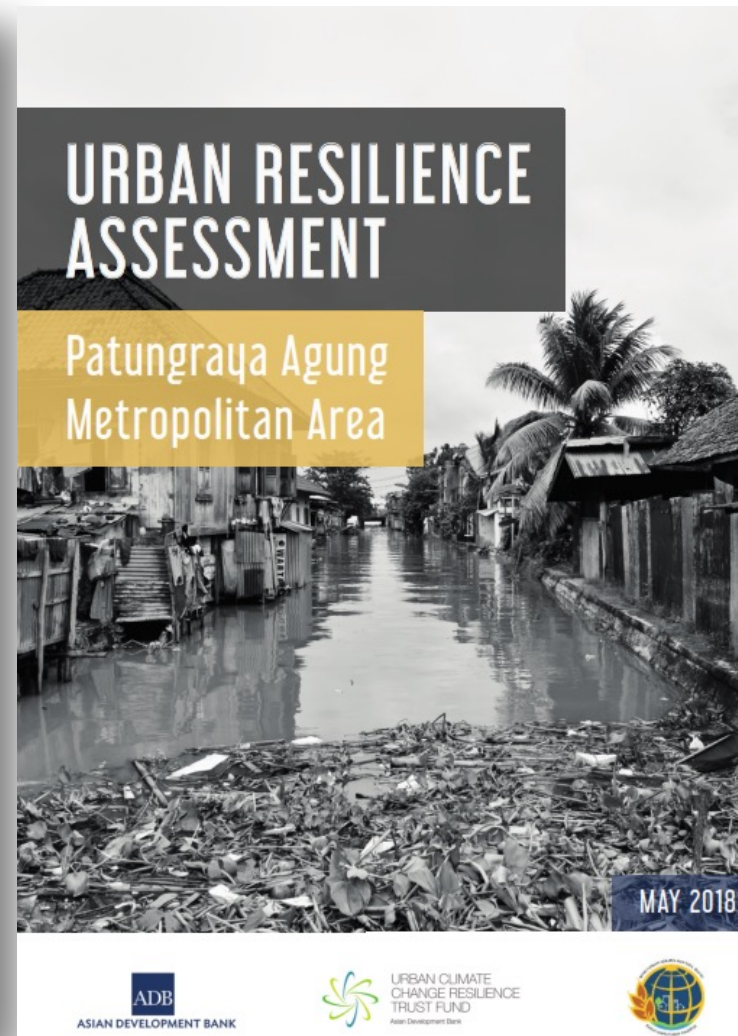
The World Bank (2009), reported that the urban population growth in seven big cities is experiencing slowdown, while the other cities are rising (see Table 1.1). The slowdown phenomenon is caused by suburban population growth rate that continue to increase significantly. The weaker influence of inner cities are caused by lower property price in suburban area and better transportation facilities and infrastructures that connect inner city with the suburban area. The proportion of suburban inhabitants is much larger than in inner cities since

Organic urban and new township development

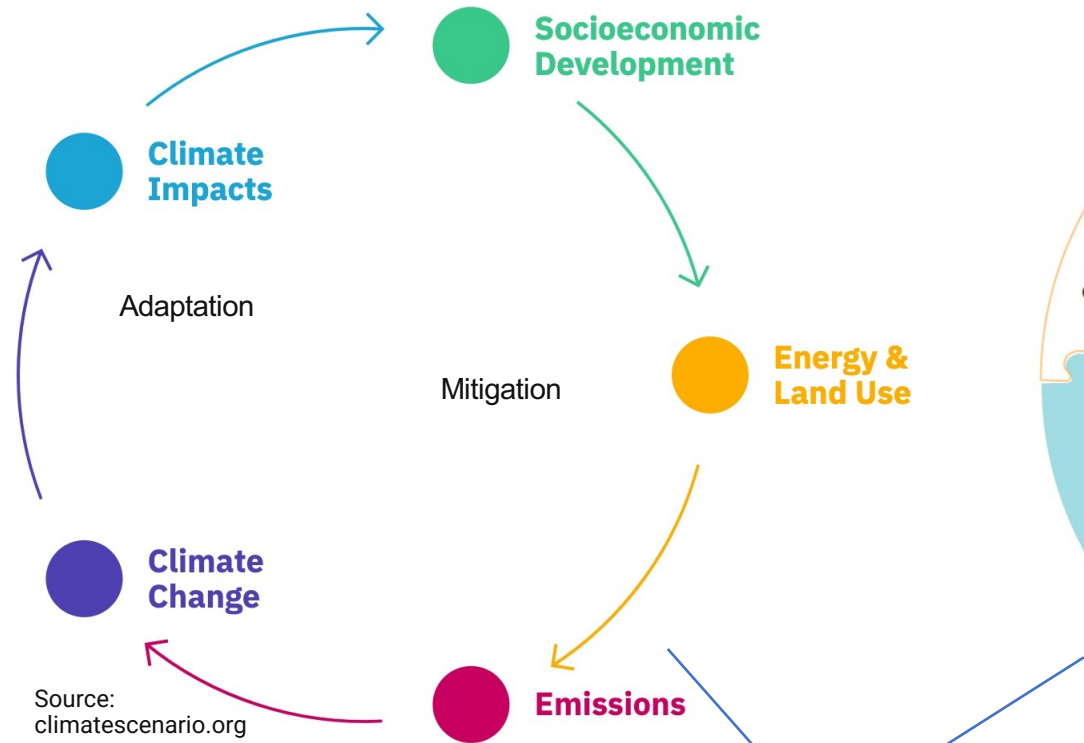


## Spatial Planning Guidances are available at national level

Example: SSP-RUDI (Oct 2017 – Aug 2018)



# Synchronizing the planning cycle with climate change scenario: An emerging integrative planning tool



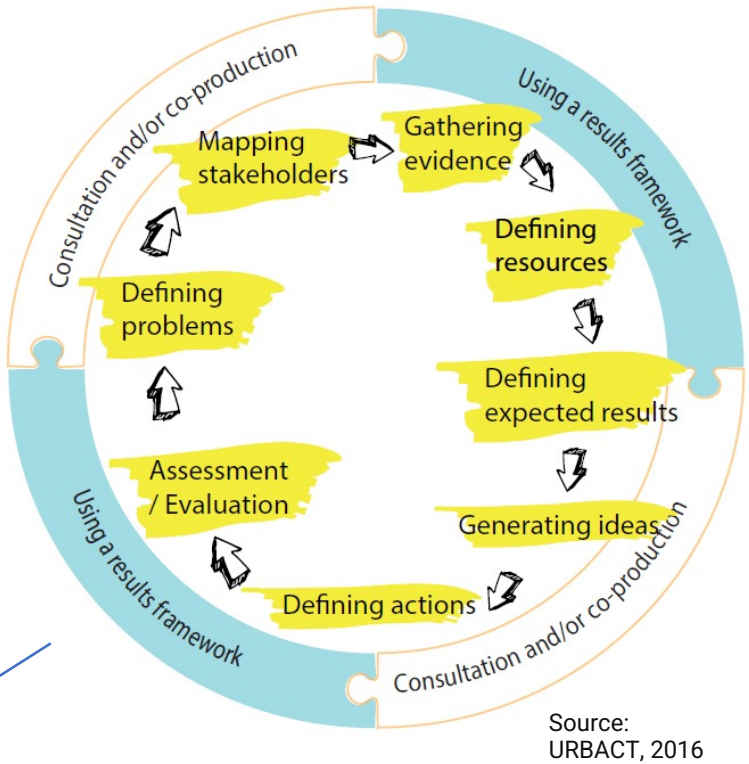
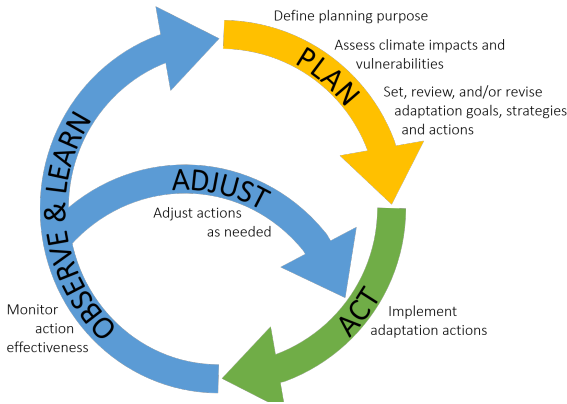
**Climate change:** minimum 30 years period

Baseline year: 2025  
Projection year: 2055

How we adapt to the changing climate?

Extreme event is one part to lead to urban preparedness

## Climate Change Adaptation Cycle

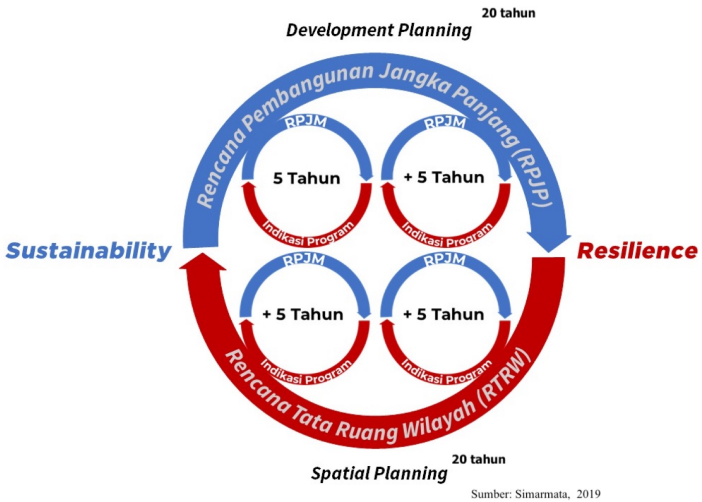


**Planning Cycle:**  
20 years spatial planning (RTRW)

25 years and 5 years of development planning (RPJPD/RPJMD)

Linking the Government programs to non-state actors initiatives

Focusing to the impacted area and vulnerable group



## Multi-Drivers:

- Net zero emission
- Middle-income trap
- Demographic Bonus
- Digital transformation
- Rapid urbanization
- Food security



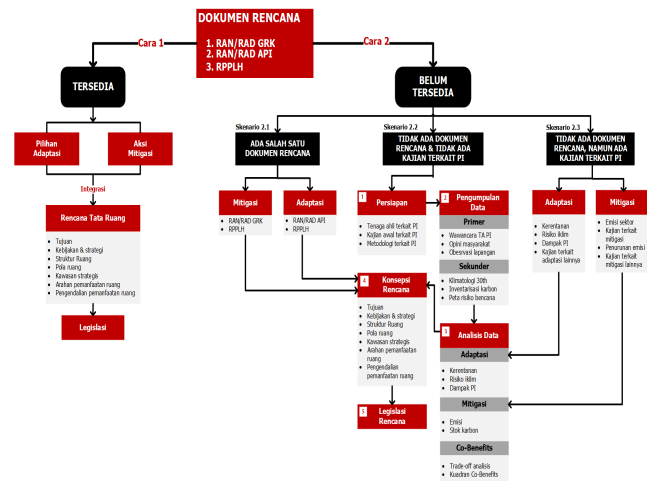


# Why climate co-benefits is matter



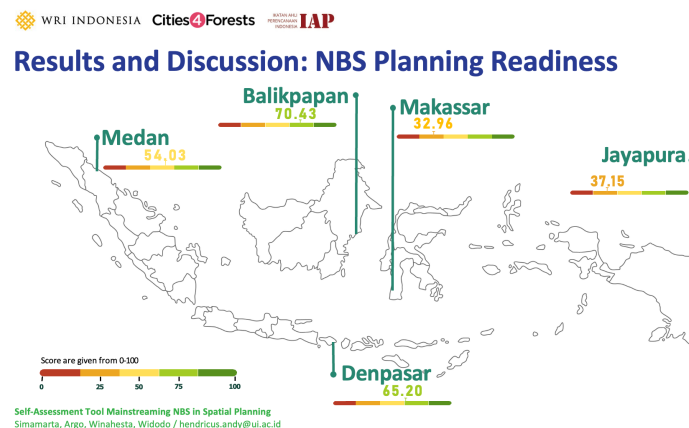


# Urban Climate co-benefits: MASP, IAP and partners (ADB, ICLEI, WRI)



Self-assessment tool for mainstreaming climate co-benefits into spatial planning procedures

Regulatory supports



Promoting nature—based solutions into spatial planning practices as an entry point for climate change co-benefits

Technical assistance

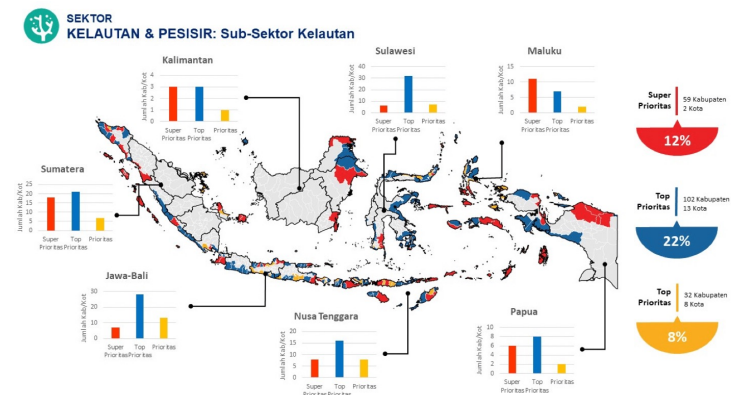
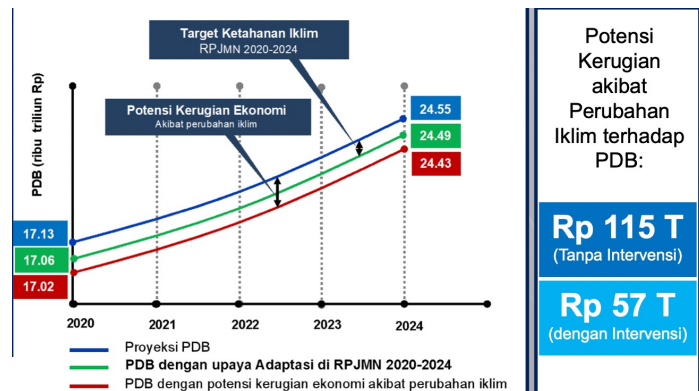
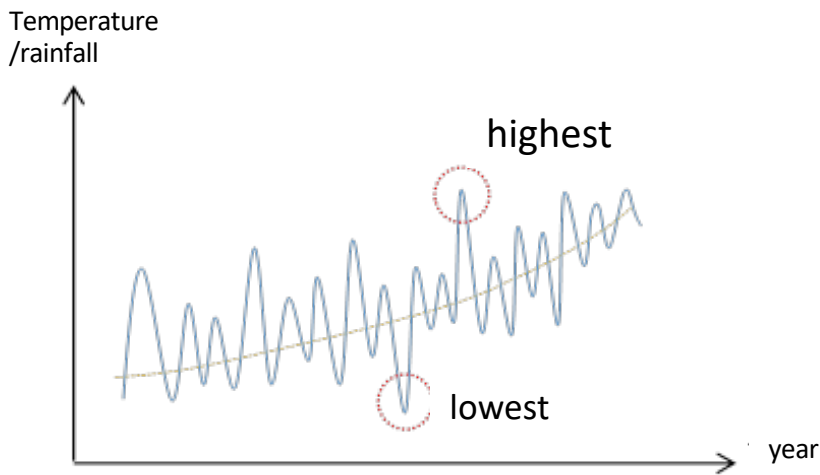


Capacity Building on urban climate resilient spatial planning for city governments

Capacity building



# Monetizing potential loss and damage (impacts of climate change) as the key performance indicators of climate resilient development – BAPPENAS



## Illustration climate hazards

### Increased Frequency and intensity

e.g. Extreme rainfall, extreme high tide, drought, etc.

### Rapid and Slow on Set

e.g., sea level rise, increased temperature, ocean acidification, etc.

## Monetizing climate hazards

### Economic Valuation

Linking future scenario of climate hazards to potential GDP losses. Using four sectors: water, agriculture, marine, and public health.

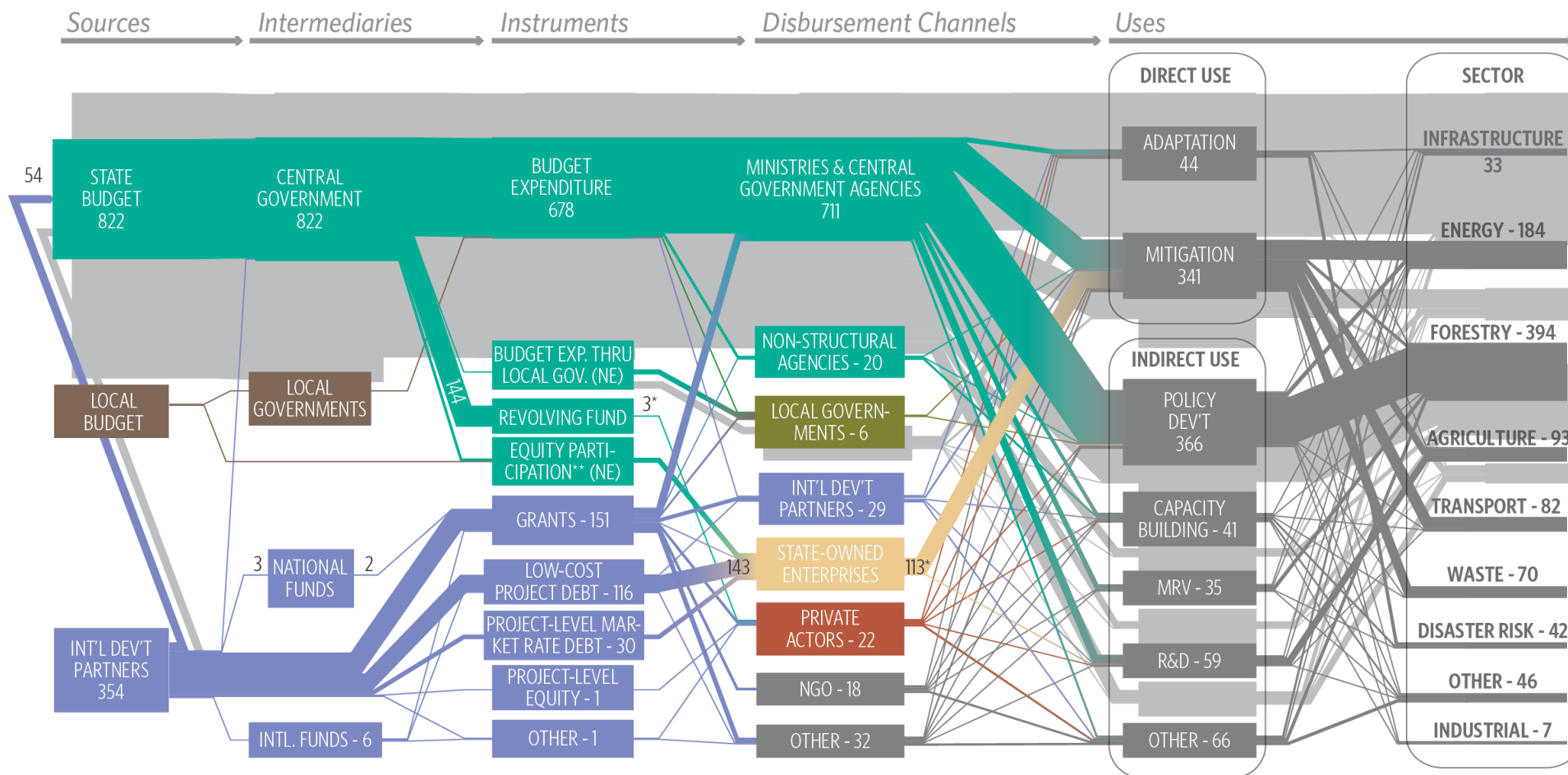
## Prioritized intervention areas and measurable actions

### Planned adaptation

Knowing how to reduce potential losses or damages in the future (preventive adaptation).



# Linking spatial development planning with creative financing scheme, incl. global fund



Engaging private sectors contribution when apply building permits

Embracing philanthropies supports

Accessing global funds: e.g., adaptation fund, GCF, GEF, etc.

In 2011, 40% of the total climate finance went to 'direct' to support mitigation (IDR 3,004 billion (USD 341 million)) and adaptation (IDR 384 billion (USD 44 million))

Source: CPI, 2014

## Urban Design Standard

Re-arrange street furniture: menambahkan fasilitas kebersihan, cctv untuk pengawasan kepadatan pejalan kaki, halte yang lebih longgar/terbuka, dll

Re-shape the public café, meeting pot, pedestrian facilities, etc.

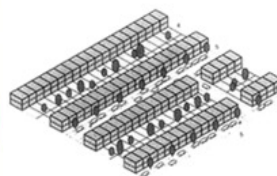


## Spatial Density Standards

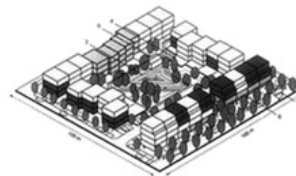
Providing back-up room/floor for quarantine purpose in the high-rise building or dense settlement, with adequate equipment

Retrofitting with green and open space

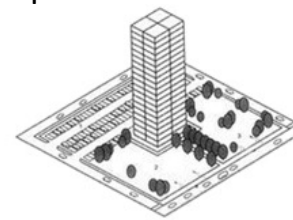
Preparing contingency plan e.g. city quarantine to have more effective and efficient health management



75 dwellings per hectare



75 dwellings per hectare



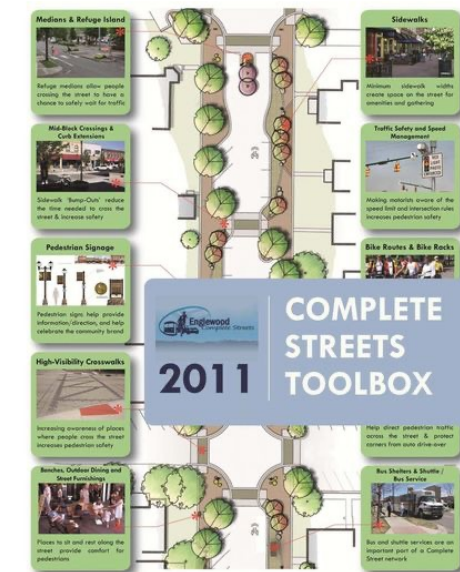
75 dwellings per hectare

## Urban Facilities Standards

Adding multi-functional building at the community level that designed for health emergence situation e.g. isolation room

Revisiting healthcare system either in numbers, facilities, and distribution for urban and rural communities

Adding more signage for public open space



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Standar Nasional Indonesia

SNI 03-1733-2004

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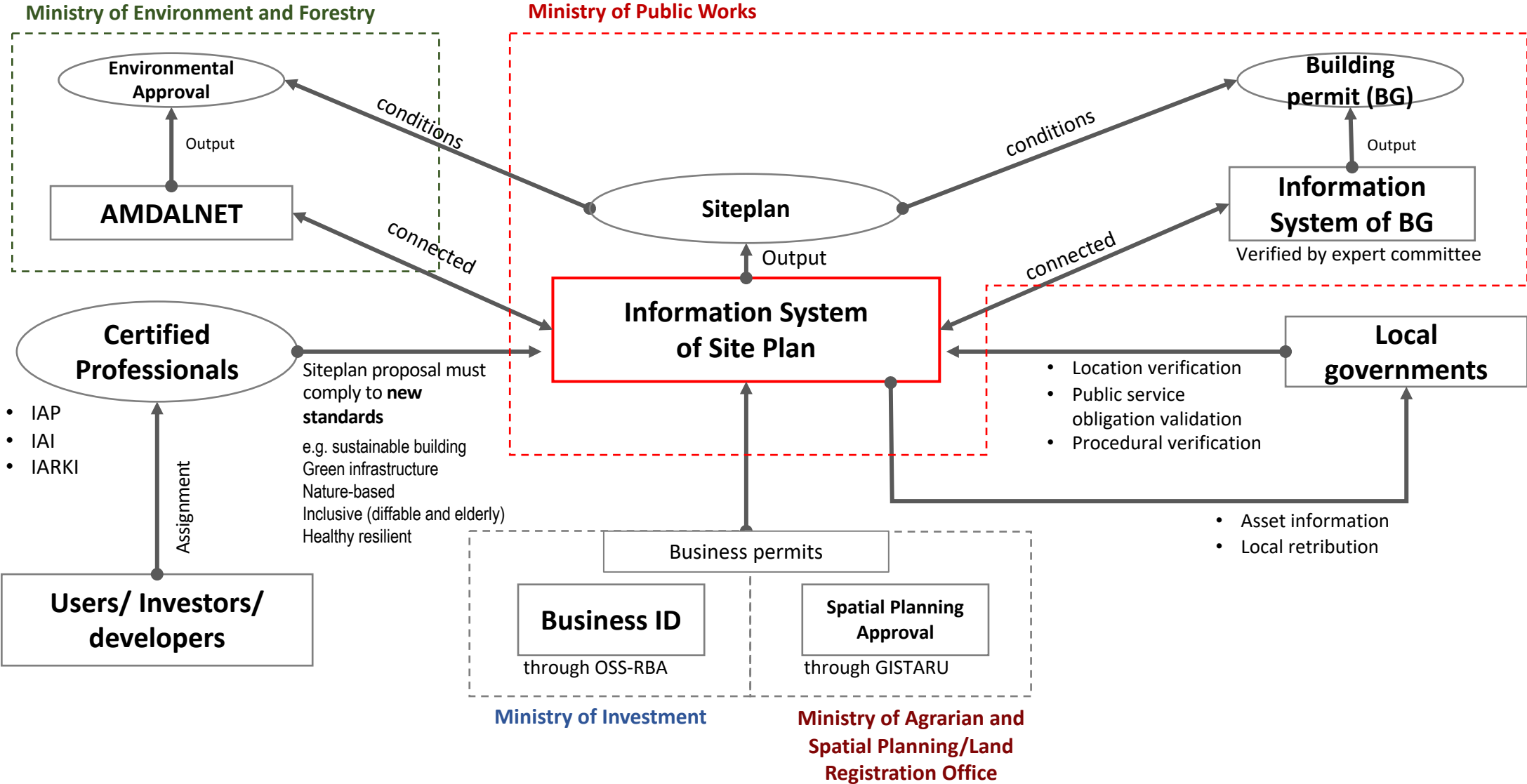
HEALTHY CITIES  
AND THE CITY  
PLANNING  
PROCESS

A BACKGROUND  
DOCUMENT ON LINKS  
BETWEEN HEALTH AND  
URBAN PLANNING

by  
L.J. Duijn & A.K. Sanchez



Integrating environmental safeguards (EIA), spatial planning, zoning and building regulation into one digital platform for ease of doing business and investments



# From planning to controlling: Managing urban informality and sustainability performance

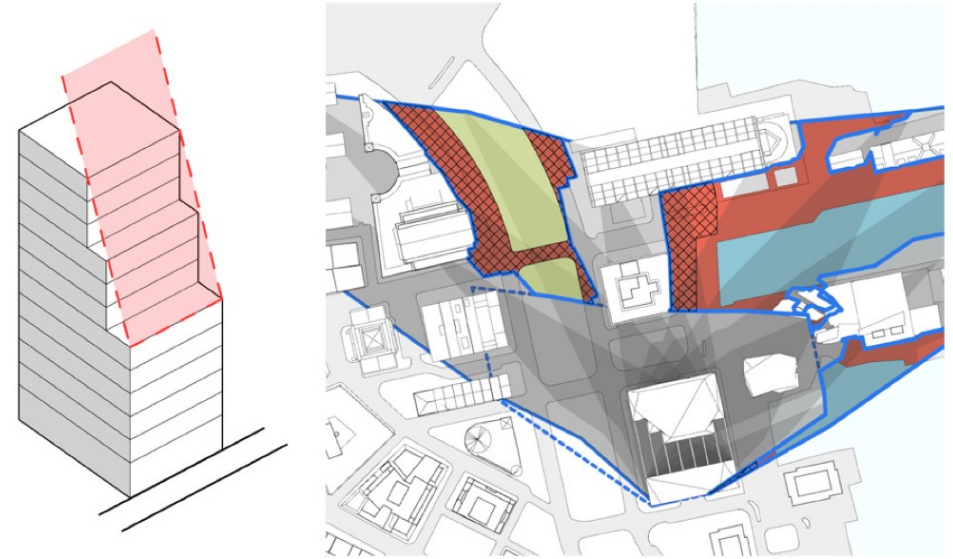
- Defining the outcome of spatial (re)development
- Demonstrating the performance of space for people
- Establishing the criteria
- Testing and calibrating the criteria at site and regional level
- Creating self-assessment tool for compliance standards and enforcement

Remarks:

Incremental vs. Comprehensive Approach

Building vs. area performance

Urban vs. settlement assessment area

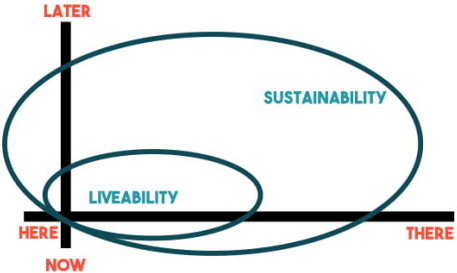


**Figure 1.** NYC Sky Exposure Plane (left), Boston shadow regulation analysis (right)





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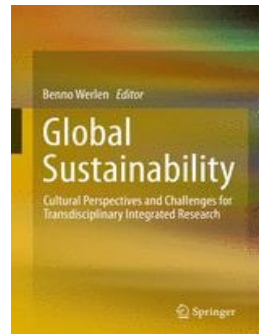
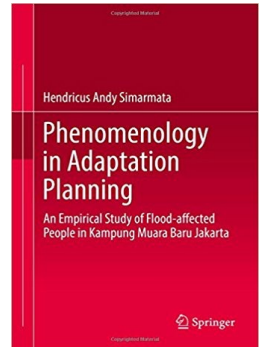
A certified urban planner who has 20 years of experience in research, consultancy, and advocacy in the field of sustainable urban development. In the last ten years, he has focused his works to develop an intertwining concept of social and economic resilience and environmental sustainability for various development projects in Southeast Asian region, mostly in Indonesia. Mr. Simarmata earned his Dr.Phil (Ph.D.) in Development Studies from one of the leading research universities in Germany, The University of Bonn in August 2016. Following completion of his doctoral studies, Mr. Simarmata has directed the Research Center of Urban and Regional Studies, Universitas Indonesia (PRPW-UI) and has been working for numerous development projects from both international organizations and Indonesian government offices. Since November 2019, he has been elected as the President of the Indonesian Association of Urban and Regional Planners (IAP)

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Latest publication: <http://dx.doi.org/10.1007/978-981-10-5496-9>

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