



(Swedish and Finnish adaptation policies) Examples from urban adaptation in Helsinki

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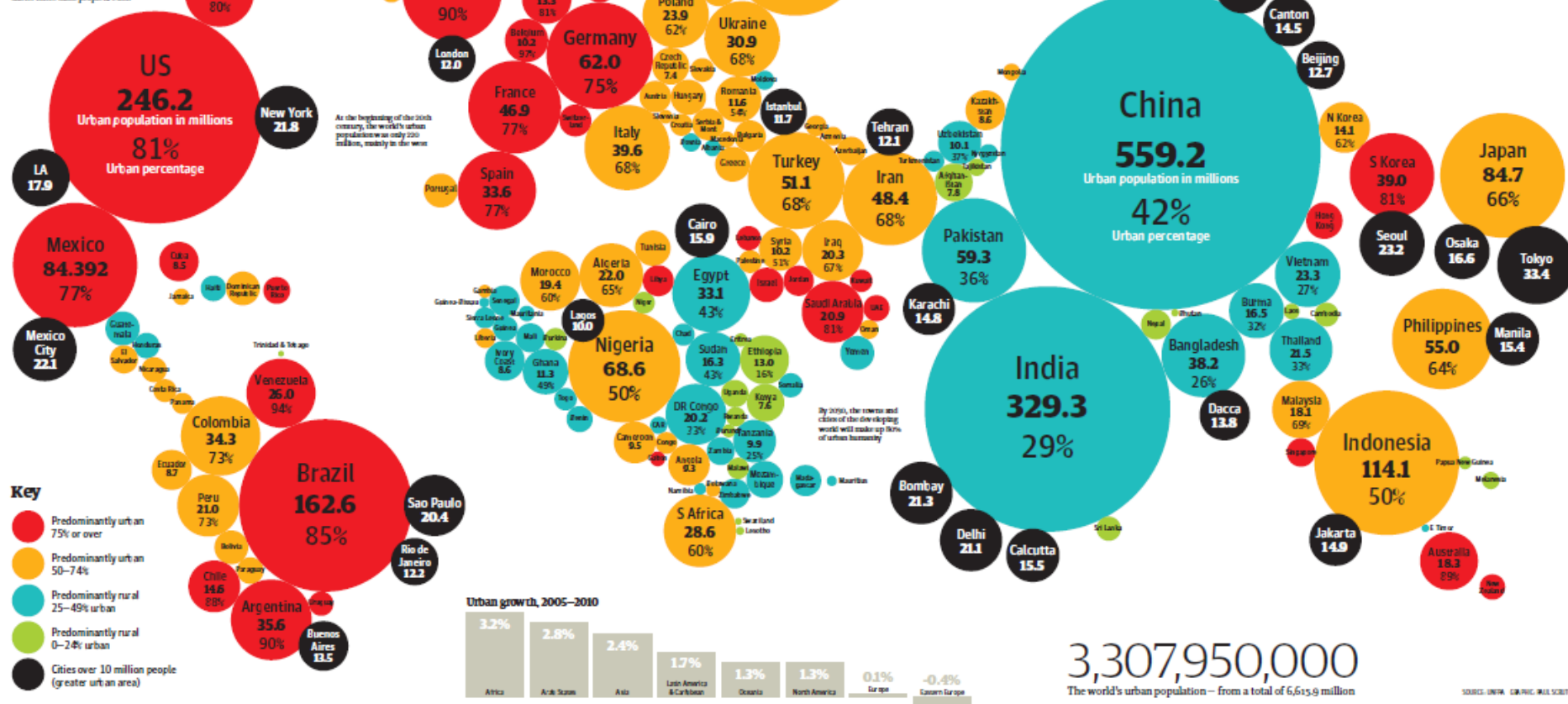
ENFRA-Estonian Ima

Seminar on Capacity Building on Climate Adaptation

3-4 March 2015 Tallinn

The new urban world

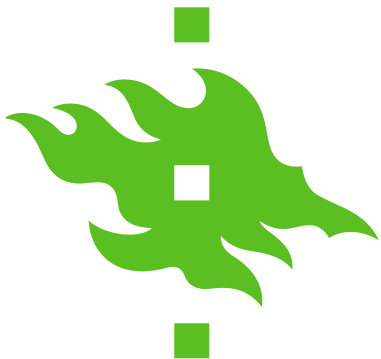
The earth reaches a momentous milestone by next year, for the first time in history, more than half its population will be living in cities. These 5.5 billion people are expected to grow to a billion by 2050 – and unique rings of the world show where these people live now.



3,307,950,000

The world's urban population – from a total of 6,615.9 million

SOURCE: UNFPA, CIA, PANG, AND SCOTT



IN 2025

70%

of Chinese will live in cities with more than 1 million people

46%

of Indians will live in cities with more than 1 million people

SPEED OF URBANIZATION BY 2030

CHINA

221

number of cities with more than 1 million people



China will add
400

million city dwellers



more than U.S. population

INDIA

68

number of cities with more than 1 million people

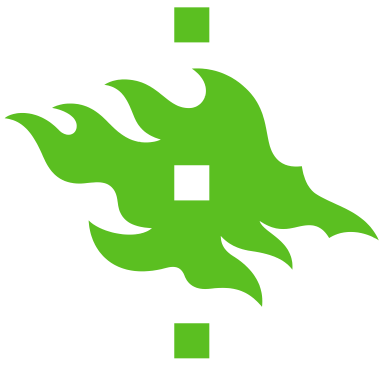


India will add
215

million city dwellers



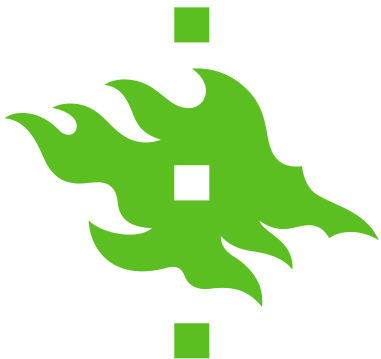
more than population of Spain



The importance of urban areas in the context of climate change



- Less than two percent of the Earth's surface is occupied by urban areas
- Urban areas accommodate over half of the world's population
- Urban areas account for 70 percent of the world's GDP
- Cities consume more than two thirds of global energy
- Cities produce more than half of the world's greenhouse gas emissions



Coordination or not?

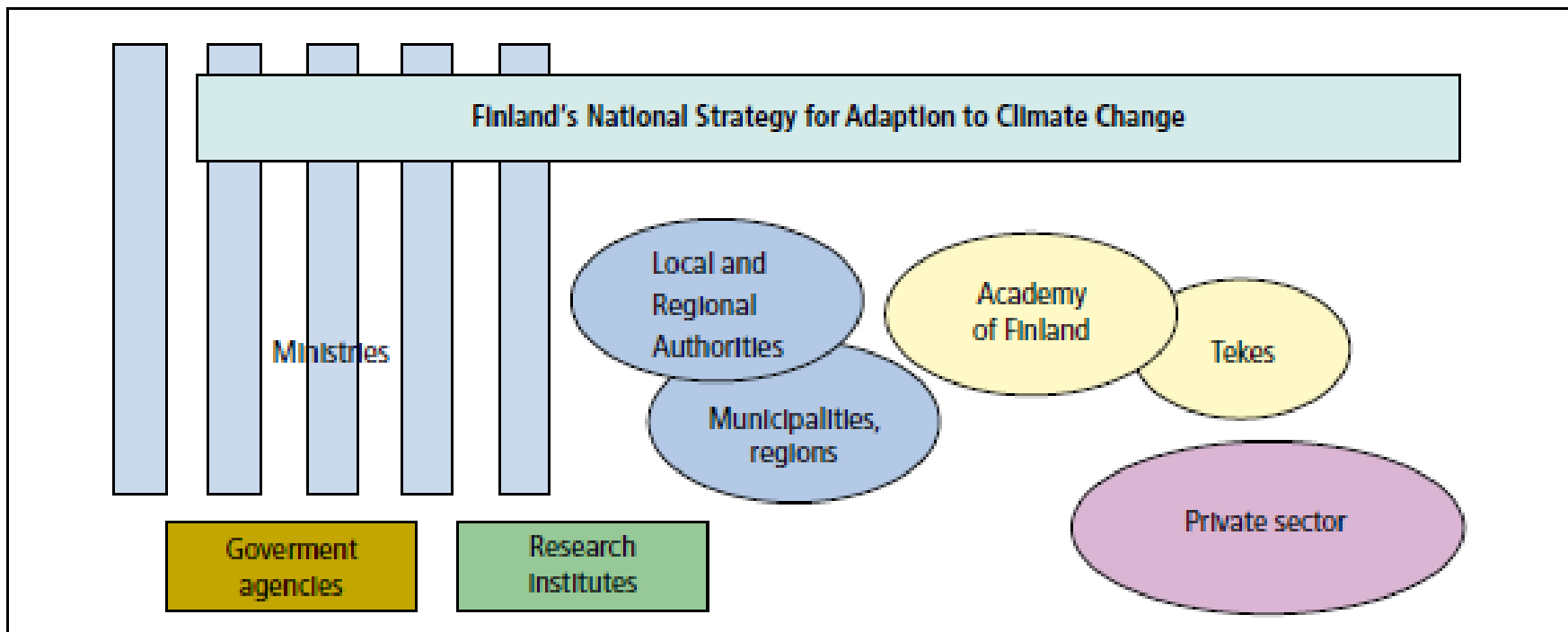


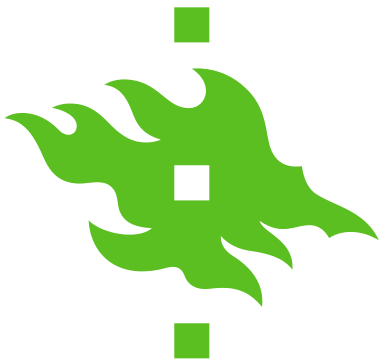
Figure 1. Finland's National Strategy for Adaptation to Climate Change is implemented in multisectoral cooperation, coordinated by the Ministry of Agriculture and Forestry.



Helsingin seudun ympäristöpalvelut -kuntayhtymä
Samkommunen Helsingforsregionens miljötjänster
Helsinki Region Environmental Services Authority

HELSINGIN YLIOPISTO
HELSINGFORS UNIVERSITET
UNIVERSITY OF HELSINKI

Helsinki Metropolitan Area Climate Change Adaptation Strategy



The process of the Helsinki Region Adaptation strategy

Processes and products

- 2009**
 - Expert interviews
 - Background reports
 - Start of steering group work
- 2010**
 - Report of adaptation strategy background studies
 - Workshops: impacts of climate change and preliminary policies
 - 1st draft strategy
- 2011**
 - Commenting of draft strategy
 - Basic content of strategy
 - Specification of strategy guidelines
- 2012**
 - 2nd draft strategy
 - Public hearing
 - Completion of strategy
 - Decision by HSY Board
- Monitoring of strategy implementation and updating of background information

Actors and Interestgroups

- Executive group:
Cities of Helsinki, Espoo, Vantaa and Kauniainen, HSY, HSL, Ministry of the Environment, Ministry of the Interior, Rescue services, Association of Finnish Local and Regional Authorities
- Other interest groups:
Ministry of Agriculture and Forestry, Ministry of Transport and Communications, Uusimaa ELY Centre
- Research institutes
- Projects: Julia 2030, BaltCICA

Other operating environment

- Research and body of knowledge of the IPCC, Finnish Meteorological Institute, Finnish Environment Institute and other research institutes
- EU White Paper on climate change adaptation
- Finnish National climate change adaptation strategy and ISTO research programme
- ELY Centres: planning of flood risk management
- Action programme for adaptation for the environmental administration
- Preparedness planning by rescue services
- Ministry of the Interior:
Internal security programme
- Preparation for natural disasters

Figure 1. Timetable for drawing up the strategy, participants and operating environment



Strategic starting points and policy guidelines for climate change adaptation

Climate change mitigation is of primary importance in the region. Adapting to the impacts of climate change is also necessary. Mitigation and adaptation measures must be coordinated.

The public sector takes the initiative in building co-operation with interest groups and strengthening the sharing of climate-related expertise between organisations.

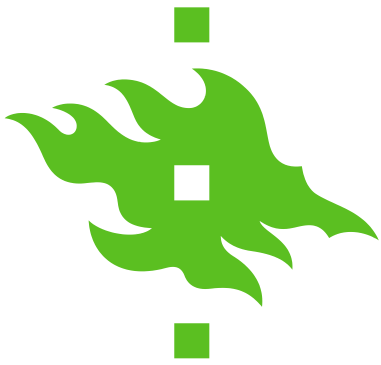
Climate change adaptation is taken as a key starting point in municipal planning, building regulation and guidance and the development of technical networks.

The cities and municipal federations share information about good practices in adapting to climate change.

Functional risks caused by climate change are taken into account in the preparedness strategies of the cities.

The metropolitan area is a forerunner in climate change adaptation.

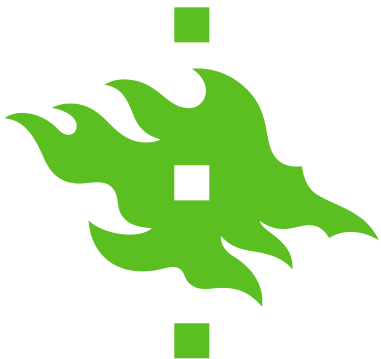
The public sector promotes research into adaptation to supplement the body of knowledge.



Focus areas of work



- Land use
- Traffic and technical networks
- Building and the climate proof local environment
- Water and waste management
- Rescue services and safety
- Health care and social services
- Co-operation in the production and distribution of information



Sectoral example of measures

3.2 Land use

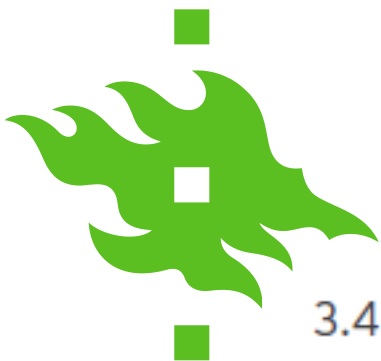
Adaptation policies	Indicator and timetable	Actors
Take the impacts of climate variation, extreme weather events and climate change into account in the land use planning work of municipalities in the Helsinki metropolitan area.	2012 => Land use plans	Cities (city planning)
Take care of the efficiency of ecosystem services and the preservation of biodiversity by developing ecological contacts and a greenbelt network*.	2012 => Area and share of forests and greenbelt areas	Cities (city planning, technical services, environment centre) Forestry Development Centre Tapio Uudenmaan liitto



Sectoral example of measures

3.3 Traffic and technical networks

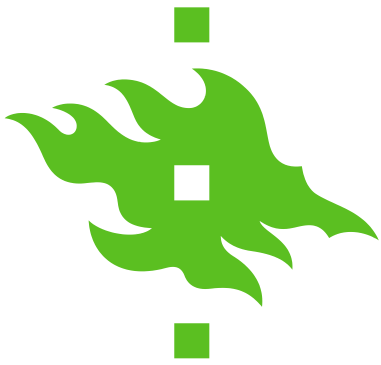
Adaptation policies	Indicator and timetable	Actors
In the planning of public transport in the Helsinki metropolitan area, take account of the major risks posed by extreme weather events, sea level rise and climate change. In preparedness planning for public transport, prepare for traffic management in cases of disruption and emergency.	2012 => Public transport management plan	HSL Cities (responsible for public transport) Partners in co-operation: Cities (city planning, technical services) The Finnish Transport Agency The Centre for Economic Development, Transport and the Environment
In the planning of the municipal transport network and other technical networks, take account of the risks of extreme weather events and climate change.	2013 => Traffic system plan	Cities HSL Partners in co-operation: The Finnish Transport Agency The Centre for Economic Development, Transport and the Environment Companies
Develop public transport on-call services and customer communication at the Transport Information Centre to real-time via different channels.	2013 => Customer feedback, experiences of users	HSL Partners in co-operation: The Finnish Transport Agency The Centre for Economic Development, Transport and the Environment Different authorities



Sectoral example of measures

3.4 Building and climate proof local environment

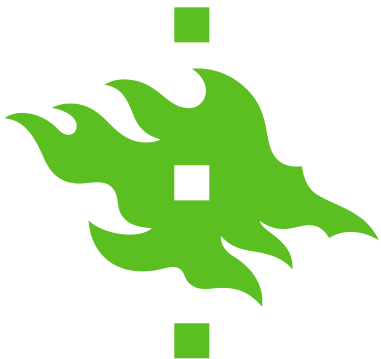
Adaptation policies	Indicator and timetable	Actors
Participate in a project studying the scenarios of sea level rise and their probabilities.	2012-2013	Ministry of Agriculture and Forestry, Ministry of the Environment, Ministry of Transport and Communications, Finnish Meteorological Institute, Finnish Environment Institute, Centre for Economic Development, Transport and the Environment, STUK, City of Pori, City of Helsinki, HSY
Check the minimum heights for construction based on updated sea level scenarios and guidelines.	2013=> Building codes, RT-cards	Cities (city planning, building inspection) Partners in co-operation: Finnish Meteorological Institute Ministry of Agriculture and Forestry, Ministry of the Environment, Ministry of Transport and Communications The Finnish Transport Agency The Centre for Economic Development, Transport and the Environment
Study the proportion of sealed areas in the metropolitan area, and assess their significance from a perspective of storm water management	2012-2014 Study of sealed areas	HSY Cities (city planning, building control) Finnish Environment Institute



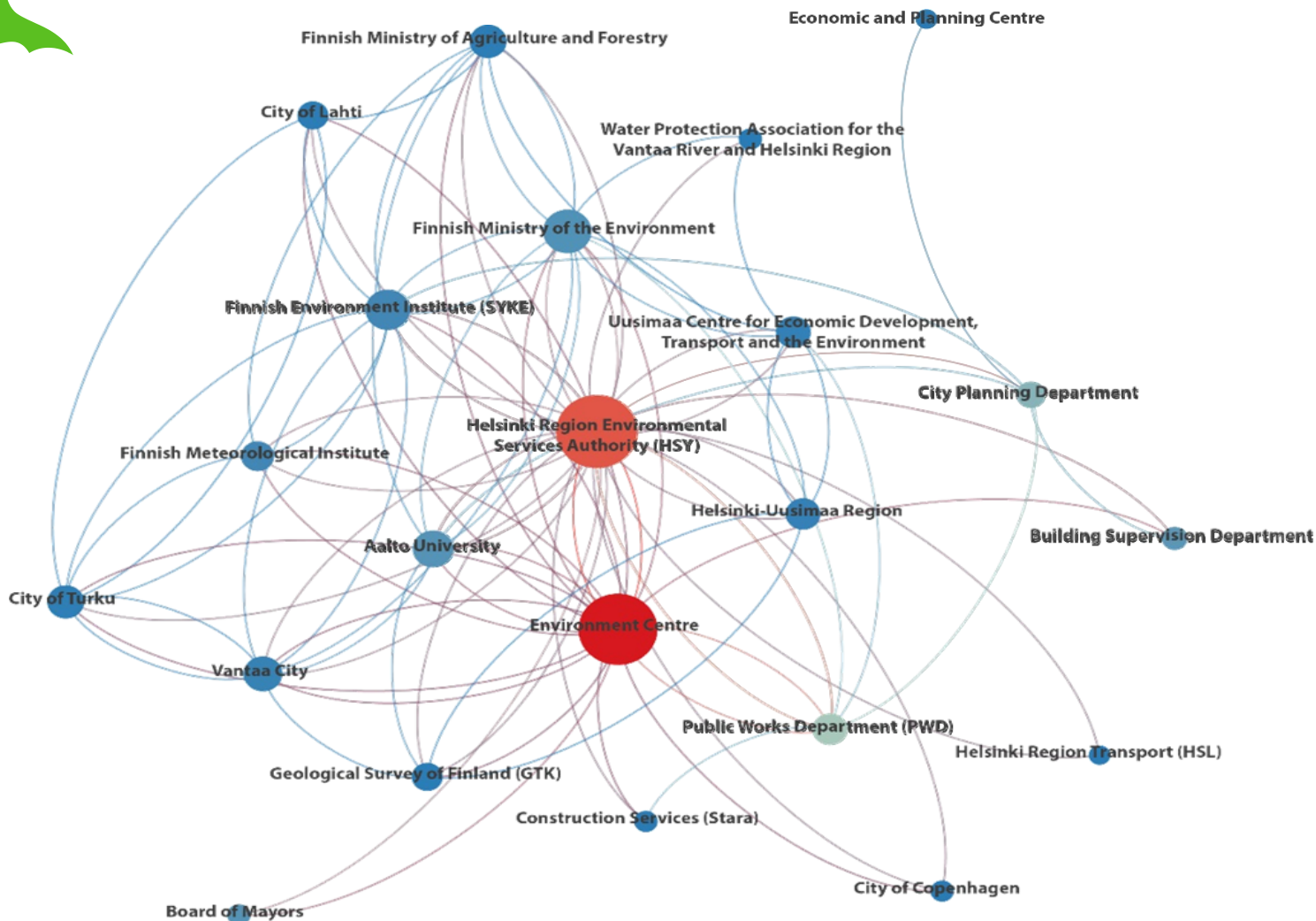
Do strategies translate to implementation?

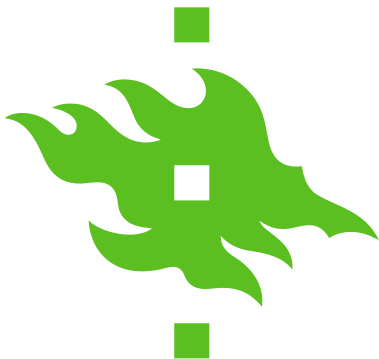


- National level has not (Amundsen et al. 2012, Baker et al. 2012)
 - set a clear assignment of roles to municipalities
 - not set goals for adaptation
 - created regulation
 - financed adaptation processes
- Is there is a misconception that this problem of barriers can be solved at the local level?



Adaptation networks

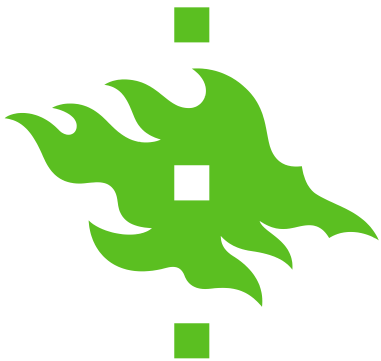




Understanding decision-making realities is crucial



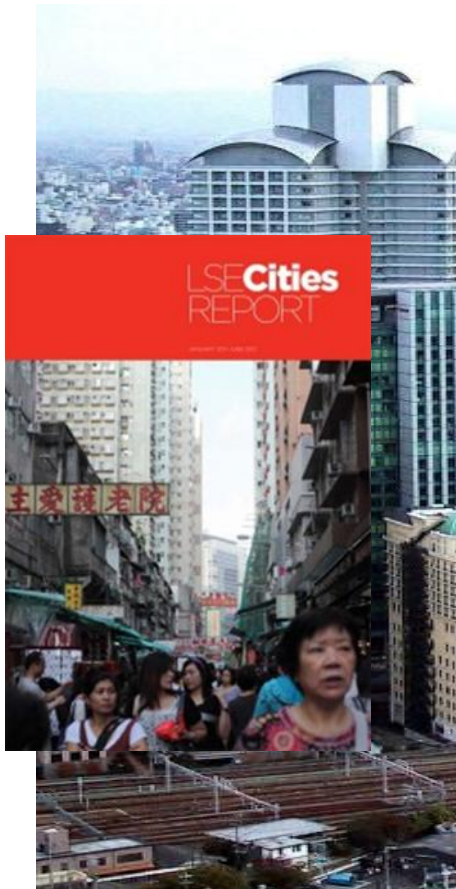
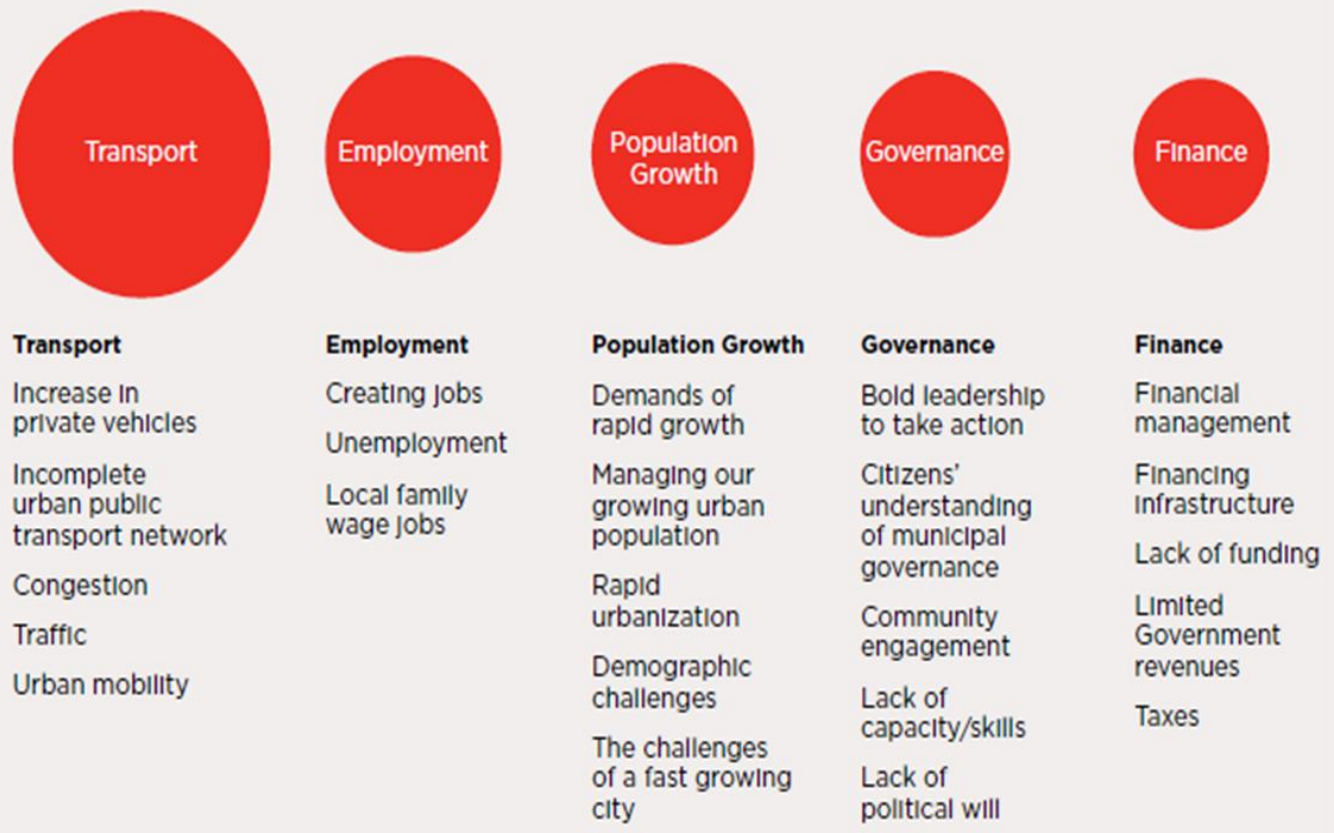
- Theoretical concepts do not relate to the decision 'reality' of stakeholders
- Uncertainty makes stakeholders inclined to wait and see rather than act
- There is a mismatch between the local scale on which many stakeholders operate and information provided by research
- Stakeholders' primary concern to manage current climate variability makes them inclined to wait
- Adaptation research often ignores the fact that adaptation is not the only priority for many stakeholders



Top challenges in cities

Diagram 1: Top three challenges

What are the three most significant general challenges facing your city today?



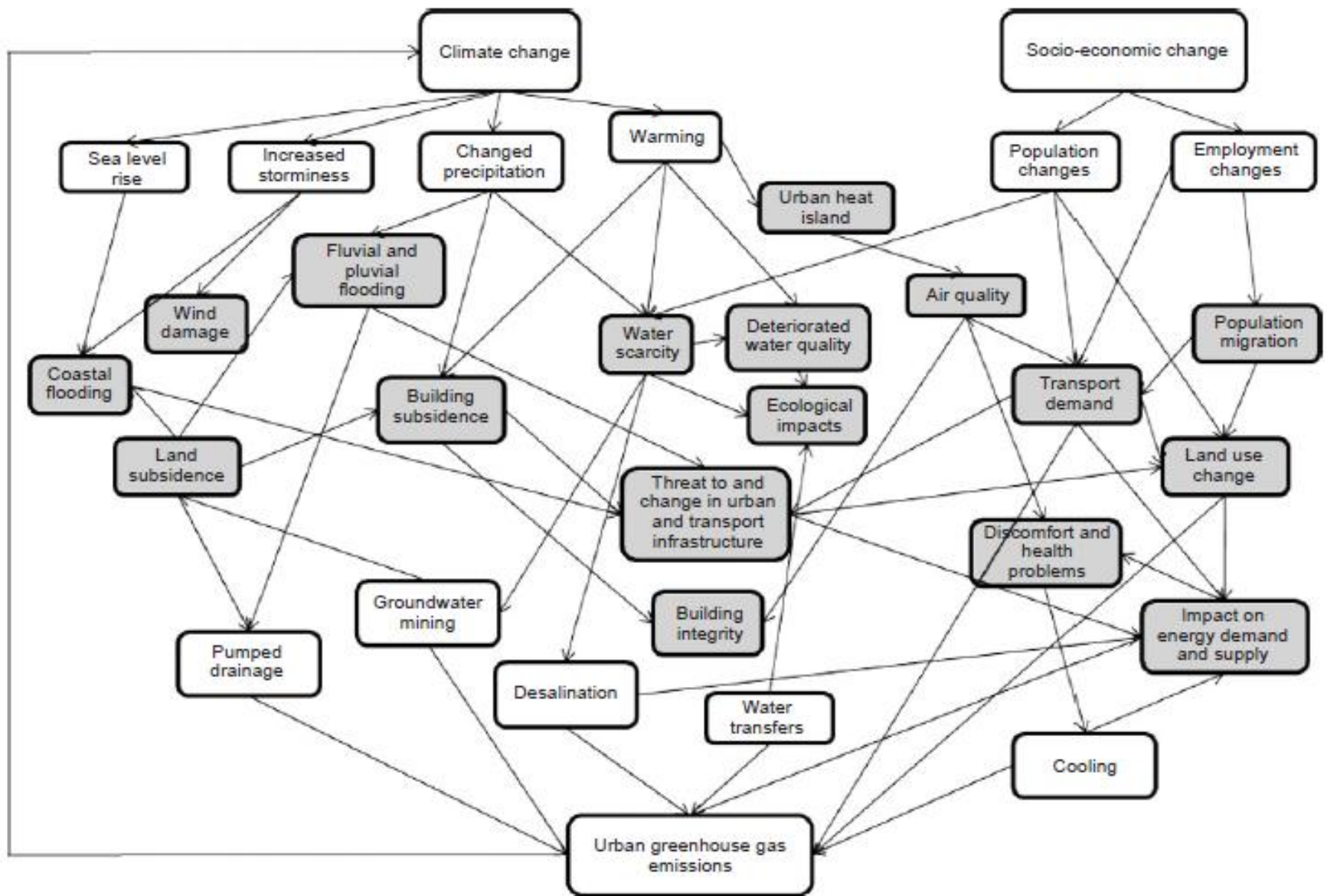
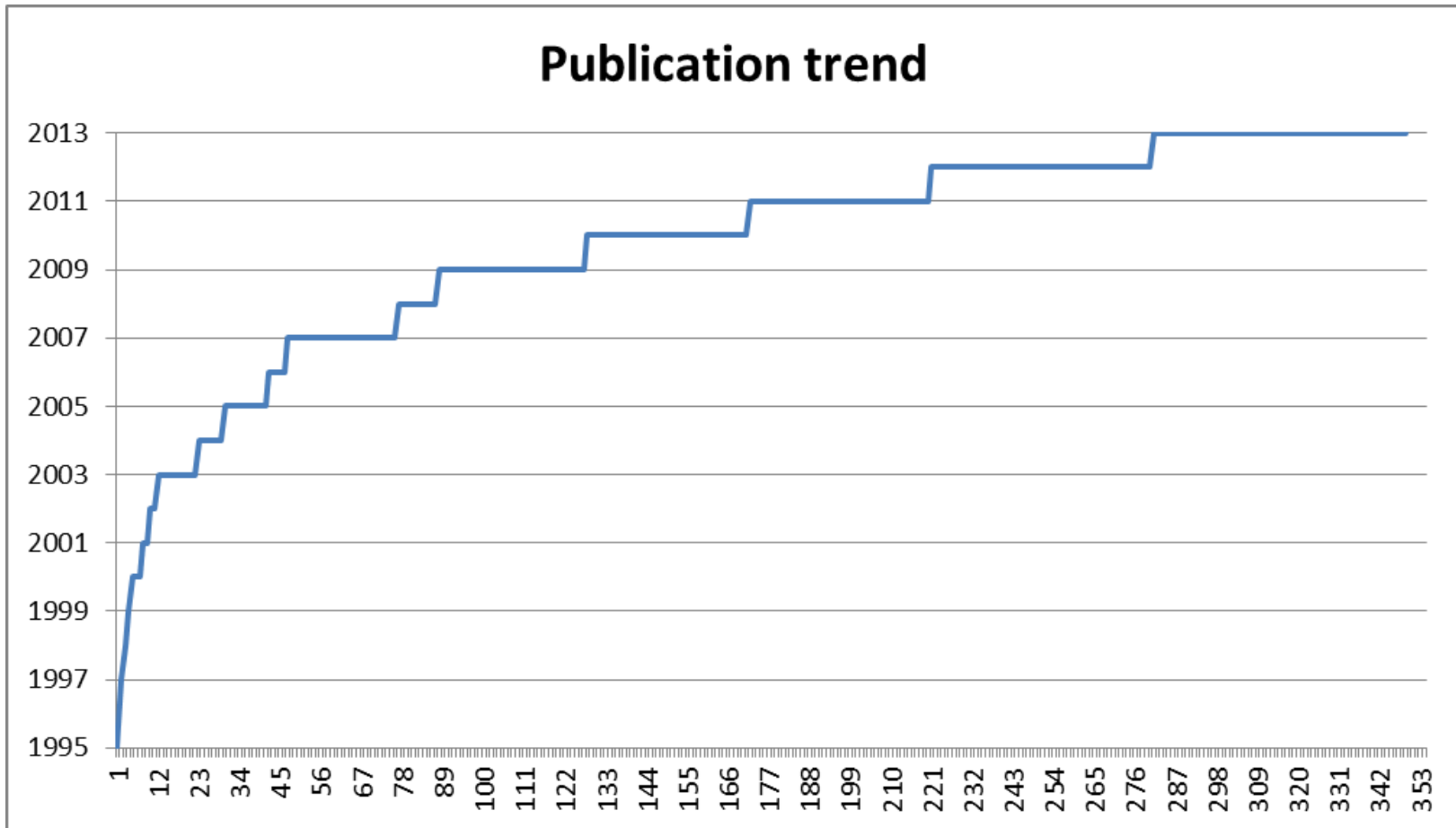
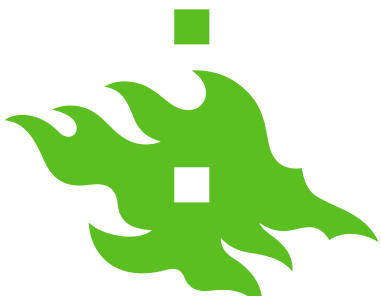


Figure 1. A sample of the many complex interactions and interdependencies between climate change, adaptation and mitigation in cities



Adaptation and mitigation interlinkages





Simplifying complexity

BROKEN

CITIES

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Further Reading:

Sirkku Juhola, Patrick Driscoll, Janot Mendler de Suarez, and Pablo Suarez. "[Social strategy games in communicating trade-offs between mitigation and adaptation in cities.](#)" *Urban Climate*. 4 (2013), 102-116.

Can playing games protect cities from climate change?

By VALERIE MOYE - DECEMBER 9, 2013

Social strategy games can help urban planners and developers learn the complex trade-offs between climate change mitigation and adaptation strategies in cities.

A new study asks whether its time to bring fun and games to climate change research. A group of social scientists led by Sirkku Juhola at the University of Helsinki report that people playing a new board game Broken Cities learned about the complex tradeoffs between climate change mitigation and adaptation decisions facing urban planners and developers. Observing this gameplay also revealed key insights about the criteria players used to make urban planning decisions in the context of climate change.

Understanding how individual actors – from urban planners to real estate developers – perceive and act upon climate change is increasingly crucial, especially as cities begin to take a front seat in the global climate change discourse. Cities contribute over 70% of greenhouse gases and consume more than 65% of energy globally. Furthermore, over 75% of large cities are in coastal areas, making them vulnerable to sea level rise. More than half of the world's

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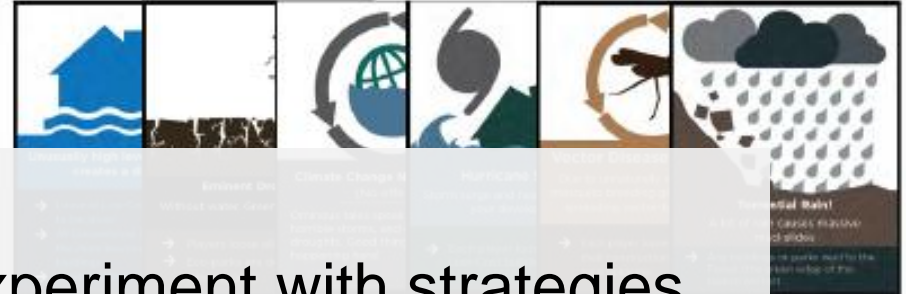
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Cards:

4 Price Cheat Sheets

Price Cheat Sheet	Price Cheat Sheet	Price Cheat Sheet	Price Cheat Sheet
Low Cost Construction Conventional Construction Green Construction Shopping Construction Waste Green Eco-Park Green	Price Cheat Sheet Low Cost Construction Conventional Construction Green Construction Shopping Construction Waste Green Eco-Park Green	Price Cheat Sheet Low Cost Construction Conventional Construction Green Construction Shopping Construction Waste Green Eco-Park Green	Price Cheat Sheet Low Cost Construction Conventional Construction Green Construction Shopping Construction Waste Green Eco-Park Green

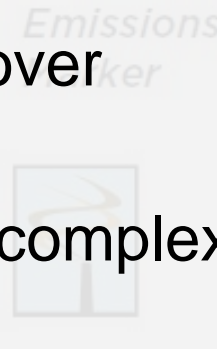
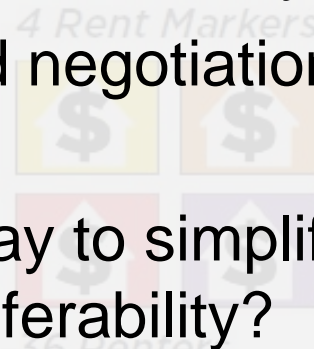
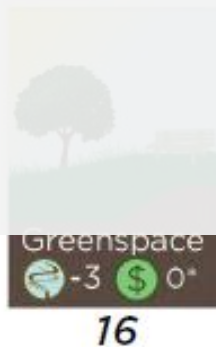
6 Atmospheric Event Cards



Construction



- Players are able to experiment with strategies that they would not otherwise try
- Enables dialogue and negotiation over objectives
- Games are a good way to simplify complexity but what is their transferability?



Counters for Money
(Not included. Poker chips or small stones work well.)





Conclusions



- Urban areas play a key role in tackling the climate change challenge
- Transformations that profoundly change the ecological, social and technological status quo are needed
- Decisions are not taken in isolation and understanding reasons for trade-offs is crucial



Thank you for your attention!

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