PBL Netherlands Environmental Assessment Agency

Lessons learned

from assessment of global climate action by cities, regions and business

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Outline

- Summary of work done by NewClimate, Data Driven Yale, DIE, Bravatnik School/Oxford University and PBL

- Lessons learned

Publications

nature > nature climate change > perspectives > article

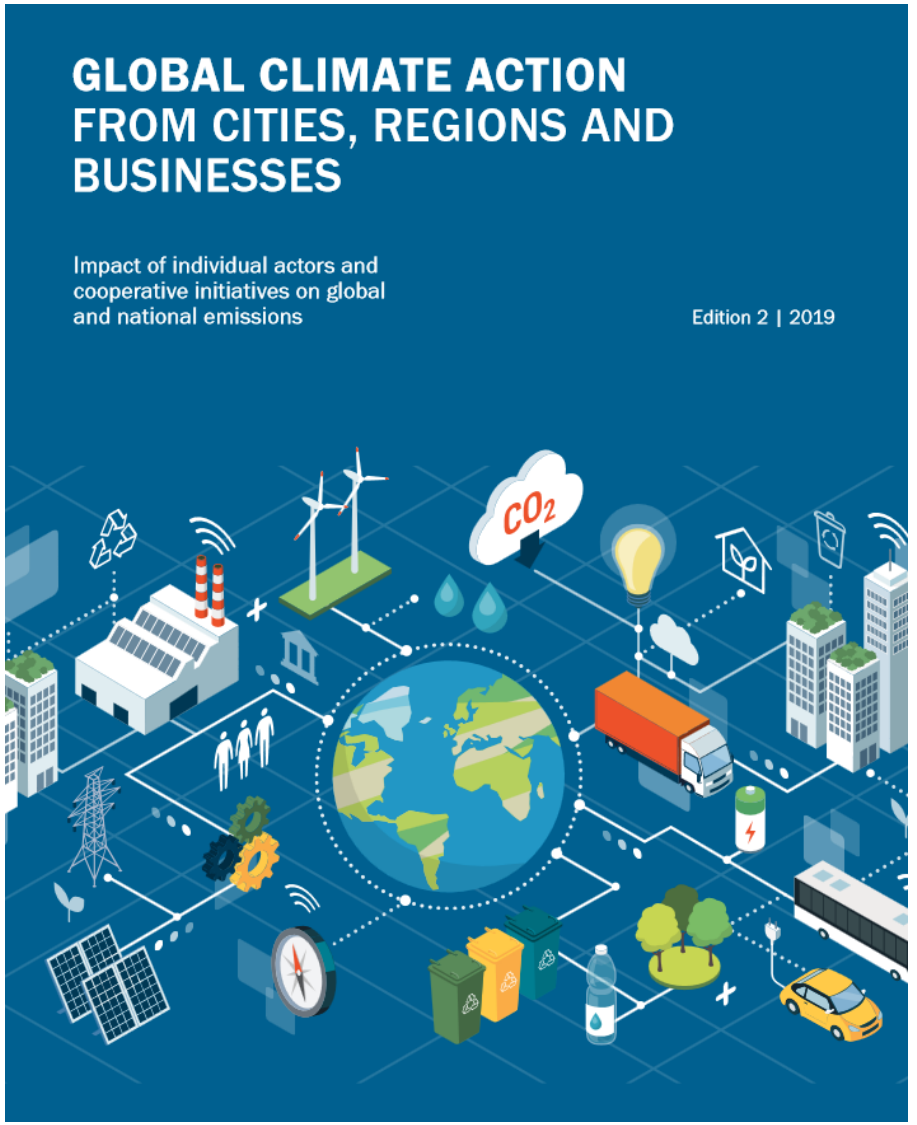
MENU

nature climate change

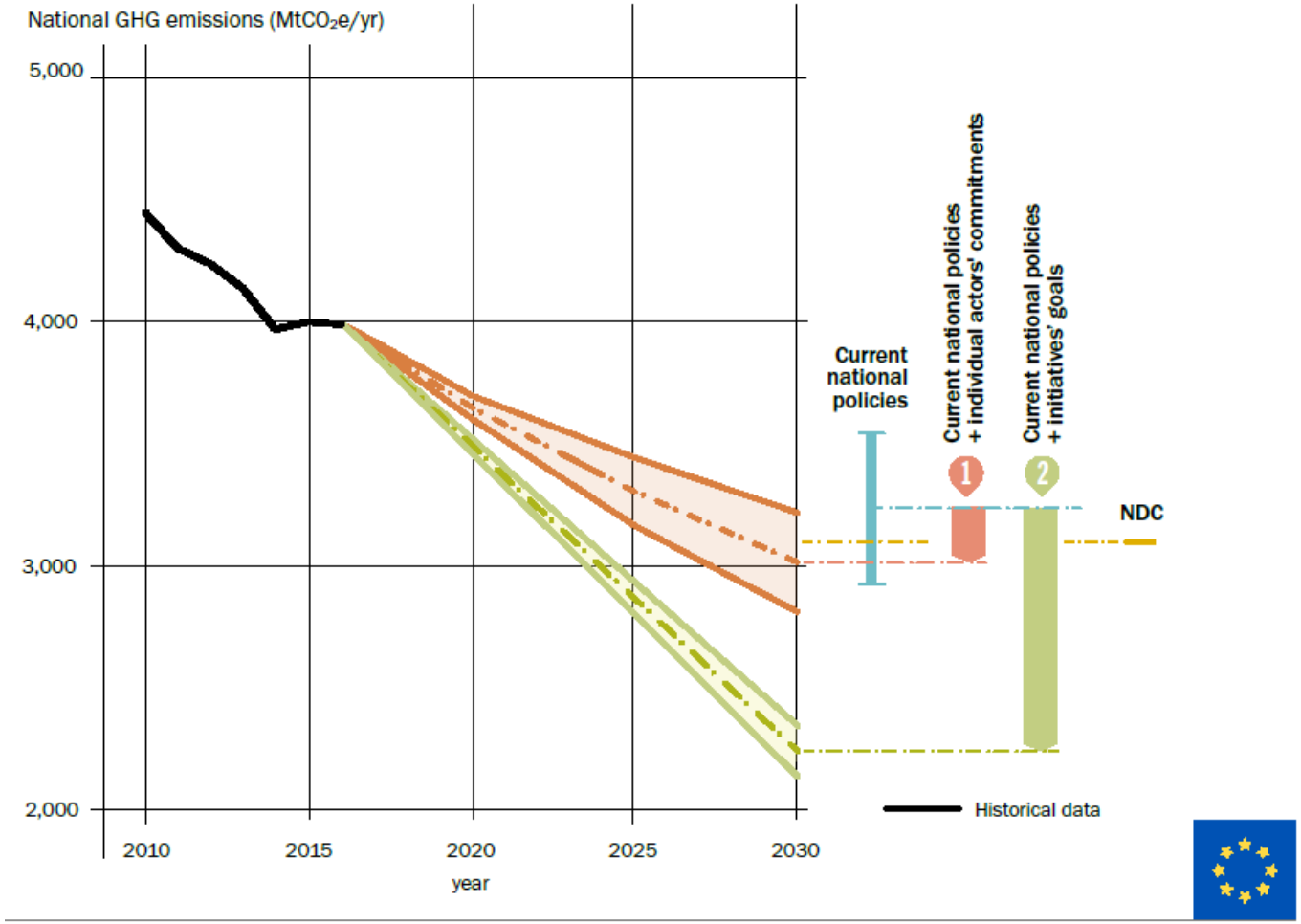
Perspective | Published: 18 December 2018

A research roadmap for quantifying non-state and subnational climate mitigation action

Angel Hsu ✉, Niklas Höhne, Takeshi Kuramochi, Mark Roelfsema, Amy Weinfurter, Yihao Xie, Katharina Lütkehermöller, Sander Chan, Jan Corfee-Morlot, Philip Drost, Pedro Faria, Ann Gardiner, David J. Gordon, Thomas Hale, Nathan E Hultman, John Moorhead, Shirin Reuvers, Joana Setzer, Neelam Singh, Christopher Weber & Oscar Widerberg



EU

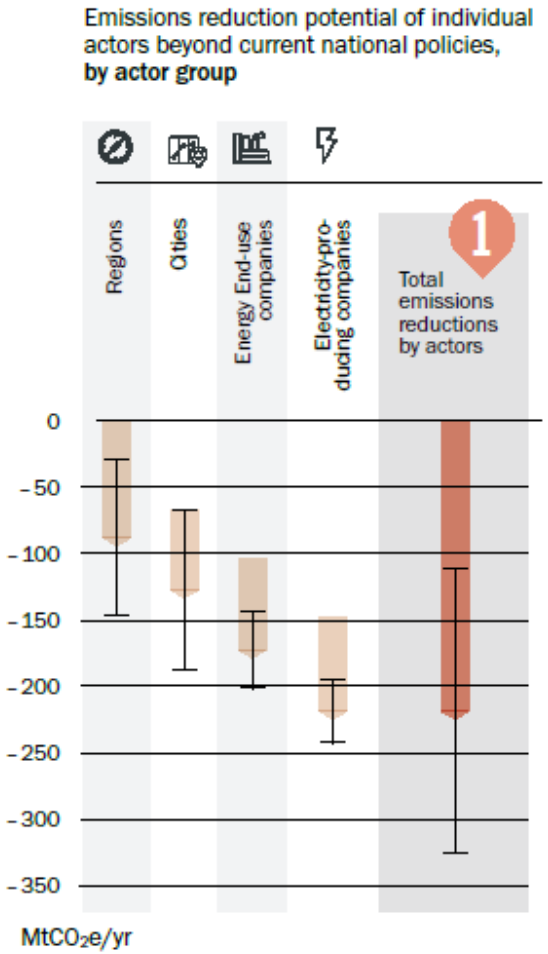


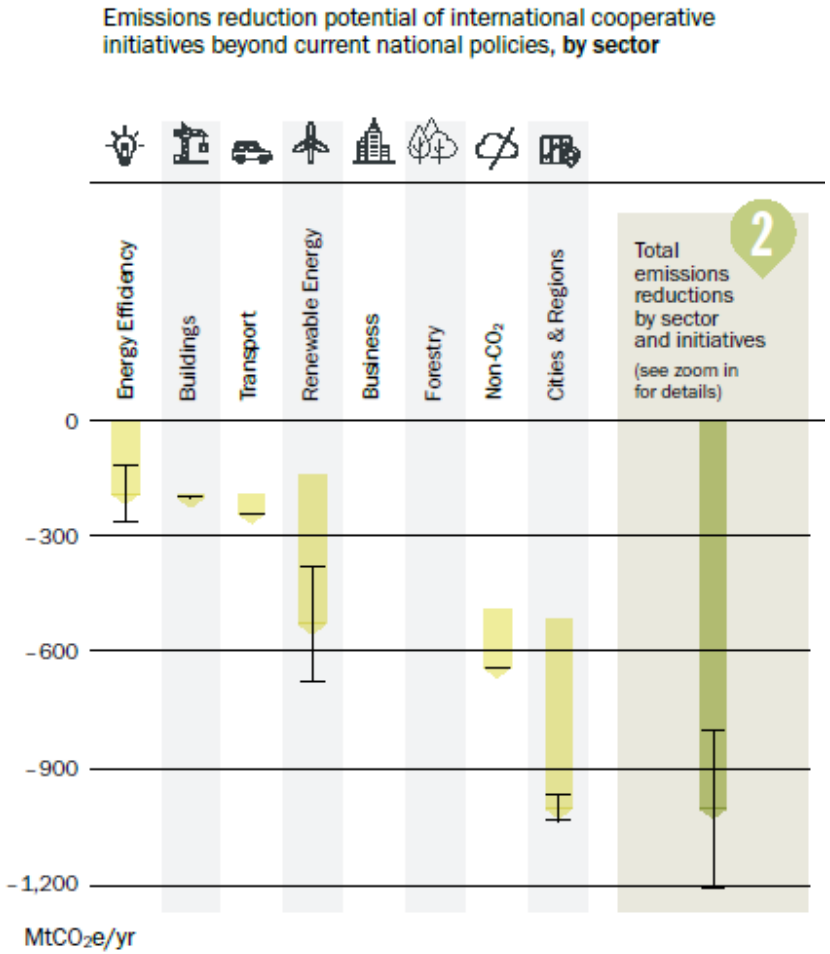
- EU does not address sub-national or non-state actors in NDC
- Individual actors in study cover 1.5 $GtCO_2eq$ by 2015

- Total reductions individual actors 110-320 $MtCO_2eq$ by 2030 below current policies scenario
- International cooperative initiatives could decrease GHG emissions in 2030 by 790-1200 $MtCO_2eq$
- Main assumption: actions do not decrease efforts elsewhere

https://www.pbl.nl/sites/default/files/cms/publicaties/pbl-2019-global-climate-action-from-cities-regions-and-businesses_3815.pdf

EU





- Individual actions
  - 5700 cities (178 mn. People)
  - 31 regions/provinces
  - 780 companies ($5400 bn)
- 17 large initiatives
  - Under2 Coalition → 44 EU signatories
  - Global Covenant of Mayors
  - London, Paris, Stockholm, Barcelona, Copenhagen, Helsinki, Manchester, Nottingham and Heidelberg have pledged to be carbon neutral in or before 2050

https://www.pbl.nl/sites/default/files/cms/publicaties/pbl-2019-global-climate-action-from-cities-regions-and-businesses_3815.pdf

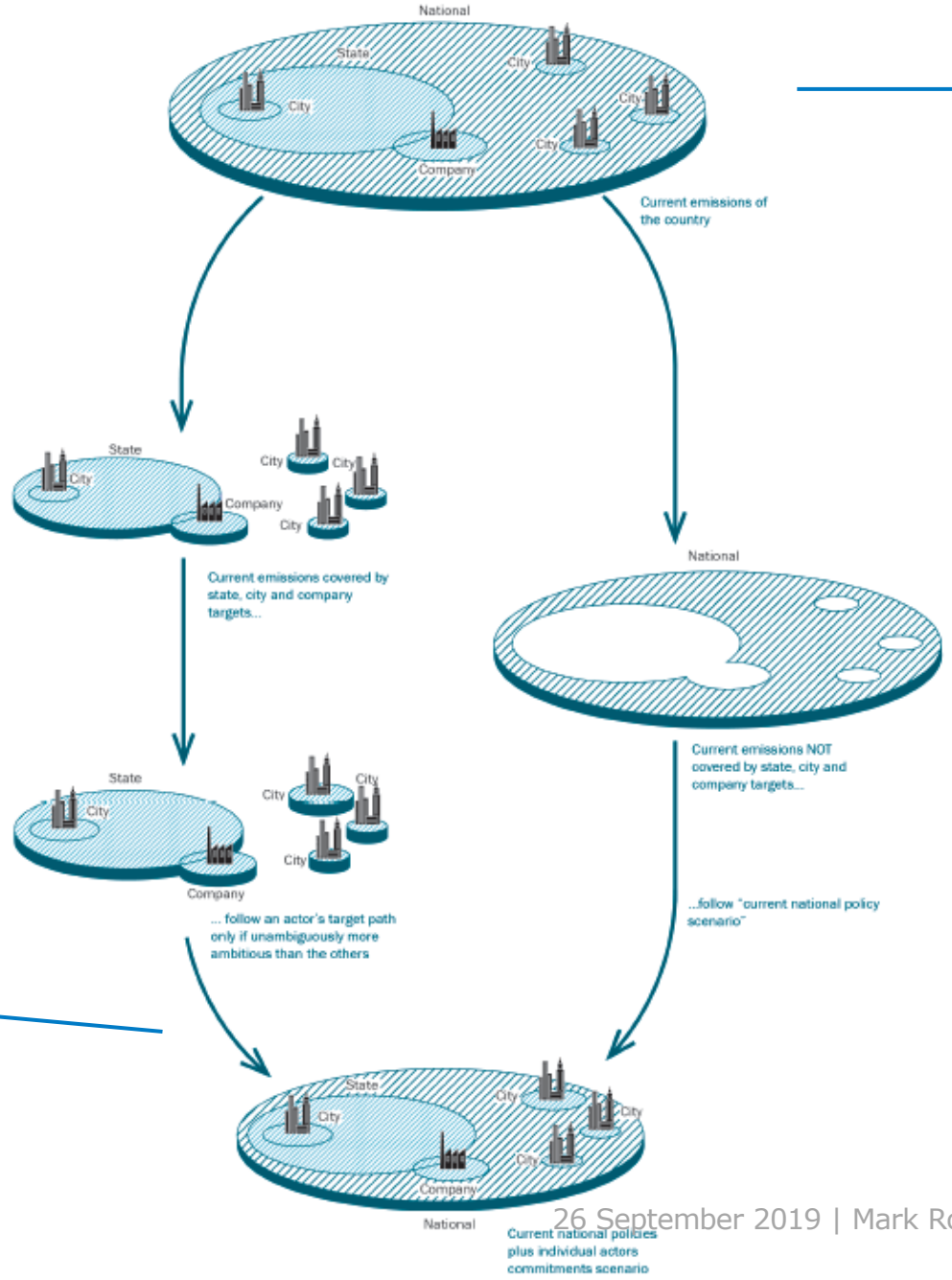
Methodology

National GHG emissions

Share covered by Regions, cities, business with targets

Combined effect (including overlap)

Additional reductions to national level



Share not covered by Regions, cities, business with targets
→ current policies scenario

Additionality

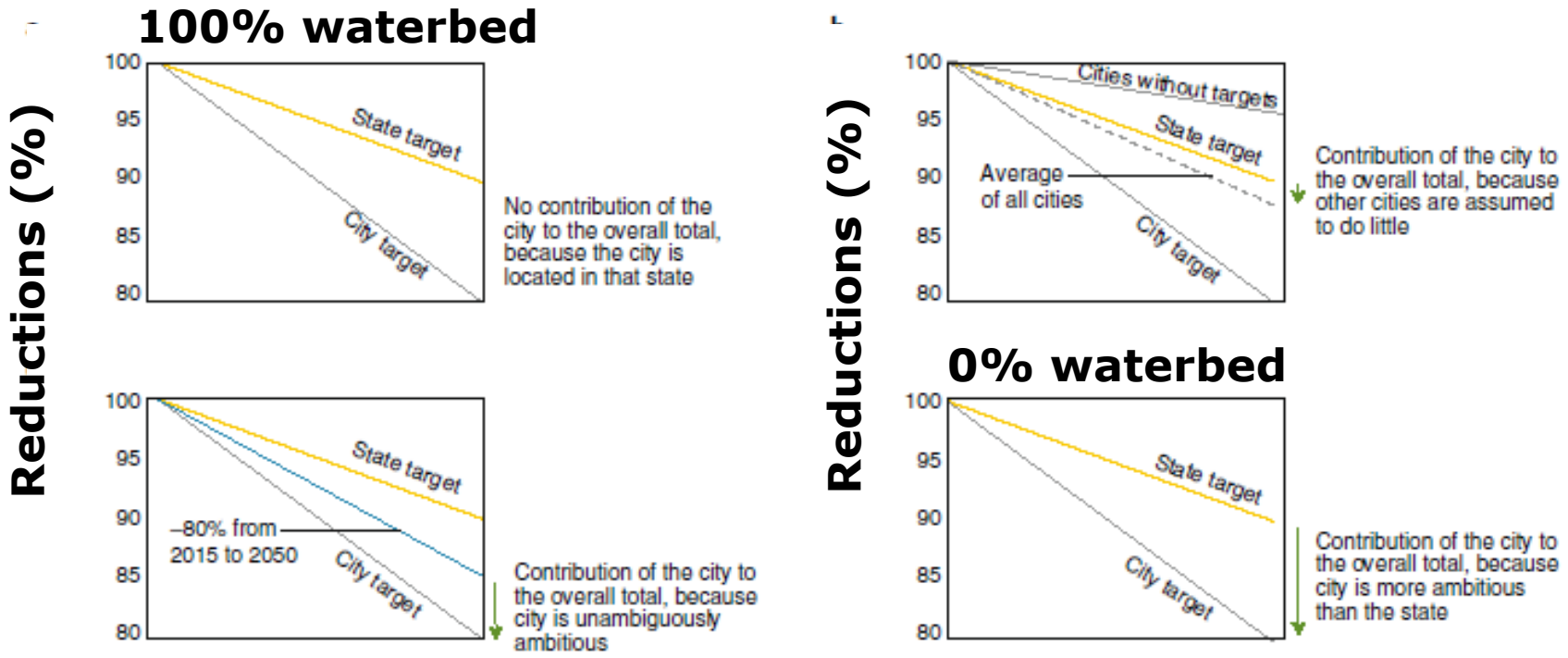
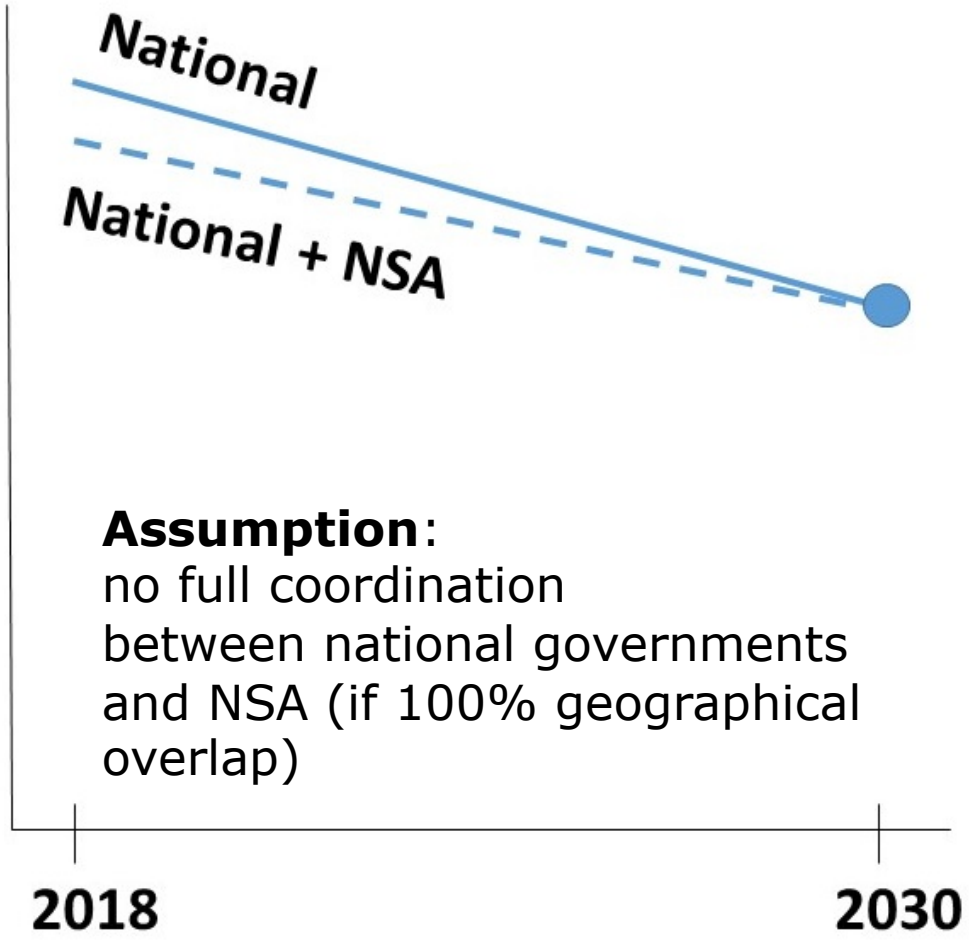


Fig. 1 | Different ways of comparing city non-state climate action with state targets. a, No additional reductions in a case with 100% geographical overlap. **b**, Additional action compared to the average of all cities (with and without targets) in the state. **c**, Additional action compared to an average long-term target for all cities with targets in the state. **d**, Full effect (assuming 100% attribution). Panel **a** adapted from ref. [35], NewClimate Institute, 2013.

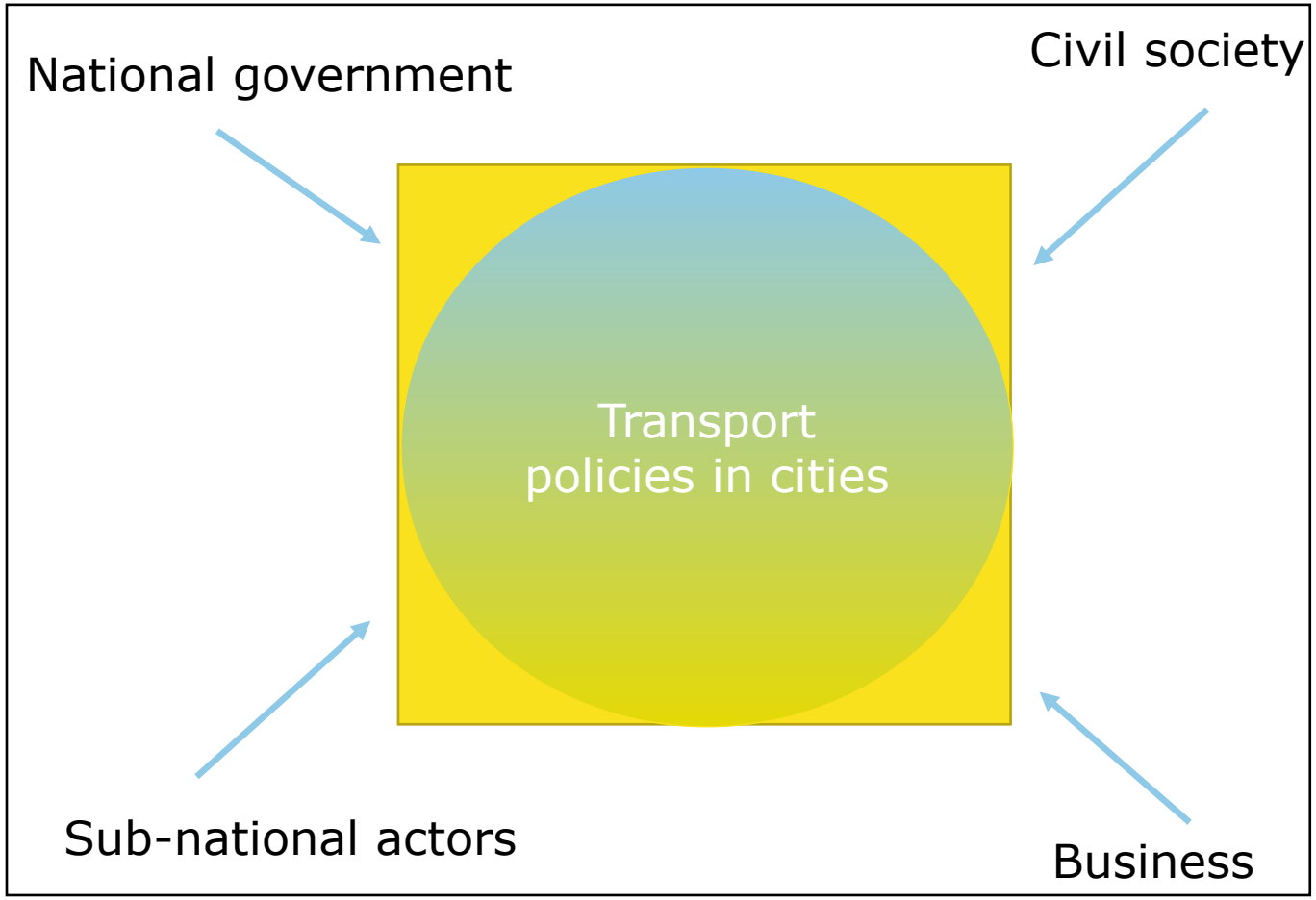
Hsu et al (2019)

Our study

Overlap Commitments vs Policies and measures



Assumption:
no full coordination between national governments and NSA (if 100% geographical overlap)



Progress of international cooperative initiatives

Functional-output-fit

→ beyond mere GHG reductions

→ likelihood of impact

Knowledge production

Knowledge dissemination

Technical implementation and 'on the ground' action

Institutional capacity building

Training and non-state and subnational capacity building

Transnational norm and standard setting

Campaigning

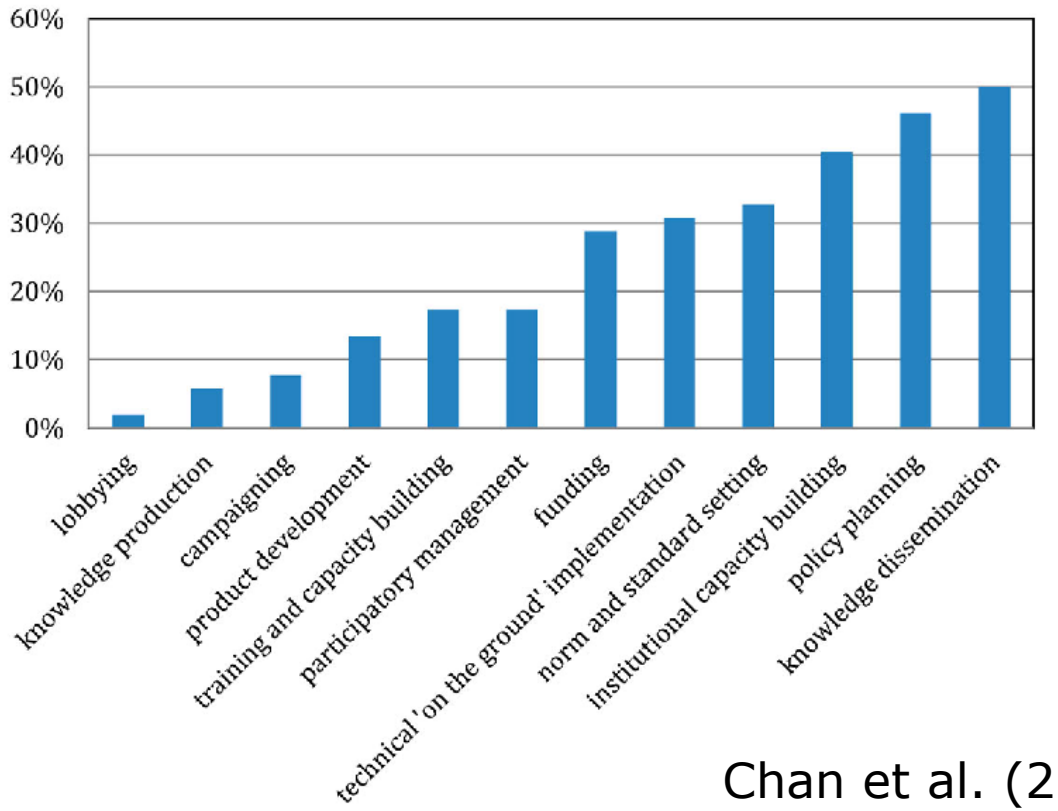
Lobbying

Participatory management

Funding

Product development

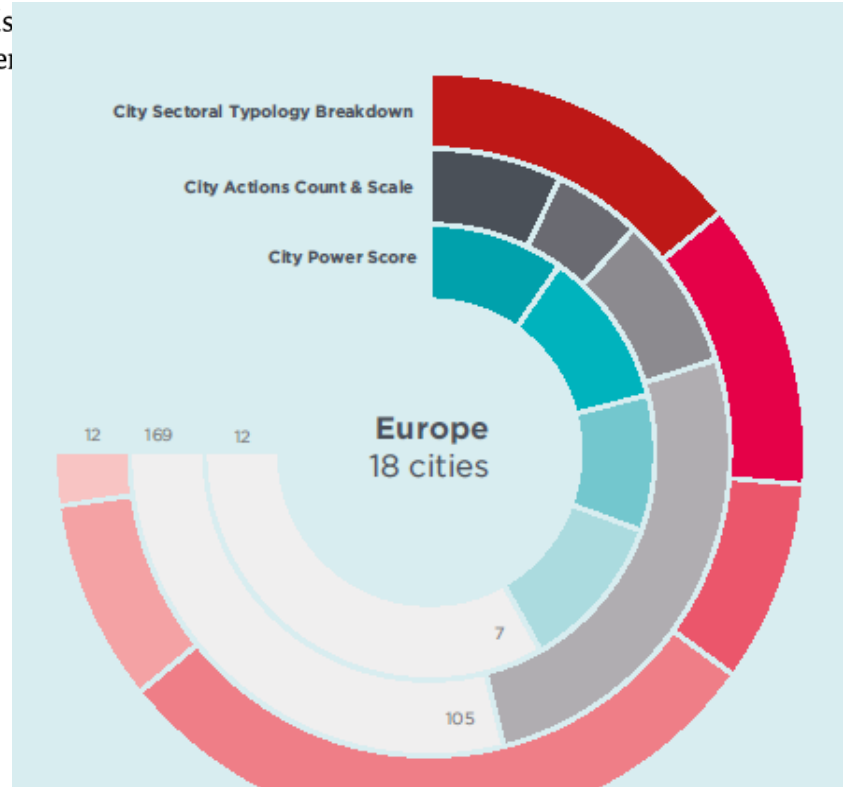
Policy planning

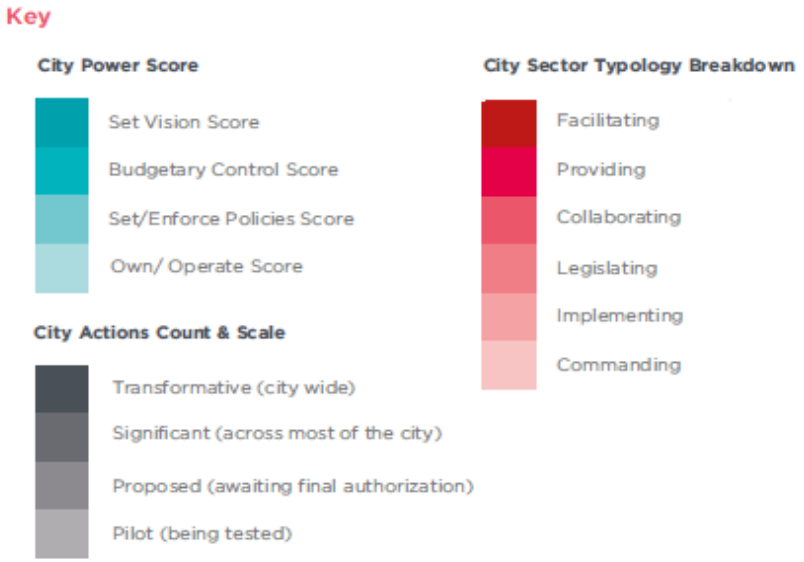


Chan et al. (2015)

Lessons

- **Measure progress**
  - Real and delivered actions
  - Identify ‘laggards’
- **Assess credibility/feasibility**
  - Examples (FOF)
- **Institutional/governance**
  - Power signature of cities/regions to implement climate policies





Arup (2015)
Powering climate action

Lessons

- **Data, data, data** (collecting/processing data is labour intensive)
  - GHG inventories
  - Climate plans (sector projections)
  - Commitments beyond GHG emissions
  - Difficult to disaggregate commitents into individual GHG and sectors
- **Research interaction between policy instruments (reinforcing policies)**
  - National government ↔ local governments
  - National government ↔ business
- **NDCs**, focus on 'closing gap' or on catalytic function of subnational and non-state climate actions?
  - Capacity building
  - Give responsibility to regions, cities
  - Overview of mitigation options and feasibility
  - Also identify laggards

Capacity building Monitoring

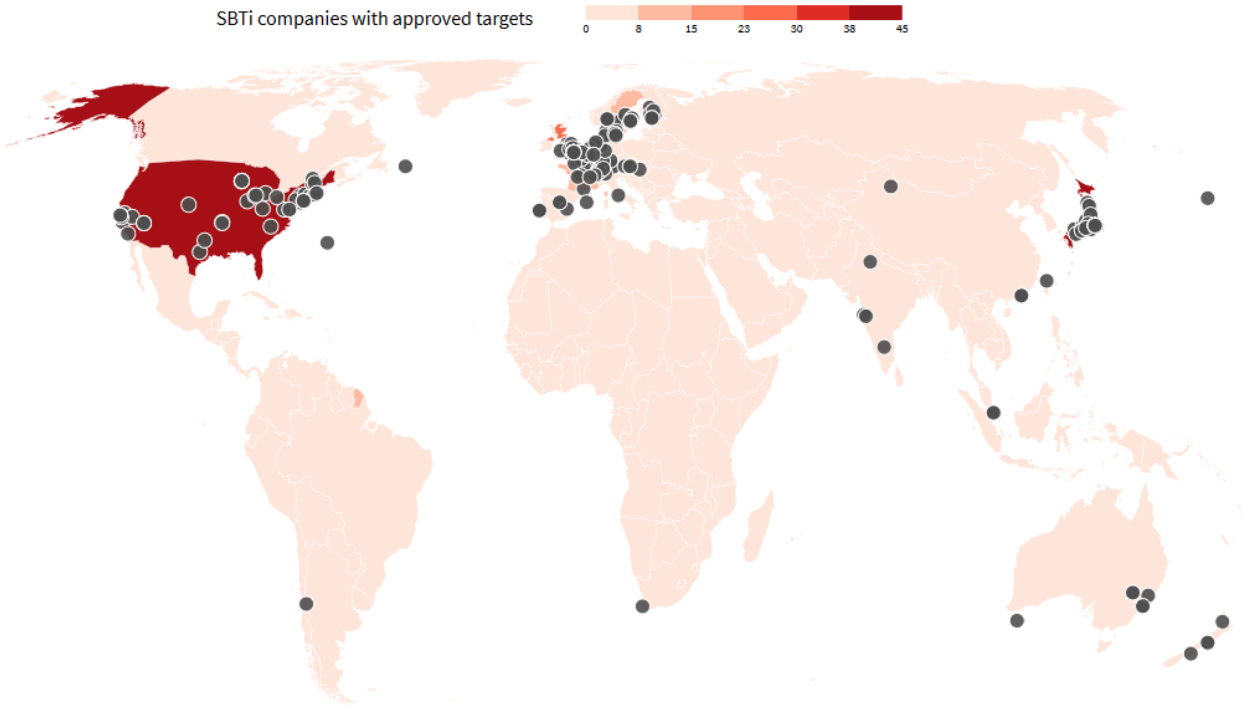
Nationaal Programma RES Regionale Energie Strategie

Dutch Climate accord → regional energy strategies (RES)

- Generation of renewable electricity
- Heat transition in buildings
- Storage and infrastructure for energy

Science Based Targets

- Set GHG reduction targets in line with 'well below 2° C or 1.5° C'
  - 611 companies
  - 232 approved targets
- Process/guidance
  - Make commitment
  - Develop a target
  - Validation of target
  - Announce target
- Scientific board



https://sciencebasedtargets.org/approved-targets-map/