

How Can Cities Thrive in a Changing Climate?

Discussion

Somik Lall, 18th January 2024

**Making Cities *Green,*
Resilient, and
Inclusive
in a Changing Climate**

THRIVING

Megha Mukim
Mark Roberts
Editors

Significant contribution to evidence-based policy making

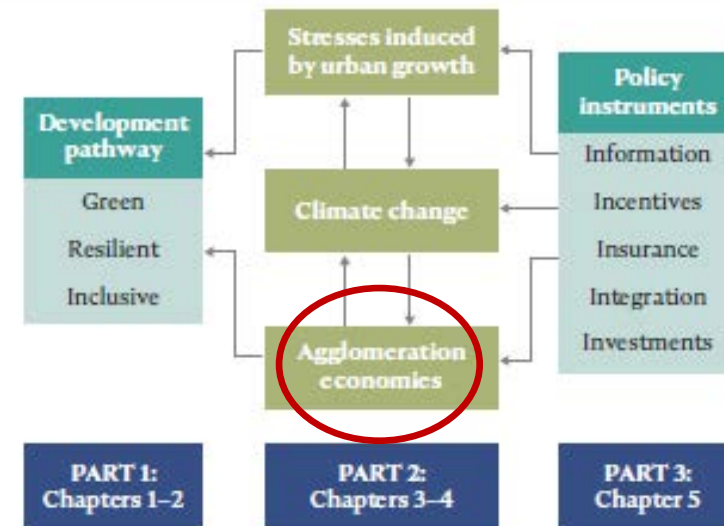
- 10 Stylized Facts
 - Richer cities emit more carbon than poorer ones
 - Cities are being built in ‘bad places’ – more taller building in hotter areas
 - Compact cities (less sprawl) have lower emissions
 - Poorer cities face greater natural hazards and are hit harder by nature’s punches.
 - Inequality exacerbates vulnerability

Making Cities *Green, Resilient, and Inclusive* in a Changing Climate

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Framework for green, resilient, and inclusive cities



Source: World Bank staff.

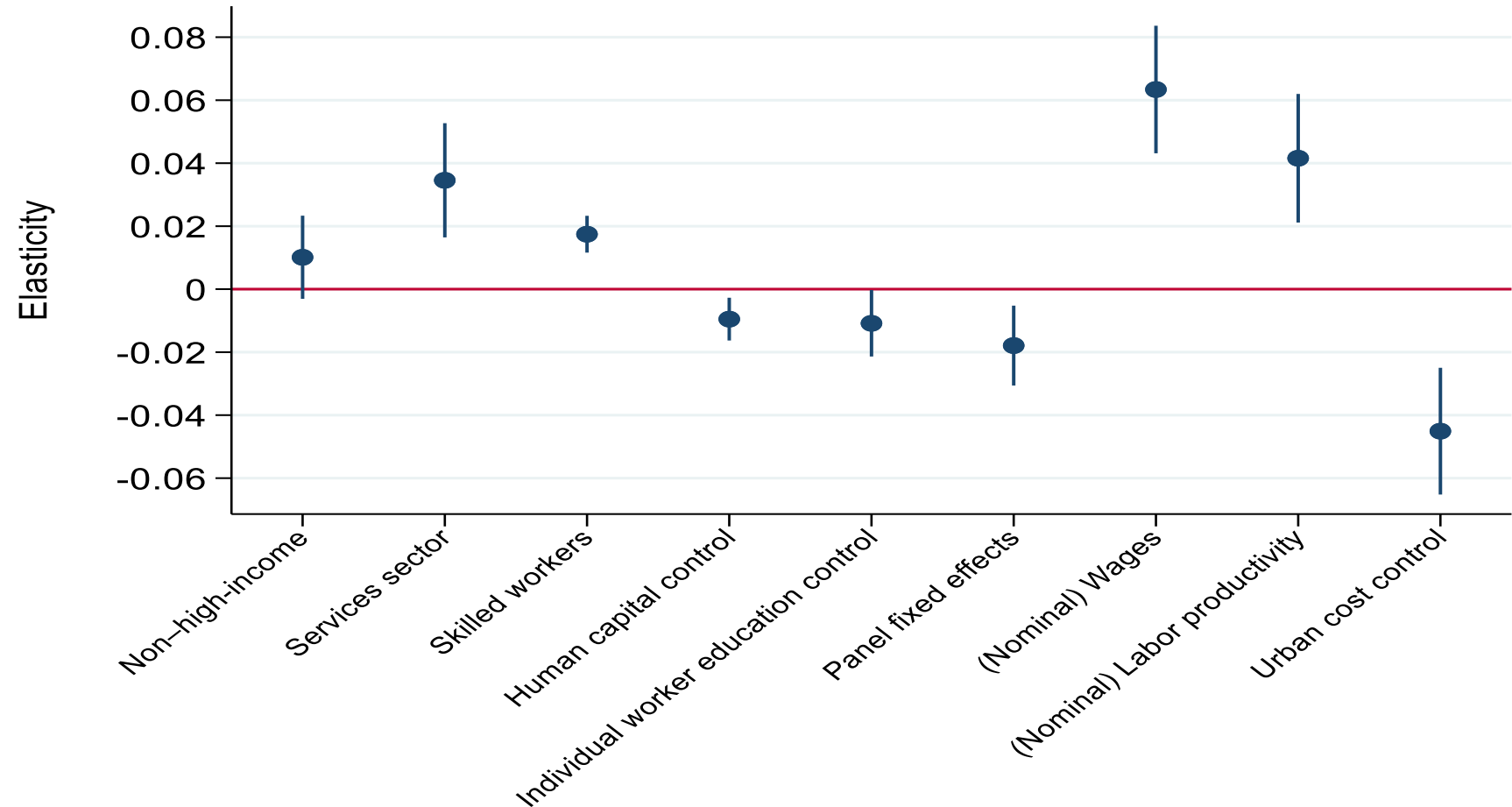
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FOR BUSINESS

Are we forgetting about growth?

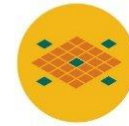
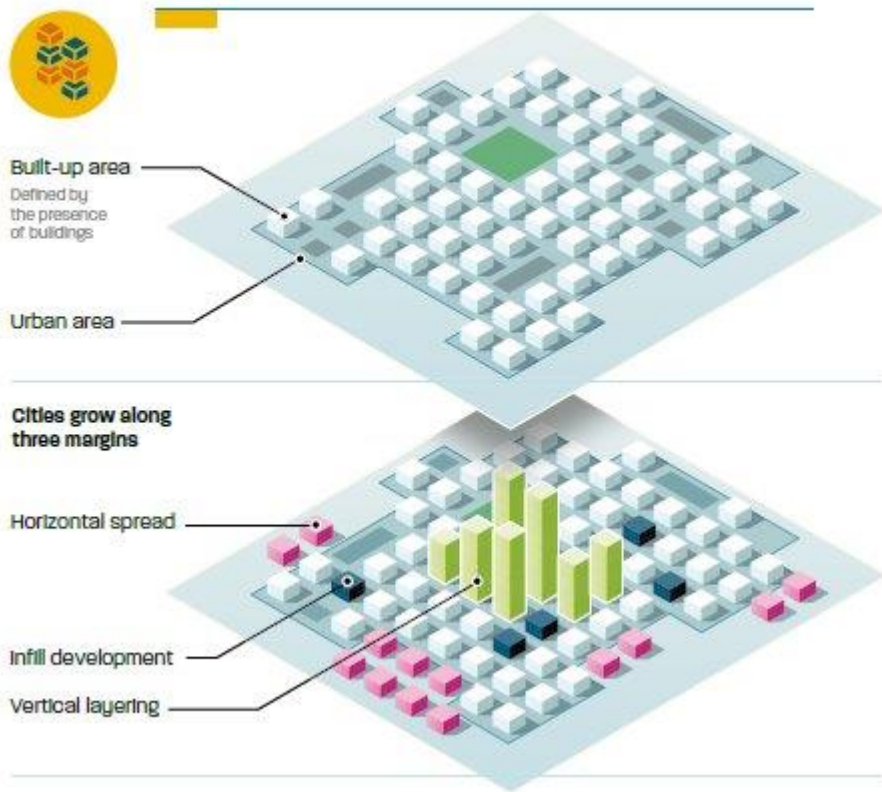


Low growth → higher vulnerability; limited climate action

The Agglomeration Premiums on Labor Productivity Nearly Disappear after Controlling for Urban Costs



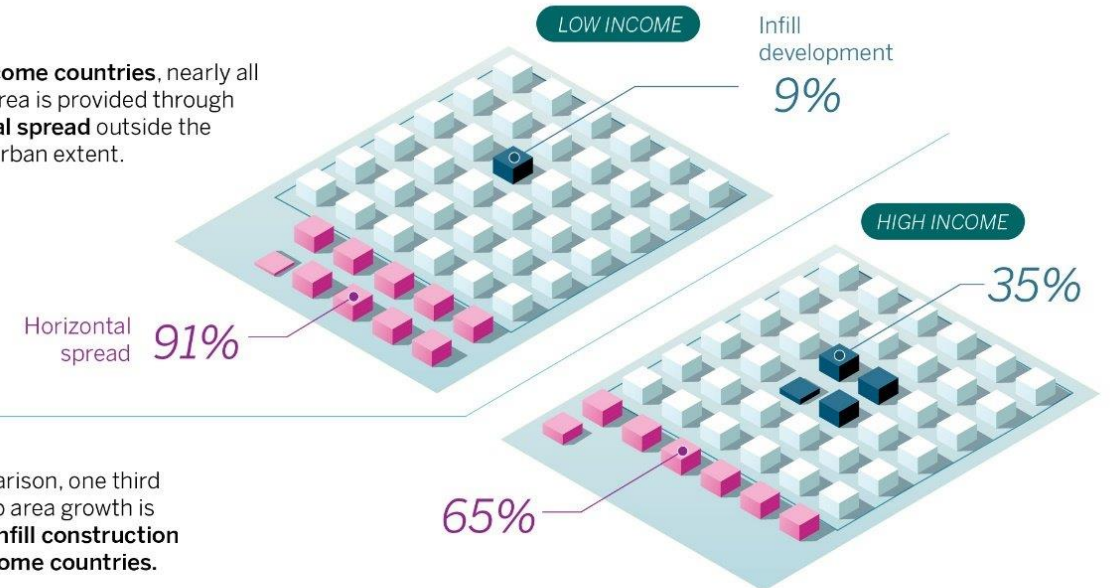
Are we forgetting about growth?



The spatial pattern of urban growth differs by income level

Growth period 2000-2015

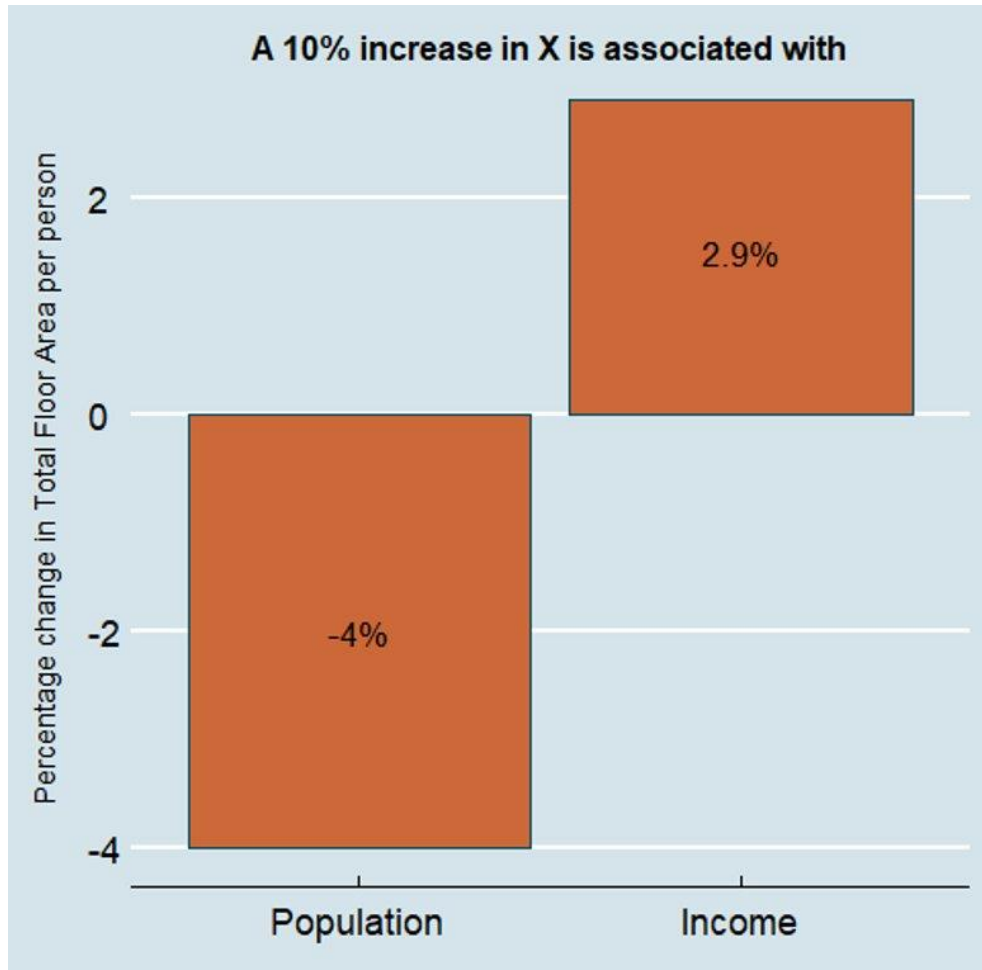
In **low income countries**, nearly all built up area is provided through **horizontal spread** outside the existing urban extent.



By comparison, one third of built up area growth is through **infill construction** in **high income countries**.

Source:

Are we forgetting about growth?

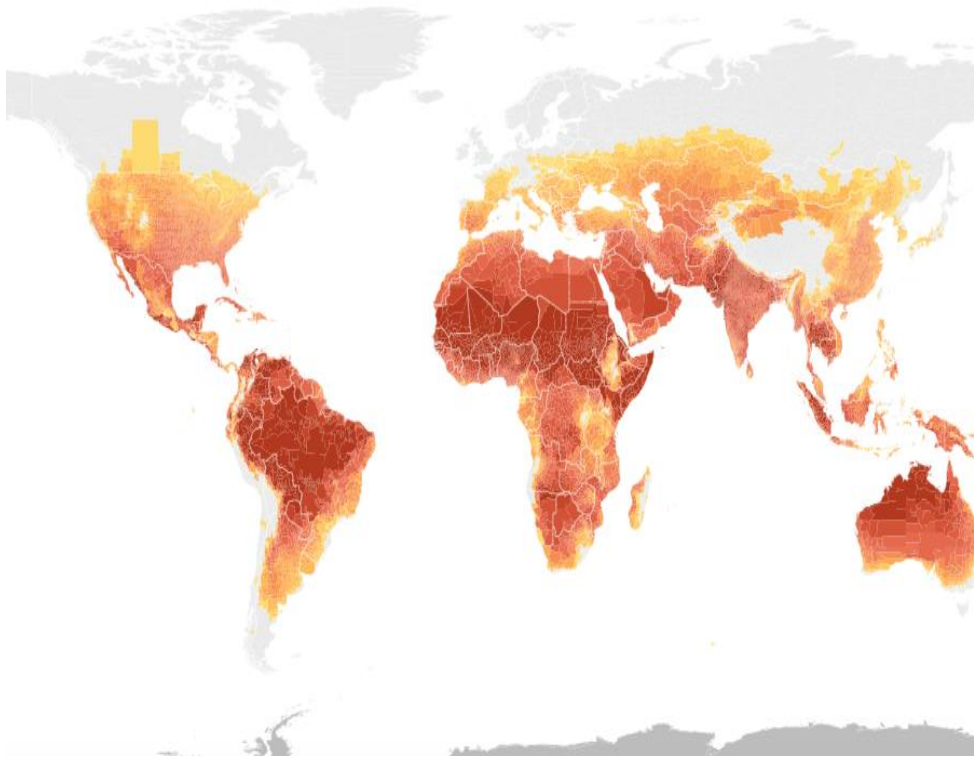


Rising incomes is the one indispensable driver of building tall and compact

Ps. Growing into hotter places can just be poorer countries catching up

Are we forgetting about growth?

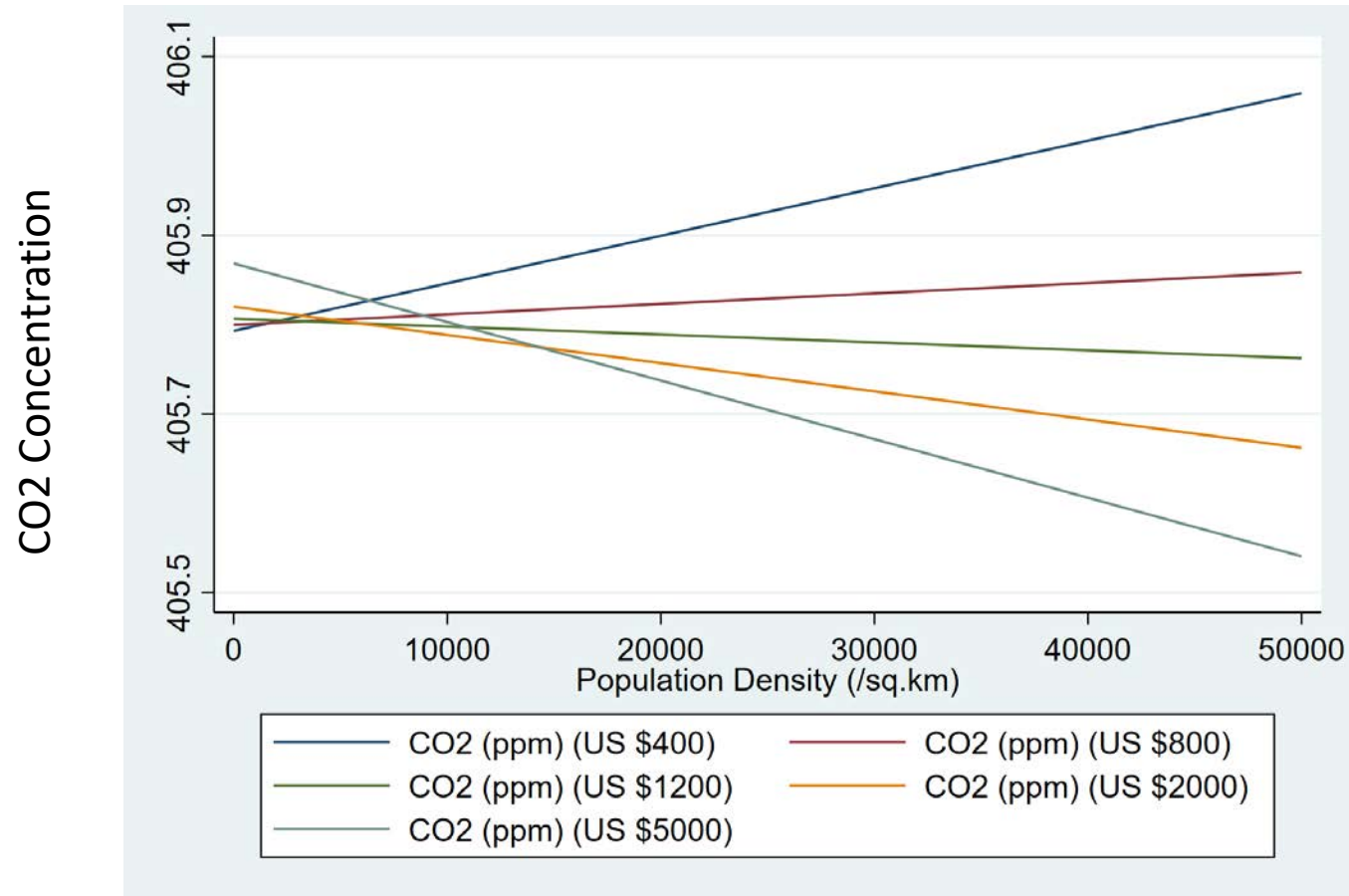
End of century days above 95°F



Growing into hotter places can just be poorer countries catching up

Not sure what the misallocation story is about

Density does not add value without rising incomes



Are we forgetting about growth?

Lower mortality: 79% due to income rise, 21% due to adaptation

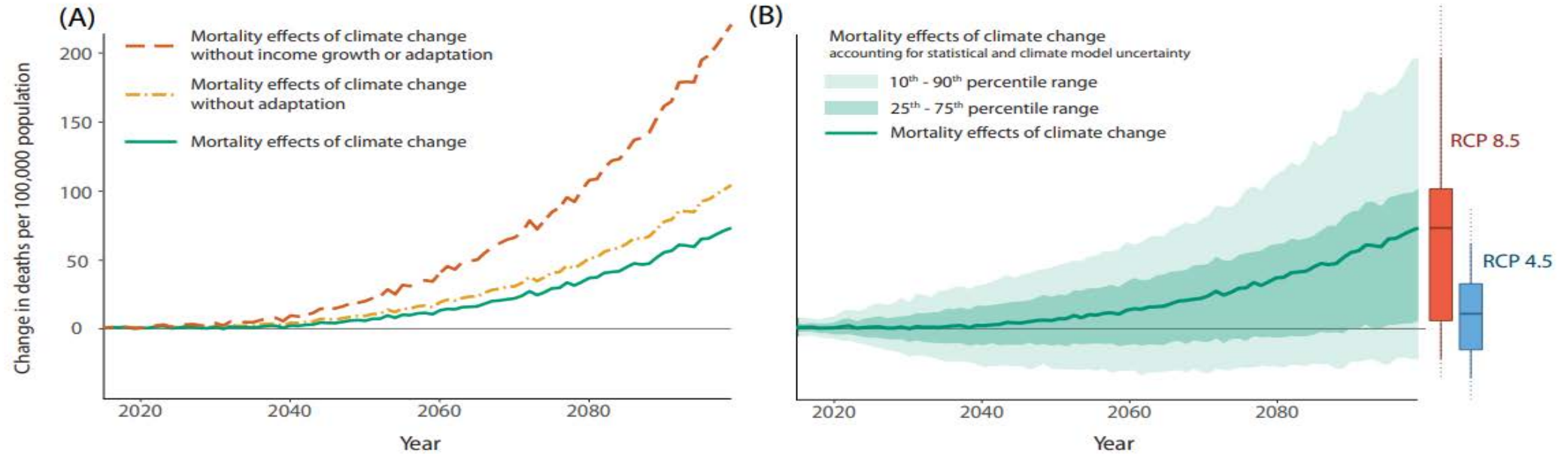


FIGURE V

Time Series of Projected Mortality Effects of Climate Change

All lines show projected mortality effects of climate change across all age categories and are represented by a mean estimate across a set of Monte Carlo simulations accounting for climate model and statistical uncertainty. In Panel A, each line represents one of three measures of the mortality effects of climate change. Dashed (equation (2a')): mortality effects of climate change without income growth or adaptation. Dashed-dotted (equation (2b')): mortality effects of climate change without adaptation. Solid (equation (2')): mortality effects of climate change. Panel B shows the 10th–90th percentile range of the Monte Carlo simulations for the mortality effects of climate change (equivalent to the solid line in Panel A), as well as the mean and interquartile range. The boxplots show the distribution of mortality effects of climate change in 2100 under both RCPs. All line estimates shown refer to the RCP8.5 emissions scenario and all line and boxplot estimates refer to the SSP3 socioeconomic scenario. [Online Appendix Figure F.7](#) shows the equivalent for SSP3 and RCP4.5.

The role of urban policy – 5Is are super useful

- Close to 50 actions – cities can pick and choose –tailor actions to their needs ;
- There probably are complementarities
- Why aren't city authorities doing many of these useful things?
 - Reforms and actions are costly – but the economic base is limited (in many LIC and MIC cities) → back to growth
 - City hall is captured by incumbents – developers, fossil fuel distributors – they want to maintain the status quo
 - Without legitimacy, compliance with reforms is low and fiscal capacity limited
- Comes back to governance!