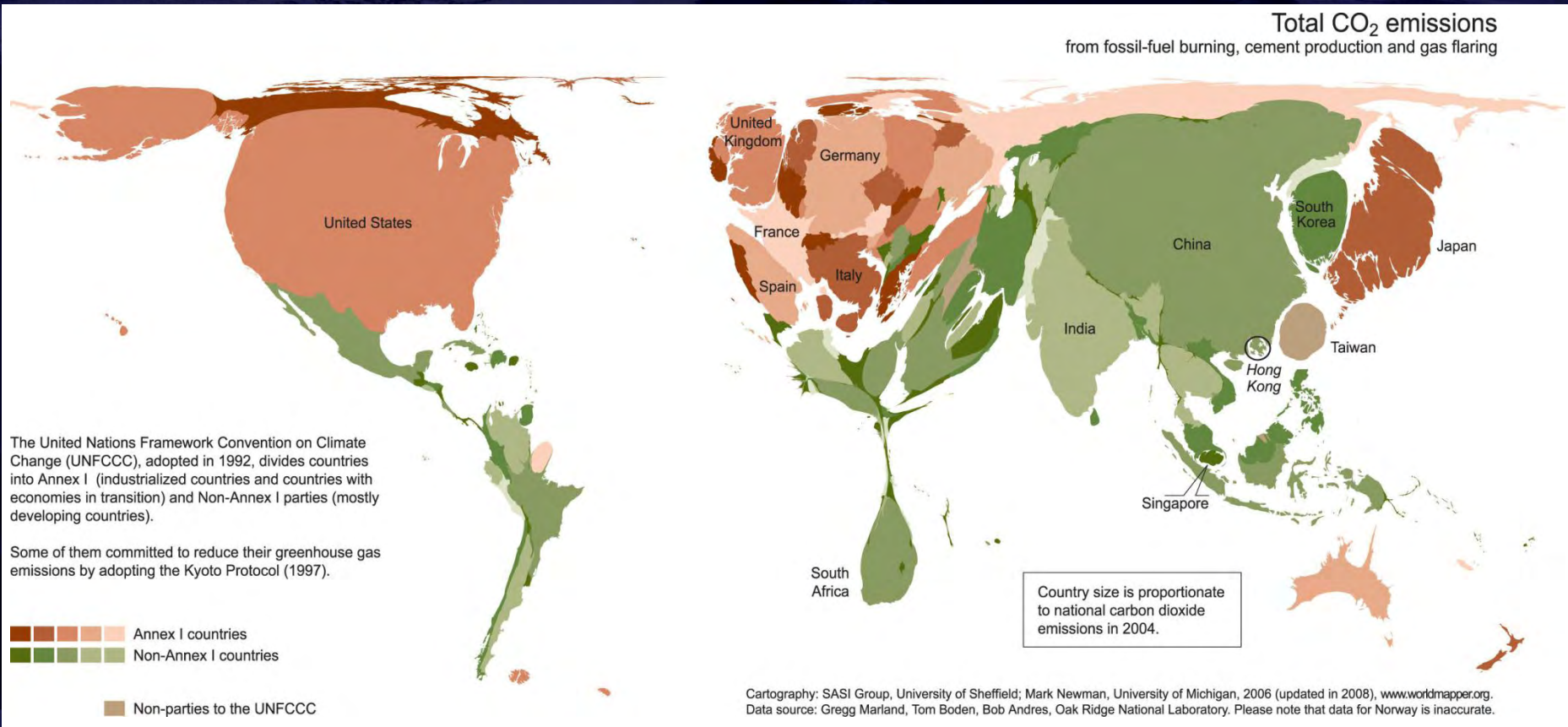


Welcome!



“Cities are among the brightest stars in the constellation of human achievement.”

W. Rees & M. Wackernagel . 1996. *Environmental Impact Assessment Review* 16:223-248.



Urbanization is a new global issue.

- In 1900, 9% of world's population in cities; only 30% in 1950.
- Now over 50% of world's population is urban.
- 80% of the developed world is urban.
- Will be true for entire planet by 2050.
- Cover \approx 3-4% of earth's surface, but account for 78% of CO₂ emissions.

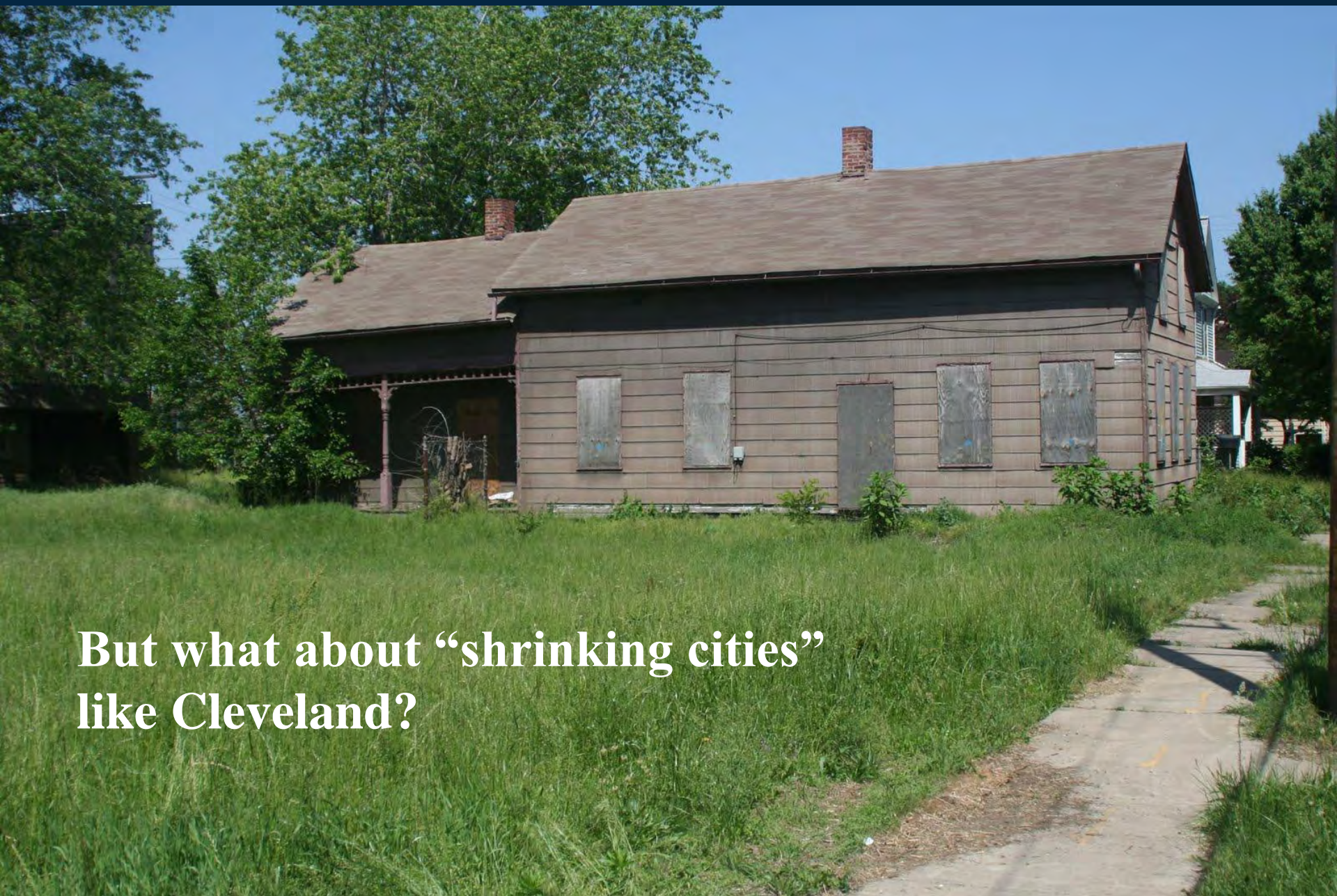
Is an urbanized world sustainable?



Hubert Blanz, *New York Times*

As population density increases...

- Per capita production of greenhouse gases declines
 - The average city resident in US has a carbon footprint 14% lower than the national average.
- Increased efficiency and higher economic-viability of infrastructure, e.g., roads, water systems, electrical cables, etc.
- Increased densities of people, institutions, and processes that spark innovation.



**But what about “shrinking cities”
like Cleveland?**

Challenges for “*Shrinking Cities*”

- How do we maintain critical infrastructure and municipal services?
- How do we stabilize de-populated neighborhoods?
- How do we maintain economic, social, and environmental stability (i.e., **sustainability**) during this period of vulnerability and uncertainty?

**Food
Production**

**Forest
Production**

**Mitigation of
Infectious Diseases**

**Preserving Habitats
& Biodiversity**

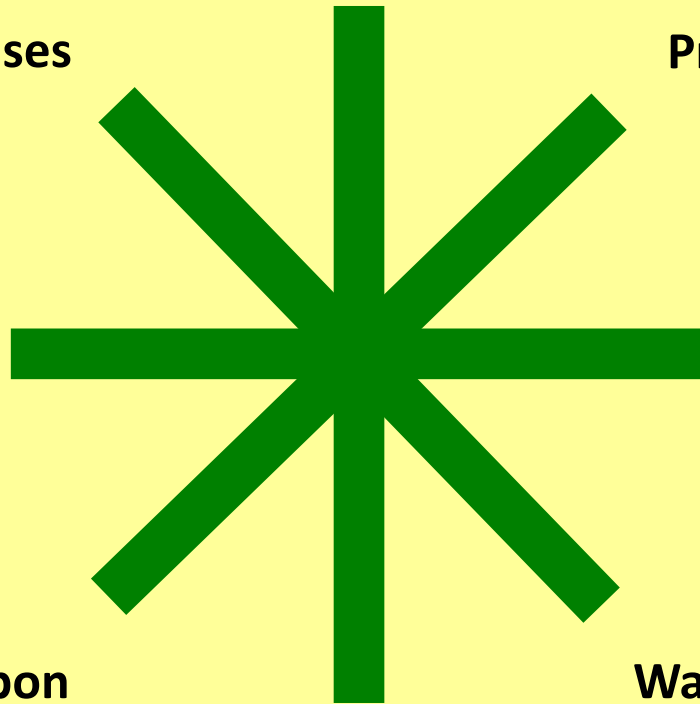
**Climate & Air
Quality Regulation**

**Water Flow
Regulation**

**Carbon
Sequestration**

**Water Quality
Regulation**

Natural Ecosystem



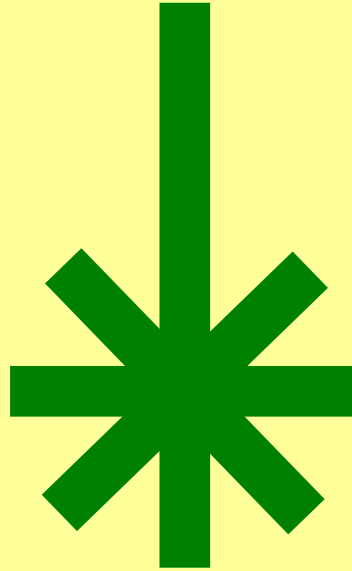
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Regulation**

High Intensity Agriculture

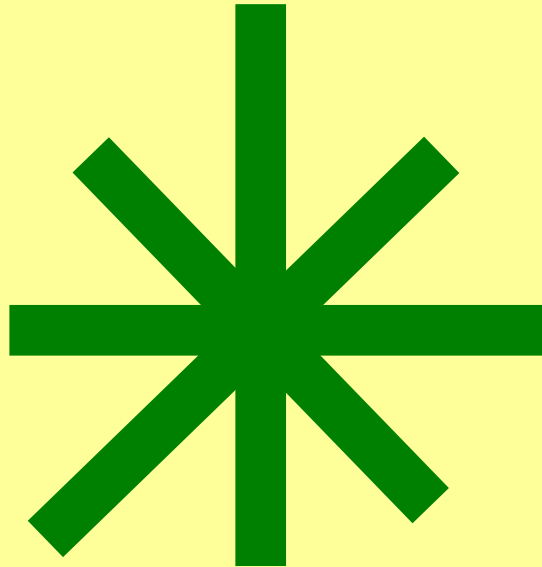
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**Water Flow
Regulation**

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Sequestration**

**Water Quality
Regulation**

Sustainable Agriculture

Today's Speakers

- Vision of urban revitalization driven by re-use of vacant land for urban re-greening and ecosystem services.
- Science and tools for decision-making in support of the vision.
- Example of innovative green infrastructure.
- Scientific framework for linking science to planning and design.