

Session 3: City Biodiversity

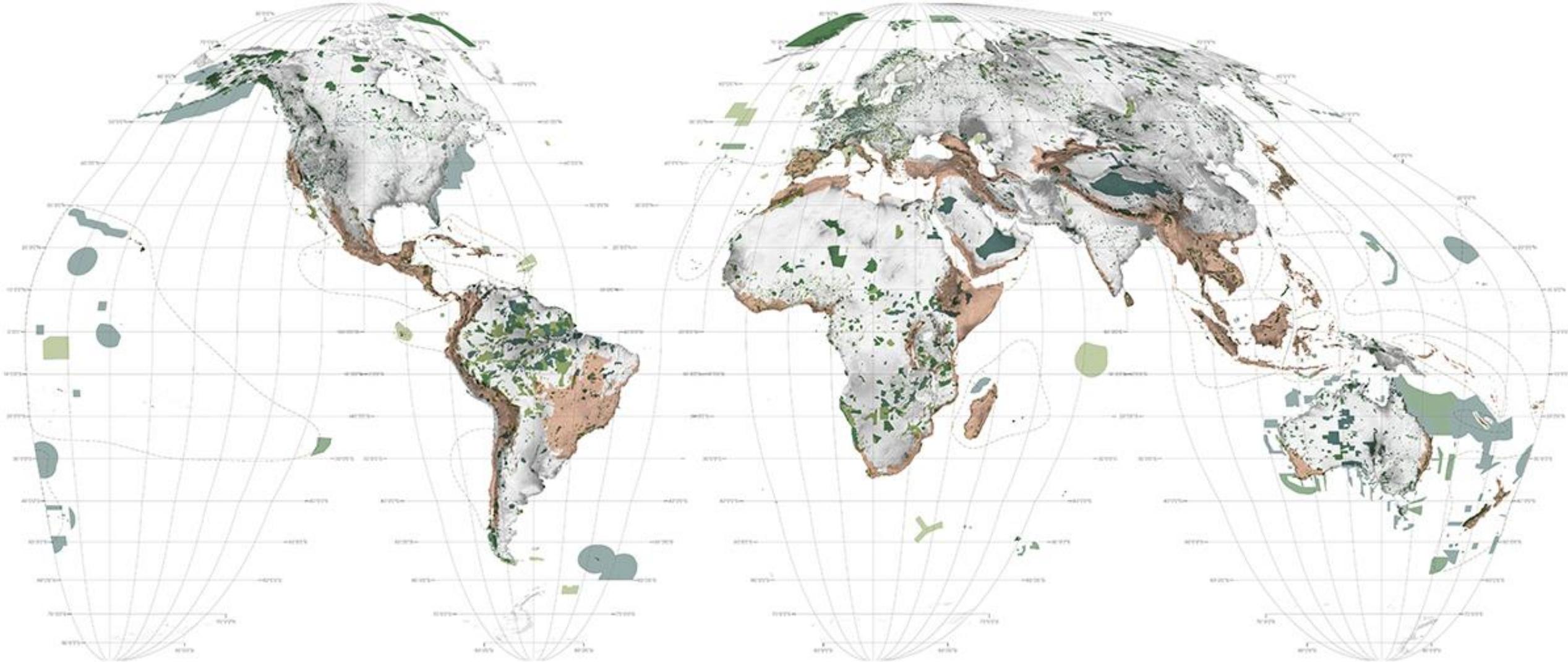
Moderator: Professor Richard Weller

University of Pennsylvania

Rapid Introduction of Participating Cities and Organizations

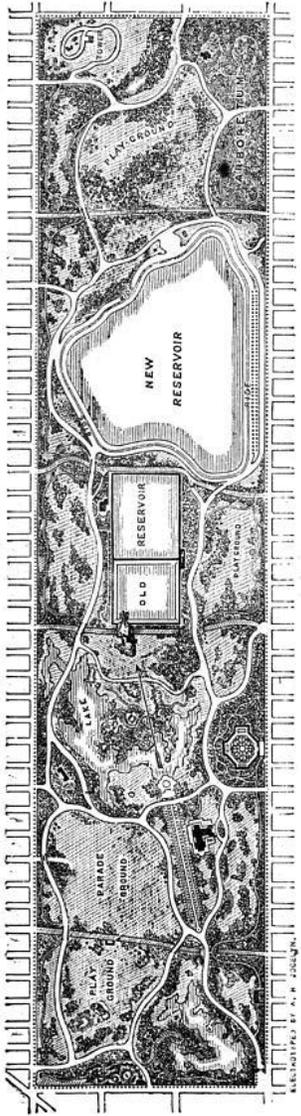
Batch 2

1.6%: representative & connected

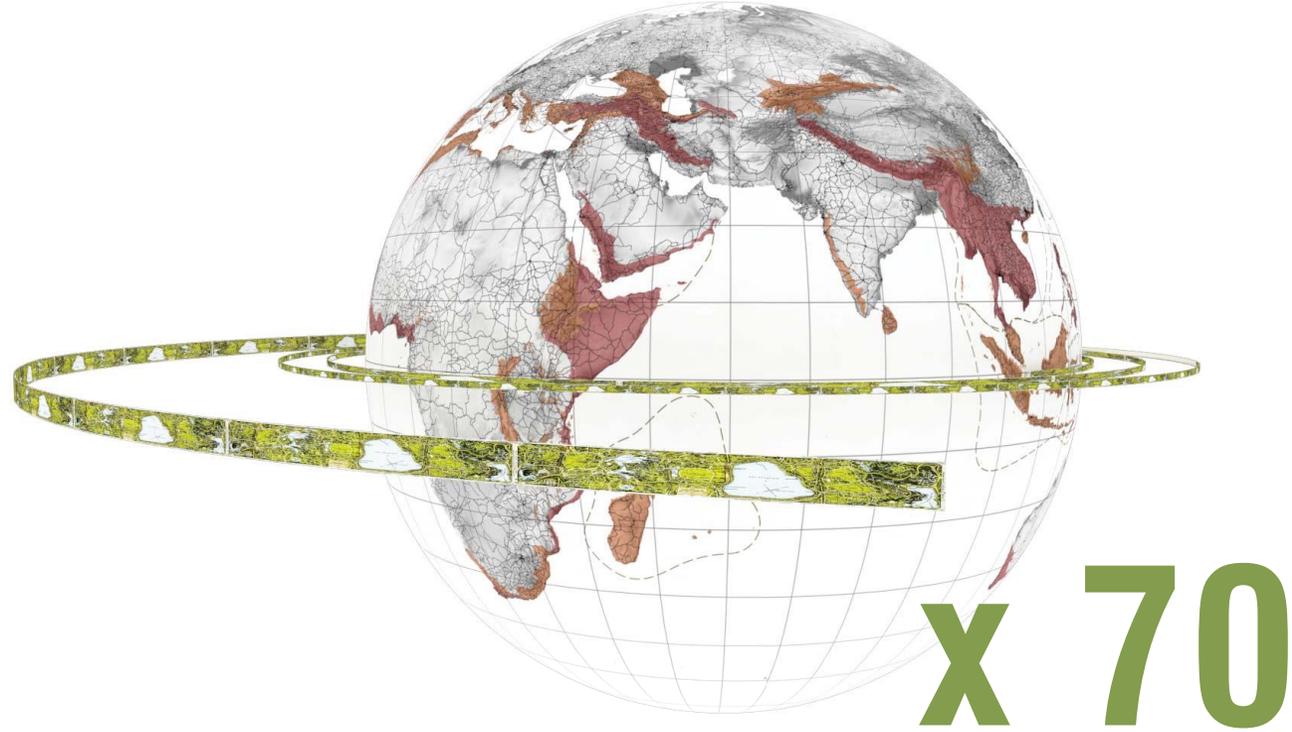




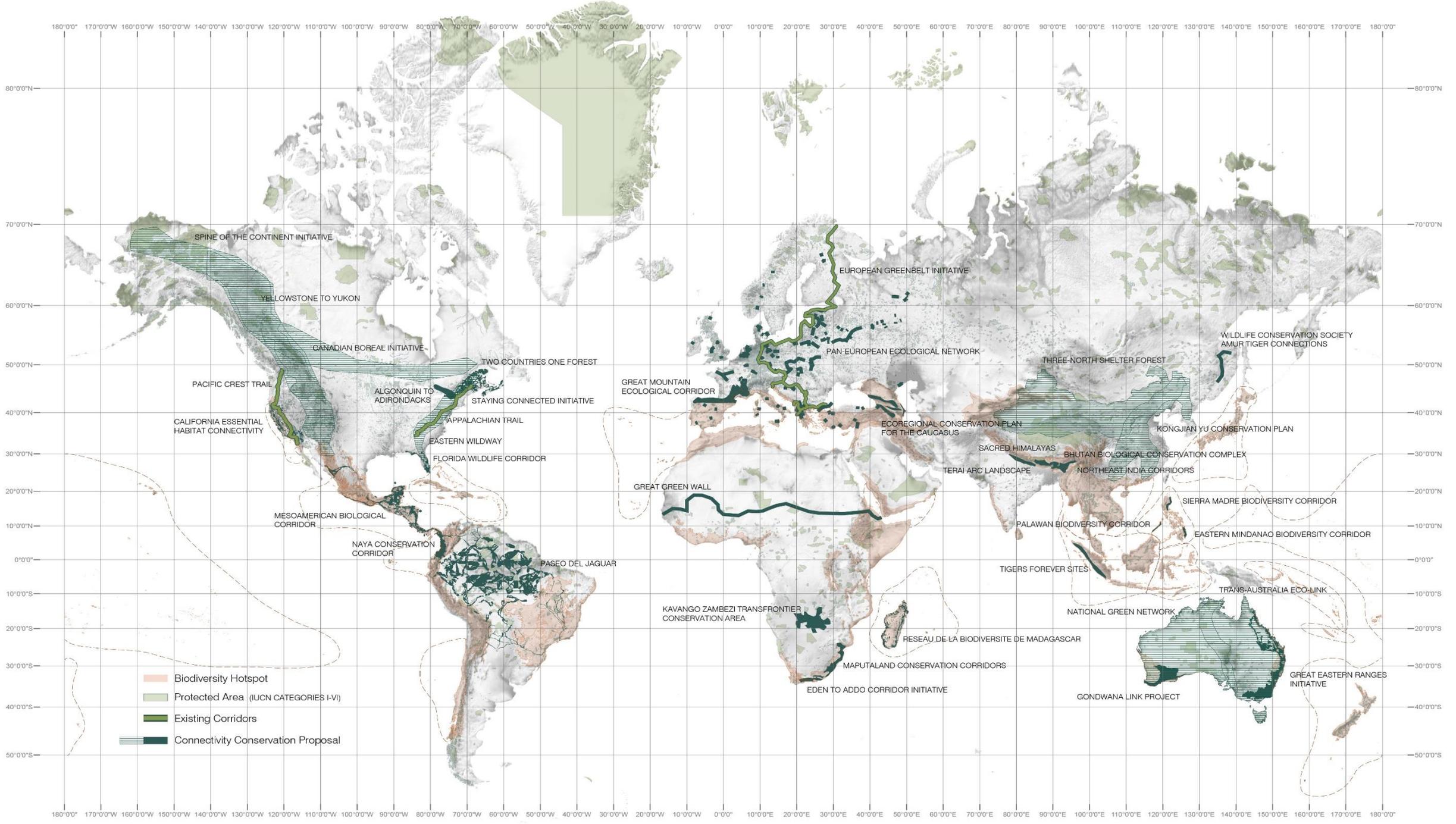
1.6% of the earth's terrestrial surface in number of Central Parks.



PRIZE PLAN FOR THE CENTRAL PARK, NEW YORK. DESIGNED BY MESSRS. OLNSTEAD AND VAUX.

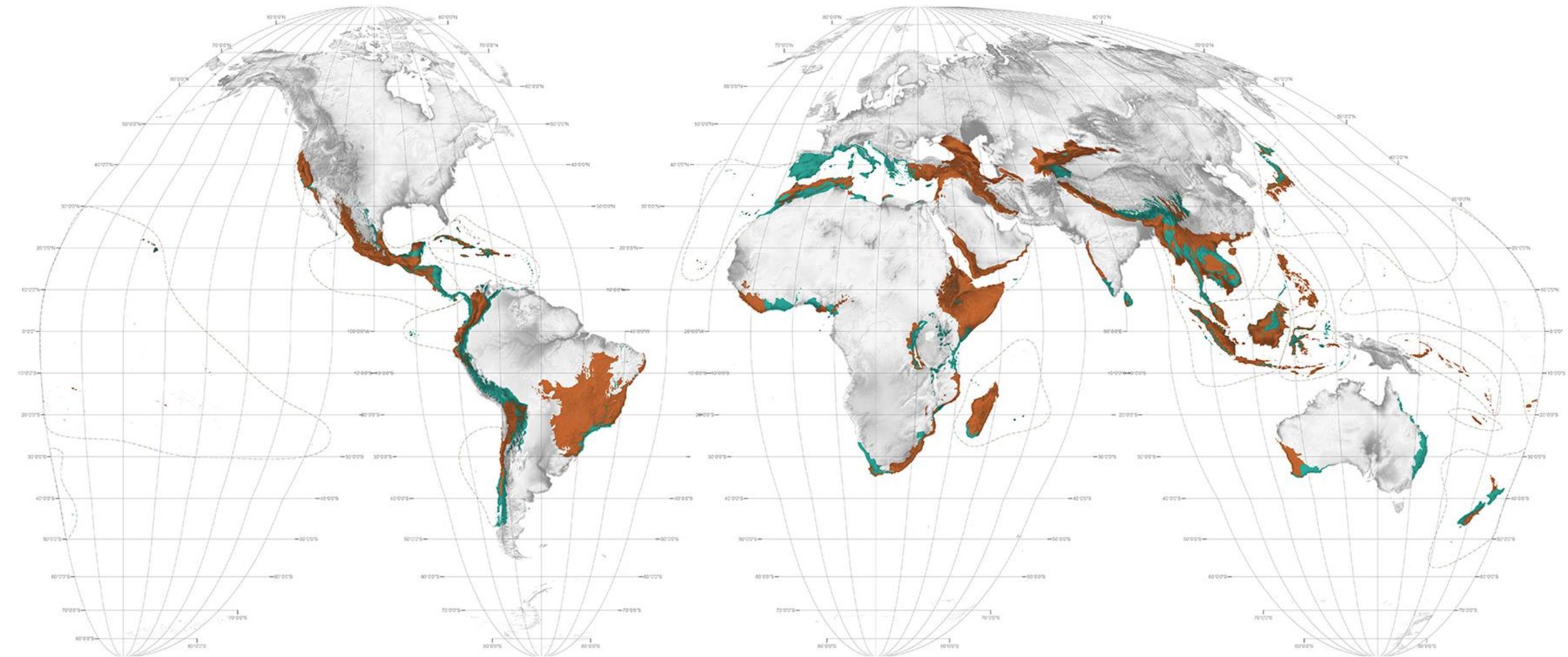


695,825 Central Parks can wrap around the globe 70 times.

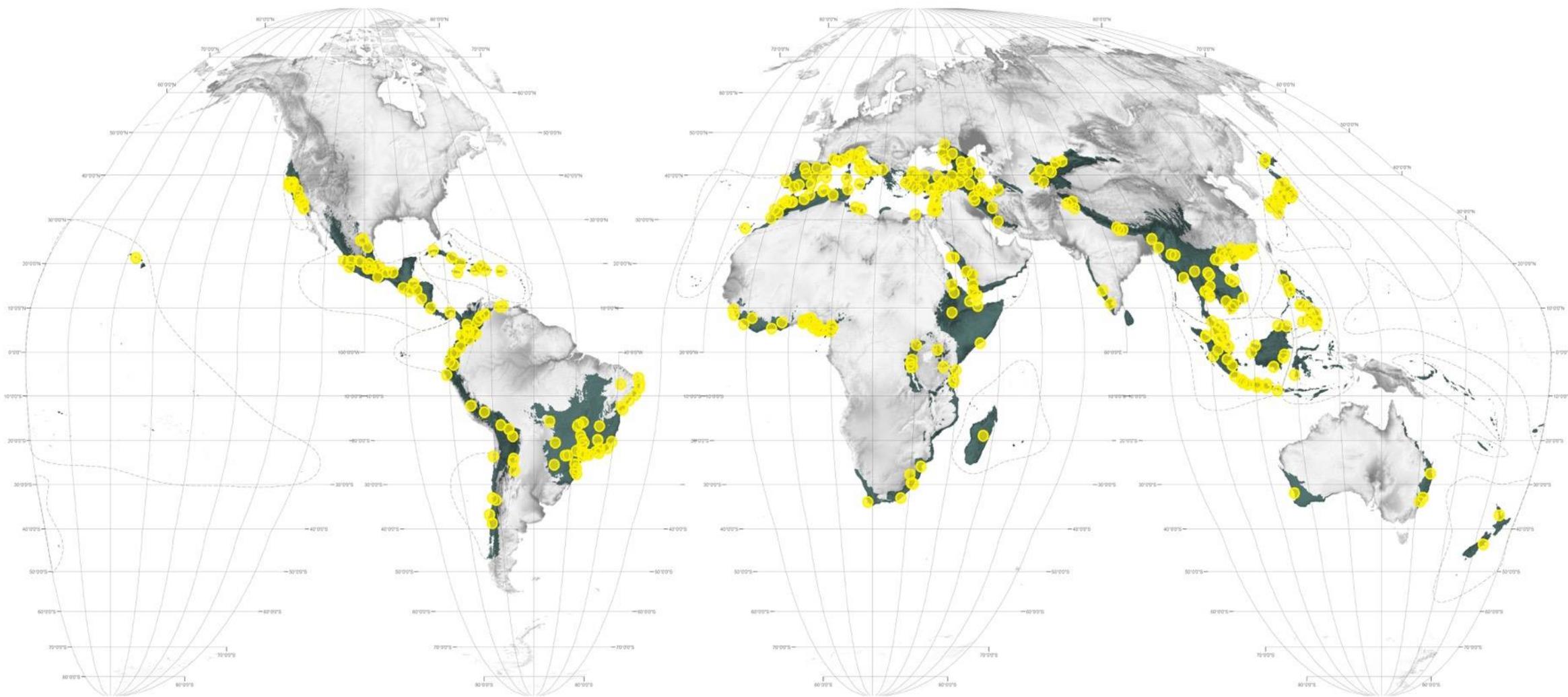




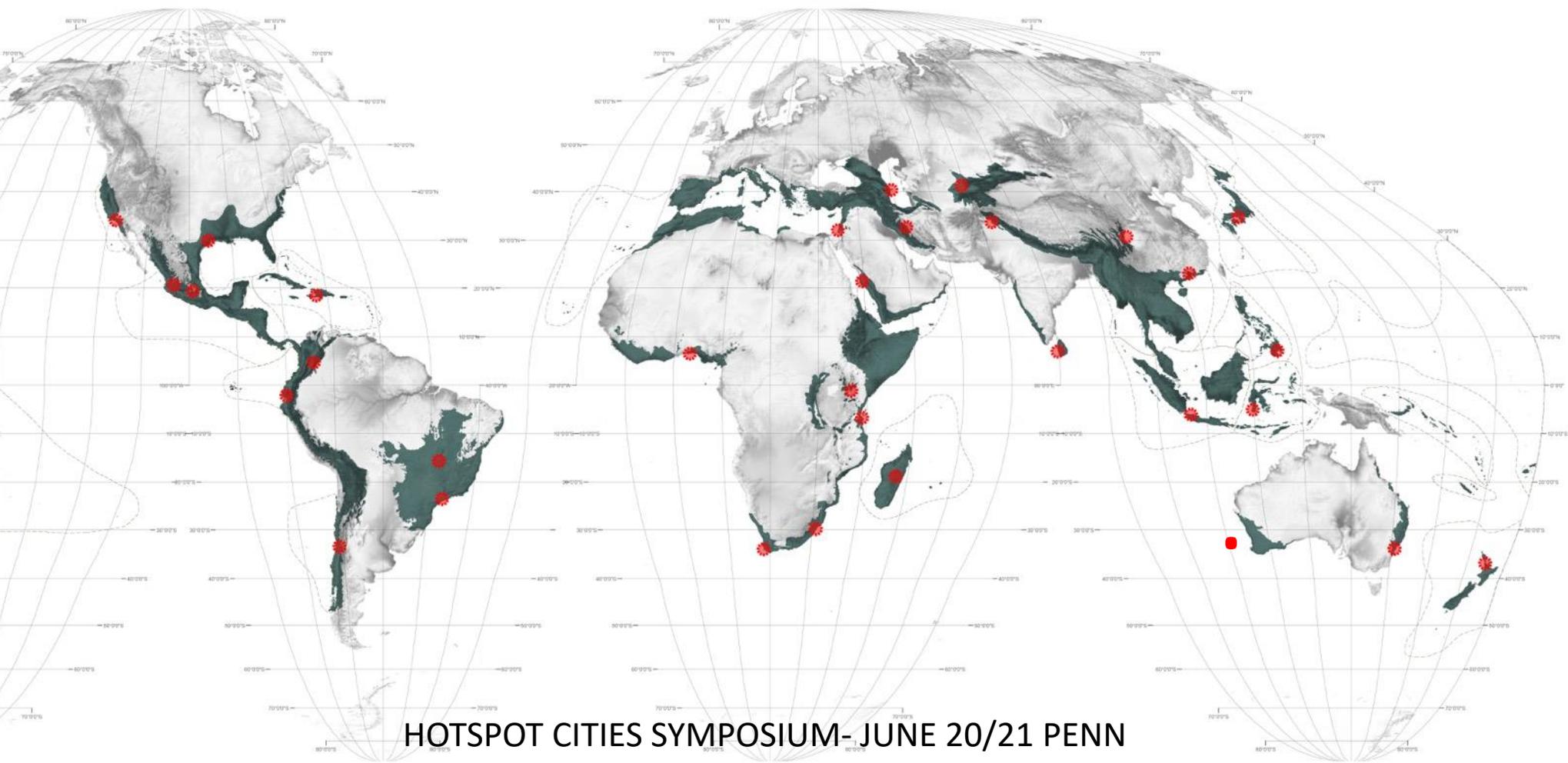
221/391 ecoregions
21/36 hotspots



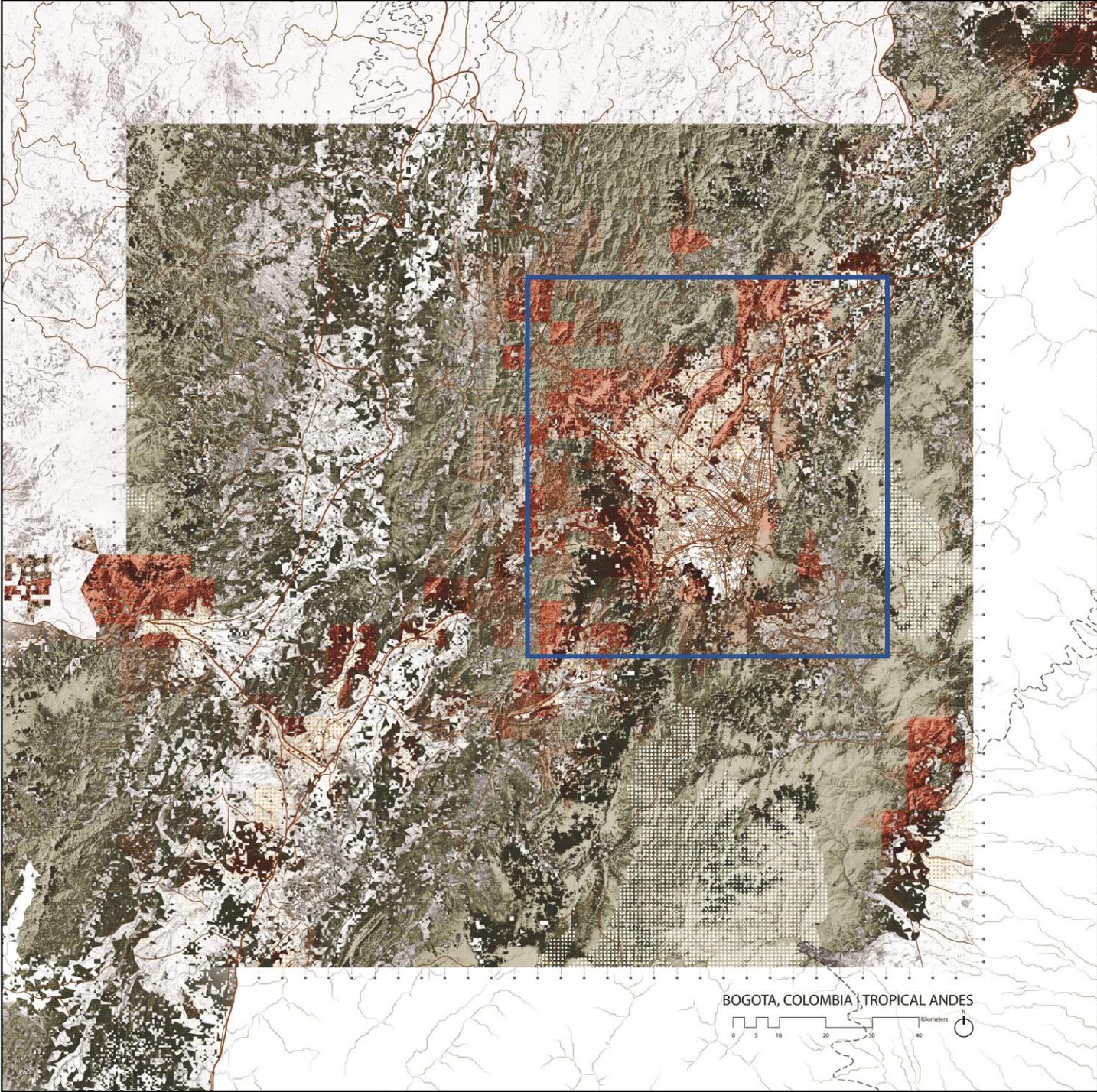
Green: Meet the 17% target
Red: Miss the 17% target



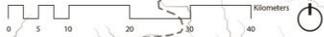
- 1) Atlantic Forest: Sao Paulo, Brazil;
- 2) California Floristic Province: Los Angeles, USA;
- 3) Cape Floristic Region: Cape Town, South Africa;
- 4) Caribbean: Port-au-Prince, Haiti;
- 5) Caucasus: Baku, Azerbaijan;
- 6) Cerrado: Brasilia, Brazil;
- 7) Chilean Winter Rainfall and Valdivian Forests: Santiago, Chile;
- 8) Coastal Forests of Eastern Africa: Dar es Salaam, United Republic of Tanzania;
- 9) Eastern Afromontane: Nairobi, Kenya;
- 10) Forests of East Australia: Sydney, Australia;
- 11) Guinean Forests of West Africa: Lagos, Nigeria;
- 12) Himalaya: Rawalpindi, Pakistan;
- 13) Horn of Africa: Mecca, Saudi Arabia;
- 14) Indo-Burma: Guangzhou, China;
- 15) Irano-Anatolian: Esfahan, Iran;
- 16) Japan: Osaka, Japan;
- 17) Madagascar and the Indian Ocean Islands: Antananarivo, Madagascar;
- 18) Madrean Pine-Oak Woodlands: Ciudad de México, Mexico;
- 19) Maputaland-Pondoland-Albany: Durban, South Africa;
- 20) Mediterranean Basin: Tel Aviv, Israel;
- 21) Mesoamerica: Guadalajara, Mexico;
- 22) Mountains of Central Asia: Tashkent, Uzbekistan;
- 23) Mountains of Southwest China: Chengdu, China;
- 24) New Zealand: Auckland, New Zealand;
- 25) Philippines: Davao, Philippines;
- 26) Polynesia-Micronesia: Honolulu, USA;
- 27) Southwest Australia: Perth, Australia;
- 28) Sundaland: Jakarta, Indonesia;
- 29) Tropical Andes: Bogotá, Colombia;
- 30) Tumbes-Choco-Magdalena: Guayaquil, Ecuador;
- 31) Wallacea: Makassar (Ujung Padang), Indonesia;
- 32) Western Ghats and Sri Lanka: Colombo, Sri Lanka.



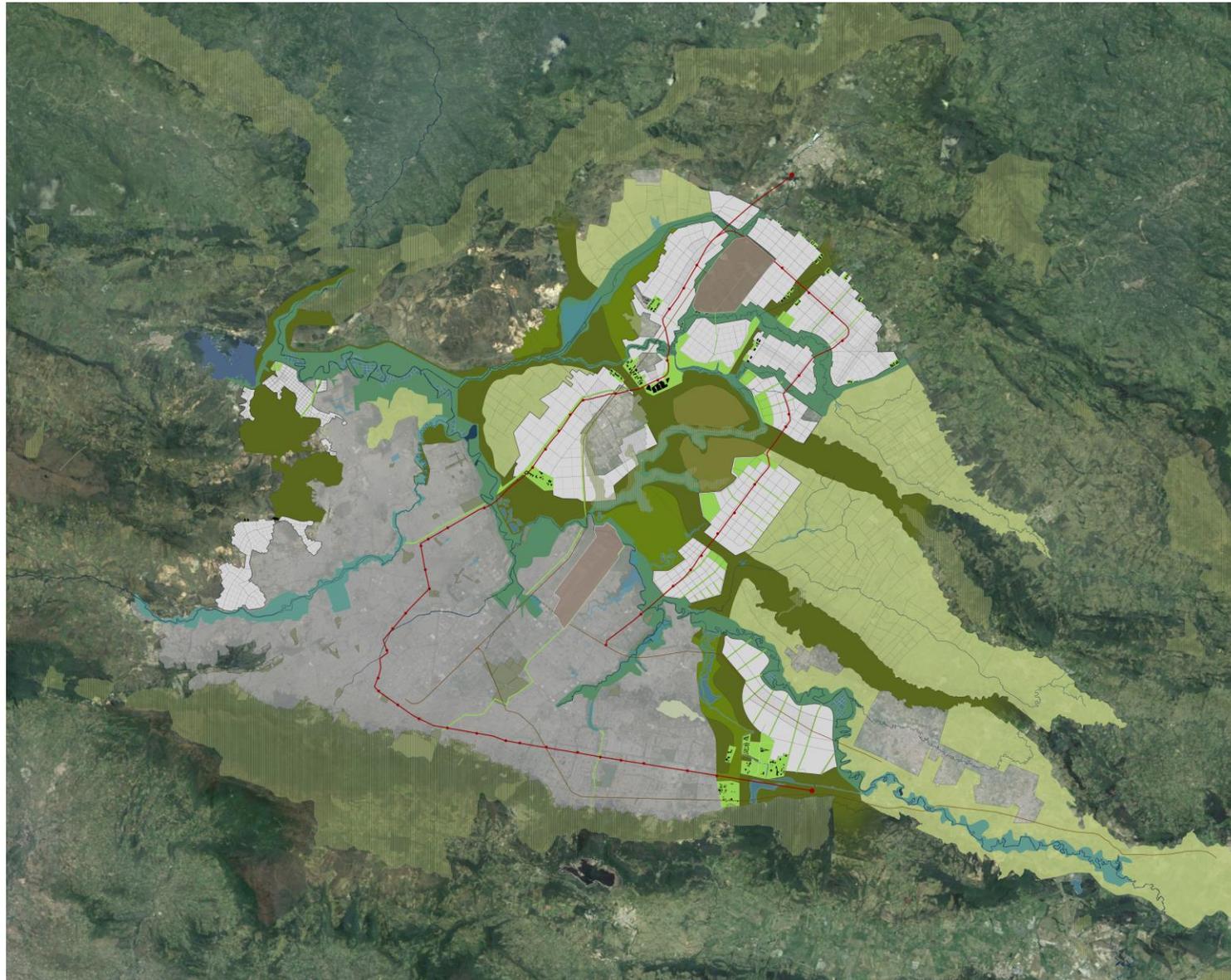
HOTSPOT CITIES SYMPOSIUM- JUNE 20/21 PENN



BOGOTA, COLOMBIA | TROPICAL ANDES



METROPOLITAN FRAMEWORK



- EXISTING PROTECTED AREA
- ECOLOGICAL CORRIDOR
- RIPARIAN CORRIDOR
- STEWARDS AND CIVIC SPACES
- WATER BODY
- AGROFORESTRY
- PROTECTED AGRICULTURAL LAND
- EXISTING URBAN
- URBAN EXPANSION
- AIRPORT
- METRO
- LIGHT RAIL
- CARGO ROAD

- **Washington, D.C. / US/EY**
- **Jane Carter Ingram/Senior Manager**
- Biodiversity and ecosystem service assessment, measurement and management strategies, Corporate natural capital measurement and management strategies, Integration of social and natural capital strategies and approaches
- **jane.ingram@ey.com**

- **Your organization's main undertakings in:**
 - (i) EY has been involved in the 100 Resilient Cities and Future Cities development and have supported numerous public/private sector clients impacting and managing natural capital**

 - (i) We have supported research, planning and management of risk reduction, recovery and sustainability planning that includes integrating natural infrastructure solutions into urban and rural sustainability planning**

- **One key reflection and lesson learned in the area:**
 - Integrating natural capital into planning and management requires understanding the objectives, approaches, data and information needs of different agencies and stakeholders. This involves significant stakeholder engagement, involvement and collaboration. It also requires facilitators who can help translate concepts into different languages to advance a common mission with very different groups.

Knowledge and ideas for a sustainable urban future:

- **Science:** Understanding urban systems in their full complexity
- **Technology:** tools to improve construction, management and planning
- **Design:** scenarios for a more sustainable urban future
- **Partnership** and dialogue

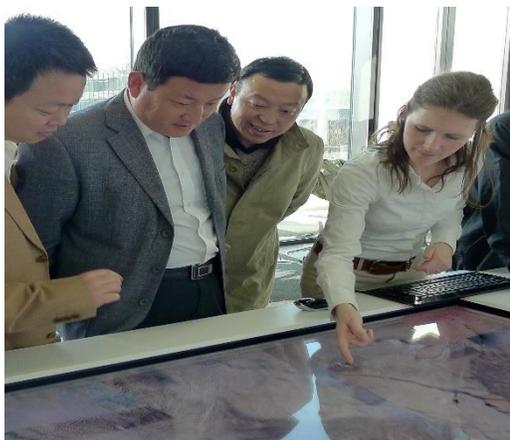
>100 researchers: architects, engineers, computer scientists, ecologists



Working with stakeholders



Value Lab Asia



Ghana: Environmental Protection Agency

Kwame Boakye Fredua, Programme Officer

GEF Scientific Advisory Panel / UN Environment



CitiesWithNature

... provides a **shared**,
interactive global platform
where cities can embark on a
journey to **connect, share &**
learn about nature-based
solutions and how to design &
build cities with nature

ICLEI – local governments for sustainability
Membership-based organization of 1750 cities
in 124+ countries globally
22 offices across the world

Ingrid Coetzee, Senior Programme Manager
Cities Biodiversity Center
(Biodiversity management & governance)

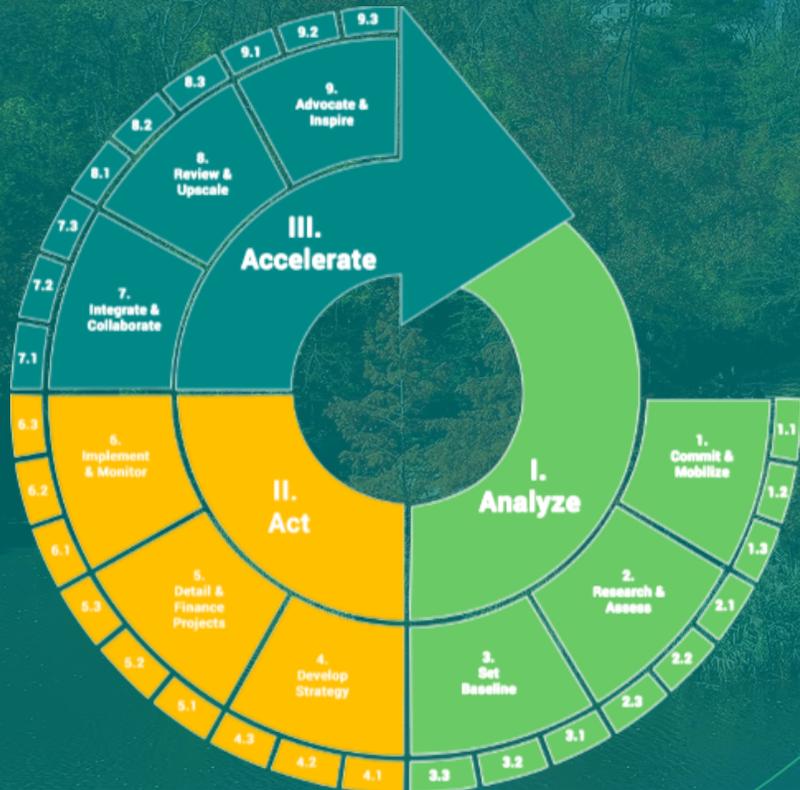
<https://www.iclei.org/>

<https://cbc.iclei.org/>





CitiesWithNature



... builds on more than a decade of **Local Action for Biodiversity** work in cities across the world

... big tent developed by founding partners **ICLEI, IUCN & TNC** & brings practitioners, policy makers, researchers & academics & citizens together

... consists of 3 components :

- ✓ Registry (nature pathways)
- ✓ Knowledge & Research Hub
- ✓ Community Hub

... **Secretariat of the Convention on Biological Diversity** endorses **CWN** as the official platform for local & subnational governments to report on their ambitions & commitments to the Action Agenda for Nature & People and the post-2020 global biodiversity framework



<https://cwn.iclei.org/>

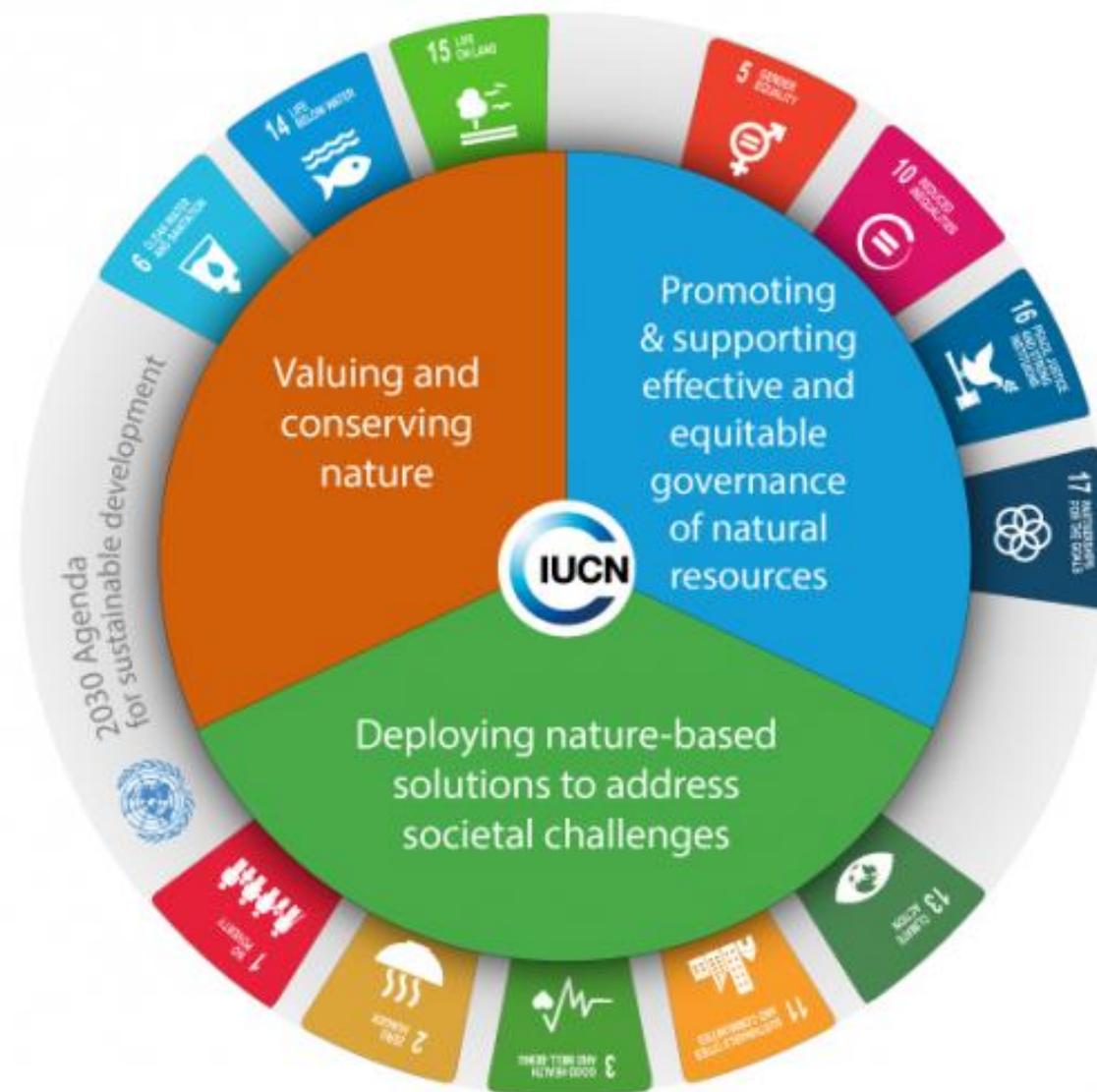


“A just world that values and conserves nature.”

**International Union for Conservation of Nature
Frank Hawkins, Director for North America**

www.iucn.org

frank.hawkins@iucn.org



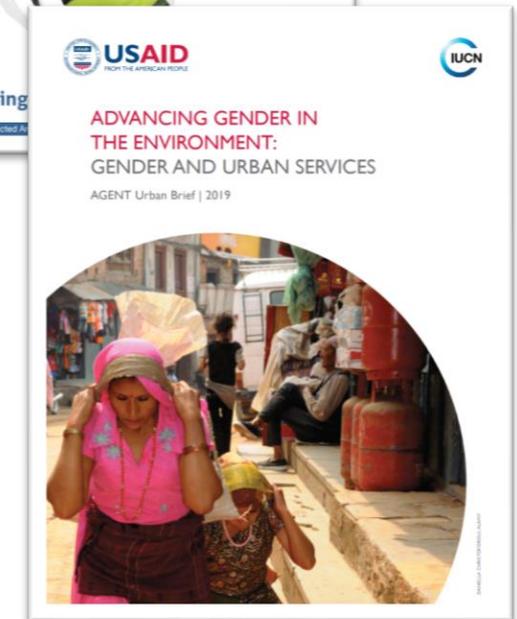
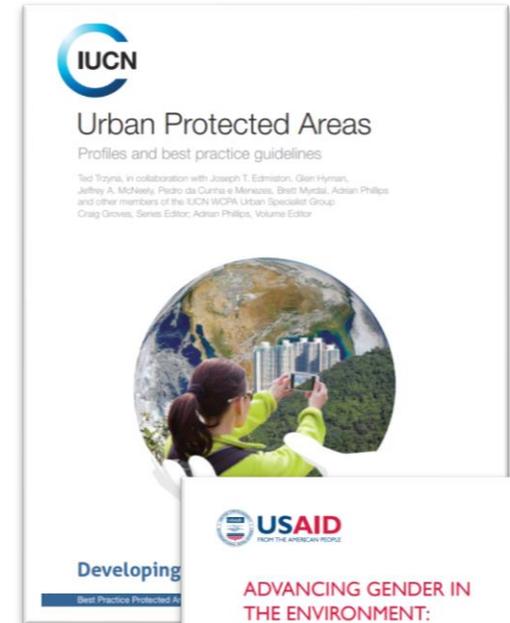


Define standards for protected areas, methodologies for assessing threats to species and ecosystems, best practice guidelines (offsets, nature based solutions, ecosystem based resilience, etc)

Relevant activities

- Best practice **guidelines** on urban protected areas
- Established the IUCN **Urban Alliance**
- Engaged in several **urban projects**, particularly at EU level
- Developing an **Urban Nature Index** and a **Species Recovery Metric** to help cities monitor natural capital & abate threats to Red-listed species.
- Founding partner of **Cities With Nature** with TNC & ICLEI
- Organising urban events at the 2020 **World Conservation Congress**

“The survival of the natural world, even the remotest remnants of wilderness, is now contingent on the sustainability of the unnatural world, our cities.”





The Natural Capital Project

SUSTAINABLE, LIVABLE CITIES PROGRAM

Anne Guerry, Chief Strategy Officer and Lead Scientist

www.naturalcapitalproject.stanford.edu

anne.guerry@stanford.edu



Stanford University

natural
capital
PROJECT

Stanford
University

Stockholm Resilience Centre
Sustainability Science for Biosphere Stewardship



INSTITUTE ON THE
ENVIRONMENT

UNIVERSITY OF MINNESOTA
Driven to DiscoverSM



The Nature
Conservancy 





natural
capital
PROJECT

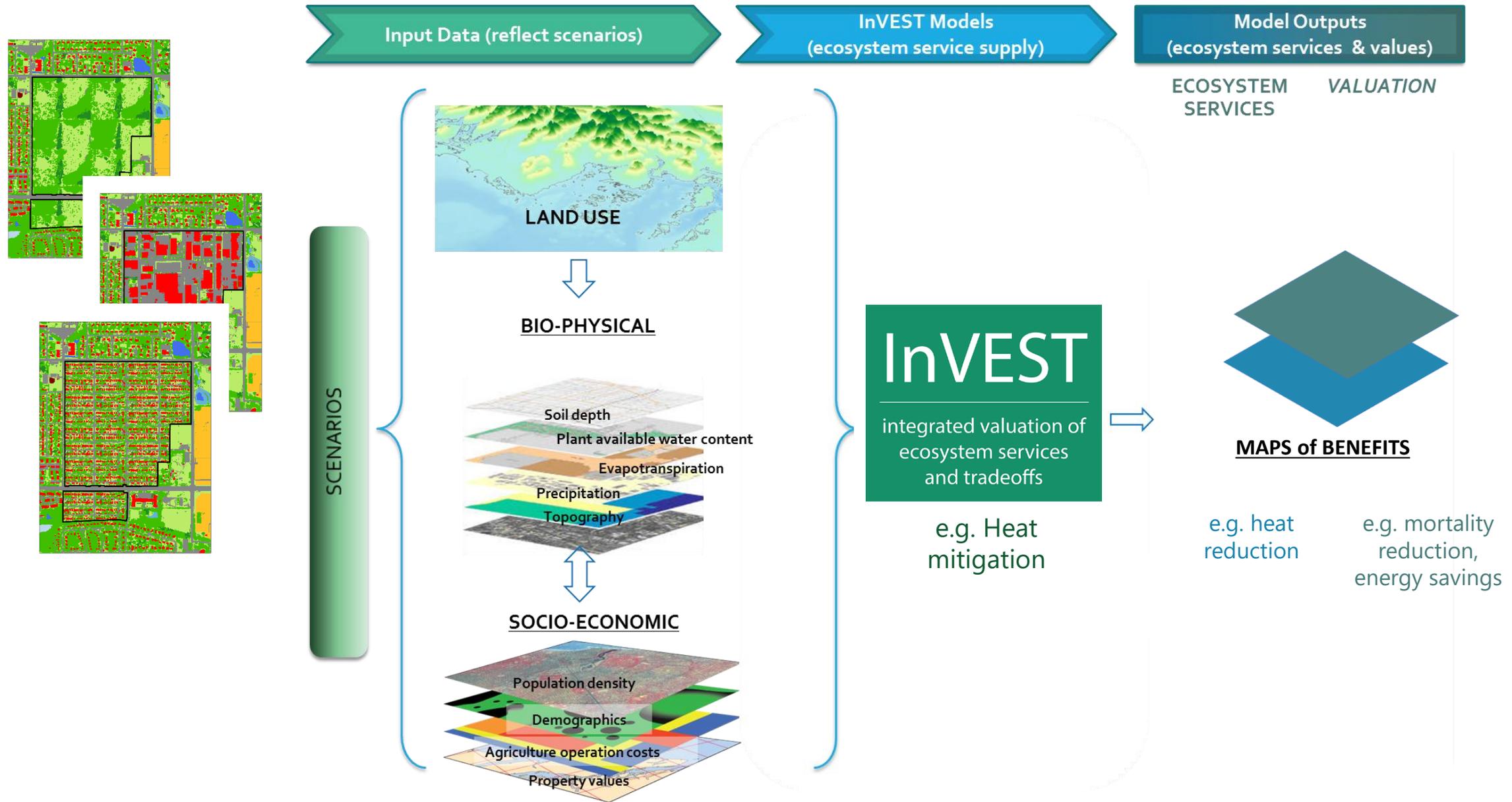
Pioneering science, technology, and
partnerships that enable people and nature
to thrive.

Partnerships



-  Development Planning
-  Livable Cities
-  Securing Freshwater
-  Private Sector Standards
-  Resilient Coastal Communities

InVEST translates scenarios into changes in services



Science + Technology

InVEST

integrated valuation of
ecosystem services
and tradeoffs

Crop pollination



Coastal flood protection & erosion control



Stormwater retention



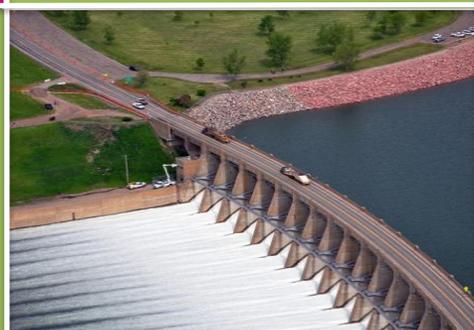
Visitation, Scenic quality



Urban cooling



Climate change mitigation



Flood risk mitigation



Air purification, Food production



Mental & Physical health, Recreation



Biodiversity conservation





InVEST

integrated valuation of
ecosystem services
and tradeoffs





InVEST

integrated valuation of
ecosystem services
and tradeoffs

Upcoming:

- (i) Further development of Urban InVEST
- (ii) Engagement in additional pilot cities
- (iii) Natural Capital Index with World Bank

science + technology + partnership → scaling of approaches and tools to create a future where people and nature thrive.



Dr Jim Rouquette

Director

- Boutique environmental consultancy based in the UK
- Specialise in biodiversity and ecosystem services research and consulting
- We are experts in:
 - ✓ Natural capital accounting
 - ✓ Modelling, mapping and monetary valuation of natural capital and ecosystem services
 - ✓ Spatial analysis and opportunity mapping using Geographical Information Systems
 - ✓ Stakeholder engagement



Paraguay, Asuncion

Tamara Bogarin, Environmental Management of the Municipality of Asuncion

Singapore: National Parks Board

Lena Chan, Senior Director