



Global Heat Resilience Service

- Building the foundation for heat resilient communities

BUILDING THE FOUNDATION FOR HEAT RESILIENT COMMUNITIES

Roundtable on the Global Heat Resilience Service | 31 July 2023

Host



Yana Gevorgyan
Secretariat Director
Group on Earth
Observations

Opening Remarks



Stefan Schweinfest
Director
Statistics Division
UNSD/DESA

Keynote Addresses



Jainey Bavishi, Asst.
Secretary for Oceans and
Atmosphere and Deputy
Administrator, NOAA



Vicki Cerullo
Acting Executive Director
NYC Mayor's Office of Climate
& Environmental Justice



Agenda



Global Heat Resilience Service

➤ Building the foundation for heat resilient communities



	Welcome	15:00 – 15:05	5 mins
1	Introduction / Who is GEO?	15:05 – 15:10	5 mins
2	Opening Remarks	15:10 – 15:15	5 mins
3	Keynote Addresses: why should we be worried about heat & health?	15:15 – 15:35	20 mins
4	Presentations & discussion: the need for a Global Heat Resilience Service	15:35 - 16:15	40 mins
	<i>Coffee Break</i>	16:15 – 16:45	30 mins
5	Moderated panel discussion: Mapping existing initiatives, resources, and partnerships	16:45 – 17:45	60 mins
6	Summary and next steps	17:45 – 18:00	15 mins

An aerial photograph of a dense urban landscape, likely Tokyo, captured during a golden sunset. The sun is a bright, glowing orb in the upper center, casting a warm, orange light across the entire scene. The city is a vast expanse of buildings, with a prominent river winding through the middle ground. The sky is a gradient of orange and yellow, and the overall atmosphere is hazy and serene.

Welcome
Yana Gevorgyan: Director, GEO Secretariat

What is GEO?

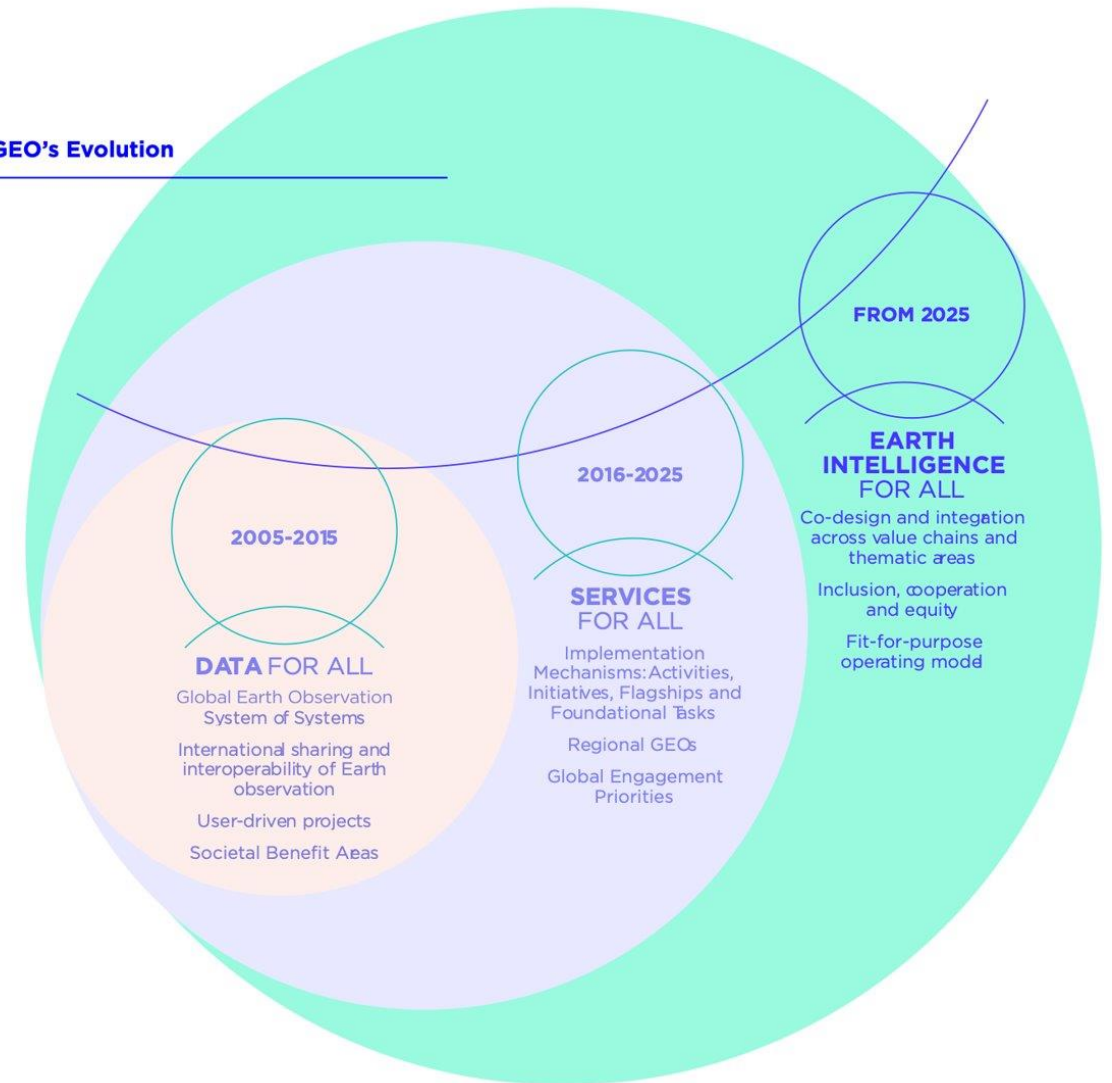
GEO is an intergovernmental partnership for people, nature, and the planet.

GEO promotes open, equitable access to Earth observation information to help decision makers understand and act on the global challenges of climate change, biodiversity loss and pollution, and achieve sustainable development.

GEO draws expertise from an extensive global network that includes 114 governments, 162 private sector and civil society organizations and thousands of world-leading scientists.

The GEO Secretariat is hosted by the World Meteorological Organization (WMO).

GEO's Evolution

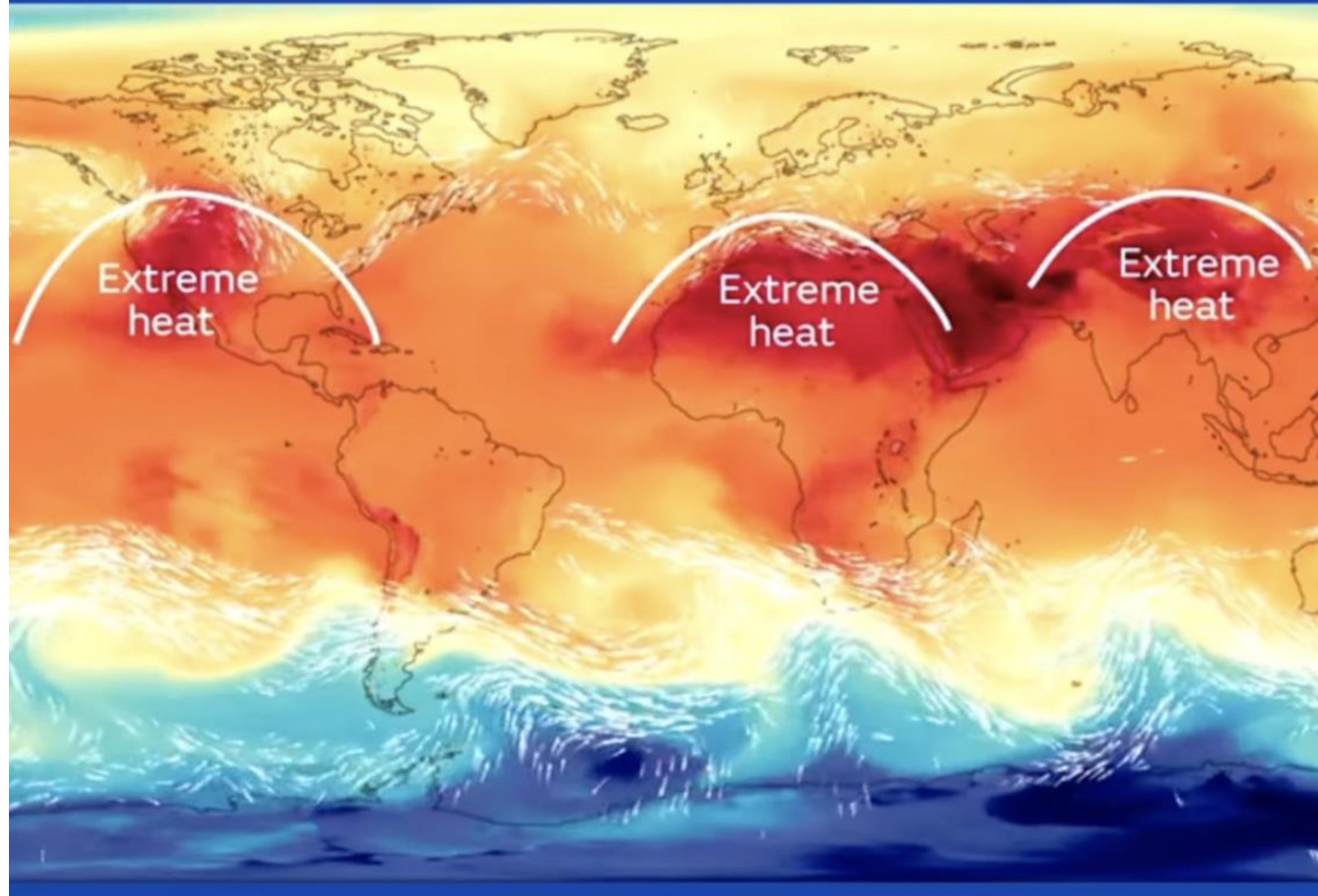


Why heat resilience?

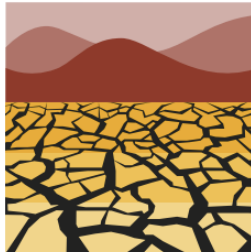
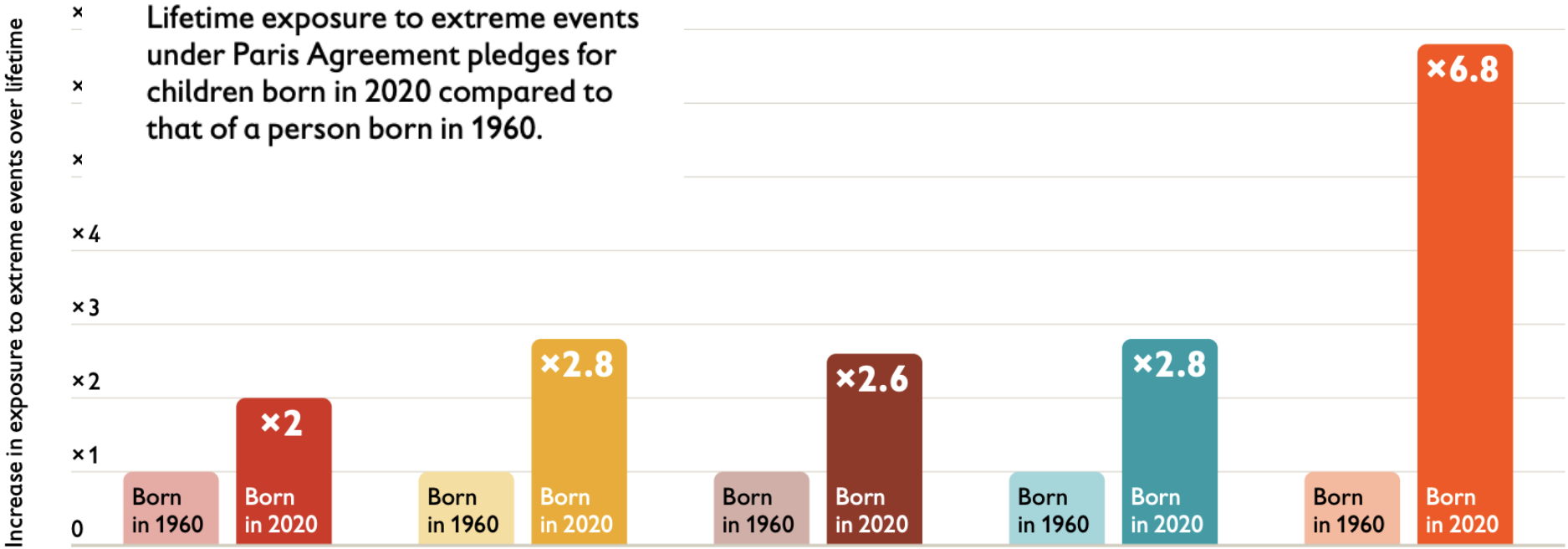
Persistent heatwaves in the Northern Hemisphere

Simultaneous heatwaves are occurring across the northern hemisphere

prolonged daytime temperatures well above 40°C (104°F). Extreme heat is a major hazard, and we must step up (WMO July, 2023)



Born into a climate crisis



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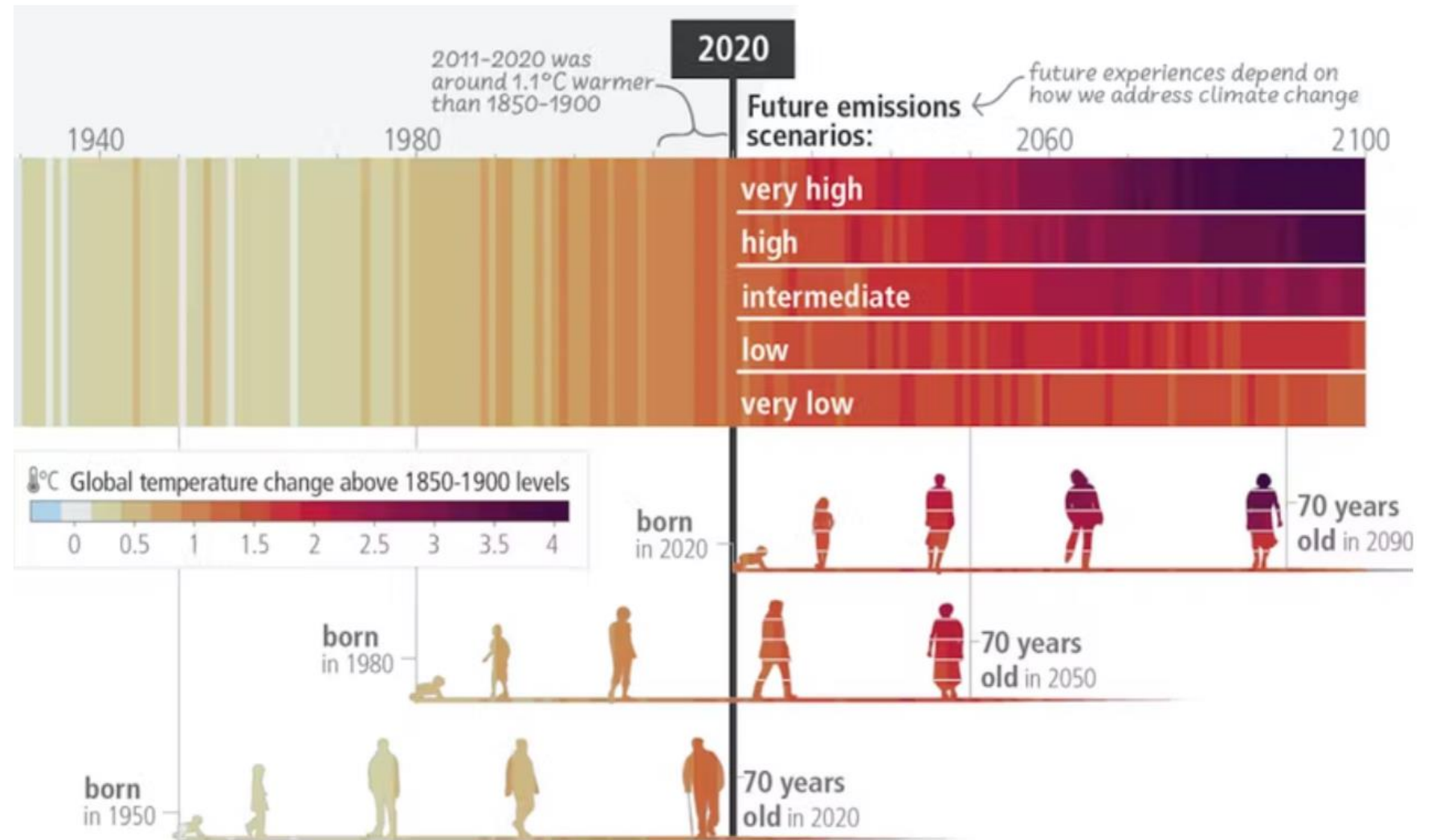
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An aerial photograph of a dense urban landscape, likely Tokyo, captured during a golden sunset. The sun is a bright, glowing orb in the upper center, casting a warm, orange light over the entire scene. The city is filled with a vast number of buildings of varying heights, creating a textured, layered appearance. A prominent river winds through the city, with a large bridge crossing it in the lower right quadrant. The overall atmosphere is hazy and serene, with the long shadows and warm tones of the setting sun dominating the color palette.

The need for a Global Heat Resilience Service

Yana Gevorgyan: Director, GEO Secretariat

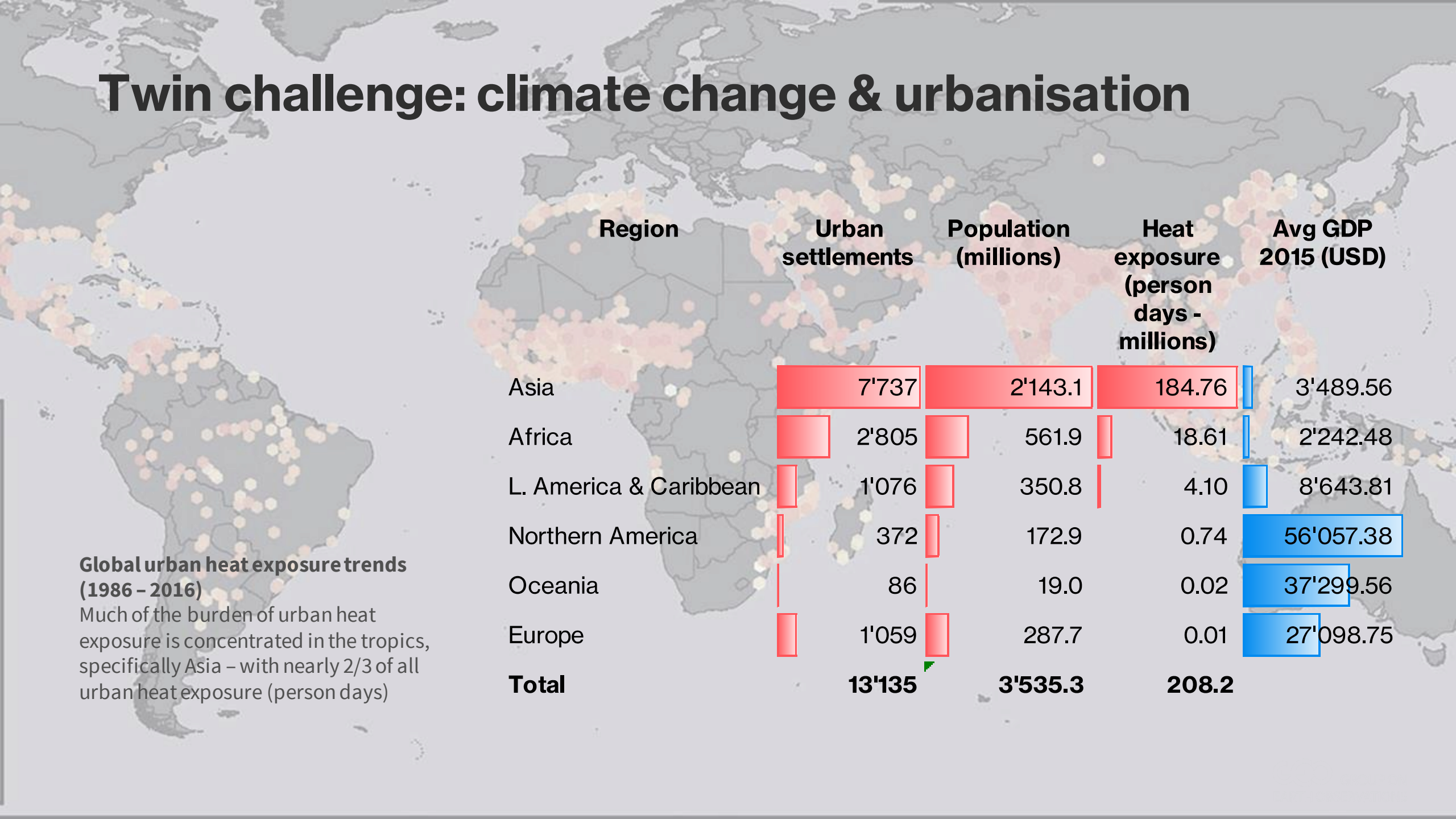
Twin challenge: climate change and urbanisation



IPCC Climate Change 2022: Impacts, Adaptation, and Vulnerability

The Working Group contribution
to the IPCC Sixth Assessment
Report

Twin challenge: climate change & urbanisation



Global urban heat exposure trends (1986 - 2016)

Much of the burden of urban heat exposure is concentrated in the tropics, specifically Asia – with nearly 2/3 of all urban heat exposure (person days)

Region	Urban settlements	Population (millions)	Heat exposure (person days - millions)	Avg GDP 2015 (USD)
Asia	7'737	2'143.1	184.76	3'489.56
Africa	2'805	561.9	18.61	2'242.48
L. America & Caribbean	1'076	350.8	4.10	8'643.81
Northern America	372	172.9	0.74	56'057.38
Oceania	86	19.0	0.02	37'299.56
Europe	1'059	287.7	0.01	27'098.75
Total	13'135	3'535.3	208.2	



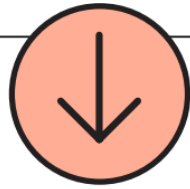
Global Heat Resilience Service

➤ Building the foundation for heat resilient communities

a co-designed service that will provide **every** urban area in the world with data and knowledge on the health risks from exposure to extreme heat. These insights will help cities develop plans to adapt to heat and reduce the impact on citizens' health and local economies.

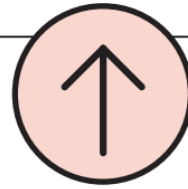


Global Heat Resilience Service



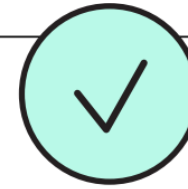
inputs

	Meteorological and climate models
	Satellite based mapping of people, infrastructure and other assets
	Community-based mapping of heat and social vulnerability
	Socio-economic and public health data



outputs

	Seasonal and sub-seasonal heat forecasts
	Heat vulnerability mapping
	Decision-support platform for heat resilience planning
	Technical support, capacity building and awareness raising tools



outcomes

	Cities can better understand risks from heat
	Cities can better address risks from heat through local solutions
	Cities can better communicate risks from heat to raise awareness

An aerial, grayscale photograph of a densely populated city, likely Tokyo, showing a wide river (the Arakawa River) winding through the urban landscape. The sun is visible in the upper center of the frame, creating a bright, hazy glow over the city. The buildings are packed closely together, and the overall scene conveys a sense of urban density and scale.

The need for a Global Heat Resilience Service

Priscilla Idele: UNFPA



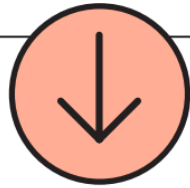
Recent experience: heat mapping campaigns

Hunter Jones, NOAA

Coffee break

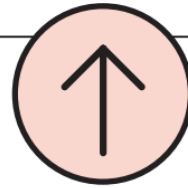
Mapping existing initiatives, resources, and partnerships Roundtable

Global Heat Resilience Service



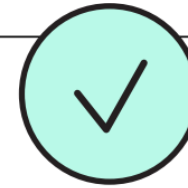
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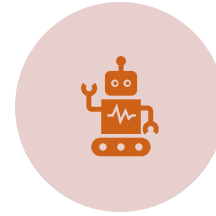
What needs, opportunities and challenges do we foresee in developing a Global Heat Resilience Service?



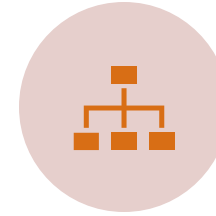
Existing initiatives that could be leveraged?



Data related challenges?



Technical capacity / other types of support?



Resources and sustainability needed for an operational service?



Governance and partnership arrangements?



Policy and advocacy?



Awareness raising and communications?

Summary & next steps

Martyn Clark, GEO Secretariat

Global Heat Resilience Service: minimum requirements?

- Trusted, consistent definition(s) of heat as a hazard
- sufficient (spatial) information on which to develop heat resilience policies, plans, and projects
- Flexibility to incorporate local data and information
- Modular and extensible approach to understanding risks to match local capabilities
- Licensing and interoperability
- Technical support and capacity building – translation of evidence into action
- Risk knowledge and communication tools



Project design



An articulation of what demand the product will fill



Use cases identified with users



“Product approach”: a phased, coherent design and plan for production defined



A scientific and technical approach defined

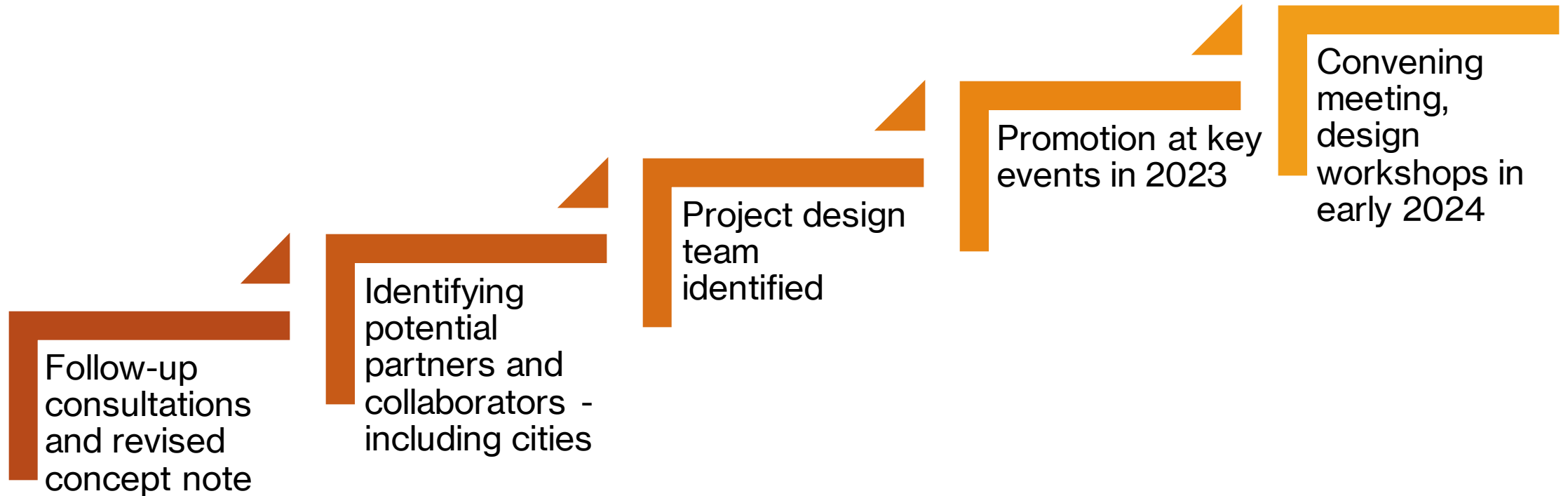


Seed funding secured

Partnerships



Next steps



Thank you!



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For more information contact:

Martyn Clark

Urban Resilience Coordinator

GEO Secretariat

mclark@geosec.org