GROUP ON EARTH OBSERVATIONS

# Resilient Cities and Human Settlements

PB-25: 7-8 Feb 2023
Geneva, Switzerland

GEO Secretariat
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# Introduction

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**urban resilience**: the capacity of a city's systems, businesses, institutions, communities, and individuals to **survive, adapt, and grow**, no matter what chronic stresses and acute shocks they experience

# Resilient Cities & Human Settlements


SDG11:
Make cities and human settlements inclusive, safe, resilient and sustainable

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Leave no-one behind;

Ensure sustainable and inclusive urban economies;

Ensure environmental sustainability

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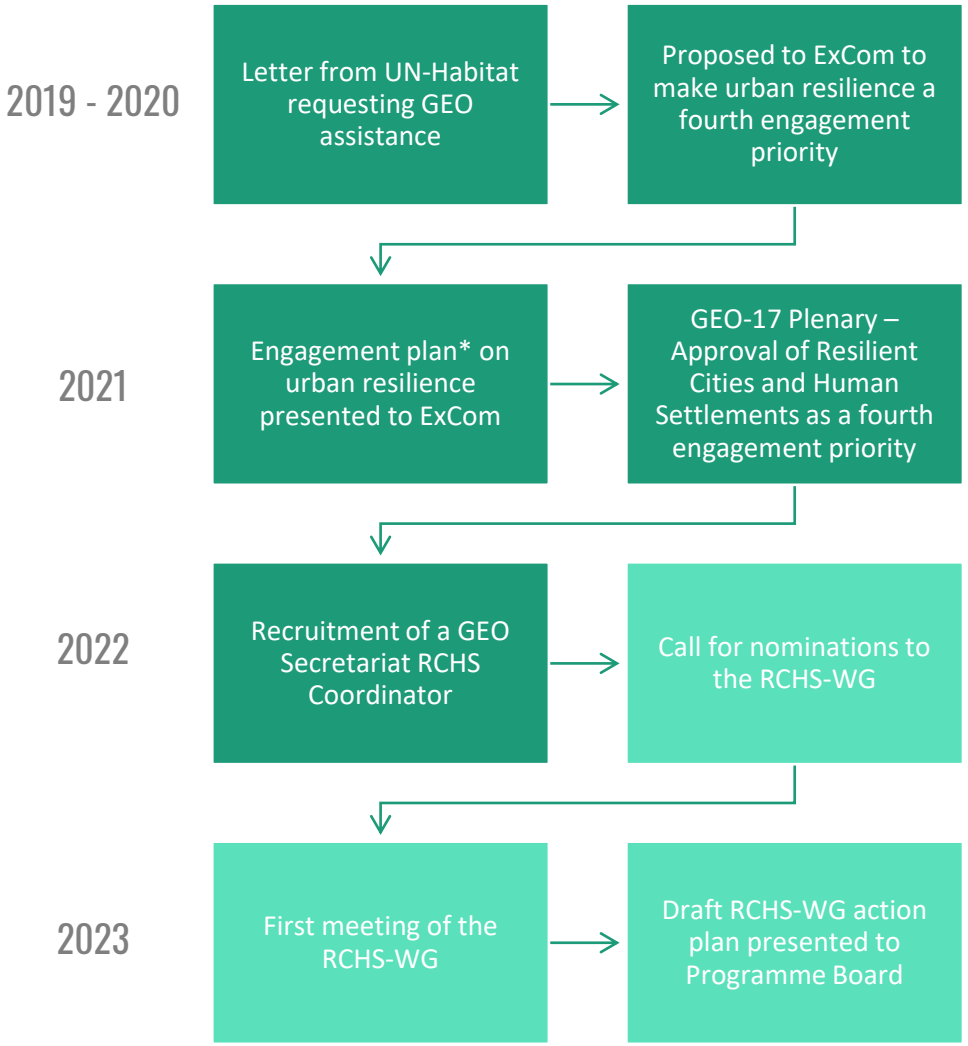
**Resilient Cities & Human Settlements**
4th Engagement Priority

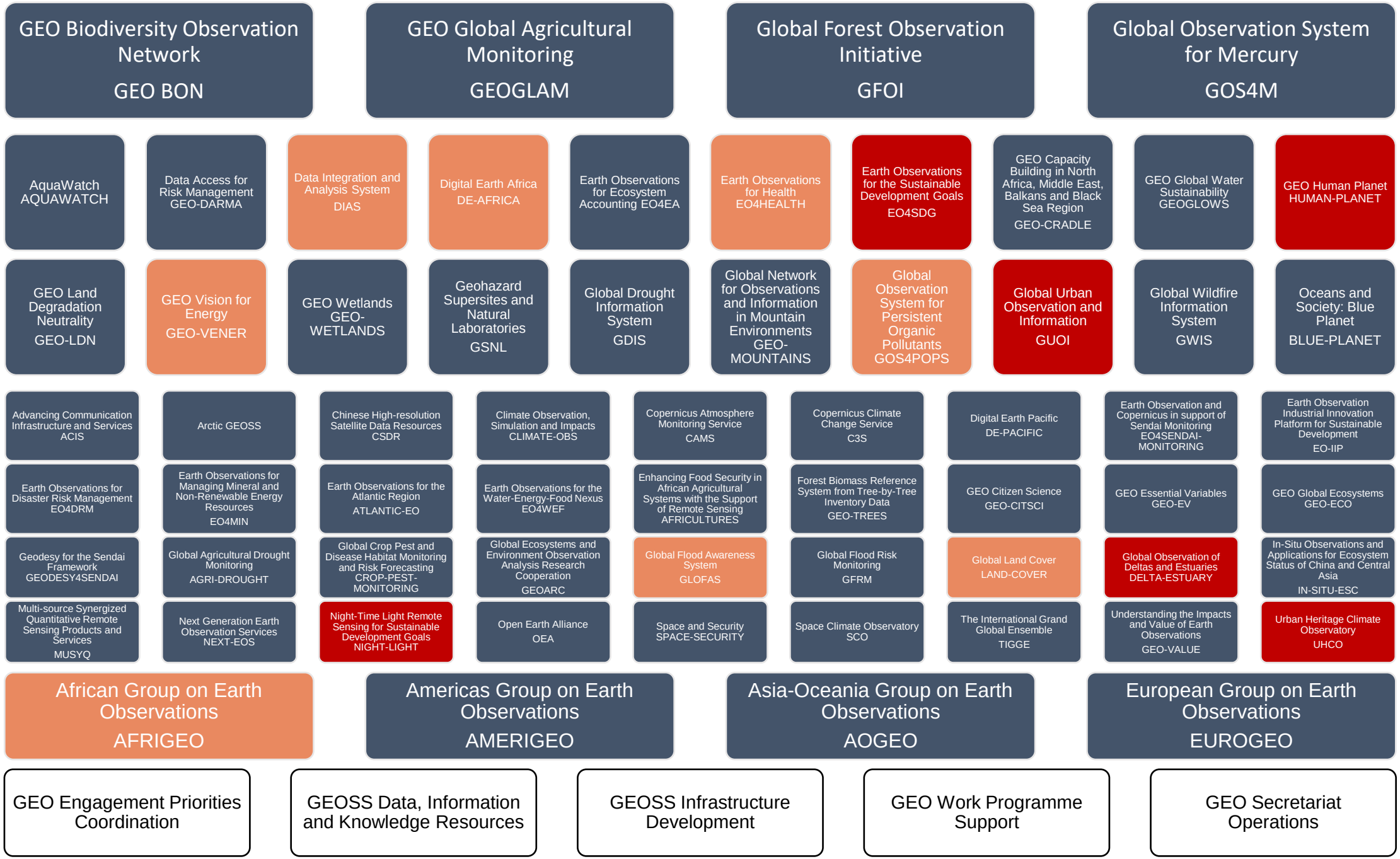
EO offers the opportunity to monitor and address multidimensional challenge of urban sustainability, including at the local-level

# RCHS: to date




## *RCHS Engagement Plan


- formulate how EO can assist implementation and monitoring of the NUA
- engage cities and other stakeholders to understand their needs
- Exploit existing and develop new EO-based tools and services to support sustainable urbanization;
- Provide greater visibility to ongoing GEO WP activities relevant to urban resilience and encourage new activities to address identified gaps;
- Collaborate with those working on other GEO engagement priorities
- Pursue opportunities with Regional GEOs to develop projects addressing urban resilience in line with their existing agendas;
- Develop the appropriate messages, language, and tools to communicate what the GEO community has to offer to cities and other stakeholders.


GEO Biodiversity Observation Network
GEO BON
GEO Global Agricultural Monitoring
GEOGLAM
Global Forest Observation Initiative
GFOI
Global Observation System for Mercury
GOS4M
AquaWatch
AQUAWATCH
Data Access for Risk Management
GEO-DARMA
Data Integration and Analysis System
DIAS
Digital Earth Africa
DE-AFRICA
Earth Observations for Ecosystem Accounting
EO4EA
Earth Observations for Health
EO4HEALTH
Earth Observations for the Sustainable Development Goals
EO4SDG
GEO Capacity Building in North Africa, Middle East, Balkans and Black Sea Region
GEO-CRADLE
GEO Global Water Sustainability
GEOGLOWS
GEO Human Planet
HUMAN-PLANET
GEO Land Degradation Neutrality
GEO-LDN
GEO Vision for Energy
GEO-VENER
GEO Wetlands
GEO-WETLANDS
Geohazard Supersites and Natural Laboratories
GSNL
Global Drought Information System
GDIS
Global Network for Observations and Information in Mountain Environments
GEO-MOUNTAINS
Global Observation System for Persistent Organic Pollutants
GOS4POPS
Global Urban Observation and Information
GUOI
Global Wildfire Information System
GWIS
Oceans and Society: Blue Planet
BLUE-PLANET
Advancing Communication Infrastructure and Services
ACIS
Arctic GEOSS
Chinese High-resolution Satellite Data Resources
CSDR
Climate Observation, Simulation and Impacts
CLIMATE-OBS
Copernicus Atmosphere Monitoring Service
CAMS
Copernicus Climate Change Service
C3S
Digital Earth Pacific
DE-PACIFIC
Earth Observation and Copernicus in support of Sendai Monitoring
EO4SENDAI-MONITORING
Earth Observation Industrial Innovation Platform for Sustainable Development
EO-IIP
Earth Observations for Disaster Risk Management
EO4DRM
Earth Observations for Managing Mineral and Non-Renewable Energy Resources
EO4MIN
Earth Observations for the Atlantic Region
ATLANTIC-EO
Earth Observations for the Water-Energy-Food Nexus
EO4WEF
Enhancing Food Security in African Agricultural Systems with the Support of Remote Sensing
AFRICULTURES
Forest Biomass Reference System from Tree-by-Tree Inventory Data
GEO-TREES
GEO Citizen Science
GEO-CITSCI
GEO Essential Variables
GEO-EV
GEO Global Ecosystems
GEO-ECO
Geodesy for the Sendai Framework
GEODESY4SENDAI
Global Agricultural Drought Monitoring
AGRI-DROUGHT
Global Crop Pest and Disease Habitat Monitoring and Risk Forecasting
CROP-PEST-MONITORING
Global Ecosystems and Environment Observation Analysis Research Cooperation
GEOARC
Global Flood Awareness System
GLOFAS
Global Flood Risk Monitoring
GFRM
Global Land Cover
LAND-COVER
Global Observation of Deltas and Estuaries
DELTA-ESTUARY
In-Situ Observations and Applications for Ecosystem Status of China and Central Asia
IN-SITU-ESC
Multi-source Synergized Quantitative Remote Sensing Products and Services
MUSYQ
Next Generation Earth Observation Services
NEXT-EOS
Night-Time Light Remote Sensing for Sustainable Development Goals
NIGHT-LIGHT
Open Earth Alliance
OEA
Space and Security
SPACE-SECURITY
Space Climate Observatory
SCO
The International Grand Global Ensemble
TIGGE
Understanding the Impacts and Value of Earth Observations
GEO-VALUE
Urban Heritage Climate Observatory
UHCO
African Group on Earth Observations
AFRIGEO
Americas Group on Earth Observations
AMERIGEO
Asia-Oceania Group on Earth Observations
AOGEO
European Group on Earth Observations
EUROGEO
GEO Engagement Priorities Coordination
GEOSS Data, Information and Knowledge Resources
GEOSS Infrastructure Development
GEO Work Programme Support
GEO Secretariat Operations

# Looking forward: proposed RCHS actions

- Further activation of RCHS working group
  - Building on URSG and then *survey of usefulness and impact of WGs across GEO…*
  - Convene working group, revisit terms of reference
  - Build out membership – cities, city networks
  - Developing, activating RCHS workplan
- Integration, alignment, streamlining of work programme activities
  - Visibility, alignment of urban-themed activities
  - Coordinating, integrating across GEO engagement priorities
  - Matching supply of EO to demand from users (demonstrate success stories, capture use-cases)
- Attracting additional resources
  - New partnerships, memberships that put cities at the centre
  - Incubator model - Heat & Health

RESILIENT CITIES NETWORK

C40 CITIES

ICLEI Local Governments for Sustainability

Cities Alliance
Cities Without Slums

UCLG United Cities and Local Governments

sdi.

# Heat & Health Incubator

**Objective:** To build a global service to map heat across time scales and provide tools for users to understand and act to mitigate evolving health risks.

**Suggested design elements:**

- Outcome 1: Develop seasonal heat outlooks for decision making
- Outcome 2: (Community) Heat and Social Vulnerability Mapping
- Outcome 3: `Platform' development – data, products, services, support ?

**Key questions:**

- Gap analysis, clarify need and demand for this at city-level – who are the users, what needs are we looking to respond to?
- How to make accessible to a broad user-base: stepped approach that responds to different levels of technical capacity, data availability, resources etc.
- Identify linkages across existing GEO work programme activities – urban, health, but also DRR, climate change, SDGS, cap. development etc.
- Attracting additional resources

**Next steps:**

- Review concept note (Feb 2023)
- Feedback, engagement GWP community