

# Project presentation

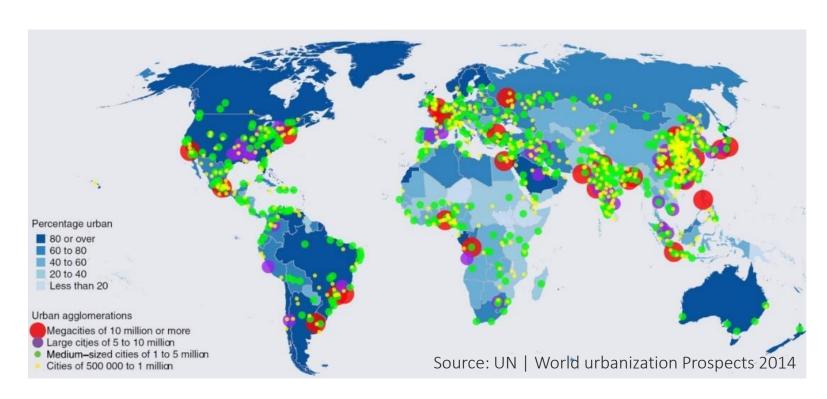
Overview of tasks, objectives and partners



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n°821242. Several Chinese CLEARING HOUSE partners have also contributed to the funding.

# CONTEXT 项目背景

# Cities and urbanization 城市化



Cities are highly vulnerable to environmental change which is happening at an alarming rate! This has consequences to both our health and the economy.

#### Cities are home to:

- >50% of the world's population (by 2050: 70%)
- >90% of global economic activities
- 65% of global energy consumption
- 75% of anthropogenic greenhouse gas emissions



# Urban Trees and Forests 城市树木与森林

- 1. Historically trees and forests in urban areas have been undervalued in respect of the ecosystem services they deliver to urban societies.
- 2. In urban areas, existing policies and practice for the governance, management and conservation of trees and forests will need to change in ways that provide a focus on enhancing ecosystem services and meeting new societal demands.
- Increasing our understanding of different approaches across countries and continents will facilitate mutual learning and improve urban forestry strategies in the future.

### Ecosystem services provided by urban trees Air pollutant reduction O3, NO2, SO2, PM10 CO2 sequestration **Energy savings** & avoided emissions due to shading Aesthetic value (increased market value) Stormwater runoff reduction Credit: iTreetools.org

# **Urban Forest Nature-based Solutions (UF-NBS)**



- Nature-based solutions are "solutions that are <u>inspired</u> and <u>supported by nature</u>, which are cost-effective, simultaneously <u>provide environmental</u>, <u>social and</u> <u>economic benefits</u> and help <u>build resilience</u>."
- Urban forest nature-based solutions (<u>UF-NBS</u>) is a term that describes the cultural, regulating and provisioning services of trees and their environs.
- <u>UF-NBS</u> includes peri-urban and urban forests, forested parks, small woods in urban areas, and trees in public and private spaces.



# CLEARING HOUSE 中欧城市森林应对方案

### About

#### Urban forest nature-based solutions contribute to sustainable urban development.

CLEARING HOUSE is a Sino-European H2020 project that is jointly coordinated by the European Forest Institute (EFI) and the Research Institute of Forestry at the Chinese Academy of Forestry (CAF-RIF). The project brings together 26 partners from across the spectrum, including prestigious universities, national research institutes, international and national non-profits, SMEs, and botanical gardens.

Between 2019 and 2023, the partners will provide evidence and create tools that encourage rehabilitating, reconnecting and restoring urban ecosystems through trees.

Together with 10 cities and urban regions, the project partners will develop an online application, a global benchmark tool, and guidelines that can aid in the design, governance and management of urban forests.

#### **CLEARING HOUSE**

#### Project Partners

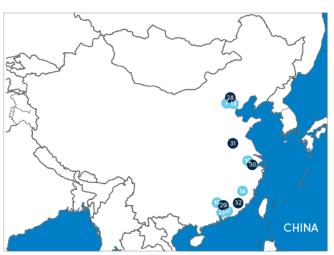
- 1 European Forest Institute (EFI) (Coordinator)
- 2 Research Institute of Forestry Chinese Academy of Forestry (CAF-RIF)
- 3 Fundacja Sendzimira (TSF)
- 4 Vrije Universiteit Brussel (VUB)
- 5 Humboldt-Universitaet zu Berlin (HUB)
- 6 Centro de Investigación Ecológica y Aplicaciones Forestales (CREAF)
- 7 Uniwersytet Lodzki (UniLodzki)
- 8 LGI Consulting SARL (LGI)
- 9 Universita degli Studi di Bari Aldo Moro (UNIBA)
- 10 Luonnonvarakeskus (LUKE)
- 11 Universitaet Fuer Bodenkultur Wien (BOKU)
- 12 Hrvatski Sumarski Institut (CFRI)
- 13 Beijing Forestry University (BFU)
- 14 Fujian Agriculture and Forestry University (FAFU)
- 15 Guangzhou Institute of Forestry and Landscape Architecture (GZIFLA)
- 16 Zhejiana University (ZJU)
- 17 Shenzhen Fairy Lake Botanical Garden (SZFLBG)
- 18 Institut Bruxellois pour la Gestion de l'Environnement-Brussels Instituut Voor Milieubeheer (IBGE)
- 19 Urzad Miasta Krakowa (UMKrakowa)
- 20 Area Metropolitana de Barcelona (AMB)
- 21 BOS+ Vlaanderen vzw (BOS+)
- 22 Vlaams-Brabant (Vlaams-Brabant)
- 23 The University of Hong Kong (HKU)
- 24 Stadt Gelsenkirchen (Gelsenkirchen)
- 25 Association mondiale des grandes métropoles, Metropolis (Metropolis)
- 26 International Union for Conservation of Nature (IUCN)

#### Case Study Cities/City Regions

- beneficiary
- non-beneficiary
- 18 Brussels\*
- 19 Krakow\*
- 20 Barcelona<sup>\*</sup>
- 24 Gelsenkirchen
- 27 Leipzia-Halle
- 28 Beijing
- 29 Hong Kong\*-Ghuangzhou-Shenzhen
- 30 Hanazhou
- 31 Huaibei
- 32 Xiamen

\*Covenant of Mayors signatory







### **Partners**









































BEIJING FORESTRY UNIVERSITY













河岸修复及区域性生态廊道



Additional partners are likely to join the consortium in the coming months.

### Case studies

### **EUROPE CHINA** Beijing Brussels Leipzig-Halle HK+Guangzhou+Shenzhen Krakow Hangzhou Gelsenkirchen Huaibei Xiamen Barcelona

#### **REFERENCES**



Inner-city afforestation



Urban-rural territorial linkage



Air purification/ air quality improvement



Heat-wave mitigation



**Outdoor recreation** 



River catchment restoration



Increasing attractiveness & nature connectivity



Restoring former mining sites



Urban regeneration

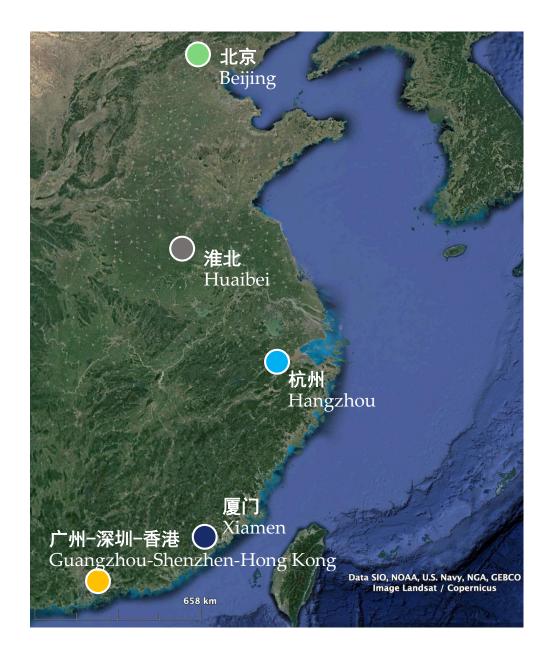


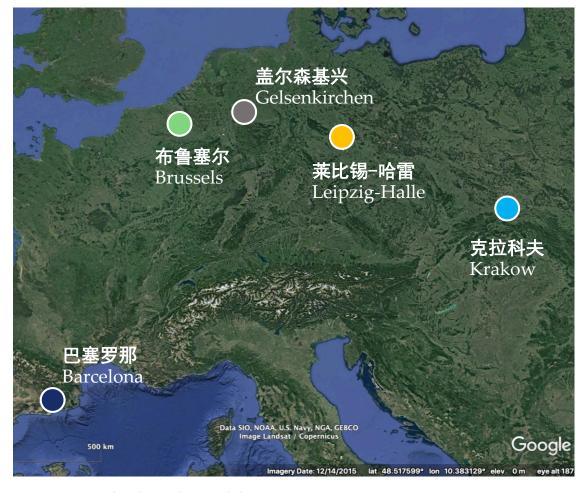
Socio-cultural integration











- Diversified ecological functions in urban and rural scales
- Ecological restoration of mining cities
- Riverbank restoration and regional ecological corridor

- Air purification
- Riparian and coastal forest restoration



# **Expected Impacts**

- Restored and functioning urban ecosystems with an enhanced capacity to deliver services
- Business and investment case for UF-NBS on the basis of increased evidence about the benefits from restored urban ecosystems with regards to urban liveability, climate change resilience, social inclusion, urban regeneration, public health and wellbeing
- Guidelines for cost-effective and high-impact urban ecosystem restoration and ecological rehabilitation, as well as new planning approaches and methods

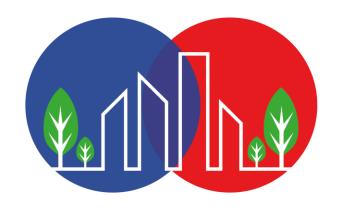


# Main objectives

- Mapping how urban forests are used/managed as NBS (typology)
- Surveying societal perceptions and demands towards UF-NBS in Europe and China
- Analysing the respective policy frameworks in Europe and China
- Comparative case study analysis in 10 paired cities/city clusters between China & Europe
- Experiment with elements of citizen science, co-design and co-learning with stakeholders and decision makers in Europe and China (two competitive calls)
- Developing user-friendly UF-NBS tools (e.g., guidelines for practitioners)



# Engage with us online!



# CLEARINGHOUSE 中欧城市森林应对方案



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