November 2022

Urban nature, biodiversity, and climate change in cities around the world

Mandy Ikert –C40 Head of Adaptation Implementation #AFutureWithNature is possible, if we make it a priority today.

Together, we can create cities that are greener, healthier and more resilient.



Rosanna Wan

The C40 Cities network



AFRICA: ABIDJAN – ACCRA – ADDIS ABABA – CAPE TOWN – DAKAR – DAR ES SALAM – DURBAN [ETHEKWIN]) = EKURHULENI – FREETOWN – JOHANNESBURG – LACOS – NAIROBI – TSHWANE] (ENTRAL EAST ASIA: BEJING CHENGDU – DALIAN – FUZHOU – GUANGZHOU – HANGZHOU – HONG KONG – NANJING – SHANGHAI – SHENZEN – QINGDAO – WUHAN – ZHENJIANG] EAST, SOUTHEAST ASIA & OCEANIE: AUCKLAND – BANGKOK – HANOI HO CHI MINH CITY – JAKARTA – KUALA LUMPUR – MELBOURIKE – QUEZON CITY – SEOUL – SINGAPORE – SYDNEY – TOKYO – YOKOHAMA] EUROPE: AMSTERDAM – ATHENS – BARCELONA – BERLIN – COPENHAGEN – HEIDELBERG ISTANBUL – LISBON – LONDON – MADRID – MILAN – OSLO – PARIS – ROME – ROTTERDAM – STOCKHOLM – TEL AVIV – WARSAW | LATIN AMERICA: BOGOTĂ – BUENOS AIRES – CURTIBA – GUADALAJARA – LIMA MEDELLÍN MEXICO CITY RIO DE JANEIRO – SALVADOR – SÃO PAULO – SANTIAGO – QUITO I NORTH AMERICA: AUSTIN – BOSTON – CIGACO – HOUSTON – LOS ANGELES – MIAMI – MONTRÉAL – NEW ORKE – PHILADELPHIA – PHOENIX PORTLAND SAN FRANCISCO – SEATTLE – TORONTO – VANCOUVER – WASHINGTON DC [SOUTH & WEST ASIA: AHMEDABAD – AMMAN – BENGALURU – CHENNAI – DEHI – DHAKA – DUBAI – KARACHI – KOLKATA – MUMBAI





Planting Healthy Air

A global analysis of the role of urban trees in addressing particulate matter pollution and extreme heat



Map E2. Return on Investment of tree planting to reduce ambient temperatures by global clins.





C40 **MAYORS'** AGENDA FOR A GREEN AND JUST RECOVERY

C40

CITIES

Health and wellbeing: Give space back to people and nature, rethink and reclaim our streets, clean our air and create liveable, local communities

Action: Build with nature

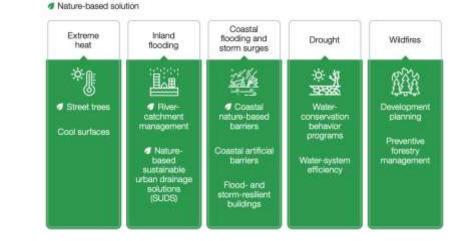
We will prioritise nature-based solutions (such as parks, green roofs, green walls, blue infrastructure and permeable pavements) to help reduce the risks of extreme heat, drought, flooding and vector- and water-borne disease while improving liveability and increasing physical and mental health.







- <u>Crisis-prepared Cities:</u> Developing and improving cities' climate hazard responses by building on learnings from COVID-19.
- <u>Climate-Ready Cities:</u> Harnessing the environmental value of nature and mainstreaming climate adaptation actions into the city governance, to protect communities from extreme weather events and changing climates.



 Living Cities: Prioritising adaptation measures that are implemented to benefit the most vulnerable or marginalised

6

Signatories Athens Austin Barcelona Berlin Bogotá **Buenos Aires** Chennai Copenhagen Curitiba Dhaka North **Dhaka South** Delhi Durban Freetown Guadalaiara Haifa (non C40) Karachi Lima London Los Angeles Medellín Milan Montreal Mumbai New Orleans Paris **Quezon City** Ouito **Rio de Janeiro** Rome Rotterdam Salvador San Francisco Seattle Stockholm Sydney **Tel Aviv** Tokvo Toronto

C40 Urban Nature Accelerator

To protect our communities from climate risk and help meet the goals of the Paris Agreement while improving overall health and wellbeing, our cities pledge to **increase** and enhance nature in our urban environments that reduces climate risk and vulnerability, supports wider ecosystem services, and is equitably distributed and

publicly accessible, by 2030."

PATHWAY 1 QUALITY TOTAL COVER

Heat & Water related risk



30-40% of the total built-up city surface area is: a.) Green spaces (e.g., street trees & urban forests, parks, building integrated vegetation) and/ or

 b.) Permeable spaces (e.g., pavements, infiltration trenches, swales, detention basins, regenerative urban agriculture)

PATHWAY 2 EQUITABLE SPATIAL DISTRIBUTION

Accessibility and connectivity



70% of the city population has access to a fit for purpose green or blue space within **15 minutes**⁷ – equitably prioritised to maximise accessibility and connectivity to nature for the most vulnerable

Declaration commitments

WITHIN TWO YEARS, WE COMMIT TO:

- Make nature **goals public**
- Develop support and skills building programmes for **green jobs**
- Develop a process for **involving vulnerable** and marginalized communities
- Map current and expected **climate risks** and vulnerability
- Conduct a **gap analyses** and mapping to show where new greening is needed and opportunities for existing green spaces
- Accelerate action to **address governance barriers** to implementation
- Mobilize **access to investments** and resources that support the Declaration targets
- Publicly **report annually** on our progress

WITHIN FIVE YEARS, WE COMMIT TO:

- **Implement** new or enhanced public green spaces and green streetscapes, in areas with the greatest impact on the most vulnerable
- Complete a baseline natural vegetation inventory and undertake natural capital accounting to raise awareness of the associated value of urban nature
- Develop **new inclusive governance frameworks,** practices and programmes
- Update our climate action plan adaptation actions to reflect our ambitious nature targets

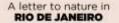


"In order to be effective, the ecological transition needs to be socially desirable"

Alexander Langer

C40 CITIES





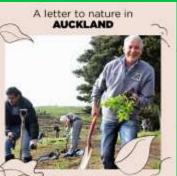












#AF-purpletthelature

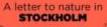


man un esternetioner











Urban Nature Interventions Across Cities

Under Toronto's <u>Urban Forests</u> <u>Grants and Incentives</u> <u>programme</u> over 13,000 trees and shrubs will be planted

<u>\$</u>

In Medellín, temperatures have reduced by 2°C as a result of planting more than 10,000 trees for the city's <u>Green Corridors</u> project. Barcelona will subsidise <u>75% of</u> <u>the cost</u> of new green rooftops, creating urban allotments

...

In Durban (eThekwini) work has already begun to complete a <u>Transformative</u> <u>Riverine Management</u> <u>Programme</u> In Mumbai, the government is making amendments to the 'Tree Act' to protect and conserve <u>mangrove trees</u>

0000



Freetown







Verification

Send Tree Payment

Tree Tracking



Ine









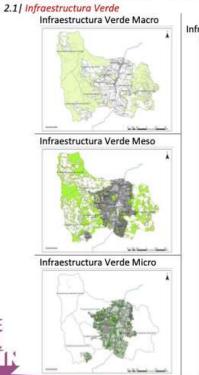
Los Angeles

H OLIMINT D

Medellin

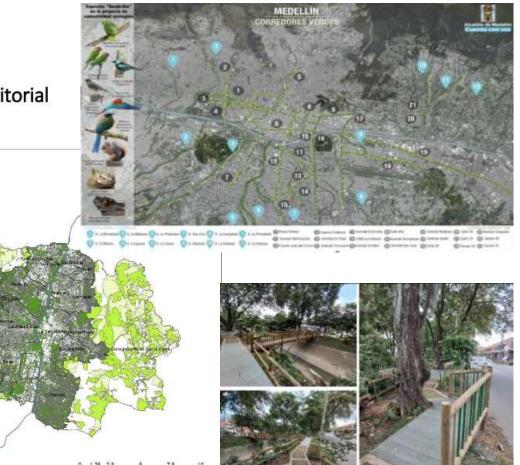
2 Estructura para la clasificación de la oferta territorial

Convenciones



Infraestructura Verde Macro – Meso - Micro

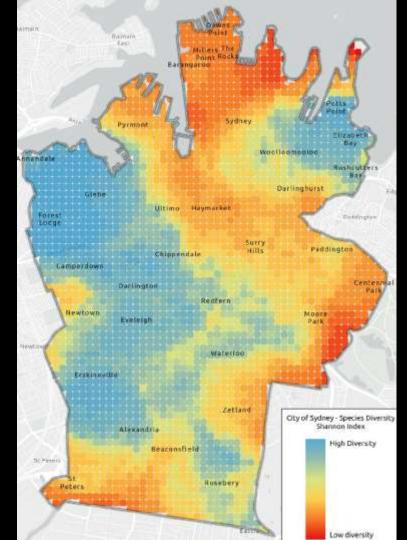
offe Sar Bezenten de Pam



Barcelona



Sydney



Shannon Index



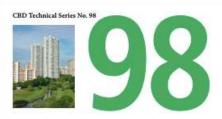
Singapore & Buenos Aires

UN@

environment

programme

Secretariat of the Convention on Biological Diversity



HANDBOOK ON THE SINGAPORE INDEX ON CITIES' BIODIVERSITY

(also known as the City Biodiversity Index)

Convention on

Biological Diversity





Support from the Private Sector



Google Environmental Insights Explorer Tree Canopy Insights

Tree Canopy Insights within Environmental Insights Explorer combines AI and aerial imagery with Google Earth Engine's data analysis capabilities, to help cities see their current tree canopy coverage and plan future tree planting projects.

What's to come

- Learning Lab
- Tree Canopy Lab 101
- Sessions grouped around common use cases



NAME OF TAXABLE PARTY.

a 6 6 1 🕑

Adapted Strengthered

This coupling parents of they limit the build-up and parents are made and through everyperimytal minors they limit the build-up and planning in threat in unter subplex. These shares have that the build related the build beness, relation years demangs for anyone have the first of the first infrastructure and the first interact, which are also as predictions. They they only only infrastructures and the first interact point demangs for anyone. They they only only on provide and only events, they are partnerses, subpared unters of better build on the first interact point which are predictions unters and head on or of their series of the series in the subscess terms and head on or of their series of the series of the

Article Topos Alapita to Chevelo Chever Adapting to Chevelo Chever Adapting to Interna Intel Interna Interna Intel Status Antonio Paradag to Assessme



Trans. Brief Print Do. Lances. The party

Arright Association (

Restricting and expanding related states in our brand plane even, is that for relating provide index (hereig provide) an intervention events intervented and providentily, or instruming the events of a state in a provide two. This desires the attention in the providential including Materialities and Landow.



With imposing from the situated Postcore the Southeaster Class Astron. a West Start Classe, & a

White Yopno



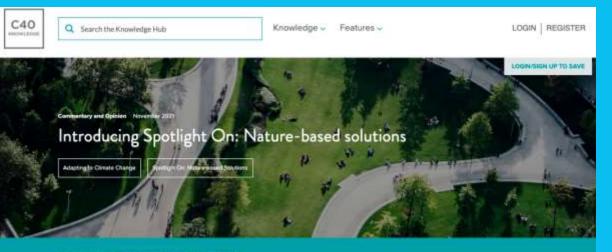
Artes American Inc.

As when these means of of the paper and piller suppress public to show a participation meaning for any anti-main the examples A. A summary suppress is a single forward, and any direct patients intermediate have real similarities in antipied patient patients, contenting patients, intermediate and control.

The broads grow model at other level 1 to increasing involved 1 are easi. Deep The



Knowledge Resources



Autors): C40 Cities Climate Leadership Group, C40 Knowledge Hult



Jump to: Related Knowledge

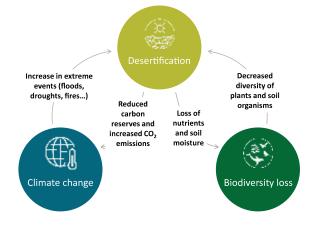
Floods, typhoons, heatwaves, wildfires and other climate hazards have gripped cities and dominated headlines in 2021 like never before.¹ Already, rising global temperatures are making extreme weather events worse, impacts are unequal – in the last 50 years over 90% of deaths

Article Topics



Next Steps:

Aligning the Rio Conventions



NDCs Nationally Determined Contributions

UNFCCC

United Nations Framework Convention on Climate Change UNCCD

United Nations Convention to Combat Desertification

> LDN Targets (SDG 15.3) Land Degradation Neutrality

Mitigation and Adaptation

> Conservation Sustainable Use Restoration of Land Resources

Genetic Diversity Species/Habitat Ecosystems Safeguard Ecosystem Services

> NBSAPs National Action Plans to Halt Biodiversity Loss

CBD Convention on Biological Diversity



Thank you

C40UrbanNature@C40.org