



Too Hot? Nature Based Solutions for Cooling Cities

Webinar Series: Bringing Nature to Cities: Integrated Urban Solutions to Biodiversity Loss and Climate Change ([link](#)) hosted by GPSC and the Global Program on NbS for Climate Resilience.

Date and time of webinar: Thursday, 2 December 2021 from 08:30 to 09:45 am ET

Event recording: Available [here](#).

Webinar Summary

Welcome Remarks - Dr Jennifer Lenhart, Global Lead, WWF Cities

Dr Jennifer Lenhart introduced everyone to the event, highlighting its timeliness, with 2020 being the hottest year on record as well as the recent developments at COP26. Jennifer congratulated the recent appointment of Kathy Baughman McLeod as the first ever Climate Specialist at the US Federal Emergency Management Agency's National Advisory Council. Jennifer emphasised the importance of nature-based solutions in cities when addressing climate change, particularly how they can mitigate extreme heat and its impacts on health and wellbeing, while delivering biodiversity services.

Keynote - Kathy Baughman McLeod, Director of the Adrienne Arsht-Rockefeller Foundation Resilience Center at the Atlantic Council

Kathy Baughman McLeod gave an overview of her background, her path in developing and supporting solutions, and services from her time with the Bank of America as the Global Environmental and Social Risk Executive, the Energy & Climate Commissioner of the state of Florida, and with the Nature Conservancy. Kathy conveyed the importance of addressing extreme heat across her positions and role, and doing so by making it tangible to communities. Kathy explained that, similar to naming hurricanes, heatwaves should also be named: heat is the biggest natural disaster killer than any other climate-driven disaster and annual costs of US \$1 billion due to extreme heat.

The Arsht-Rockefeller initiative focuses on nature-based solutions for extreme heat and has created the Extreme Heat Resilience Alliance. It has helped to create the first Heat Season in Miami-Dade County between 1 May to 31 October where a dedicated team is on alert to help, educate, and support communities during heat seasons. Further, Chief Heat Officers in Miami-Dade, Athens, and Freetown have been announced to address the severe effects of extreme heat. This showcases increased awareness of cities on the need to tackle heat, and dedicate staff and attention to this issue.

Panel Discussion: Cities Developing NbS for Cooling Cities - Councilor Santiago Saura of Madrid & Xueman Wang, Senior Urban Specialist, GPSC, World Bank

Jennifer introduced the panel and asked both guests to give a brief introduction of their work related to NbS. Councilor Saura began by explaining that Madrid's plans to use nature-based solutions to reduce extreme heat and cool down the city include a new connected forest area of half a million trees which will promote agricultural connectivity. Madrid promotes productive neighbourhood projects that incorporate inhabitants within the projects, something that Councilor Saura was emphatic upon. The projects aim to reduce carbon footprint through zero-kilometre food, renewable of school yards, greening criteria, climate comfort in public spaces, modifying city regulations for climate comfort and adaptation through green roofs and walls in policy regulations.

Led by:



Supported by:



Jenifer then directed the next question to Xueman Wang who gave an overview on the pilot NbS projects in Guangzhou. They have a site level and urban regeneration focus with cool alleyways, reshaping buildings sizes for optimum cooling capacity, using bamboo tube houses, widening streets to allow wind flows. The Jiulong Lake area at Sino Singapore Knowledge City are examples of these projects, where efforts are urgent as population is very dense and growing, and would therefore require further cooling. These projects include maximising site ventilation, using Haizhu Wetland for maximising natural assets and tools, financing Urban Cooling Investment (incentives, cost sharing). The Sustainable Urban Cooling Solutions: Guangzhou Pilots report will be released in April 2022 by ESMAP.

Jennifer asked both panellists what the challenges, needs, and advice they can provide for NbS for cooling implementation. Councillor Saura responded by emphasising the importance for community-support, long-term political support, and funding support. He noted that investment in green construction was essential, as well as leveraging synergies among sectors to ensure a holistic approach. Xueman suggested that coordination among sectors is critical because heat is not confined to just one department within city administrations, it is cross-cutting. Councillor Saura concluded by illustrating that participatory approaches that include young people, citizens, universities into one approach with a portfolio of projects (ecological, climate, economic, social) to provide collaboration, integration, and participation is one of the most effective ways to approach NbS in cities effectively.

Roundtable: Tools to Develop NbS for Cooling - Rushad Nanavatty, Lead, Urban Transformation, RMI and Erica Ward, Senior Policy Advisor, Department for Environment, Food and Rural Affairs, UK - Facilitated by Kes McCormick, Associate Professor, Lund University

Kes McCormick introduced the guests to the roundtable and asked Erica Ward from DEFRA about how extreme heat is impacting cities in the UK and about the government's standpoint towards extreme heat mitigation. Erica Ward responded by explaining that the UK has recognised the effects of rising temperatures in its [National Adaption Programme](#) which is updated every five years. The NAP includes action to increase green/blue spaces, street trees for shading, green walls/roofs in cities. The UK sees the multifunctionality of well-designed NbS. Erica continued to note that the UK local government play a central role for NbS. Erica announced that the [Green Infrastructure Framework](#) developed by DEFRA & Natural England will be launched on the 7th December 2021 and includes a series of products, data, best practices, and standards which can be adopted and adapted by communities.

Kes then turned to Rushad Nanavatty from RMI and asked about the newly launched [Beating The Heat: A Sustainable Cooling Handbook for Cities](#). Rushad congratulated the Cool Coalition's Working Group for helping develop the NbS part of the Handbook. Rushad discussed how the handbook outlines no regret moves, low-cost interventions for cities which can be implemented at any point of urban development stages. Rushad made clear that time is no at our side, and that NbS are key parts of the comprehensive cooling strategies needed to tackle this rising issue..

Kes turned back to Erica to ask about the key challenges and opportunities for NbS implementation as well as the strategies DEFRA are undertaking. Erica explained that DEFRA have developed an "[England Mapping System](#)" which is an interactive system to show where there is deprivation, vulnerable communities, and plan for green infrastructure. She noted that there is an £100 million investment in the pipeline for street trees that will provide people rest bite from the heat.

Kes asked Rushad how different sectors can come together to enable to the transition to sustainable cooling for. Rushad highlighted the work of the C40 Cities Climate Leadership Group as well as the urgent need for equity and climate justice when addressing extreme heat. For example, Rushad explained that parks serve so many people but they are not available in poor areas. With heat disproportionately affecting the most vulnerable communities, it is essential to provide access to cooling solutions for all, including equitably distributed access to nature and NbS.

Finally, Kes asked Erica what the UK intends to do going forwards in the next year to support sustainable cooling action in urban landscapes. Erica announced that all new streets in the UK will be tree-lined as

Led by:



part of the new Environment Pact which has just been passed in Parliament. Lastly, Kes asked what Rushad hopes to see in terms of raising awareness on extreme heat. He responded with a call to action, emphasising that thermal comfort is not a luxury and thermal comfort needs should be placed at the same level as other human needs. He concluded by stating that we need to start treating nature in urban areas as a very worthy infrastructure asset, and that we should spend money on nature in cities as much as we would spend on new roads. RMI will be providing technical support and design for cities to achieve these goals and develop comprehensive cooling strategies.

Closing Remarks - Martina Otto, Head, Cities Unit, UN Environment Programme

Martina Otto closed the session by making clear that action to counter extreme urban heat is as urgent as ever, with cities suffering the most from extreme heat and are heating up twice the global average. By 2100, cities across the world could warm as much as 4°C on average. Martina echoed sentiments from Kathy Baughman McLeod that extreme heat causes mental and physical exhaustion and greatly impacts our productivity and health. She explained how nature-based solutions come with multiple benefits, beyond cooling.

However, efforts articulated by speakers are just the beginning of the work we need to do to beat the heat with nature. We need to ensure heat resilience is at the top of the agenda for cities and people working on infrastructure, and that data is available to build the case for action. A key part of this work is to increase efforts to raise awareness on the benefits of nature for cooling with policymakers, critical for helping them make the case for action and address a range of policy drivers.

Martina noted that sharing best practices for implementation and testing business models and financing approaches that are sustainable and effective, especially for vulnerable communities is important for a holistic and accelerated approach for the transition to sustainable cooling. Initiatives like the Cool Coalition and the Global Platform for Sustainable Cities are key to facilitate these exchanges and demonstrate what works.

She concluded by outlining how UNEP and the Cool Coalition are seeking to put NbS at the centre of cities' planning and of the 2022 international agenda. UNEP is working with the G20 presidency to put nature-based solutions further on the map, and launched a report on [Smart, Sustainable and Resilient cities: the Power of Nature-based Solutions with the Italian Government](#). The report will be followed by chapters on nature accounting and business models. She concluded by echoing Rushad's comments on the Handbook launched at COP26 by the Cool Coalition, and by highlighting that the topic will be on the agenda of the UN Environment Assembly. UNEP will also work on emphasising it at other milestone events such as the World Urban Forum, and COP27.

Led by:



Supported by:

