

THEORETICAL BACKGROUND

EDIT 14 JUNE 2022

BY UIA EXPERTS, BIRGIT
GEORGI,
CONSTANTINOS
CARTALIS AND MARIA
SITZOGLU

Introduction

The 6th report from Intergovernmental Panel on Climate Change (IPCC) started with this staggering observation: “Global net anthropogenic Greenhouse Gas (GHG) emissions during the last decade (2010-2019) were higher than at any previous time in human history”. It is widely acknowledged that urban areas are major contributors to climate change and indeed to GHG emissions, while being vulnerable to climate change.

See on UIA
website



Experiences and first lessons learnt from Amsterdam, Barcelona, Manchester, Paris, Riba-Roja and Seville.



The 6th report from IPCC^[1] started with this staggering observation: “Global net anthropogenic Greenhouse Gas (GHG) emissions during the last decade (2010-2019) were higher than at any previous time in human history”. It is widely acknowledged that urban areas are major contributors to climate change and indeed to GHG emissions, while being vulnerable to climate change.

Cities in the EU are home to more to ¾ of Europeans^[2], therefore concentrating cultural, research, and economic activities, creating innovation and GDP growth^[3]. But these concentrations of population and activities are important generators of carbon emissions^[4], fine particulate matter and waste. Globally, urban areas generate

70% of GHG emissions. On Earth, cities occupy only 2-3% of land^[5] and often lie in risk-prone areas, low-lying areas (such as Amsterdam), or areas prone to extreme heat and droughts (Seville). Hence urban areas are hotspots of vulnerability to climate change impacts. It has been demonstrated that urban areas experience twice as many heat wave days compared to their rural surroundings^[6], a direct consequence of the heat island effect. Built areas are also more vulnerable to pluvial flooding caused by extreme precipitation events as their high levels of impermeable surfaces reduces natural drainage.

Our urban environments are not yet designed nor adapted to the climate emergency. We need cities to act and propose both mitigation and adaptation measures. There are high expectations of cities to become greener, healthier, more liveable. Urban authorities have demonstrated their willingness to contribute to the fight against climate emergency and the decisive role they need to play.

On 28 November 2019, the [European Parliament](#) declared a climate emergency^[7], with 3 key objectives:

- Commission must ensure all proposals are aligned with 1.5 °C target
- EU should cut emissions by 55% by 2030 to become climate neutral by 2050
- Calls to reduce global emissions from shipping and aviation

The EU has adopted ambitious goals and policies commensurate to the gravity of risk that we are projecting. Nevertheless, the implementation of these goals, such as reducing emissions by 55% by 2030, require a rapid leap forward. We are yet to understand what we need to do in order to jump ahead and accelerate and what are the challenges that we are facing today.

Six UIA cities, Amsterdam, Barcelona, Manchester, Paris, Riba-Roja and Seville, have been working on the topic of adaptation to climate change since November 2018. After 3 years of implementation, the moment seemed perfect to exchange on what projects had achieved and share the first results.

Stakeholders from across Europe gathered in Seville for a 2-days event organised by the UIA Permanent Secretariat and the city of Seville to discuss how EU cities can contribute to green and just transitions. Special attention was paid to showcase concrete experiments to build resilient cities. A policy-lab was organised to highlight the key results of UIA projects on three topics, that were highlighted by experts as hot topics for EU cities:

- **Re-designing urban spaces for climate adaptation**

UIA cities have proposed innovative solutions to transform urban spaces into climate-friendly areas for citizen, exploring a wide range of solutions to adapt their spaces to heat, droughts, and floods. They experienced challenges in the design, financing and implementation the solutions and are able to share some insightful learnings.



OASIS project, Paris

- **Keeping the city resilient under climate extremes**

Long-term thinking is essential when planning to adapt our cities. Knowing that the frequency and intensity of extreme climate events will increase, how can we prepare to maintain the city and its services running in case of occurrence of climate extremes. UIA projects are contributing to build their cities' resilience, by assessing, planning and preparing for all hazards related to climate change[8].

- **Citizen's engagement and participation – a vital requirement to create climate-resilient cities**

Building sustainable and climate-resilient cities requires to plan towards the common good[9]. Citizen engagement and participation are essential to ensure that our cities pay attention to needs and expectations of a wide spectrum of stakeholders, transitioning towards equal and just cities.



The policy-lab organised by UIA during the 2-days event in Seville

This report, as part of the [knowledge management activities](#) of UIA, highlights the key conclusions of this policy-lab. Additional and up-to-date knowledge and information is also available on the project webpages on the [UIA website](#).

[1] IPCC, 2022: Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press.

[2] Eurostats 2016

[3] https://ec.europa.eu/regional_policy/en/policy/themes/urban-development/

[4] urban.jrc.ec.europa.eu/thefutureofcities/executive-summary#the-chapter

[5] [Goal 11: Sustainable cities and communities \(undp.org\)](#)

[6] [index.php \(ramses-cities.eu\)](#)

[7] [The European Parliament declares climate emergency | News | European Parliament \(europa.eu\)](#)

[8] Urban Data Platforms Plus, European Commission

[9] [New Leipzig Charter- The transformative power of cities for the common good - Regional Policy - European Commission \(europa.eu\)](#)

