



77TH CAIRO CLIMATE TALK REPORT

The Heat is on Climate Change and Heat

27 JULY 2021 // PREPARED BY AMENA SHARAF

On 27th of July 2021, the 77th Cairo Climate Talks hosted a conversation between experts in fields of cooling and urban studies to discuss ways we can cool ourselves down without heating the planet

Philippe Maupai, Head of Science at the German Embassy in Cairo, reflected on average temperatures in Egypt which have increased by 0.31°C, and on summer days which are becoming significantly hotter. “In Germany, average temperatures have also been rapidly rising in the last decades, with several extreme heat waves hitting our country and the rest of Europe in the recent past, causing the deaths of tens of thousands of people,” he added. Ezzat Lewis, Head of Ozone Unit at the Egyptian Environmental Affairs Agency (EEAA) started his welcome words stressing on the role of human activities in the increase of global temperatures. “The observed climate change, marked by a 0.75 °C increase of the average surface temperatures globally over the past century, is altering the frequency and intensity of weather and climate extremes, such as floods, droughts, heatwaves and sandstorms” he explained. Ezzat Lewis stated that climate change is critically altering the weather, these trends affect all people but especially people in developing and climate-vulnerable countries and are expected to get worse. Ezzat Lewis assured the audience that the strong partnerships seen today in Egypt and around the world are unprecedented and essential to solving the climate crisis and properly adapting to extreme weather events. Lilly von Stackelberg, coordinator of the Cairo Climate Talks, had introduced the event referencing how heat is one of the most notable effects of climate change. Many countries around the world saw the rise of temperature affecting their health and resources. Effects of heat were impossible to miss with photos of wildfires and melted ceiling fans.

THE STRONG PARTNERSHIPS SEEN TODAY IN EGYPT AND AROUND THE WORLD ARE UNPRECEDENTED AND ESSENTIAL TO SOLVING THE CLIMATE CRISIS

To start the discussion, Zeinab Salah, Researcher in the Scientific Research Department at the Egyptian Meteorological Authority (EMA), introduced the EMA and the importance of its work. It is the official authority concerned with measuring temperatures through its large networks covering all areas. The EMA also has an essential role in testing air quality, measuring rates of air pollution, greenhouse gases, and other climatic conditions. Zeinab Salah explained that heatwaves are defined by the duration of the abnormally high temperature in relation to the average temperature. She continued to explain that other factors like humidity also affect our perception of the weather. Mohamed Salheen, Chairman of the Integrated Development Group, and national representative of the Cool Up project explained that the project is a continuation of a previous project which addressed energy efficiency in buildings. The project is a six year project funded by the German Ministry of Environment (BMU) under the International Climate Initiative (IKI), and in partnership with the Egyptian Environmental Affairs Agency. Mohamed Salheen explains that the research was focused on decreasing the energy needed for cooling, but also decrease the demand for cooling through passive design. The three main focuses of the project are policy, technology, and finance. “We have a policy and stakeholder platform dialogue where we work with all the stakeholders on these tracks” he clarified “in the technology track, we are looking at the industry and its challenges. And we look at these challenges from a technological point of view but also from an economic point of view”.

To explain the urban landscape and how heat fits into the equation, Heba Khalil, Professor of Sustainable Urbanism at Cairo University explains that the weather forecast is not expressive of all the parts of the city. “The reality in different parts of the city is very different” she shared with the audience. Heba Khalil introduced the concept of urban heat islands; a concept that scientists use to describe the urban circumstances that cause an increase of heat in the core of the city, like the height of buildings, lack of vegetation, and certain building materials. She continued to expand on the concept of urban microclimates, saying that the differences in temperatures within the same city can reach up to 8°C.

“WE SOMETIMES FORGET THAT CAIRO IS THE BIGGEST ARID CITY IN THE WORLD, WE HAVE THE NILE BUT IT’S STILL A DESERT CITY”

Heba Khalil then listed ways in which the Nile River acts as an adaptation measure for Cairo and its residents, who use it for boat rides or walk beside it for a natural breeze. “We sometimes forget that Cairo is the biggest arid city in the world, we have the Nile but it’s still a desert city” she concluded. Marwa Dabaieh, associate professor of Urban Studies at Malmö University, noted that the environment should play a big part in the way we design our cities. She stressed on the importance of changing the urban design based on the environment rather than using the one-size-fits-all approach, she gave an example of office buildings which are becoming more uniform and standardized. She also pointed out that these office conditions acclimate our bodies to very low temperatures, which means our bodies are shocked as soon as we walk out of a building. She also spoke about the 7 different climatic zones in Egypt and insisted on the importance of looking at the specificity of the climatic zone before designing buildings.

“YOU CAN HELP PEOPLE LIVE A BETTER LIFE IF YOU ADJUST SOLUTIONS TO THEIR NEEDS, WE’RE BUILDING FOR HUMANITY”

“We have different levels of luxury, but we all have the same basic needs, you can help people live a better life if you adjust solutions to their needs” Marwa Dabaieh commented on the excessive use of air conditioners and active systems “we’re not building for the rich, we’re building for humanity” she concluded. The experts agreed on a few key points, including that “the Nile is the lungs of the city” as Heba Khalil expressed it. The second point is planning for the climate and the specificity of the urban area can act as a weapon against heat as well as increase the efficiency of buildings and neighborhoods, for example by using the abundant local materials and traditional knowledge. Lastly, international treaties and national policies should reflect in our urban strategy and design.

DR. HEBA ALLAH KHALIL

PROFESSOR OF SUSTAINABLE
URBANISM
CAIRO UNIVERSITY

Heba Khalil is a professor of sustainable urbanism & the senior coordinator of the Architectural Engineering and Technology Program at Faculty of Engineering, Cairo University with a focus on community development, informal areas, urban metabolism, urban climate, integrated urban systems, gender equity & land governance with several publications & international research partnerships. She has 20 years of experience working as an architect, urban planner & housing & capacity building expert with a passion for inclusive & sustainable development. As an Alumina of SPURS, MIT, she continuously seeks partnerships to support a new planning & design practice for sustainable urbanism.

Mohamed Salheen is the Founder and CEO of Integrated Development Group (IDG), with over 25 years' experience in the field and an in-house Research and Development Department working on Environmental, Planning and Building Topics. He is a Professor of Integrated Planning & Design and the Co-founder and Director of the Integrated Urbanism and Sustainable Design (IUSD) at Ain Shams University.

DR. MOHAMED SALHEEN

CHAIRPERSON
INTEGRATED DEVELOPMENT
GROUP (IDG)

Salheen is very active in practice and consultation working with various international Agencies such as the EU, BMU, GIZ, UN-Habitat, UNEP and UNDP as well as other national and regional organizations in the fields of strategic, environmental and integrated planning and design.

NATIONAL [COOL UP](#)
PARTNER

DR. ZEINAB SALAH

RESEARCHER IN THE
SCIENTIFIC RESEARCH
DEPARTMENT
EGYPTIAN METEOROLOGICAL
AUTHORITY (EMA)

Zeinab Salah is a researcher in the Egyptian Meteorological Authority (EMA), where she worked in the numerical weather prediction center and currently in the air pollution department. Her research interests are Aerosols and Green House Gas effects on the climate, aerosol-clouds interactions, climate modeling, development of dust forecast, moisture sources, drought, and dispersion models.

She has worked on various research projects and publications, among others on Integrated Environmental Health Impact Assessment and advanced observation and modelling technologies.

Marwa Dabaieh is an architect and BioGeometry® practitioner. Her expertise is in sustainable and environmentally conscious architecture. She works in the field of zero emission and passive earth buildings, sustainable architectural conservation, climate responsive design, climate neutral architectural design and is a licensed architect since 2001. She published over 60 manuscripts and four books beside lecturing in the fields of vernacular architecture, sustainable and environmental design, energy efficient buildings, zero emission design, carbon neutral architecture, sustainable conservation, design and build with natural materials and BioGeometry®. She is a Docent and associate professor at Malmö University in Sweden, working in a Crafoord funded project on climate resilient architecture called 'Z free home'.

DR. MARWA DABAIEH

ASSOCIATE PROFESSOR
AT THE DEPARTMENT OF
URBAN STUDIES
MALMÖ UNIVERSITY

**BACKGROUND
INFORMATION:**

Cairo Climate Talks are conceived, organized and hosted as a cooperation between the German Embassy in Cairo, the Egyptian Ministry of Environment, the German Academic Exchange Service (DAAD) and the German Corporation for International Cooperation (GIZ).



[facebook.com/cairoclimatetalks](https://www.facebook.com/cairoclimatetalks)



www.cairoclimatetalks.net



[youtube.com/cairoclimatetalks](https://www.youtube.com/cairoclimatetalks)



info@cairoclimatetalks.net