ABSTRACT FOR THE GENERAL PUBLIC

Climate change is one of the leading global threats, if not the main threat we are currently facing. For the wider public, however, climate science is often abstract and difficult to understand. You cannot easily smell, touch or see climate change. In order to make climate change less abstract, this research project aims to **humanize climate science**. This project will connect the abstract, global and seemingly disconnected natural and physical occurrences with people's local knowledges and embodied experiences. Our aim is to understand **how people experience climate change** on a daily basis, and to explore climate change as both an environmental and social phenomenon.

The project focuses on urban overheating. Urban overheating and heat waves in cities have been increasing the rates of deaths and diseases. By combining natural sciences, social sciences, and the humanities, this project aims to connect the environmental and biological aspects of urban overheating with people's social experiences. There are two main goals of this research project: (1) to understand how climate change and urban overheating have been impacting vulnerable groups, and (2) to understand people's embodied and socially situated experiences of overheating. More specifically, the project aims to **study and explore the bio-social adaptive and coping mechanisms** of dealing with urban overheating.

An important goal of this research project is to develop a **transdisciplinary methodology** to study climate change. The project includes researchers who come from a diverse set of disciplines, such as physics, sociology, environmental and climate science, and social anthropology. During the entire research Project Partners will exchange knowledge and collected data, and let the different scientific perspectives of the research project inform each other.

Research will be conducted in Warsaw and another city in the south of Europe. The latter city will be identified during the initial phase of the research project. The project will include the analysis of heat waves in European cities since 2000, calculations of climate models for the two case study cities, and the use of dynamic downscaling in order to identify the most vulnerable urban areas within two cities. The project will also include quantitative study of people's experiences of urban overheating and their ways of dealing with it. Based on the initial stage of the research project, and review of existing literature, we will identify the most vulnerable groups, which might include the elderly populations and people living in precarious socio-economic conditions, including those experiencing homelessness. The project will also include qualitative research conducted with vulnerable populations, which will be based on formal and informal interviews, group discussions, participant observations and interactive workshops. Moreover, in order to gather and connect data on individual health changes (for instance cardiovascular) and environmental shifts (for instance raising temperatures), we will incorporate into our research the use of wearable sensors, which will be worn by volunteer research participants.

One of the results will be the creation of new knowledge about people's experiences of urban overheating. This knowledge could be used by policy makers and the general public to improve quality of life. While this research project will be especially valuable for local governments in the two studied cities, we believe that new data on bio-social coping and adaptive mechanisms will be of interest to other policy makers across Europe as well. Moreover, since this project aims to humanize climate science, it will also **contribute to the public's perception, awareness and understanding of climate change**.