

Scientific-Technical Annual Report 2023 (Phases 2 and 3) - Executive Summary

During the period January 1 - December 31, 2023, the SynUHI project (Improving the adaptation capacity of cities to the impact of climate change on the relations between the urban heat island and heat waves) aimed to achieve the following deliverables (1) the creation of the climate database and non- climate and their integration, (2) the study of the relationships between heat waves and the urban heat island, (3) the selection of relevant indices and indicators for the analysis of heat waves and their relationship with the urban heat island, (4) the analysis of wave variability of heat in the current climate, (5) the impact of climate change on heat waves in the urban environment, (6) the synthesis of the current state of research for the development of a set of supporting tools and the formulation of the stages of the adaptation process based on multicriteria analysis methods, (7) dissemination of results.

At this stage, the integration of the climatic and non-climatic database and their analysis was carried out, identifying the quantitative relationships between heat waves and the current climate in the cities selected for the study. Based on the analysis of the national and international specialized literature, the synthesis of relevant indices and indicators for the analysis of heat waves in the current climate and variability for the future climate (2031-2060) was carried out. Also, existing national and international support tools and platforms were analyzed to substantiate the development of decision support tools regarding adaptation to heat waves in the context of climate change.

Obtained results were presented in 4 oral communications held at international scientific events. 2 scientific articles have been submitted for publication.