

EGU24-19983, updated on 20 May 2024

<https://doi.org/10.5194/egusphere-egu24-19983>

EGU General Assembly 2024

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Integrated Hydrometeorology, Climate and Environmental Systems and Services for Sustainable Cities: Approaches for different regions and countries.

Alexander Baklanov^{1,2}

¹World Meteorological Organization (WMO), Geneva, Switzerland

²Copenhagen University, Copenhagen, Denmark

The third United Nations Conference on Housing and Sustainable Urban Development (HABITAT-III) in October 2016 adopted the New Urban Agenda (United Nations, 2017), which brings into focus urban resilience, climate and environment sustainability, and disaster risk management.

Following the event at the United Nations Economic and Social Council, efforts are required from WMO to consolidate its input to the revision of the New Urban Agenda (NUA) and support urban related activities in a comprehensive manner. Urban development is now a cornerstone of the United Nations 2030 Sustainable Development Goals. It has its own sustainable development goal (SDG 11): Make cities inclusive, safe, resilient and sustainable.

To support implementation of urban activities the WMO inter-programme Urban Expert Team under the Commission for Atmospheric Sciences and Commission for Basic Systems (2018) supported by a dedicated team of urban focal points in the Secretariat developed the Guidance on Integrated Urban Hydro-Meteorological, Climate and Environmental Services (IUS). The needs for integrated urban services (IUS) include information for short-term preparedness (e.g. hazard response and early warning systems), longer-term planning (e.g. adaptation and mitigation to climate change) and support for day-to-day operations (e.g. water resources). The aim is to build urban systems and services that meet the special needs of cities through a combination of dense observation networks, high-resolution forecasts, multi-hazard early warning systems, disaster management plans and climate services. This approach gives cities the tools they need to reduce emissions, build thriving and resilient communities and implement the UN Sustainable Development Goals.

The ways and approaches, as well as priorities for realization of such systems depend on specific climatic, geographical, economical and environmental conditions specific cities. In this presentation we will classify and consider different approaches, methodologies and tools for selected cities in different climate zones (e.g. northern, tropical), economical conditions (developed and developing worlds) and combinations of risk factors (e.g., multi-hazards, heat stress, floods, air quality). Specific focus will also be done on the mitigation and adaptation strategies and their combinations.