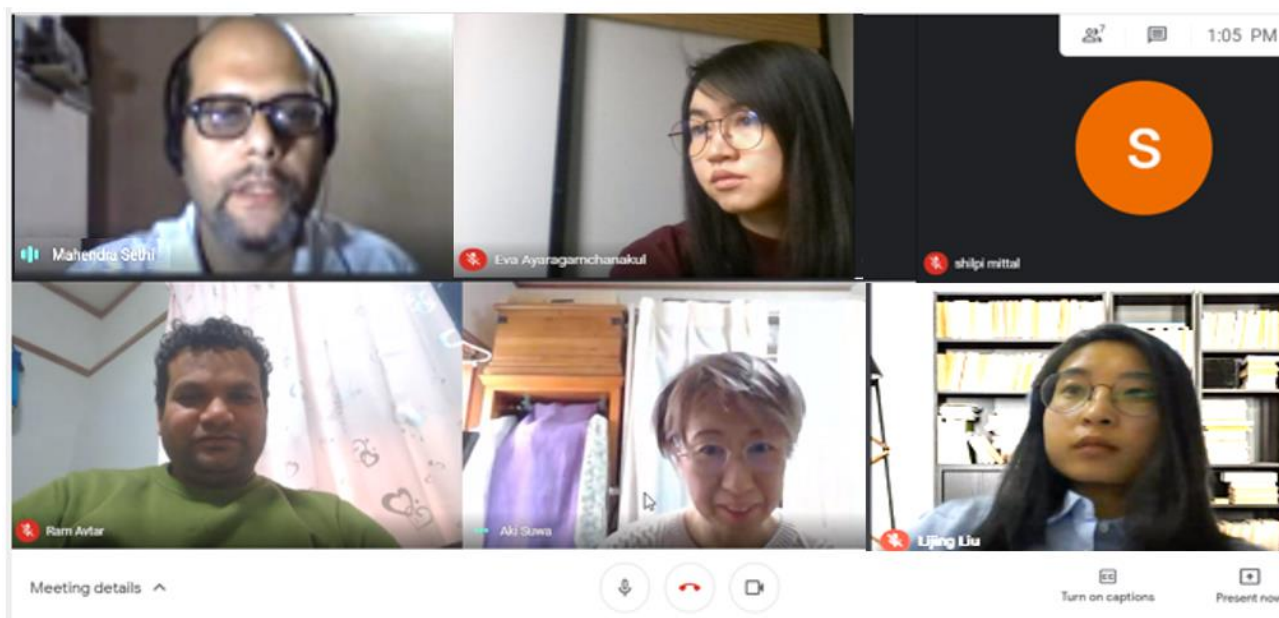


Expert Workshop on ICLAP Data Structure and Analysis in the Asia-Pacific Cities

Online Platform, 24 March 2021



Key Highlights

The Project Leader, Dr Mahendra Sethi, welcomed all the expert/ project members and explained the project's premise and significance in the current context. He discussed the day's agenda, i.e. to focus on the available datasets and policies in the Asia-Pacific cities, the limitations and gaps therein. This would empirically appraise the necessity of building a robust data structure for an analytical platform that facilitates decision-making under the ICLAP project. The workshop proceeded with the following presentations:

Session I: Managing Data Structures

Application of RS-GIS in Climate Action Planning of Urban Areas

Dr Ram Avtar from Hokkaido University introduced the current state of affairs, explaining how normally urban climate studies rely on 2D geospatial datasets, which may lead to incorrect or limited use of information. This gap can be circumvented by using 3D geospatial information that gives a precise understanding of energy consumption, transport infrastructure, urban form, climate hazards, emissions and heat footprints. Most of these have not been applied in developing countries owing to data inaccessibility. Dr Avtar further expanded on some open-source digital geospatial datasets for GIS modelling, demonstrating their application in New Delhi and Dhaka's Asia-Pacific cities and other works in progress.

Session II: Data Availability, Policies and Gaps

Urban Climate in Chinese Cities

Dr Lijing Liu from the Beijing Institute of Technology briefly introduced Chinese cities, emphasising the diversity of data indicators in these cities. She demonstrated the availability of necessary data on urban,

energy and GHG indicators for five key cities: Beijing, Shanghai, Tianjin, Guangzhou and Shenzhen. This was followed by a review of main urban climate-oriented policies, spanning Central to city-level planning. Dr Liu emphasised the need to internalise adaptation features into city climate action planning. The presentation concluded by highlighting critical gaps in urban climate planning and specific features expected from the proposed ICLAP tool.

Urban Climate in Japanese Cities

Prof. (Dr) Aki Suwa from Kyoto Women's University initiated the presentation with multiple datasets and technical tools for climate action available in Japan. Specialised tools developed by National Institute of Environmental Studies (NIES) were a case in point. It was found that nationwide data is available for climate hazards and long-term forecasts, which can also be used for its urban centres. As an illustration, she expounded how the NIES tool A-PLAT is relevant to extract future temperature and rainfall projections. Prof. Suwa then focused on the GHG emission commitment and policies for the two major metropolitan regions of Tokyo and Osaka.

Urban Climate in SE Asian Cities

Ms Eva from Prince of Songkla University (currently with TU Berlin) showcased seven 5 million plus cities in SE Asia, their national data sources, data availability for socio-economic indicators, inventories on energy, GHGs, climate policies (mitigation, adaptation, etc.) and raised the concern about language interpretation. For an in-depth understanding of data on urban climate plans, Eva elaborated on the three capital cities of Bangkok (Thailand), Manilla (Philippines) and Singapore.

Urban Climate in Australian Cities

Prof. (Dr) Akhilesh Surjan from Charles Darwin University initiated the presentation on urbanisation rates in Australia and how the Australian Bureau of Statistics define cities. He introduced the timeline of urban policies and initiatives in the last three decades and the role of states and local governments while climate change hazards are increasingly impacting cities. The country's GHG emissions, regional temperature, and rainfall values indicate significant physical and economic impacts and risks to communities. Prof. Surjan highlighted the responses to these, covering key agencies, data sources, strategies and tools for assessment.

Urban Climate in Indian Cities

Ms Shilpi from ISARD started the presentation with a broad overview of nine Indian cities covered within 49 sample cities in the project. Shilpi underscored the diversity of the population, socio-economic data, CO₂/ GHGs, and climate action plans in these cities within a multi-tiered and complex planning and governance framework. Upon discussing the data availability matrix for Indian cities, she focused on the case of Mumbai and the gaps thereof. This was followed by the presentation of the New Delhi case study by Dr Mahendra Sethi. Upon discussing the data availability, he focused on spatial, statistical, and case study approaches evident in urban climate technical models and policy tools. Based on discussions with experts, he shared information, features or outcomes expected from a climate action decision-making tool and the necessary analytics for creating such an application.

Session III: Discussions for ICLAP analysis

In the final session, the experts assessed the current state of the data availability and structures in the member countries of the ICLAP project. They further discussed the data gaps and, considering their limitations, how to integrate different datasets for a common analytical framework under the ICLAP framework.

Dr Sethi briefly gave a year-wise breakup of research activities. The first year is devoted to the literature study, finalisation of parameters and indicators, data generation and compilation. The second year would focus on analytics and development of the ICLAP tool, duly supported by select city case studies from the Asia-Pacific region. Once the tool is prepared, the third year will be devoted to dissemination in the member countries.

Each working group worked on their expertise and experience. The working group (WG) 1 deal with the spatial aspect of the project, WG 2 concentrates on statistical modelling, while WG 3 deals with bibliometric analysis, systematically reviewing urban climate case studies.

The experts also discussed the importance and means of reporting the project findings in due course through paper publications focusing on reviewing urban climate evaluation/ simulation tools and case studies of select cities in member countries. Accordingly, the workshop determined different work packages and a tentative timeline for the proposed activities. It outlined the necessary climate and urban-related data indicators, their collection, sharing/ management plan and communication procedures to meet the project goals.

The expert workshop concluded with a vote of thanks by the Project Leader.

Key participants:

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