

Proposal Title: Climate Resilience and Urban Health: Addressing Heat, Floods, and Air Pollution in South-east Asian Cities

Relevant Conference Theme: Healthy Built Environment: Building Equitable, Climate-Resilient Cities

Type of submission: Pre-formed Panel Discussion (Full Proposal)

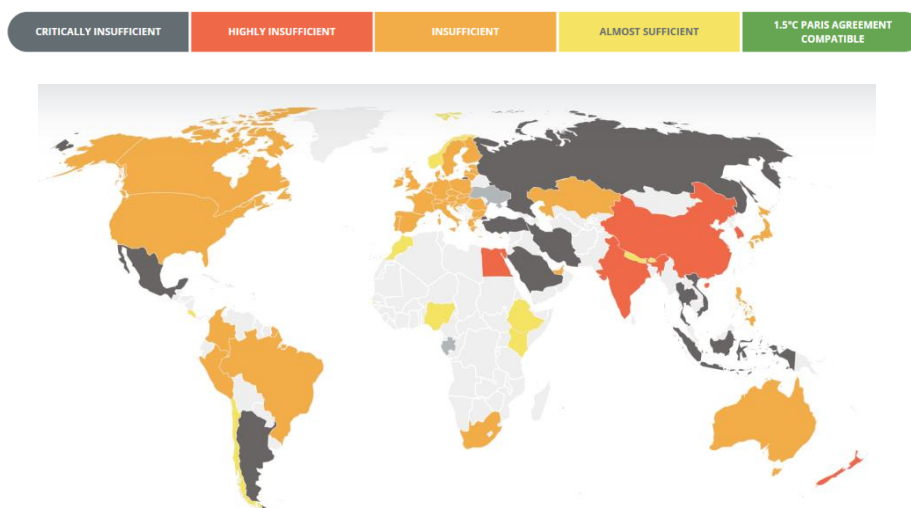
Proposed By: Bangladesh Urban Health Network (BUHN)

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Cities across Southeast Asia—including Dhaka^{2,3}, Jakarta⁴, Bangkok⁵, and Manila⁶—are confronting the compounding impacts of climate change, including extreme heat, flooding, and air pollution, which are exacerbated by rapid urbanization and increasing climate variability. The urban poor are particularly vulnerable, living in densely populated informal settlements with limited access to clean air, safe housing, health services, or climate-resilient infrastructure^{7,8}.

According to the Global Climate Risk Index (2025), countries in Southeast Asia are ranked among the most

climate-vulnerable globally⁹, despite contributing minimally to global greenhouse gas emissions, Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam (termed the DA5) collectively accounted for 90% of greenhouse gas emissions in 2010 in Southeast Asia.^{10,11} This paradox underscores the urgent need for



The Climate Action Tracker is an independent scientific project that tracks government climate action and measures it against the globally agreed Paris Agreement aim of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C."¹¹

¹ <https://climateactiontracker.org/>

² <https://www.climateactionproject.org/blog/how-climate-crisis-impacting-bangladesh#:~:text=But%20sea%20level%20rise%20isn,in%20the%20past%20four%20decades.>

³ <https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2023.1269362/full>

⁴ <https://www.globalcitizen.org/en/content/jakarta-sinking-climate-change-nashin-mahtani/#:~:text=Indonesia%20is%20a%20densely%20populated%20region%20with,rising%20sea%20levels%20and%20the%20city%20sinking.>

⁵ <https://onebillionresilient.org/hot-cities-chilled-economies-bangkok/#:~:text=Bangkok%20faces%20high%20and%20rising%20temperatures,%20over,to%20increase%20by%2050%20percent%20by%202050.>

⁶ <https://insideclimatenews.org/news/18112022/sinking-land-and-rising-seas-threaten-manila-bays-coastal-communities/#:~:text=Manila%20is%20one%20of%20the%20most%20vulnerable,declining%20water%20table%20rather%20than%20rising%20seas.>

⁷ <https://www.tandfonline.com/doi/full/10.1080/1943815X.2022.2127774>

⁸ 10.1111/grow.12297

⁹ <https://www.germanwatch.org/sites/default/files/2025-02/Climate%20Risk%20Index%202025.pdf>

¹⁰ <https://www.adb.org/sites/default/files/publication/178615/sea-economics-global-climate-stabilization.pdf>

¹¹ https://edgar.jrc.ec.europa.eu/report_2023

resilience-building efforts that are both region-specific and inclusive. In Bangladesh, Despite producing only 0.5% of global greenhouse gas emissions¹², Bangladesh ranks ninth on the 2024 World Risk Index of countries vulnerable to extreme weather and other climate impacts¹³. Being one of the world's most climate-vulnerable countries, projections indicate that by 2050, with a projected 19.6 inch (50 cm) rise in sea level, Bangladesh may lose approximately 11% of its land by then, and up to 18 million people may have

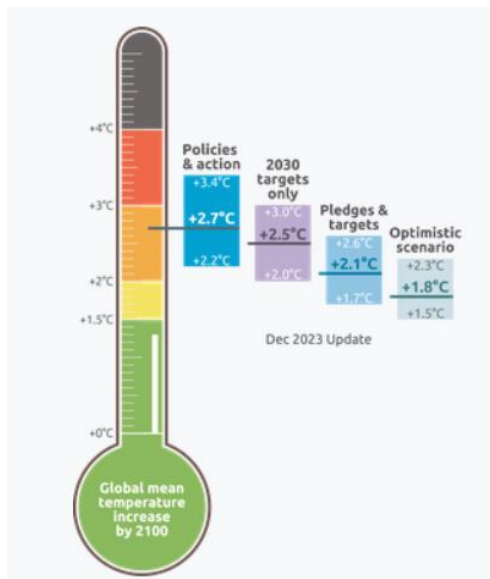


Figure: Parameter for Tracking global climate action in accordance with temperature difference

to migrate because of sea-level rise alone¹⁴. This is compounded by the increasing frequency of heatwaves, which are expected to raise the incidence of heat-related morbidity and mortality, especially among vulnerable groups such as the elderly, children, and low-income communities¹⁵ ¹⁶. Additionally, urban areas are struggling with a growing burden of non-communicable diseases (NCDs), including respiratory diseases linked to air pollution, which are further exacerbated by vehicular emissions and industrial activities¹⁷ ¹⁸.

The health impacts of these climate-related hazards are often felt most acutely by the urban poor, who live in poorly regulated, flood-prone areas, with inadequate sanitation and limited access to healthcare. In urban centers like Dhaka, poor air quality leads to a high incidence of respiratory illnesses, while flooding disrupts access to clean water and sanitation, promoting the spread of waterborne diseases like cholera and diarrheal diseases ¹⁹. To address these challenges, a multi-sectoral, integrated approach is required. Urban

health systems, including governance, disaster management, urban planning, and public health initiatives, must be strengthened to meet the growing demands of urban populations exposed to climate change²⁰. Additionally, community-led adaptation strategies can play a crucial role in building resilience at the grassroots level, where local actors have knowledge of the specific needs and vulnerabilities of their communities²¹

This panel will present the latest evidence on the intersection of climate change and urban health, along with innovative strategies for adaptation. By drawing on case studies from Bangladesh and other Southeast Asian cities, we aim to explore how cities can integrate public health objectives into climate adaptation plans, enhance data systems for monitoring health risks, improve risk communication, and empower community-led planning for resilience. This session will also examine the policy frameworks needed to support the health and climate goals of urban populations.

¹² <https://climateactiontracker.org/>

¹³ <https://www.climaterealityproject.org/blog/how-climate-crisis-impacting-bangladesh#:~:text=But%20sea%2Dlevel%20rise%20isn,in%20the%20past%20four%20decades.>

¹⁴ <https://www.climaterealityproject.org/blog/how-climate-crisis-impacting-bangladesh#:~:text=But%20sea%2Dlevel%20rise%20isn,in%20the%20past%20four%20decades.>

¹⁵ file:///C:/Users/ASUS/Downloads/Volume_1_Issue_1_1_IJMH.pdf

¹⁶ <https://www.sciencedirect.com/science/article/pii/S2667010023001257>

¹⁷ https://www.who.int/health-topics/air-pollution#tab=tab_1

¹⁸ <https://pmc.ncbi.nlm.nih.gov/articles/PMC6904854/>

¹⁹ https://www.researchgate.net/publication/241849693_Assessment_of_adaptation_measures_against_flooding_in_the_city_of_Dhaka_Bangladesh

²⁰ <https://iris.who.int/bitstream/handle/10665/355760/WHO-EURO-2022-5650-45415-64990-eng.pdf>

²¹ <https://publications.wri.org/locally-led-climate-adaptation>

Session Duration

It is proposed that the total duration of the session will be 60 minutes.

Session Overview

Southeast Asia's urban centers are at the frontline of climate change, facing intensifying threats from extreme heat, urban flooding, and hazardous air pollution. These hazards—amplified by rapid urbanization, socioeconomic disparities, and overstretched public health systems—pose a significant and growing risk to urban populations, particularly the poor and vulnerable. In response, cities across the region are exploring integrated strategies that protect public health while advancing climate resilience and sustainable urban development. This interactive panel session will bring together regional experts, policymakers, and practitioners to explore how Southeast Asian cities can better prepare for and respond to climate-related urban health risks. Anchored in five thematic presentations, the session will share scientific insights, highlight proven innovations, and foster dialogue around community-led adaptation, governance frameworks, and regional collaboration. The 05 proposed topics are:

Objectives of the Workshop



Analyze Health Impacts

Analyze climate-induced urban hazards in Southeast Asia. This includes heat, floods, and air pollution.



Present Case Studies

Present climate-resilient urban health initiatives from Bangladesh. Also include initiatives from neighboring countries.



Explore Governance Role

Explore the role of integrated governance and policy frameworks. These frameworks address climate and health risks.



Discuss Innovative Approaches

Discuss innovative approaches for strengthening community adaptation. Also strengthen early warning systems.



Foster Regional Learning

Foster regional learning and collaboration for resilient health systems. These systems should be inclusive in the face of climate change.

Climate Hazards and Urban Health: Mapping the Impacts of Heat, Floods, and Air Pollution in Southeast Asian Cities

The discussion will provide a concise overview of the major climate-related threats impacting urban populations across the region. It will highlight how rising temperatures, worsening air pollution, and recurrent urban flooding are contributing to growing public health risks—particularly among vulnerable groups such as the elderly, children, and residents of informal settlements. Drawing on recent data and case examples from South-east Asian countries like Bangladesh, Thailand etc., the presentation will outline trends in heat-related illness, respiratory conditions, and disease outbreaks linked to flooding. It will also touch on key urban vulnerability factors—such as inadequate housing, poor infrastructure, and socio-economic disparities—and conclude with implications for health system readiness and the need for integrated climate and health planning in cities.

Resilient Cities, Healthy Communities: Case Studies from Bangladesh and the Region The discussion will showcase practical examples of urban health and climate resilience initiatives that have been successfully implemented in Southeast Asia. Drawing from cities such as Dhaka, Bangkok etc., the presentation will highlight innovative approaches that integrate health, environmental sustainability, and

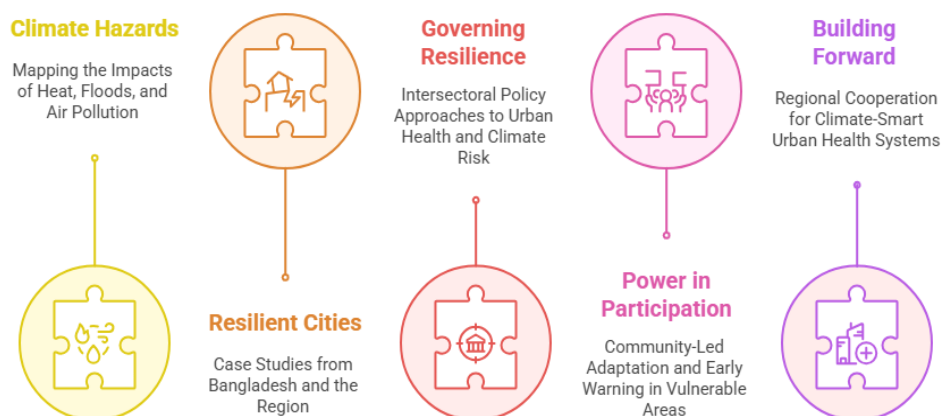
climate adaptation. Case studies will include community-based flood management in urban slums, the development of heat action plans, and the use of green infrastructure to improve air quality and reduce urban heat islands. Bangladesh's own experiences—such as climate-resilient health facilities, early warning systems for urban floods, and multi-sector coordination at the city level—will be featured to illustrate scalable and locally adapted solutions. The presentation will also explore enabling factors such as strong political commitment, cross-sector partnerships, and community engagement that have contributed to these successes. Together, these cases will provide actionable insights for other cities aiming to build healthier and more climate-resilient urban environments

Governing for Resilience: Intersectoral Policy Approaches to Urban Health and Climate Risk

The discussion will focus on the importance of integrated governance in addressing the complex challenges

posed by climate change on urban health. It will explore how urban planning, health systems, disaster management, and climate policies must work together to create a cohesive approach to resilience. Drawing on examples from cities in Southeast Asia, the presentation will examine successful intersectoral policies that link climate adaptation with health improvement, such as integrating climate risk assessments into urban health planning and

Topics of Discussion



aligning climate goals with public health objectives. Key discussion points will include the role of local governments, national policies, and community-driven approaches in fostering collaboration across sectors, ensuring equitable resource allocation, and strengthening institutional capacities for disaster preparedness. The presentation will also highlight the need for policy coherence to address both climate mitigation and adaptation, ensuring that urban health systems are equipped to handle emerging climate-induced health threats while promoting sustainable development.

Power in Participation: Community-Led Adaptation and Early Warning in Vulnerable Urban Areas

The discussion will highlight the critical role of grassroots engagement in building urban resilience to climate-related health risks. It will showcase how low-income and marginalized urban communities across Southeast Asia are leading locally adapted solutions to address threats such as flooding, heatwaves, and disease outbreaks. Drawing on examples from Bangladesh Thailand etc., the presentation will explore successful community-led initiatives—such as neighborhood-level flood preparedness, informal settlement upgrading, and participatory risk mapping. It will also examine how early warning systems, when co-designed with community members, can enhance trust, responsiveness, and timely action. Emphasis will be placed on the importance of empowering women, youth, and local leaders, and on building strong collaborations between communities, NGOs, and municipal authorities. The presentation will underline that meaningful participation not only strengthens adaptive capacity but also promotes equity, social cohesion, and long-term sustainability in urban climate resilience efforts.

Building Forward Together: Regional Cooperation for Inclusive and Climate-Smart Urban Health Systems The discussion will focus on the need for strengthened regional collaboration to address the shared climate and health challenges facing Southeast Asian cities. As urban areas across the region confront rising climate risks—such as extreme heat, air pollution, and flooding—this session will highlight how cross-country partnerships can accelerate learning, innovation, and coordinated responses. The presentation will explore examples of successful regional initiatives, including transboundary climate-health surveillance, joint capacity-building programs, and collaborative urban resilience projects supported by ASEAN, UN agencies, and development partners. It will emphasize the importance of harmonizing data systems, sharing best practices, and aligning policy goals across countries to create more inclusive and climate-resilient urban health systems. Finally, the session will outline pathways for future collaborations such as regional policy platforms, peer-learning networks, and joint funding mechanisms—to ensure that no city is left behind in the collective pursuit of sustainable urban health under a changing climate.

Schedule of the Session

SL No	Topic	Mode of Discussion	Duration (minutes)
1	Welcome & Opening Remarks	Moderator's Speech	02
2	Climate Hazards and Urban Health: Mapping the Impacts of Heat, Floods, and Air Pollution	Presentation/ Discussion	08
3	Resilient Cities, Healthy Communities: Case Studies from Bangladesh and the Region	Presentation	08
4	Governing for Resilience: Intersectoral Policy Approaches to Urban Health and Climate Risk	Presentation/ Discussion	08
5	Power in Participation: Community-Led Adaptation and Early Warning in Vulnerable Areas	Presentation	08
6	Building Forward Together: Regional Cooperation for Climate-Smart Urban Health Systems	Presentation	08
7	Interactive Q&A and Discussion	Open Discussion	15
8	Chairperson's Reflections and Closing Remarks	Chairperson's Summary	03
Total			60

The panel discussion on Climate Resilience and Urban Health: Addressing Heat, Floods, and Air Pollution in Southeast Asian Cities will provide a critical platform for exploring the intersecting challenges of urbanization, environmental degradation, and public health in a changing climate. By fostering dialogue among policymakers, researchers, practitioners, and community leaders, the session aims to promote evidence-based strategies and collaborative action for building climate-resilient, health-inclusive urban systems.