Extreme Heat Risk Reduction
Towards a common global framework

Report of the Expert Consultation

WMO, 7 bis Avenue de la Paix, Geneva
17-19 December 2024

GLOBAL HEAT HEALTH INFORMATION NETWORK

WORLD METEOROLOGICAL ORGANIZATION

UNDRR
UN Office for Disaster Risk Reduction

Duke
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ABOUT THIS REPORT

Executive Summary

From 17-19 December 2024, over 60 representatives from national and subnational government institutions, international organizations, philanthropy, academia, and civil society gathered at the WMO Headquarters in Geneva, Switzerland, for the Extreme Heat Risk Reduction Expert Consultation.

Convened by the WHO-WMO Joint Office for Climate and Health, the United Nations Office for Disaster Risk Reduction (UNDRR), and the Global Heat Health Information Network (GHHIN), this consultation aimed to advance the development of a common framework for extreme heat risk governance.

The 3-day event built on prior initiatives, including the UN Secretary-General's Call to Action on Extreme Heat, and brought together diverse stakeholders from a range of sectors covering energy, social and civil protection, natural environment, agriculture and urban planning representing 10 countries and 16 international organizations to share experiences, identify challenges, and co-develop key elements of an actionable governance framework.

Enhanced leadership, risk informed investment, and institutional arrangements will be required to address the drivers of heat risk and protect ecosystems and vulnerable populations including those displaced and at risk of mobility from the escalating risks of extreme heat.

Extreme heat is one of the deadliest and most damaging climate hazards, yet it defies the boundaries of sectoral governance mechanisms. Responsibilities for managing heat risk do not lie with a single entity. The drivers of heat risk - and the consequences of extreme heat events- are generated and manifested across different sectors, including health, urban planning, labour, energy, water, and more.

A lack of clear governance processes means that while many cities and countries have heat action plans, they often fail to address systemic challenges such as root causes, inter-agency coordination, and alignment of policies for long-term extreme heat risk reduction and resilience building, including addressing the socio-economic disparities that exacerbate heat vulnerability.

Without a structured governance framework, efforts to address extreme heat risk remain reactive and isolated, rather than proactive and integrated. Policies infrequently move beyond immediate emergency responses to medium to long-term efforts to prevent and mitigate heat risk, and sustainable adaptation.

A common heat risk governance framework goes beyond identifying what needs to be done, it addresses the often-overlooked question on how to do it. It supports multi-entity accountability and responsibility, ensuring clear decision-making processes – ranging from managing extreme heat events to managing extreme heat risk. Furthermore, it tackles governance challenges identified when evaluating ongoing extreme heat risk mitigation efforts, especially in heat action plans.

As extreme heat intensifies, governance must integrate policies that protect outdoor workers, enhance urban heat mitigation, and strengthen healthcare preparedness while prioritizing the most vulnerable populations. With hundreds of thousands of preventable deaths and billions in economic losses already incurred annually, urgent action is needed to establish an equity-driven common framework that moves beyond short-term fixes to build sustainable, long-term resilience.

Through a series of panel discussions, case studies, and working group sessions, participants analysed national and subnational heat risk governance approaches, discussed existing challenges, explored cross-sectoral coordination mechanisms, and identified opportunities to scale up successful heat risk reduction approaches. A key focus was the transition from fragmented, short-term projects to sustainable, institutionalized governance systems that integrate sectors both driving and impacted by extreme heat. The consultation on heat risk governance successfully resulted in three key outputs:

- Consensus from participants on the need for a common governance framework that can enhance local coordination among sectors, institutions and levels of government, align actors and policies, and guide investment in heat risk reduction.

- Definition of essential components of heat risk governance including for example cross-sectoral data integration, coordinated decision-making, and investment, financial and technical capacity building, and multi-level policy alignment.

- Agreement on a roadmap for next steps, including the drafting of a common framework for extreme heat risk governance, consultation, and its planned launch at the Global Platform for Disaster Risk Reduction (GP2025) in June 2025.

These discussions reinforced the urgency of addressing extreme heat as a global governance challenge and the need to shift from reactive responses to proactive measures that mitigate the underlying root causes of heat risk.

Recognizing gaps in participation and subject matter expertise, additional focus groups will be in conducted in spring 2025 to provide more holistic perspectives, notably related to transport, energy, cooling and environmental management.

Key Messages

1   **Extreme heat is a growing global crisis**

Extreme heat is the leading cause of weather-related mortality, morbidity and damage to economies, ecosystems and biodiversity. Climate change is exacerbating the frequency, duration, and intensity of extreme heat events worldwide. Despite growing awareness, many countries still lack adequate policies, governance mechanisms, and resources to effectively prevent and mitigate heat risks. Urgent, collective action is needed at all levels and sectors to prevent avoidable negative impacts from extreme heat.

2   **Reducing extreme heat risks must start with climate change mitigation**

The world continues to warm to levels that have never been seen in recent millennia, and the primary cause of this is the release of greenhouse gases, predominantly carbon dioxide and methane. The only sustainable way to reduce heat risks over the long term is to reverse this destructive trend by transitioning energy systems, transport, industry, agriculture and all other greenhouse gas-emitting sectors through a transition to net-zero emissions.

3   **Investment in heat risk reduction is an economic and social imperative**

Extreme heat strains public health systems, reduces workforce productivity, increases socio-economic inequalities and degrades the ecosystem on which we depend. Investments must be risk-informed, scaled up and strategically aligned to support heat risk governance, particularly in low-resource settings where the burden is higher. This may require innovations in financing mechanisms.

4   **Extreme heat compromises planetary health and ecosystem integrity**

Extreme heat disrupts natural systems, threatens biodiversity and impacts animal wellbeing. The degradation of ecosystems weakens essential environmental services that sustain human societies, highlighting the need for integrated solutions to protect both planetary health and human well-being.

5   **Strong governance and coordination are essential**

A multi-sectoral and multi-scalar, integrated governance approach is critical for effective cross-sectoral heat risk reduction. Having a heat action plan (HAP) is not enough. Many existing HAPs lack vulnerability assessments, long term adaptation strategies and alignment with broader national and local plans, limiting their effectiveness. In addition, single-sector HAPs, often only health-focused, fail to account to broader socio-economic and infrastructural impacts. Participants highlighted the importance of aligning efforts across health, urban planning, labour, social protection sectors, energy and utilities, water management, agriculture and food, biodiversity and other critical sectors. This alignment should draw on meteorology and disaster risk reduction expertise, and incorporate mobility and displacement considerations while ensuring strong governance coordination mechanisms to sustain and operationalize these efforts effectively.

6   **A mindset shift is needed to address long-term root causes**

Integrated risk management for heat is often locked within the immediate timescales of early warning, response and disaster recovery. While these timescales are critically important, they are frequently prioritized at the expense of long-term thinking to address the underlying root causes of heat risks, seeking to fundamentally improve the extreme heat risk profile of vulnerable groups

7   **From ad-hoc projects to systemic solutions**

Many existing heat risk reduction investments and interventions remain isolated pilot projects with limited scalability, integration and alignment. There is a pressing need to transition towards sustainable, institutionalized governance that fosters an enabling regulatory and legislative environment. This should ensure consistent, long-term risk-informed investment that supports actions, technological innovations and adaptive infrastructure.

8 Data and technology must drive decision-making

Advancements in climate modelling, digital surveillance, and AI-powered risk assessment tools offer unprecedented opportunities for improving heat risk management. Participants emphasized the need for standardized data practices, including data-sharing agreements, scalar data compatibility improvements, common methodologies, and capacity-building programs along with integrated decision-support tools to ensure these technologies are accessible and effectively utilized.

9 All countries, all populations, are and will be impacted by extreme heat

While extreme heat disproportionately affects marginalized communities, heat-exposed workers, the elderly, low-income populations, displaced communities and other social groups, no one is immune to its consequences. Governance frameworks must prioritize inclusive, community-driven solutions, ensuring that heat action plans are tailored to the specific vulnerabilities and needs of different regions and social groups.

10 The time to act is now

The consultation underscored the urgent need for global collaboration, political commitment, and sustained investment to address extreme heat as a systemic governance challenge. With increasing scientific evidence and policy momentum, governments and stakeholders must take decisive action to implement a cohesive, well-resourced framework for extreme heat risk reduction.

Consultation Objectives

The consultation made significant progress toward the development of a common extreme heat risk governance framework. It had 3 objectives:

Understand the successes, challenges, and needs of national and subnational participants in developing extreme heat risk reduction frameworks, governance, strategies, and actions.

Understand the multi-sector impacts of extreme heat and articulate the role of multi-sector collaboration in extreme heat risk reduction.

Co-create the elements of and recommendations for a common framework for coordinated action on extreme heat risk reduction.

Background

As global temperatures rise and extreme heat events become more frequent and severe, the imperative for more effective, collective extreme heat risk reduction, governance and management is starkly apparent.

Confronting and addressing the multi-sectoral, multi-dimensional root causes and underlying drivers of extreme heat risk, preparing and protecting both humans and the ecosystems upon which we depend, and building resilience to extreme heat is rapidly becoming one of the central challenges for nations worldwide. And yet, many societies and ecologies are ill-prepared to cope with this rapidly emerging risk.

The situation requires bold action across sectors, disciplines and from local to national to global levels. Action that is commensurate to the scale of the challenge, for the failure to do so will only see human behaviour amplify heat risk, placing billions at risk of preventable death and illness, and putting our natural life support systems in jeopardy.

Work is underway in countries, and internationally. However, as has been highlighted through the multiple technical, regional, urban-scale and G7 level consultations led by the Global Heat Health Information Network (GHHIN), the challenges related to aligning and integrating multi-sectoral policy approaches are repeatedly highlighted as a key challenge to effective heat action.

To make further progress, the December 2025 technical consultation in Geneva brought together a targeted group of sectoral experts from governments, international organisations and other actors to share experiences, challenges, identify opportunities for collaborative action in extreme heat risk reduction, and articulate good governance opportunities which can foster resilience to extreme heat.

The consultation brought together a diverse and multidisciplinary group of experts and stakeholders, reflecting the multi-sectoral nature of effective extreme heat risk governance. Participants included representatives from multiple government ministries and agencies, international organizations, academia, and non-governmental institutions, spanning sectors such as health, environment, urban planning, water, labour, energy, disaster risk management, and humanitarian response. This broad engagement underscores the recognition that extreme heat is not solely a health issue but one that requires coordinated action across policy areas to build resilience and protect communities.

While some key representatives were unable to attend due to scheduling conflicts—including experts from C40, national emergency management agencies, labour and interior ministries, as well as representatives from energy, environment, health, and hydrometeorology—their perspectives remain essential. Furthermore, participants identified some other representatives that will need to be engaged over the coming months, for example business chambers of commerce, frontline workforce organizations, architecture associations, organizations working on transport resilience and representatives working on human mobility and displacement, given their growing relevance to extreme heat resilience. Future consultations will ensure their inclusion, reinforcing a truly comprehensive and integrated approach to extreme heat risk governance.

The consultation was a key component of a broader initiative of UNDRR, WMO and GHHIN, with Duke University, to develop an Extreme Heat Decision- support Package. This broader initiative is examining existing extreme heat risk reduction approaches and governance models, identifying challenges and solutions, highlighting successful collaborations, and exploring opportunities for common approaches in enhanced heat risk governance and management.

The consultation, and the wider initiative within which it sits, are designed to respond to the UN Secretary-General's Call to Action on Extreme Heat.

2024 recorded some of the most extreme temperatures.

50°C — India
50°C — United States temperatures peak 50C
50°C — Pakistan
50°C — Japan Heat stroke alert as temps hit 50C (July)
50°C — Mexico intense heat (May)
42°C — Brazil
50°C — Saudi Arabia
42°C — Bangladesh
45°C — Southeast Asia Heatwave (April/May)
48.5°C — Sahel

Under EMBARGO until 12:30 p.m. EDT on Thursday, 25 July 2024

United Nations Secretary-General's Call to Action on Extreme Heat
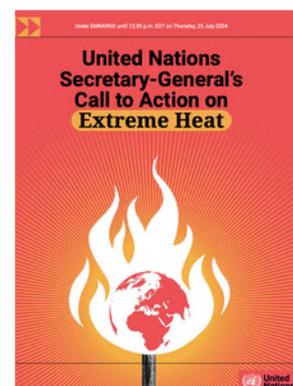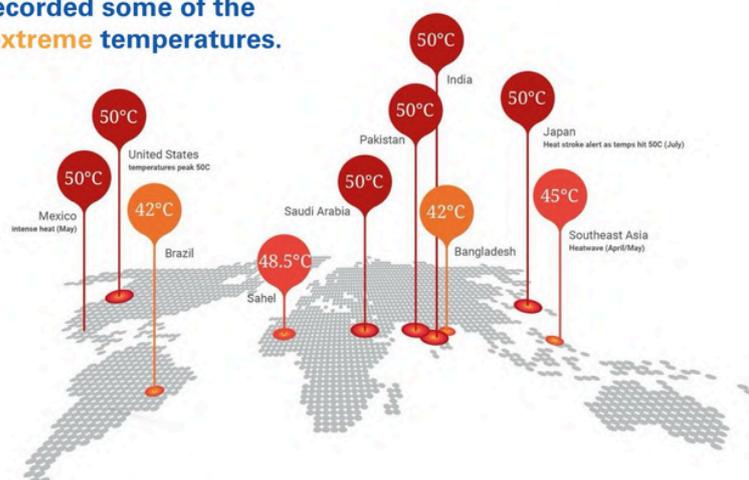
Key goals

The consultation successfully achieved six planned goals, per the summary table below.

Goals of the Consultation	Results against goals
Sharing & Stocktaking – review the current state of understanding and action in multi-sectoral extreme heat risk reduction	Selected participants made presentations to share experiences and needs in multi-sectoral extreme heat risk reduction at the national level and sub-national level, followed by a short discussion where other participants had the chance to ask questions. See section "Summary of Presentations" for more details.
Identifying bottlenecks and accelerators – assess key heat risk governance challenges faced by diverse actors and pinpoint opportunities for cohesive policy and collaborative action across timescales	Panellists from various regions shared their experiences with heat planning, highlighting challenges, successes, and the importance of partnerships and clear roles and responsibilities. They identified gaps in heat action plans, such as a lack of standards, focus on short-term responses, and insufficient integration with other plans. They also highlighted the impact of heat on various sectors, including health, infrastructure, and agriculture, and the need for better integration of national schemes and international outreach.
Co-creation of governance processes – Develop a common heat risk governance framework to strengthen enabling environments and enhance extreme heat risk reduction across timescales	Participants discussed several key elements that should be part of a global heat risk governance framework. The main points included: • Using an integrated "systems" lens to look at heat impacts across food, health, energy, and other sectors when designing solutions. • Integrating heat planning across sectors like health, infrastructure, energy systems, etc. Avoiding siloed approaches. • Incorporating heat into existing climate policies and plans like Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and global processes like the Coalition for High Ambition Multilevel Partnership for Climate Action (CHAMP) to enable climate financing. • Securing sustained funding not just for emergency response but also long-term mitigation and prevention efforts related to heat. • Building capacity through training programs for urban planners, health officials, and others who will face heat responsibilities. • Clear roles and responsibilities need to be defined. • Facilitating global and regional knowledge sharing of best practices between countries and cities. • Making the economic and business case for heat resilience to engage the private sector, not just relying on climate finance. Factors like productivity losses need to be quantified. • Having a trusted messenger/authority responsible for heat issues, though not necessarily a dedicated "chief heat officer" in every location. Additionally, in breakout groups, participants discussed the purpose of a common heat risk governance framework and co-created their own governance framework with key components (see summary of their presentations later in this section). Overall, the discussions emphasized practicality, coordination, sustained financing, and building on existing capabilities.

Collective troubleshooting – refine recommendations for integrated extreme heat risk governance

In sector-specific breakout groups, participants surfaced challenges and approaches and investment issues to consider to successfully integrate extreme heat risk governance.

The groups identified various actors and institutions, including international organizations, government agencies, and tourism operators. They also discussed strategies such as early warning systems, social protection systems, and data collection. The group then divided into smaller groups to discuss short-term, mid-term, and long-term strategies. The short-term group focused on response and recovery, while the mid-term group discussed strategies for the medium range timeframe. The long-term group discussed governance, data and evidence-based, and financing.

Strengthen decision-support and technical assistance to enhance the role of International Organisations for heat risk reduction by leveraging existing work, addressing gaps in current approaches

IOs emphasized the need for a common framework that integrates heat considerations into national strategies, policy-based financing, and development plans.

They reviewed a stocktake report that identified gaps and assessed capacity across the UN system. A maturity curve model was developed to help agencies self-assess their readiness. The discussion also highlighted the need for more demand from Member States for heat risk reduction activities, and the importance of integrating heat work into other structures and initiatives.
IOs also identified key gaps in standardizing definitions and risk assessments, highlighting the importance of a dynamic, adaptable framework that aligns global, national, and local efforts. IOs stressed the necessity of coordination mechanisms to streamline resource use, data sharing for transparency, and a multilevel approach to ensure holistic, sector-specific interventions. In particular, IOs stressed the importance of acknowledging and leveraging the efforts done by subnational governments in addressing heat risk and connecting these to ongoing national and global processes. Additionally, the discussion underscored the need to avoid overly prescriptive or technical solutions, advocating instead for a guiding framework that fosters collaboration, complements existing initiatives, and drives actionable heat resilience measures across diverse contexts.

Forge cooperation – catalyse collaboration to provide tailored support and drive innovative solutions for heat-related challenges faced by national and local authorities and key stakeholders, aligning to the SG's Call to Action on Extreme Heat

After much discussion, participants agreed that to better respond to the SG's Call to Action on Extreme Heat, a governance framework is needed that is practical, multi-sectorial, and addresses multiple geographies. The meeting ended with a call for continued engagement and collaboration over the coming months to develop a common heat risk governance framework and the need to empower vulnerable populations in heat management efforts.

It was agreed that a series of follow up consultations would be conducted in the first half of 2025, targeting groups that were underrepresented in this consultation. Specifically, it was agreed that regional consultations could help to ensure that voices from all continents were well represented, and sectoral consultations would be helpful to address the needs of agriculture and food systems, transportation, water resources management, labour authorities, financial and urban planning authorities, investors and businesses and other sectors that were less represented. It was agreed that further consultation would be online, either through video calling, or through electronic surveys.

Outputs

Based on the consultation's group-working sessions, participants produced three outputs which will inform the development of a common framework for extreme heat risk governance moving forward.

A. Shared understanding of the purpose for a governance framework

On Day 3, participants were divided into government representatives and IOs and each group established a shared understanding of the framework's purpose, focusing on the medium- and long-term goals. Discussions emphasized the need for structured coordination among actors, institutions, strategies, and processes to effectively mitigate and manage heat risks effectively. This exercise produced two outputs-one for Governments and one for IOs.

B. Essential components of heat risk governance

On Day 2, participants identified the essential components of heat risk governance across short-, medium- and long-term timescales. These include cross-sectoral data integration, institutional roles and responsibilities, financial and technical capacity building, and multi-level coordination to strengthen resilience.

C. Roadmap for next steps

By the end of Day 3, participants agreed on a roadmap for next steps, which includes drafting the initial framework, conducting consultations with key stakeholders, and officially launching the framework at the Global Platform for Disaster Risk Reduction (GP2025) in Geneva in June 2025.

Meeting participant group photo. WMO 2024

Output A: Purpose of a common framework for extreme heat risk governance

To discuss and align on the purpose of a common heat risk governance framework, participants from IOs and national representatives were split into different rooms to capture both perspectives productively and openly.

Below is a summary that shows the key purposes of a heat risk governance framework, as agreed on by representatives of national and subnational governments in the consultation.

1. Coordination
Participants stressed the need for enhanced cross-sectoral coordination with long-term strategies that integrate hazard, systems, and scenario planning. Local interventions should align with national frameworks while preserving local autonomy. Strengthening collaboration with urban planners was highlighted as key to promoting resilient infrastructure and nature-based solutions. Participants also emphasized aligning Heat Action Plans (HAPs) with Disaster Risk Management (DRM), National Adaptation Plans (NAPs), and Non-Communicable Disease (NCD) strategies for greater effectiveness.

2. Clarify Roles and Responsibilities
Clarifying the roles and responsibilities of different sectors was seen as a crucial step toward effective collaboration. Participants emphasized the importance of defining common, concurrent, and exclusive responsibilities to ensure accountability. Risk ownership models should be developed to improve risk assessment and risk-informed decision-making and risk management. Additionally, labour laws should be integrated into governance strategies to effectively protect the health and safety of workers. Also, greater collaboration with academia, research institutions, the private sector, and the public sector was recommended to strengthen overall governance capacity.

3. Financial, Human, and Institutional Resources
Strategic resource allocation was emphasized to maximize impact. Participants highlighted the need to harmonize financial and institutional capacities across governance levels and strengthen decision-making on heat risk. Risk-informed investments and joint budgets were suggested to facilitate resource pooling. Capacity-building assessments were also recommended to improve governance structures and ensure financial sustainability.

4. Integrate Multi-Sectoral, Multi-Level Information
A multi-sectoral and multi-level approach was deemed essential for governance, integrating health, water, urban planning, agriculture, and DRM data. Legislation and public health data should be aligned to improve practical implementation. Participants stressed extending planning beyond health to include key sectors like energy, agriculture and urban planning while incorporating DRM targets to reduce heat vulnerability and enhance urban resilience. The Global Heat Resilience Service (under development) was noted as a tool supporting this kind of integrated planning.

5. Data Collection and Sharing
Robust data collection and sharing were highlighted as vital for informed decision-making. Participants called for improved multi-sectoral monitoring, AI-driven data infrastructure, and standardized methodologies. Establishing data-sharing agreements among DRM, climate, and health agencies was seen as crucial for integrating climate and vulnerability data, ensuring accessibility, and strengthening long-term monitoring.

6. Identify Vulnerable Communities/Sectors – Flexibility in Implementation

Understanding socioeconomic, environmental, and regional differences was identified as a priority. Participants emphasized integrating informal economies into governance and combining traditional knowledge with modern technologies for mitigation, while also addressing the specific vulnerabilities of displaced or mobile populations. Community engagement was seen as key to ensuring responsive and sustainable strategies, with indigenous knowledge-sharing encouraged for localized solutions.

7. Capacity Building

Building institutional and technical capacity for extreme heat risk reduction was identified as a critical priority. Participants recommended providing training in GIS, remote sensing, and climate modelling to enhance technical expertise. The development of practical, user-oriented knowledge products was also emphasized to support decision-makers at all levels. Moreover, integrating health and climate experts into planning and response efforts will strengthen the overall governance framework. Improving local-level DRM capacities will help ensure coherence between national and local strategies, including strengthening early warning system with impact-based forecasts tailored to vulnerable communities.

8. Sharing Good Practices

Participants stressed the importance of sharing best practices across countries to foster collaboration. Peer-to-peer learning through joint training and multilingual translation of tools like early warning systems (EWS) and disaster risk reduction (DRR) strategies was recommended. Integrating health and climate experts into these efforts was seen as key to strengthening governance.

9. Evaluate Strategies and Policies

Regular evaluation of governance strategies was considered necessary for ensuring effectiveness and adaptability. Participants called for continuous assessment to identify gaps, refine policies, and improve implementation. Embedding evaluation mechanisms in heat risk governance frameworks was recommended to sustain progress and enhance resilience.

Defining the use case

Why a common framework?

Participants discussed the need for a common framework to effectively harmonize and maximize resources in a coherent and unified way to respond to countries' demands. They agreed a unified approach could help simplify processes, ensuring that advocacy efforts are aligned and impactful. A common framework can help actors streamline their collaboration and more effiencitly coordinate resource use, and avoid duplication of efforts. Standardizing processes, definitions, and messages was seen as crucial for consistency, while also enabling better communication on extreme heat impacts and fostering mutual learning.

Participants believe that showcasing successful practices from other countries can serve as inspiration for integrated programs that maximize impact. They highlighted the importance of embedding these strategies into national and local development plans to ensure long-term sustainability. The group agreed that the framework should clearly outline the benefits that each country can achieve, reinforcing the value of collective action.

Who will use it?

Participants recognized that the framework will be helpful to a range of diverse actors and decision-makers , including government bodies, international organizations and UN partners. They emphasized the importance of an approach to help actors harmonize and operate across multiple scales, from local to global, ensuring that national frameworks are integrated with both local priorities and global objectives. Participants agreed that combining disaster risk management and humanitarian perspectives with long-term goals will be essential for developing a comprehensive response.

The framework will provide common starting points and, guidance for those mandated to lead on extreme heat risk governance. Participants advocated for a multilevel, multisectoral approach to address extreme heat challenges holistically and inclusively. They stressed the need for a flexibile framework so that different actors can implement strategies according to their unique contexts while maintaining alignment with broader objectives.

How will It be used?

IO participants discussed the framework's application across timescales, emphasizing a phased approach that addresses short-, medium-, and long-term goals. They highlighted advocacy and capacity building as key functions, supporting governments and stakeholders in adopting heat resilience measures. Coordination mechanisms will facilitate collaboration, identify gaps, and ensure complementarity among different actors.

Additionally, participants agreed that data sharing and knowledge exchange should be prioritized to promote transparency and mutual learning. The framework should be embedded within existing country development strategies to enhance integration and long-term effectiveness. They acknowledged that ensuring alignment with national plans will be essential to drive meaningful action at all levels.

What the framework should not be:

IO participants agreed that the framework should not be prescriptive, emphasizing that it must guide rather than impose solutions. They cautioned against making it overly technical, advocating for practical and accessible approaches rather than high-tech or complex solutions. Participants stressed that it should not function as a standalone initiative but instead integrate with existing efforts to avoid redundancy.

Furthermore, they emphasized that the framework should not impose time constraints but rather facilitate an ongoing community of practice where agencies can exchange insights and updates. The discussion also highlighted differing perspectives on whether the framework should serve as operational guidance—while some participants felt it should remain high-level, others suggested a middle ground, incorporating both guiding principles and some operational elements.

Output B: Components of a common framework for extreme heat risk governance

The governance of heat risk is a complex process that requires system-level thinking and distributed responsibility. There is an extraordinarily wide range of stakeholders involved in heat risk reduction, ranging from individuals to informal groups and formal institutions. Each of these must be effectively engaged so that they know their own roles and responsibilities, and so that they can leverage and deploy the assets at their disposal towards risk mitigation. Furthermore, this complex stakeholder ecosystem must be orchestrated into collective action for a common purpose, by aligning around agreed strategies, processes and structures that ensure continuous collaboration. There is no single source of accountability for the devastating impacts of extreme heat, meaning that heat governance must ensure multi-source accountability, with effective data, evaluation and learning to ensure continuous improvement.

The following summary describes consultation participants' views on the key components of a common framework for extreme heat risk governance, following Ladd Keith's definition of heat governance as comprising actors, institutions, strategies and processes, which was presented before the discussion. Note that the common framework begins with problem identification where stakeholders must develop an understanding of the underlying drivers of extreme heat risk as well as the impact when it is realized across timescales. This first step is key to form systemic solutions that address long-term root causes.

What is heat governance?

Problem identification

Demand exists for action that solves a specific problem, such as protecting a population from chronic or episodic heat in a city or region. (Decision responsive)

Good Practices/Goals

Enabling efforts which:

- foster trusted relationships,
- fit for purpose for decision-making and investment,
- foster integration and whole system management and thinking
- Are agile and flexible
- Work across the timescales of risk and vulnerability, etc.

Mission / Vision

Principles

Heat Planning

Desired **outcomes** are defined:

Goals

Targets

Heat Governance (System)

Action is executed to achieve desired outcomes:

Strategies / Action

Processes

Institutions

Actors

Decision-Support Package:
Extreme Heat Governance

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Actors

Actors are the individual stakeholders involved in heat-related decision-making and implementation. They may be taking decisions, or be acting to implement plans and strategies, or be affected by the actions of others in relation to heat risk. They include officials within institutions (government, private enterprise, civil society), those with informal roles, and vulnerable groups. Important to note that integrated heat risk reduction requires multi-entity accountability and responsibility between actors.

Participants identified the following key actors:

1. Government officials and policy leaders (for example (non-exhaustive) Ministries of environment, labour, health, education, transport, finance, energy, water, agriculture, city councils, public health agencies, urban planning departments)
2. Private Sector and Economic Stakeholders (local business owners, energy systems coordinators, landowners, housing associations representatives, financial regulatory and supervisory bodies officials)
3. Urban and infrastructure actors (urban planners, housing associations, transportation services)
4. Researchers (academics, meteorologists, forecasting, climate services, weather services, academic partners, research institutions, social/cultural anthropologists)
5. Healthcare and Social Protection Service actors (healthcare, health system, social protection, emergency support
6. International and non-governmental organization leaders
7. Community leaders from grassroots organizations, faith groups, informal settlements, social workers, citizens
8. Media and Communication actors

Institutions

Institutions are the formal bodies with a role or mandate in relation to heat risk reduction actions, including but not limited to government ministries, chambers of commerce, school and hospital boards, non-governmental organizations, and labour unions.

Participants identified the following key institutions (non-exhaustive):

1. Governmental Agencies, Ministry of finance, agriculture, environment, energy, agriculture, water, health, local governments, labour, regulatory authorities, sub-national governments, national environment agency, NDMA etc.)
2. Energy and Infrastructure Institutions (energy, electrical producers, utility providers, infrastructure services)
3. Healthcare and Emergency Services (hospitals, primary healthcare, ambulances, first responders, emergency management services, health and environment management)
4. Private Sector and Economic Institutions (private sector, inventors, finance)
5. Media and Communication Institutions
6. International and Multi-lateral Institutions (multilateral development banks/organizations)
7. Community-Based Organizations (locally-led, refugee-led)
8. Research and Academic Institutions (meteorological services, climate prediction centres, university research institutes, universities)

Strategies

Strategies are formally agreed documents that set out what actions will be taken over a defined timeframe, and by whom, to achieve a specific set of objectives, goals and outcomes, including but not limited to legislation and regulations, Heat Action Plans, climate adaptation plans, health resilience strategies and other relevant documents.

Participants identified the following key extreme heat risk management strategies:

1. Risk-informed investment and financial strategies (including financial regulation and other measures to inculcate risk preventive public and private investments, as well as risk transfer, crop insurance, and other compensatory measures).
2. Heat Health Strategies (heat risk strategies, heat action plans, healthcare plans that are heat inclusive, social protection, migrant sensitive heat action planning)
3. Infrastructure and Urban Planning Strategies (heat-informed urban planning climate-resilient building codes, heat resilient social housing plans/construction, blue/green space plans, heat-sensitive transport capacity plans)
4. Water Strategies (water rationing approaches, heat-sensitive water use plans for industries such as energy generation)
5. Food Security Strategies (food distribution, crop insurance plans, food stocks and storage plans)
6. Energy Strategies (energy transition plans to shift to renewable energies cooling centre plans, strategies to limit resource consumption, technology strategies for emission reduction, maintain energy demands, utility infrastructure for heat resilience)
7. Environmental and Nature-Based Strategies (Tree-planting, green/blue space, ecosystem and biodiversity conservation and protection)
8. Behavioural Change Strategies (loose clothing, recreational safety, working conditions safety)
9. Community Awareness and Capacity-Building Strategies (Prevention communication, consumer engagement, participation of vulnerable/affected groups in planning, trust building)
10. Disaster management strategies (Early warning, impact-based alert/EW localized, co-production impact forecast, risk information and assessment, M&E)
11. Mobility-sensitive Strategies (heat action plans that consider the needs of displaced or mobile populations, ensure access to shelter, health care, and essential services, and include long-term solutions to reduce displacement risks linked to heat)

Processes

Processes are an agreed set of steps or sequence of actions aimed to achieve an outcome, including but not limited to planning and response partnership building, coordination mechanism, passing a law, developing a regulation, and deploying an early warning system.

Participants identified the following key processes:

1. Policy, Governance, and Coordination Processes (Multisectoral coordination, enabling legislation, heat risk disclosure (standards, credit ratings), budget cycles, evidence in governance city-state consultations, extreme heat events as health crisis.
2. Financial and Funding Processes (Public budgetary and appropriations processes, funding mechanisms, financial regulation for public and private investment)
3. Resource Management and Infrastructure Processes (Water supply, sanitation)
4. Risk and Vulnerability Assessment Processes (Vulnerability risk, climate risk assessments)
5. Innovation and Adaptation Processes (Public-Private Partnerships (PPP), adaptation, investor attraction mechanisms, building codes)
6. Communication and Awareness Processes (Media communication, public awareness, technical communication, economic impact communication)
7. Emergency Protocols and Response Processes (Emergency protocols, legally binding regulations, emergency response plans, EW systems, integrated monitoring, multi-sectoral monitoring
8. Monitoring, Evaluation, and Learning (MEL) Processes (Monitor heat in real-time, reporting, impact report, lessons-learned, climate risk assessment, mapping interdependencies)

Output C: Roadmap for next steps

The following next steps were agreed by participants:

1. Work together to develop first draft of a common framework for extreme heat risk governance

|Participants saw great value in the convening, both for its stated purpose, and to foster new connections and networks between countries, between international organisations, and between countries and international organisations. Valuing the utility of an agreed extreme heat risk governance framework, participants asked to be further involved through consultation, email updates and other means, to support the consultation hosts in developing an effective common framework for extreme heat risk governance in the first half of 2025.

2. Conduct consultation interviews with key stakeholders

Despite the large number of stakeholders in the room, it was acknowledged that there were some groups and formats that would be helpful to address gaps in the consultation to date.

Specifically, it was agreed that regional consultations could help to ensure that voices from all continents were well represented, and sectoral consultations would be helpful to address the needs of agriculture and food systems, transportation, disaster risk management, education, technology, and organizations working on mobility and displacement, water resources management, labour authorities, financial and urban planning authorities, investors and businesses and other sectors that were less represented. It was agreed that further consultation would be online, either through video calling, or through electronic surveys.

3. Launch common heat risk governance framework at the Global Platform for Disaster Risk Reduction (GP2025)

It was agreed that the final governance framework would be launched at the GP2025 event in Geneva, 2-6 June 2025, giving enough time for sufficient consultation, while also ensuring speedy action so that the framework can enter the implementation phase in the second half of the year.

Summary of Presentations

⊕ **Download all Presentations**

Day 1 Morning: Sharing national experiences and needs

This session highlighted national-level approaches to extreme heat risk reduction, showcasing governance frameworks, strategies, and implementation challenges across four countries. Presentations covered United Kingdom's integrated Adverse Weather and Health Plan, the U.S. federal NIHHIS initiative, Japan's legally mandated Heat Illness Prevention Action Plan, and India's extensive Heat Action Plans, illustrating diverse methods to protect public health and enhance climate resilience.

UK Health Security Agency
Agostinho Sousa

England's Adverse Weather and Health Plan (AWHP) unified extreme heat event and cold weather policies into a comprehensive framework that prioritized vulnerable populations, early warning systems, and cross-sector collaboration. The system successfully integrated climate resilience into health policies and provided multilingual public guidance. However, challenges remained in ensuring consistent local implementation and public adherence to heat advisories.

US National Oceanic and Atmospheric Administration (NOAA)
Juli Trtanj

The National Integrated Heat Health Information System (NIHHIS), launched in 2015 by NOAA and the Centers for Disease Control and Prevention (CDC), provided coordinated, data-driven decision support for heat risk mitigation. It effectively bridged gaps between agencies and developed localized adaptation strategies, but struggled with private sector engagement, long-term planning, and establishing clear legislative authority.

Japan Ministry of Environment
Kyoko Sakieda

Japan implemented a legally mandated Heat Illness Prevention Action Plan, issued heat stroke alerts, and established designated cooling shelters. The integration of heat alerts into national governance improved public awareness and response, while the expansion of cooling centres helped protect vulnerable populations. However, enforcement challenges and the need for stronger local government coordination remained key areas for improvement.

India National Disaster Management Authority (NDMA)
Safi Rizvi

India developed hundreds of Heat Action Plans (HAPs), introduced cool roof technology, launched heat insurance, and established a national extreme heat event framework. Government and non-government collaboration improved awareness and response, but gaps persisted in localized heat mapping, vulnerability assessments, and integrating heat risks into urban planning.

Day 1 Afternoon: Sharing subnational experiences and needs

This session examined subnational experiences in extreme heat risk reduction, showcasing governance frameworks, strategies, and implementation challenges through case studies from Senegal, Arizona, British Columbia, and the International Council for Local Environmental Initiatives (ICLEI). Presenters highlighted diverse approaches, from institutional coordination and policy innovations to community engagement and global advocacy, identifying key barriers and lessons learned in heat resilience planning.

Urban Planning Senegal
Alé Badara Sy

Senegal adopted a multi-sectoral approach to extreme heat risk reduction through institutional policies, territorial strategies, and community-led initiatives. Key measures included climate-sensitive urban planning codes, green city development guidelines, and reforestation projects at the neighbourhood level. However, challenges such as weak governance structures, inadequate funding for pilot projects, and limited technical capacity hindered effective implementation.

University of Arizona
Ladd Keith

Arizona developed a structured heat resilience strategy through policy innovations, institutional coordination, and the appointment of the country's first state-level Chief Heat Officer. The state implemented measures like the Heat Relief Network, extreme heat preparedness planning, and city-specific heat safety ordinances. Despite progress, barriers included limited resources, governance tensions, and the need for more time to integrate heat resilience across agencies.

British Colombia Centre for Disease Control
Sarah Henderson

British Columbia focused on mitigating indoor overheating risks, protecting vulnerable populations, and leveraging near-real-time data systems like SITNet and the BC HEAT situational awareness dashboard. Policy advancements included stricter building codes, mandatory cooling measures in long-term care facilities, and targeted outreach for at-risk groups. However, challenges such as governance fragmentation, resource limitations, and reliance on federal warnings for public health responses complicated implementation.

ICLEI - Local Governments for Sustainability
Sunandan Tiwari

ICLEI supported extreme heat risk reduction through multilevel governance, peer learning, and integrated adaptation strategies. The organization facilitated risk assessments, insurance-based risk management, and legally binding agreements with local governments to drive climate resilience. Despite these efforts, limited local resources, infrastructure ownership complexities, and difficulties in securing financing for resilient urban planning remained key barriers.

Day 2 Morning: Roundtable dialogue on multi-sector approaches to extreme heat

This session facilitated an interactive discussion on the challenges and best practices for fostering successful cross-sector and multilevel governance collaboration in extreme heat risk reduction.
Speakers from diverse sectors and regions shared insights on innovative solutions, such as Brazil's Wet-Bulb Globe Temperature (WBGT) Monitor for real-time heat exposure evaluation, the water coordination strategies of Électricité de France (EDF), and Senegal's heat wave early warning system.

Key themes included the role of governance in workplace heat protection (International Labour Organization or ILO), gaps in cross-sector coordination (Egypt, South Africa), the importance of decentralized and community-driven approaches (India), and the need for global governance frameworks to enhance resilience planning (UNDRR).

Health: Senegal Ministry of Health and Social Action (**Codou Mane**) – Discussed Senegal's early warning system for extreme heat events and the need for improved governance, data collection, and cross-sector collaboration to mitigate health risks.

Health: France Ministry of Health (**Camille Renoux**) – Explored challenges in extreme heat event management and advocated for a common governance framework to enhance cross-sector collaboration, resource allocation, and climate adaptation.

Labour: Brazil Fundacentro (**Daniel Pires Bitencourt**) – Presented the Wet-Bulb Globe Temperature (WBGT) Monitor, a mobile app for real-time heat exposure evaluation, and discusses Brazil's collaborative efforts in extreme heat risk reduction through public policy, technology, and labour law updates.

Labour: International Labour Organization (**Halshka Graczyk**) – Provided statistical insights into labour-related heat risks and highlighted the role of governance in addressing workplace heat exposure.

Energy: Électricité de France (EDF) (**Marianne Lamonin**) – Examined the impact of extreme heat events on electricity production, highlighting EDF's cross-sectoral water coordination strategies and governance improvements following the 2003 extreme heat event.

Water / Environment: Brazil Ministry of Environment and Climate Change (**Daniela Dantas**) – Highlighted governance challenges in managing extreme heat risks at national and subnational levels and suggested integrating sectoral plans to improve resilience.

Water/ Environment: Egypt Giza Water and Sanitation Company (**Waleed Yahia Abd El-Gaied Abdeen**) – Identified gaps in Egypt's cross-sectoral coordination for heat risk reduction and proposed joint governance frameworks for data sharing, resource allocation, and community engagement.

Disaster Risk Reduction: India National Research Development Corporation (NRDC) (**Abhiyant Tiwari**) – Questioned the preparedness of India's heat action plans and advocated for decentralized, community-driven strategies that integrate traditional and modern solutions.

Disaster Risk Reduction: UNDRR (**Loretta Hieber-Girardet**) – Highlighted the growing disaster risk of extreme heat, the challenges disaster risk management agencies face in data collection, coordination, and public awareness, and advocated for a global governance framework to improve risk assessment, multi-sectoral collaboration, and resilience planning.

Hydromet: South Africa Weather Service (**Innocent Mbokodo**) – Examined gaps in extreme heat event preparedness, highlighted the lack of data, awareness, and coordination, while proposing behavioural, environmental, and policy interventions.

Hydromet: UK Met Service (**Elizabeth Fuller**) – Showcased the UK's multi-scale approach to heat risk reduction, including early warning systems, climate projections, and cross-sectoral risk assessment methodologies.

Day 2 Afternoon: Towards a common framework

This session explored key elements of a common framework for effective heat risk governance, emphasizing equity, mitigation, and coordination. Case studies from Arizona's cooling centres and integrated information systems of the NOAA, USA showcased best practices in resilience planning, participatory monitoring, and innovative funding models.

University of Arizona
Ladd Keith
Defined heat risk governance as a structured approach to managing heat risks through equity, mitigation, and coordination, using case studies from Arizona's cooling centres and resilience planning to highlight best practices.

NOAA NIHHIS
Hunter Jones
Examined the challenges of heat risk perception, governance, and response; advocated for integrated information systems, participatory monitoring, and innovative funding models to improve community resilience.

Day 3 Morning: Setting targets and measuring progress and success and Heat risk governance maturity curve and self-assessment exercise

Setting Targets and Measuring Progress and Success
Animesh Kumar (UNDRR)
This session focused on defining and measuring success in extreme heat risk reduction by establishing clear targets, indicators, and governance strategies. It presented a monitoring framework that evaluated progress at multiple levels, linking heat resilience efforts to broader climate adaptation and disaster risk reduction goals. Key metrics included reductions in heat-related mortality, economic losses, and infrastructure disruptions. The session highlighted challenges such as data gaps—particularly in the Global South—insufficient disaggregation of impacts and limited financial resources. It emphasized the need for national and local strategies, stronger early warning systems, and integration of heat risk into urban planning and health systems. The presentation reviewed global datasets like the Sendai Framework Monitor and DesInventar and called for better international cooperation, monitoring, and reporting to ensure sustainable and actionable heat resilience strategies.

Heat Risk Governance Maturity Curve and Self-Assessment Exercise
Ashley Ward (Duke University)
This presentation introduced a governance maturity curve and self-assessment framework to help organizations evaluate their extreme heat risk governance capacity. A stocktake report, based on surveys from 17 UN entities and interviews, highlighted gaps in funding, expertise, and coordination that limited agencies' ability to manage heat risks. It found that heat risk governance was often embedded in broader climate adaptation strategies, leading to fragmented approaches and inadequate knowledge-sharing across regions. The presentation proposed an interactive ecosystem map and a framework to improve governance, collaboration, and resilience-building. It also included a self-assessment tool to help organizations identify areas for growth. The session concluded with discussions on achieving higher governance maturity and the need for an integrated, cross-sectoral approach to extreme heat resilience.

Annex A: Agenda

Day 1: Learning day
Tuesday 17 December 2024

09:00 Welcome remarks by WMO and UNDRR Executives

09:15 Review of Workshop's Agenda

09:45 Session 1: Defining and Unlocking Effective Heat Governance

This session will frame the technical consultation scope and purpose and introduce participants to preparatory work that has been conducted and its links to the UN Call To Action on Extreme Heat. It will present the synthesis of findings from Heat Action Plan Assessment and Case Studies as a lens through which we have reviewed heat risk governance needs and opportunities.

10:30 Session 2: Sharing National Experiences and Needs

Session 2 will describe experiences developing and implementing extreme heat risk reduction frameworks, governance, strategies and actions at national levels. Session aims to identify governance related successes and barriers to implementation through four national level examples and discussion.

12:00 Lunch break

13:00 Session 3: Sharing Subnational Experiences and Needs

Session 3 will continue to describe experiences in developing extreme heat risk reduction frameworks, governance, strategies and actions at subnational levels. It will aim to identify governance related barriers to implementation at subnational and city-scale levels through four examples and discussion.

14:00 Session 4: Sharing Sector Spectific Experiences and Needs

Session 4 is the first groupwork session that will begin to surface sector-specific challenges and approaches, as well as consider priority governance and investment issues to address sector-based priorities for heat risk reduction.

15:00 Tea break / group photo

15:30 Session 4 continued... Sharing Sector Spectific Experiences and Needs

16:30 Questions – looking toward tomorrow

Synthesis of emerging themes from Day 1 - that start to define what heat governance means and how a common framework can facilitate success of heat action.

17:00 Social event – cocktail WMO Attique (9th floor)

Day 2: Towards a Common Framework for Heat Action
Wednesday 18 December 2024

09:00 **Reflections from yesterday, preview of today**

09:30 **Session 1: Roundtable dialogue on multi-sector approaches to extreme heat**

Surfacing session to engage all participants through an interactive structured discussion on challenges and good practices for enabling successful cross-sector and multilevel governance collaboration – this conversation will help define common framework essential principles, requirements, components.

10:30 Morning break in the Foyer

11:00 **Session 2: Introduction Co-creating a Common Heat risk governance Framework**

This session will introduce expected and emerging dimensions of a common framework that can promote good heat risk governance. The presentation will introduce afternoon working group sessions.

12:00 Lunch break

13:00 **Session 2: Co-creating a Common Heat risk governance Framework: Working groups**

Groupwork defining the characteristics and pillars of the common heat risk governance framework, with regards to institutions, actors, strategies, and processes required for successful heat risk reduction.

15:00 Tea break

15:30 **Session 2 continued... Group work Feedback and Consensus Building**

Consensus review of the overall structure and key elements of the proposed common framework

16:30 **Closing**

Consensus review of the overall structure and key elements of the proposed common framework

Day 3: Catalyzing heat action
Thursday 19 December 2024

09:00   **Reflections from Days 1 and 2, preview of today**

09:30   **Session 1: Are we ready to catalyse progress on heat action?**
Heat Governance Maturity Curve Self-assessment exercise

This session will present the heat risk governance maturity model, as tested on UN partners, as an exercise to consider institutional readiness. Facilitators will guide an in-session self-assessment exercise.

10:30   **Session 2: From Strategies to Implementation: What is Needed?**

Discussion will focus on what is needed to catalyse heat finance and policy? What role do International Organizations need to play? As time allows, session may consider how to streamline priority strategies/investments for national and subnational levels.

11:30   **Session 3: Measuring Progress and Success**

Session will draft targets and goals for successful heat action. Discussion will focus on questions such as how will we know we are making progress? What needs to be monitored to measure progress in heat risk reduction and good governance? Who should do that at which level? Are 10 metrics of success possible? What does success look like?

12:30   Lunch break

13:30   **Session 4: Next steps: Roadmap 2025 toward more effective heat governance**

Present and discuss next steps in 2025, to draft, validate, launch, socialize, and advance extreme heat risk reduction and governance support

15:00   Tea break

15:30   **Session 5: Panel discussion – International Organisations' Reflections**

Reflection on and key takeaways from the consultation. Commitments toward success.

16:30   **Closing Discussion and Remarks: Next steps**

Annex B. Host Organizations

WMO-WHO Joint Office for Climate and Health

The WMO-WHO Joint Office for Climate and Health provides interagency coordination for strategic and technical activities since 2014. The Office promotes the coordinated development and use of climate, weather, and environmental services to improve public health. It increases awareness, builds capacity, and connects meteorological services and experts in the health sector as part of an active partnership for climate adaptation and environmental risk management.

UN Office for Disaster Risk Reduction (UNDRR)

The United Nations Office for Disaster Risk Reduction (UNDRR) serves as the focal point for coordinating disaster risk reduction within the UN system. UNDRR supports the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030, advocating for a substantial reduction in disaster risk and losses. The office collaborates with governments, organizations, and stakeholders to strengthen resilience, promote risk-informed development, and enhance preparedness for disasters worldwide.

Global Heat Health Information Network

The Global Heat Health Information Network (GHHIN) is an independent, voluntary forum comprising scientists, practitioners, and policymakers dedicated to enhancing the capacity to protect populations from the preventable health risks of extreme heat in our changing climate. Established in 2016, GHHIN aims to improve awareness, foster interdisciplinary partnerships, advance science and technology for decision-making, and accelerate action to address critical gaps in research and practice. The network offers resources such as global forums, learning events, and synthesis reports to support governments, organizations, and professionals in mitigating heat-related health impacts.

Annex C. Participants

Country / Institution	Name	Country / Institution	Name
Senegal, ANACIM	Papa Ngor NDIAYE	WMO	Daniela Cuellar Vargas
Senegal, Cabinet du Premier Ministre	Alé Badara Sy	WMO	Joy Shumake-Guillemot
UK, UK Health Security Agency,	Agostinho Sousa	WMO	Alejandro Saez Reale
Canada, BC Centre for Disease Control and the Scientific Director of the National Collaborating Centre for Environmental Health (NCCEH)	Sarah Henderson	WMO	Shona Kamps
		UNDRR	Marc Gordon
		UNDRR	Loretta Hieber-Girardet
Japan, Ministry of the Environment (MOEJ)	Kyoko Sakieda	UNDRR	Sanjaya Bhatia
		UNDRR	Mariavittoria Dona
USA, NOAA	Wasilla Thiaw	University of Arizona	Ladd Keith
USA, NOAA	Juli Trtanj	GEO	Rui Kotani
USA, NOAA	Hunter Jones	WHO	Marisol Yglesias
Egypt, Egyptian Natural Gas Holding Company (EGAS)	En. Sally Salaheldin Sayed Abdelrahman	UNU	Simone Sandholz
		UNHCR	Rosi-Selam Reusing
Egypt, Climate/Environment	Dr. Abdelhamied Guda Elawadi	ICLEI	Sunandan Tiwari
		IFRC	Francisco Ianni
Egypt, Giza Water and Sanitation Company	Waleed Yahia Abd El-Gaied Abdeen	IFRC	Ella Serdaroglu
		UNEP	Mirey Atallah
UK, UK Met Office	Elizabeth Fuller	UNEP	Benjamin Hickman
Senegal, Ministry of Health and Social Action	Codou Mané	FAO	Hideki Kanamuru
		World Bank	Nick Jones
Brazil, Fundacentro	Daniel Pires Betancourt	UN-Habitat	Alina Koschmieder
France, French Ministry of Health	Camille Renoux	UN-Habitat	Lea Renalder
South Africa, South African Weather Service	Innocent Mbokodo	UNICEF	Swathi Manchikanti
		WFP	Amelia Stewart
Brazil, Ministry of the Environment and Climate Change	Daniela Dantas de Menezes Ribeiro	NRDC	Abhiyant Tiwari
		IOM	Nicholas Bishop
France, Electricite de France (EDF)	Marianne Lamonin	UNDRR	Animesh Kumar
India, National Disaster Management Authority. (NDMA)	Safi Ahsan Rizvi	GEO	Martyn Clark
		IOM	Clementine Marie Favier
UK, National Energy System Operator	Herpreet Bhamra	IOM	Ana Cubillo
UK, National Energy System Operator	Urmi Mistry	Red Cross Climate Center	Julie Arrighi
Japan, Ministry of the Environment (MOEJ)	Mr. Satoshi Yokoyama	WTO	Mateo Ferrero
		ADB	Zonny Woods
Duke University	Ashley Ward	ILO	Halshka Graczyk
Duke University	Julee Snyder		
Global Nation	Hassan Damluji		
Global Nation	Cara Lew		

Annex C. Photos
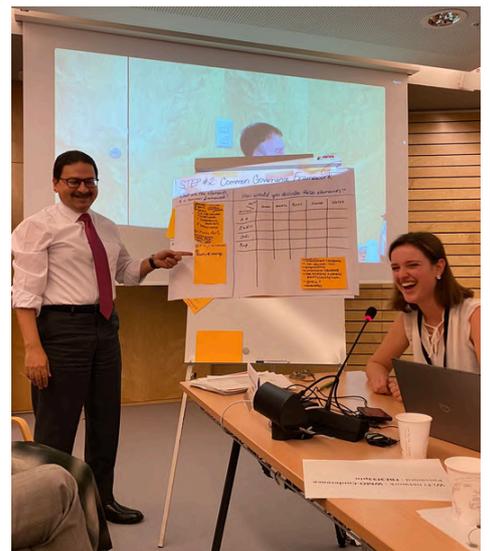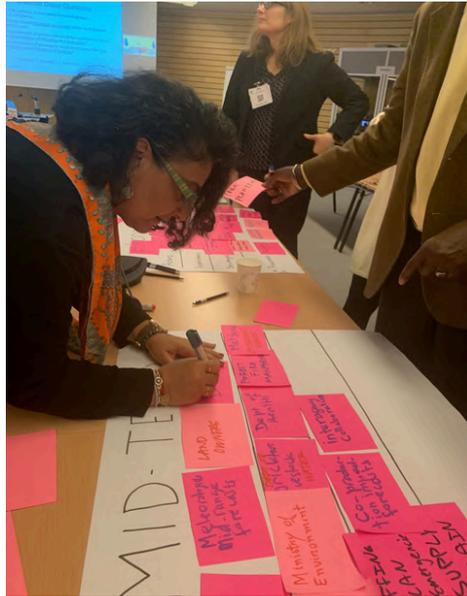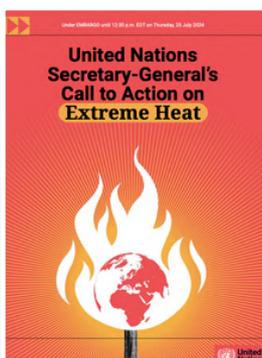
Supporting Extreme Heat Risk Governance

The Global Heat Health Information Network, WMO, and UNDRR have partnered with Duke University's Heat Policy Innovation Hub to develop an Extreme Heat Decision-Support Package to enhance extreme heat risk governance and resilience worldwide, as a contribution to the United Nations Secretary-General's Call to Action on Extreme Heat (2024).

About the project

GLOBAL HEAT HEALTH INFORMATION NETWORK

WORLD METEOROLOGICAL ORGANIZATION

UNDRR
UN Office for Disaster Risk Reduction

CENTRE OF EXCELLENCE
CLIMATE AND DISASTER RESILIENCE

Duke
NICHOLAS INSTITUTE
for ENERGY, ENVIRONMENT & SUSTAINABILITY

Global Nation