

# Making Cities Heat Resilient

## Asia Pacific Regional Heatwave

### 2022 Report



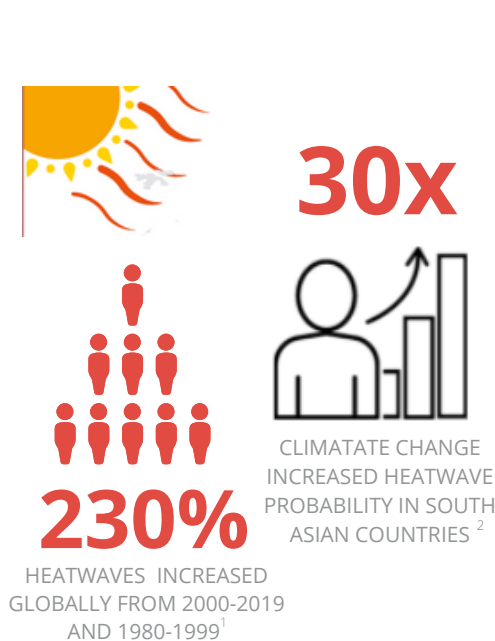
***"Cities are on the front lines of this public health and climate emergency, the good news is heatwave deaths are preventable, and Red Cross Red Crescent is here to support you". Ms. Juja Kim, IFRC APRO Deputy Secretary General***

On May 17 the IFRC, ICLEI - Local Governments for Sustainability and partners hosted the "Making Cities Heat Resilient Meeting", welcoming over 550 participants from local government, RCRC National Societies and Youth, UN and Intergovernmental agencies, Research and Academia.

The meeting coincided as South Asian cities and towns continued to experience the hottest temperatures on record in 122 years. As a product of climate change, the Asia Pacific may expect heatwaves to continue to increase in frequency and intensity, including in countries which have historically remained unaffected. The 1st IFRC Regional Meeting in 2021 discussed the cross-cutting physiological and socio-economic impacts of heatwaves.

Building upon regional heatwave leadership and momentum, the Asia Pacific Making Cities Heat Resilient 2022 meeting, in partnership with ICLEI-Local Governments for Sustainability, Red Cross Red Crescent Climate Centre, Global Disaster Preparedness Centre and the Global First Aid Reference Centre was dedicated to moving from understanding to action. Participants were introduced to a range of available resources and opportunities for networked engagement to scale up regional heat resilience in cities and towns. Part 1 "Understanding" set the stage with an overview of the Asia Pacific heat risk context, followed by Part 2, "Action", featuring voices from Cities, Red Cross Red Crescent Societies, and expert practitioners.

## Why Heatwave Action in Asia Pacific?



## HEATWAVES IN ASIA PACIFIC....

**Impact health** and correlate to increased mortality and morbidity. Those most at risk are the elderly (1 in 4 in Asia Pacific by 2050), pregnant or lactating women, those with pre-existing health conditions, as well as outdoor day laborers, or those living in poor conditions with limited access to cooling devices and basic services.<sup>3</sup> Heatwaves place social and psychological duress on the already vulnerable, the isolated, displaced, and can increase stress, anxiety.<sup>4</sup>

**Impact livelihoods** and come at a human, social and psychological, and economic cost. 68% workforce in Asia Pacific are informally employed, 85% in rural areas (primarily in outdoor agriculture) and nearly 50% in urban areas. Heatwaves will disproportionately affect the poor, from crop yields to food price volatility, and the inability to pay for cooling devices and basic services.<sup>5</sup> India lost 75 billion hours due to heatwaves in 2017, 60 billion hours from the agriculture sector alone.<sup>6</sup>

**Impact urban areas** and subject urban dwellers to amplified heat-health risks with the heat island effect. The majority of the population in Asia Pacific (2.3 billion) live in urban areas. Over half a billion people live in slum areas and rapid urban growth continues to pose a critical challenge for local governments. High rates of poverty, urbanisation, and high heat conditions make those in Asia Pacific a region highly vulnerable to the impact of heatwaves.<sup>7,8</sup>

## Asia Pacific Making Cities Heat Resilient Recommendations

The 2nd Asia Pacific Regional Heatwave Meeting featured a wide range practical actions to reduce heatwave impacts:

### Leverage data and existing resources



Policy-makers and humanitarians should advocate for and operationalize the use of improved quality and quantity of data to enable early action, bolster prevention and preparedness and inform adaptive response. In parallel to closing the data gap, local authorities and humanitarians should harness existing resources to drive Heat Action, for example, the suite of available resources within the Red Cross Red Crescent Heat Toolkit.

### Engage with and protect vulnerable groups



Populations in urban areas are particularly vulnerable to heatwaves, however, negative impacts are felt differently across diverse vulnerable groups. In particular, those who earn a daily wage outside (e.g. street vendors, construction workers, traffic police), as well as those living in sub-standard housing lacking access to consistent electricity, or cooling mechanisms. Engagement with those most vulnerable in urban settings is integral to preventing heat-related deaths and illness. Nepalgunj Municipality and the Nepal Red Cross together with Bangladesh Red Crescent and the Bangladesh Meteorological Department presented their cities' experiences in the targeting and co-designing Heat Action Plans for urban anticipation. The Red Cross Climate Centre shared innovative methods to design impactful communication plans and heat awareness campaigns.

### Co-develop, implement, evaluate Heat Action



Placing people at the centre of Heat Action Planning vulnerable in urban settings is integral to preventing heat-related deaths and illness. Resilience is truly a multi-stakeholder endeavor, requiring city-wide and national-level engagement. Nepalgunj Municipality and the Nepal Red Cross together with Bangladesh Red Crescent and the Bangladesh Meteorological Department presented their cities' experiences in coalition building for the co-designing Heat Action Plans for urban anticipation. The Red Cross Climate Centre shared innovative methods to design impactful communication plans and heat awareness campaigns.

### Employ climate-smart, inclusive and adaptive urban architecture and development



Cities should prioritize low-income housing investments, climate smart urban planning, nature-based solutions and passive design solutions. Nature-based Solutions and their immense potential to reduce exposure to disasters and climate change impacts, including heatwaves, in urban and rural areas and provide critical resilience dimension to the RCRC work, as demonstrated within recent UNDRR Sweltering Risk findings. Humanitarians can support local authorities to connect community voices to urban decision-making, as well as support with nature-based solutions, from assessments to youth-driven tree planting and urban gardening.

### Utilize regional resilience networks



Within and beyond the RCRC Movement, collaboration is key. Research and academia offer vast benefits for humanitarian heatwave work, as presented in Part I. In addition, regional resilience networks, including city networks, as well as initiatives, like Making Cities Resilient 2030, and the Asia Pacific Urban Community Resilience Hub, continue to support learning, exchange and the mainstreaming of local to global heatwave action.

## Part 1:

# Understanding the Asia Pacific Heatwave context

**IFRC APRO** Regional Heatwave Meeting co-hosts, **Lucy Price, Urban Risk Management Coordinator Arnaud Raulin, DRR Coordinator and Mariko Hirai, Regional Youth Delegate** welcomed participants.

As introduced by the IFRC APRO team, heatwaves present a number of challenges, from a lack of a common global definition of heatwaves, unlike other natural hazards, 'heat' is particularly difficult to identify, earning it the moniker "the silent killer". One reason extreme heat is so elusive is that it occurs both as an acute event, as a heatwave, but also in the form of chronic exposure, for example, experienced by the seasonal or year-round extreme heat of tropical regions. In addition, heat can be challenging to forecast and communicate, given its physiological impacts on human health comprise a composite of factors beyond just temperature.

Factors range from high humidity, exposure like where one works or lives, pre-existing health conditions, as well as physical surroundings presence of cooling infrastructure, consistent electricity and urban greenery. There is an immense role for both Cities and humanitarians to play in safeguarding the resilience of people and city systems, especially in urban areas, but also across the urban and rural continuum.

Keynote speakers, **Ms. Juja Kim, IFRC Asia Pacific Deputy Regional Director, and Mr. Emani Kumar, ICLEI-Local Governments for Sustainability Deputy Secretary General, and Executive Director ICLEI South Asia, and Making Cities Resilient 2030 Regional co-chair,** anchored participants in the added value and need for City and humanitarian collaboration for heat resilience.

Heat Action Plans can save lives: Invest in awareness raising, set up early warning and early action systems, build resilience of public services.

## HUMANITARIANS DEPEND ON CITIES TO...

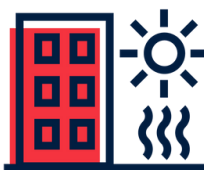
1) Set ambitious GHG reduction targets, devise strategies, policies and plans for climate mitigation and adaptation

2) Advocate to national government to recognize heat as a hazard, establish national and city-level forecasting for early warning, early action

3) Integrate heat risk reduction interventions into municipal policies and budgeting processes to ensure sustainability, climate-smart infrastructure and city planning

4) Devise Heat Action Plans in collaboration with public service providers, businesses, and community leaders

5) Set heat thresholds, and embed heat-health considerations into city planning, health and social services, Hydro-Met forecasting and emergency management



## CITIES DEPEND ON HUMANITARIANS TO...

1) Set ambitious Climate and Environment targets and activities in their strategic operational plans.

2) Advocate with and on behalf of those most vulnerable, help connecting communities with decision makers.

3) Support cities to build coalitions of urban stakeholders for Heat Action, ensuring no one is left behind

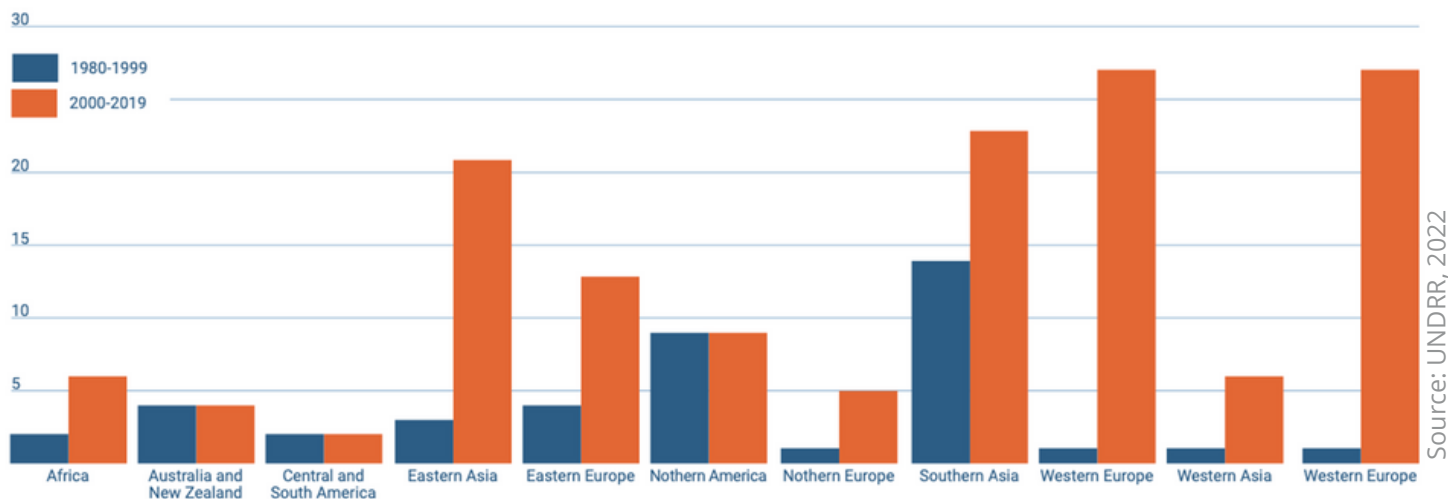
4) Augment city-wide Heat Action Plans with the community risk assessments to identify the most at-risk communities and heat hotspots,

5) Engage and invest in community preparedness, mobilize local capacities to raise awareness and protect the most vulnerable to heat risk and climate change





FIGURE 1. HEAT WAVES BY UN REGIONS<sup>2</sup> OVER TWO PERIODS: 1980-1999 & 2000-2019<sup>3</sup>.



## Heatwaves - Addressing a Sweltering Risk in Asia Pacific

Contributing authors to the UNDRR Heatwaves: Addressing a Sweltering Risk in Asia Pacific report, **Prof. Debarati Guha-Sapir, Professor of Public Health Université Catholique de Louvain** and **Sarah Scales, MPH. PhD student Epidemiology at the University of Delaware** set the stage with the regional context.

According to the EM-DAT database, compared to storms and flood, heatwaves have increased over 230% globally between 2000-2019 and 1980-1999. More than 150,000 deaths were attributed to heat waves, a vast underestimate of the true toll of extreme heat on affected populations. Among the regions most affected – both in terms of occurrence and severity,

South and West Europe, followed by East, South, and West Asia are most affected. In accordance with climate change impacts, Asia Pacific may expect cross-cutting issues including:

- Stronger and longer extreme heat events
- Changes in vector-borne and other infectious disease patterns
- Challenges to food and water security
- Compromised worker/labourer safety and associated losses
- Widening gender gaps in health outcomes

### POLICY & RESEARCH RECOMMENDATIONS

The impacts of extreme heat are related to disenfranchisement and socioeconomic vulnerabilities of the most affected populations, methodologies for heat-health data are underdeveloped, development partners and local civil society can push for change

To address this growing risk in the Asia Pacific, the report offers key policy and research directions to guide decision-makers in reducing impact in populations most at-risk.

### HARNESS DATA

Policy-makers and humanitarians should advocate for and operationalize use of improved quality and quantity of data to enable early action, bolster prevention and preparedness and inform adaptive response in the short and medium term. For example, remote sensed data, when paired with rapid field analyses, can provide cost-effective ways to generate predictive models and mobilise early response mechanisms to address heat-related infectious disease and health-impacts at many jurisdictional levels. Sentinel systems can additionally capture rises in heat-related morbidity and mortality.

## ENGAGE WITH VULNERABLE GROUPS

National and municipal level policies should target high-risk groups, accounting for gender-related exposure among women and infants for heatwave preparedness and response. Further, frontline actors in both civil society and in disaster risk reduction roles should be encouraged to focus on groups most at risk, including outdoor laborers, elderly, pregnant and breastfeeding women, and infants. Some examples include teaching heat-resilient behaviors in early education, opening community-based cooling centers, providing pregnant and breastfeeding working women with paid leave to limit excess heat exposure, setting up rehydration centers for distributing oral rehydration salt packets and potable water, and streamlining heat-exposure reduction measures with pre-existing health programmes and policies.

## EMPLOY CLIMATE-SMART, ADAPTIVE SUSTAINABLE URBAN DEVELOPMENT

Urban planners, public and private sector frontline organizations must urgently prepare, reduce risks, and adapt for heatwaves. While climate-smart designs are very much in the conversation and public consciousness, they have not been fully realized in practice. One of these design schema is the preservation and creation of green spaces – particularly in urban settings. The Sendai Framework Targets C and D, in alignment with Sustainable Development Goals 1 and 11, call for development and protection of urban green spaces as a means of reducing economic losses and degradation of vital infrastructure due to disasters, investing in climate-adaptive housing is the most cost-effective option.

## PRIORITIZE LOW-INCOME HOUSING INVESTMENTS

Research and technical institutions should develop and test financially feasible, structural options for reducing heat retention in low-income housing. In conjunction with other actors - civil society, disaster risk reduction, private, and government actors, policy measures should be designed to promote and subsidize alternative options for housing materials such as whitewashing tiles, thatched roofing materials, green walls. Further, passive cooling design considerations for increased ventilation are also cost-effective, high-uptake options.



Tokyo Metropolitan Government: Umi no Mori, or Sea Forest, that was part of the design utilized for reducing heat retention and subsequent exposure at Olympic venues for the 2020 Tokyo Games. Source: UNDRR, 2022

## PROTECT WORKERS

Engage employers, labour unions, ministries of labour and worker protection, workplace safety, associations of workers to review regulations for protection against heat for both male and female workers in high heat exposure occupations. Key low-cost recommendations include: Implementing mandatory work breaks for hottest times of day, Shifting operational hours to early mornings and nights, Training workers to recognise signs and respond to symptoms of heat exhaustion and stress, Messaging to encourage wearing of heat-reducing and moisture-wicking clothes

## DEVELOP, IMPLEMENT, EVALUATE HEAT ACTION

Local and regional authorities should develop, implement, and iteratively evaluate heat action plans. Taking multi-sector approaches for triggering and responding to extreme heat events, as well as encouraging data sharing practices are key steps for integrating health components into heat action plans. Engaging with community organisations and members to maximise impact, creating and utilizing a clear warning system and anticipatory action schema and integrating health components of heat action plans into national and subnational disaster risk reduction policies are critical facets of strong heat-health plans.

Read the UNDRR Heatwaves: Addressing a Sweltering Risk in Asia Pacific full report [here](#).

Source: UNDRR 2022

## IFRC APRO Making Cities Resilient RCRC Heatwave Services

STAGE A CITIES	STAGE B CITIES	STAGE C CITIES
<b>Know Better</b> Enhancing cities' understanding on (heat) risk reduction and resilience <ul style="list-style-type: none"> <li>✓ Strengthen capacities and reach to conduct heat-health awareness campaigns</li> <li>✓ Assess risk at the community + city-wide level</li> <li>✓ Conduct orientation workshops, coalitions, sub-committees for heat resilience planning</li> </ul>	<b>Plan Better</b> Improving assessment and diagnostic skills, increasing alignment between multi-level strategies <ul style="list-style-type: none"> <li>✓ Incorporate city-wide and community risk assessment results for the joint development of Heat Action Plans:               <ul style="list-style-type: none"> <li>- Long-term seasonal + short term planning</li> <li>- Integrating heat action throughout city planning decisions</li> </ul> </li> </ul>	<b>Implement Better</b> Supporting cities in the implementation of risk reduction and resilience actions. <ul style="list-style-type: none"> <li>✓ Conducting simulations/ after-action heatwave response review</li> <li>✓ Improving preparedness, (Early Warning Early Action, Early Action Protocols, SOPs) as well as augmenting urban planning for enhanced climate adaptation (NbS)</li> <li>✓ Improving access to finance (research grants, Anticipation)</li> </ul>

## MAKING CITIES HEAT RESILIENT TOGETHER in ASIA PACIFIC

**Sunisa Soodrak, Program Management Officer UNDRR MCR 2030 and IFRC APRO Lucy Price** introduced the Making Cities Resilient 2030 initiative as a means to further collective heatwave action.

The ultimate goal, stated Soodrak, of MCR2030 "is to ensure that cities become inclusive, safe, resilient and sustainable by 2030, contributing directly to the achievement of Sustainable Development Goal 11 (SDG11), "Make cities and human settlements inclusive, safe, resilient and sustainable", and other global frameworks, including the Sendai Framework for Disaster Risk Reduction, the Paris Agreement and the New Urban Agenda. Many cities know what they need to do but they cannot do it alone.

Participating entities in MCR2030 have signed up to the dashboard to list services that can support cities in disaster risk reduction and resilience."

Making Cities Resilient currently consists of a growing network of over 1,000 cities and partners.

IFRC is a core partner of the Making Cities Resilient campaign. Price reminded participants, "As auxiliary to governments, the support services, Red Cross Red Crescent National Societies provide extend far beyond the MCR 2030 dashboard. National Societies, including sub-units (chapters and branches) have a mandate to support local authorities' heat resilience journeys. Price called upon local governments and National Societies to take advantage of their unique relationship, outlining that IFRC and Red Cross are here to support cities of all stages (pictured above). National Societies may also directly join the Dashboard as a supporting entity for enhanced city-branch matchmaking.

[JOIN](#) Making Cities Resilient 2030 as a City or National Society supporting entity today.



# Practitioner Voices: City & Red Cross Red Crescent collaboration in South Asia

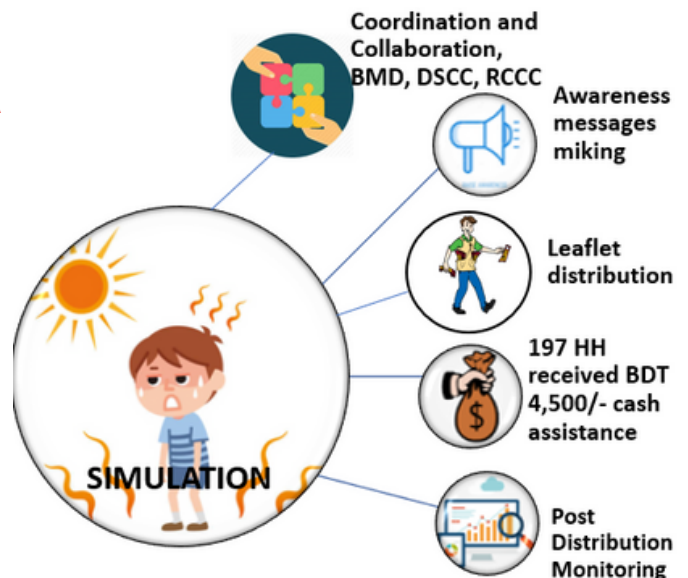
## URBAN ANTICIPATION FOR HEATWAVES IN DHAKA

Urban populations are at risk from extreme heat worldwide, and Bangladesh, one of the most disaster prone countries, is no exception. Under the GRC Forecast-based Financing project, **Mohammad Shahjahan, Assistant Director & FbF Project Coordinator, Bangladesh Red Crescent** presented advances in the urban FbF Heatwave project.

The objectives of the project to reduce risk of heat stress and heat stroke, reduce related health expenses, reduce loss of working hours and ensure livelihood stability are met through applying anticipatory action prior to the onset of heatwaves. In May 2021, BDRCS simulated FbF early actions, engaging in awareness messaging, and distributing cash assistance to 197 Households based on a threshold of 38 degrees Celsius. As shared by Mr. Shahjahan, elements such as the BDRCS MoU with the Hydro-Met Department, and simulations together with the City, have been instrumental to strengthening government authorities capacities to prevent and mitigate heatwave risk and is laying a strong foundation for future policy and planning work.

Evidence and impact assessments further augment BDRCS and City preparedness and plans. In March 2021, the FbF Heatwave Feasibility study findings were published. The study identified groups most at risk (those working outdoors, rickshaw pullers, street vendors, construction workers, pedestrians), people living in the informal settlements, the elderly, infants, young children, people with underlying health conditions, and pregnant women are disproportionately impacted by the extreme heat, along with the concurrent trigger methodology, early actions and roles and responsibilities for city officials and BDRCS staff and volunteers.

On 24 April - 3 May 2021, amidst the Covid-19 pandemic and nationwide strict lockdown, a simulation was conducted to test the triggers, thresholds, and early actions for heatwaves. A post distribution monitoring (PDM) was commissioned and the findings from the PDM revealed the multi-purpose cash grant (BDT 4500, around 45 EUR) and awareness generation activities during the simulation have been enormously helpful and effective to the recipients.



Bangladesh Red Crescent and German Red Cross FbF Heatwave simulation, Dhaka, May 2021

Currently, the team is working closely with the City, research institutes and communities to finalize the Early Action Protocol.

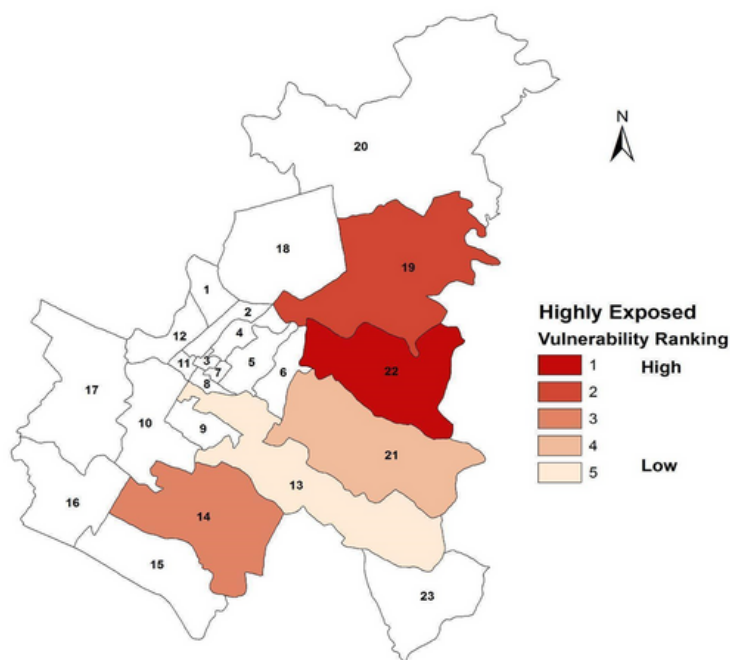
Read the Heatwave Feasibility report and continue following Dhaka's journey to beat the heat on the [Anticipation Hub here](#).

## CITY & RED CROSS BRANCH HEAT ACTION PLANNING IN NEPALGUNJ

Where and how do cities start when it comes to Heat Action Planning? **Mr. Dolakh Bahadur Dangi, Manager Banke District Branch, Nepal Red Cross Society, and Mr. Prakash, D.C. Nepalgunj Municipality** shared key steps taken in the RCCC Heat Action in Cities project.

As heat is a new hazard addressed by the City and Red Cross Branch, the first step, as explained by Mr. Dangi, was to understand the local context of the city and risk of extreme heat in the city. As a second step, city stakeholders must identify heatwave impacts, analyzing who is most vulnerable to heat and in what ways? This is achieved through impact and risk analyses to identify heat impacts on vulnerable groups. From there, heat thresholds and vulnerability hotspots were identified, to provide information on when, where and how to act in to protect those most vulnerable, once the trigger is reached on extreme heat days. Working closely with multiple urban stakeholders, including communities, but also diverse government departments has been critical to determines the 'who and what' elements of Heat Action Plans (below).

The Branch and City shared Covid-19 impeded simulating and testing, however, the city intends to do so for Global Heat Action Day June 14.



Nepalgunj vulnerability hotspot mapping results from 2021, presented by Nepal Red Cross Society Banke District Branch and Nepalgunj Municipality

The project, supported by Climate and Development Knowledge Network (CDKN), Asia (hosted by ICLEI South Asia) and UK Met Office – ARRC Programme, connects residents of the respective cities, especially the vulnerable, with City/local Authority, Health service providers, Civil Society Organisations (CSO), and the volunteers/staff of the respective branches of the Red Cross Red Crescent National Societies, has yielded fruitful results. All Heat Action Planning outputs, including multilingual IEC materials, heat threshold identification, guidance briefings and much more may be found [here](#).

## What does city-level heat action planning look like in practice?

ROLES	STAKEHOLDERS
Heat Action Plan Development	<ul style="list-style-type: none"> <li>o District Disaster Management Committee (DDMC) including DEOC</li> <li>o Nepalgunj Upamahannagar Palika (all the lead departments)</li> <li>o Nepal Red Cross Society (NRCS) Banke district branch</li> <li>o Bheri Zonal Hospital</li> <li>o Nepalgunj Chamber of Commerce and Industry</li> </ul>
Developing and issuing heat early warnings	<ul style="list-style-type: none"> <li>o DHM</li> <li>o Department of Health Services, Nepal</li> </ul>
Leading emergency response	<ul style="list-style-type: none"> <li>o Disaster management division, Nepal Police</li> <li>o Disaster management department, NRCS</li> <li>o Banke district branch, NRCS</li> <li>o Nepalgunj Upamahannagar Palika</li> </ul>
Liaising with the media	<ul style="list-style-type: none"> <li>o Nepalgunj Upamahannagar Palika</li> </ul>
Liaising with city residents	<ul style="list-style-type: none"> <li>o Nepalgunj Upamahannagar Palika</li> <li>o Banke district branch, Nepal Red Cross Society (NRCS)</li> <li>o Bheri Zonal Hospital</li> </ul>

Source: Nepal Red Cross Society, 2022



# Part 2: Getting to Work

## ACTIVATING THE POWER OF YOUTH-LED HEAT ACTION

**IFRC Youth Commission Asia Pacific Representative Michelle Chew**, kicked off the second half of the meeting. When it comes to 'Getting to Work', Chew underscored the benefits, urgency and need to engage youth as key actors in heat action. The benefits of youth engagement are manifold: young people bring social movements through new forms of advocacy, access to unique tools, innovation and technology, energy passion and creative solutions and access to communities around the world, in line with the IFRC Strategy 2030 priority to shift power to the most local level. At present, the IFRC has 192 member National Societies and globally. Young people play a vital role in humanitarian action and development and represent the 50% of a 14 million strong volunteer base, delivering lifesaving and life-changing work within their communities every single day. In particular, Chew shared the three dimensions of change through which young people can make a unique contribution to drive climate action.

- "Awareness: recognizing that in order to address the climate crisis - we as volunteers, and our communities need to understand it first.
- Action (Volunteer Action): engaging in practical initiatives that reduce climate risk as responding to climate disasters is not enough, we need to tackle the underlying causes, reduce their impacts, better address emerging risks and prevent them from reoccurring to protect and prepare our communities for some of the inevitable impact of climate change that will affect all of us.
- Advocacy & Representation: making sure that our voice is heard where it matters. Recognizing when we talk about climate change, we talk about our future. To make a lasting impact, we need to shape policies, decisions and ensure that the right people are at the discussion table."

Cities and Red Cross National Societies can engage Youth in Heat Action especially through school or community-level engagement, offering on the ground or social media and digital support. Chew closed with the reminder that, as key urban actors, Youth should be engaged as key actors in local government climate decision-making processes, stating, "the world cannot wait".



### AWARENESS



### ACTION

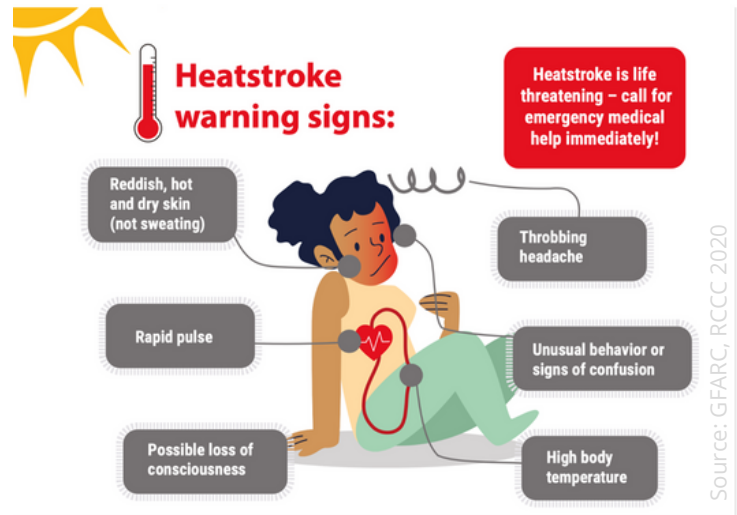
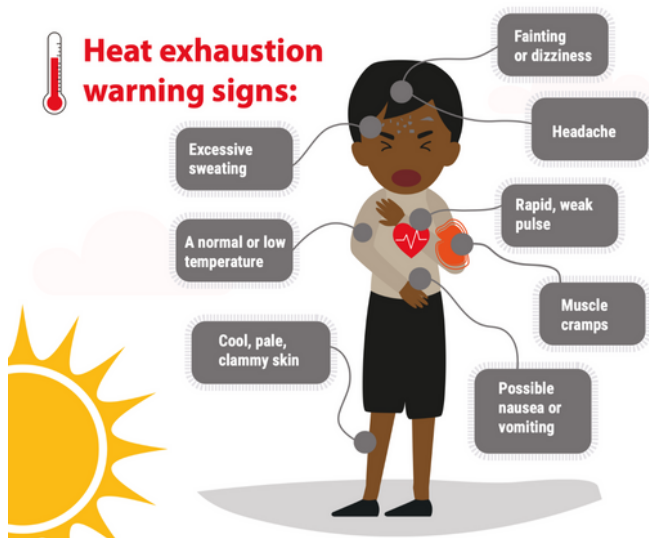


### ADVOCACY

Read the Youth-led Strategy  
for Climate Action here

## HEAT & HEALTH: HOW TO RECOGNIZE AND PREVENT HEAT - HEALTH IMPACTS

**Global First Aid Reference Centre, Dr. Pascal Cassan and Salome Boucif** outlined how to recognize and prevent negative health impacts from extreme heat.



- Place the person in a cool air-conditioned place, in a comfortable position
- Cover the person with damp cloth and use fan
- Give a cool bath if possible
- Provide water if the person is conscious
- Carry out a complete check-up including temperature
- Seek medical advice if the person does not get better quickly

- Heatstroke is an emergency: call Emergency Management Services
- Employ active cooling:
  - Immerse the whole body (neck down) in water <26° C
  - If bath is not available, cool the person by placing a cool, wet sheet on the person, or shower them with cold water and place ice packs on neck, groin and armpits. Fanning may also help

Appropriate first aid and emergency medical care save lives during a heatwave, especially for heatstroke. The IFRC GFARC stressed the importance of the inclusion of heatwave management in National Societies first aid courses, whereas local governments should embed heat-health considerations into city planning. Including health and social services, Hydro-Met forecasting and emergency management. It is paramount that Cities, RCRC and communities be able to recognize the signs between heat exhaustion and heat stroke, as both require different treatment. GFARC colleagues shared measures for heat prevention, including wearing loose clothing and shifting outdoor activities to cooler times. Effective risk communication and awareness campaigns are crucial as lay public should be aware of signs and engage in early recognition between heat exhaustion (mild hyperthermia) and heat stroke (severe hyperthermia, life threatening).

Regardless as to whether a person is suffering from heat exhaustion, or heat stroke, they should stop all physical activity and rest for at least 20 minutes. If the person is showing signs of mild to moderate hyperthermia, cool them off using any technique available such as immersing their hands and feet in cold water, applying ice-packs, encouraging them to have a cold shower, or fanning them. Provide water, sports drinks or cold tea to hydrate, and continue to monitor the person's temperature and level of response. Try to reduce their temperature to less than 39°C. The establishment of cooling centres can play a significant role in management and prevention of heatwaves consequences like dehydration, whereby both RCRC and Cities have distinct roles to play.

For more information, contact visit the [IFRC Global First Aid Reference Centre](https://www.ifrc.org/) or contact the team: [first.aid@ifrc.org](mailto:first.aid@ifrc.org)



Source: RCC, CDKN, ICLEI, PFR, ARCC, 2021

## HEAT & RISK COMMUNICATION: HOW TO DESIGN EFFECTIVE MATERIAL AND PLANS

A critical component of a heat action is communication. **Ramiz Khan, Urban Advisor, Red Cross Red Crescent Climate Centre** introduced four key elements needed when creating public awareness campaigns and early warning messaging for enhanced understanding of heat risk.

### COMMUNICATION PLANNING PRO TIPS

#### 1 ACCESS

how will the public access the information?

**ACCESS:** when designing communications plans, community engagement and co-designing is critical as they are the target receivers of messaging. Select and leverage channels that have proved effective, enlist appropriate intermediary actors (e.g. local news/media, NGOs, community leaders), and a combination of channels that will serve all vulnerable communities effectively.

#### 2 RELEVANCE

is the information relevant to the needs of the population?

**RELEVANCE:** should be guided through Hydro-Met engagement, employing heat and vulnerability maps to develop context-specific advice messages.

#### 3 CLARITY

is the information understandable by all?

**CLARITY:** translate heat forecasts and information into local languages, cultural practices and simplify terminology.

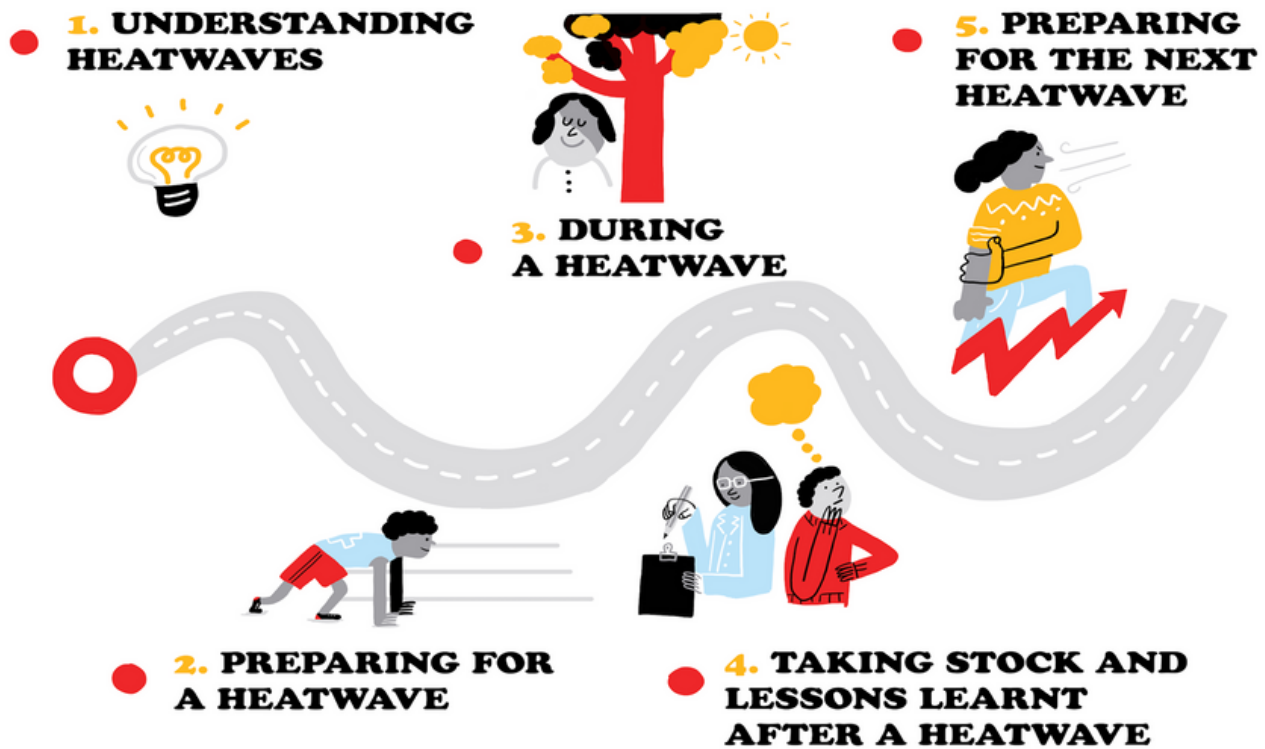
#### 4 USE

can the public take action based on the information provided?

**USE:** prepare IEC materials and a list of actions that the public can take to reduce the adverse impacts of extreme heat. Create timelines for communication activities aligned with Heat Action Plans and threshold triggers. Co-produce awareness and alert messages with key stakeholders such as public health agencies, media, and community organisations. The content of alert message should focus on key types of information: weather forecasts, affected areas which will be most affected, potential impacts, advice on actions to take, who to contact for help. Don't forget to gather feedback from the public on the effectiveness of heat communication.

Further inspiration may be found on the GDPC Heat Toolkit [here](#).





Source: GDPC, RCCC, 2021

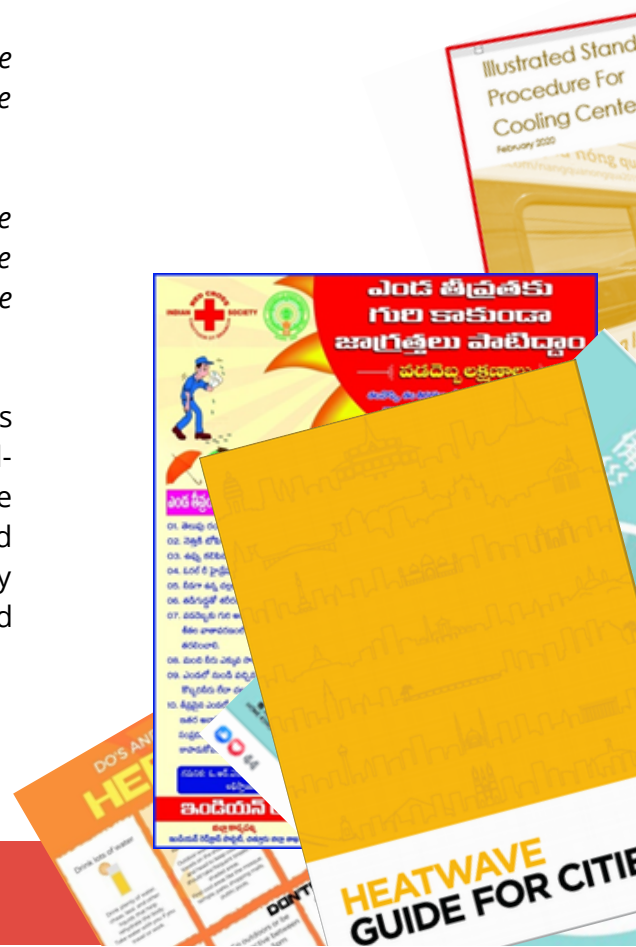
## HEAT ACTION DAY EVERYDAY: HOW TO ACCESS THE RESOURCES YOU NEED FOR SIMPLE, SCALABLE SOLUTIONS

**Aynur Kadihasanoglu, Senior Advisor, Urban Climate and Disaster Resilience American Red Cross**, engaged participants in an interactive journey through available heatwave resources.

*"A major heatwave is anticipated in your town and you are the Mayor, what is the first thing you should be doing prior to the Heatwave?"*

*"A major heatwave is anticipated in your town and you are the manager of a RCRC branch in the most densely built up area of the city. What is the first thing you should be doing prior to the Heatwave?"*

The Red Cross Climate Centre has worked with numerous partners to develop a suite of valuable resources to ensure well-prepared Cities and Red Cross Red Crescent staff, including the Heatwave Guide for Cities and City Heatwave Guide for Red Cross Red Crescent branches, along with the Urban Community Resilience Toolkit, Urban Action Kit, and much more as outlined in the following section.



# HEAT TOOLKIT

A COLLECTION OF RESOURCES ON  
HEAT WAVES AND CLIMATE CHANGE

The [Global Disaster Preparedness Centre](#) [Heatwave Toolkit](#) offers a wide range of:



**Guidance Materials**



**Campaign Material**



**Case Studies & Policy Briefs**

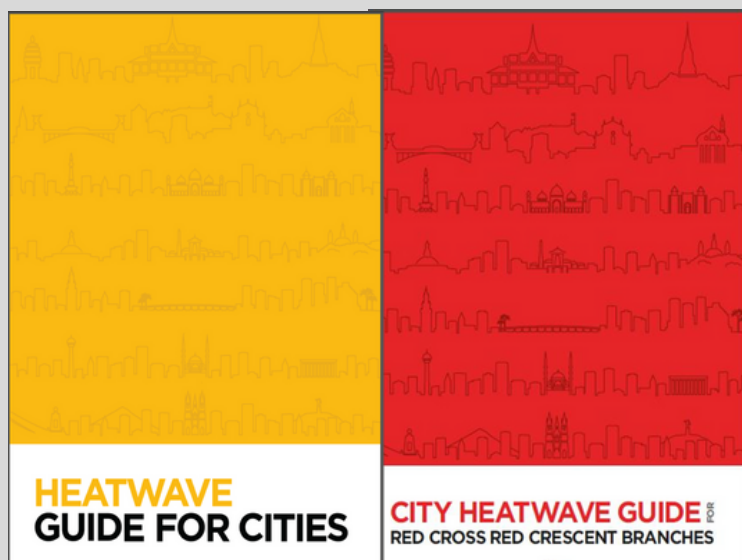


**Research & Reports**

These resources have been designed with, and for, people working in cities, in particular, Red Cross Red Crescent branches and government to understand, reduce the risk of, and respond to, heatwaves in their cities.

In addition, to support Cities to engage a range of diverse urban stakeholders in heat action planning, resources such as the **Urban Community Resilience Toolkit**, including the **City-wide Risk Assessment** and the **Building Coalitions for Resilience Kit** help urban communities identify their resilience priorities and design sustainable and scalable solutions together with a diverse set of partners.

## Heat Action Planning



## Heat Action Day



Join us in demonstrating your city's commitment to *#BeatTheHeat*, raise awareness and prevent unnecessary deaths on HEAT ACTION DAY June 14, 2022. [Sign up here!](#)



## YOU CAN PREVENT HEAT DEATHS

### HEATWAVE MEETING RESOURCES

- **MEETING RECORDING**

#### General

- **Asia Pacific Urban Community Resilience Hub :**  
<https://preparecenter.org/initiative/asian-pacific-urban-community-resilience-hub/>
- **IFRC APRO 1st Asia Pacific Heatwave Report 2021**
- **Global First Aid Reference Centre :**  
<https://www.globalfirstaidcentre.org/>
- **Global Disaster Preparedness Centre**
- **Heat Toolkit:**  
<https://preparecenter.org/toolkit/heat/>
- **Coalition Toolkit:**  
<https://preparecenter.org/resource/coalition-building-for-urban-community-resilience/>
- **Global Heat Health Information Network:** <https://ghhin.org/>
- **Red Cross Red Crescent Strategy on Youth-Led Climate Action:**  
[https://www.climatecentre.org/priority\\_areas/youth/strategy-on-youth-led-climate-action/](https://www.climatecentre.org/priority_areas/youth/strategy-on-youth-led-climate-action/)
- **United Nations Office for Disaster Risk Reduction - Regional Office for Asia and Pacific. 2022. *Heatwaves: addressing a sweltering risk in the Asia Pacific*:**  
<https://www.undrr.org/publication/heatwaves-addressing-sweltering-risk-asia-pacific>
- **UNDRR Making Cities Resilient 2030:** <https://mcr2030.undrr.org/>
- **Urban Collaboration Platform:** <https://preparecenter.org/initiative/red-cross-red-crescent-urban-collaboration-platform/>

#### City-level collaboration for Heat Action:

- **CDKN, ICLEI South Asia, Red Cross Red Crescent Climate Centre. 2021. Heat action in cities in Bangladesh and Nepal: Nepalgunj, Nepal IEC material, EWEA Guidance Note, Heat Threshold Identification Report:** <https://cdkn.org/project/heat-action-cities-bangladesh-and-nepal>
- **Bangladesh Red Crescent - Anticipation Hub heatwave resources. *Heatwave Feasibility Report* & *Anticipation Hub* page:** <https://www.anticipation-hub.org/news/the-story-of-heatwave-anticipatory-action-in-dhaka-bangladesh>

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