CITY HEATWAVE GUIDE FOR
RED CROSS RED CRESCENT BRANCHES

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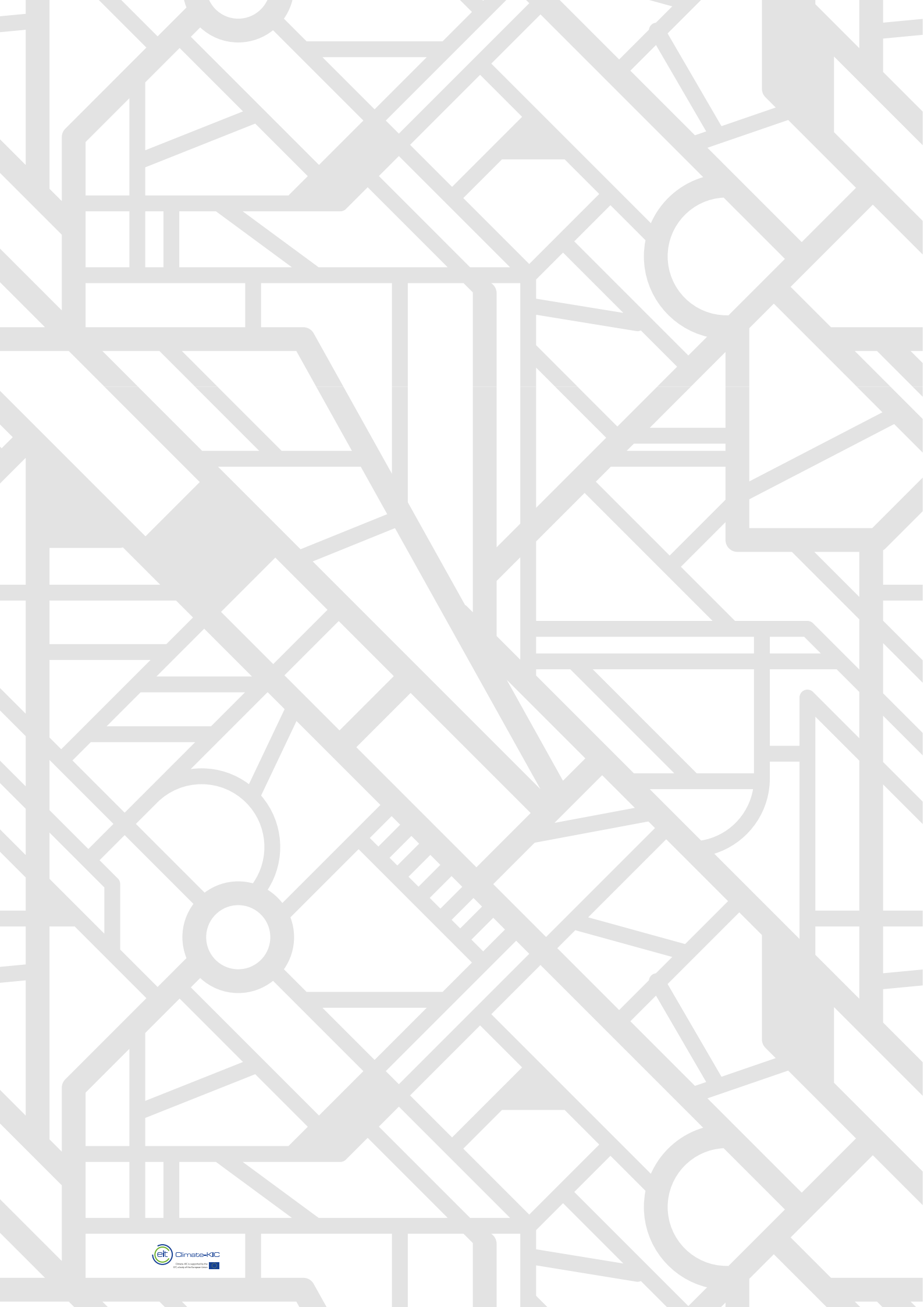
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CITY HEATWAVE GUIDE for Red Cross Red Crescent Branches

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Heatwaves are deadly and their impacts are on the rise globally due to climate change. But this is not inevitable; it is up to us to prevent this public-health crisis from impacting our neighbours, friends and family members.

Every year, heatwaves claim the lives of infants, the elderly, and people with chronic health conditions. What is unacceptable about this silent emergency is that simple, low-cost actions – ordinary citizens checking on vulnerable neighbours, for example – can save lives during episodes of extreme heat.

As many as 5 billion people live in areas of the world where heatwaves can be forecast before they happen, which means we have time to take early action to save lives. People living in urban areas are amongst the hardest hit when a heatwave occurs because these areas are hotter than the surrounding countryside.

Over half the world now lives in urban areas and this is projected to increase to two-thirds by 2050. It is crucial that Red Cross Red Crescent staff and volunteers integrate actions to reduce heat risks into their day-to-day operations in urban areas.

This guide is intended to help staff and volunteers in Red Cross Red Crescent branches understand the heat risks they face, work with partners to prepare for heat action, and integrate simple, low-cost, lifesaving actions into routine branch activities. It can be used on its own or alongside the *Heatwave Guide for Cities*, which helps city staff to understand heat risks, develop an early-warning system and adapt urban-planning practices.

Red Cross Red Crescent staff and volunteers are on the front lines of this public health emergency in towns and cities around the world, and are thus crucial in leading the fight to prevent unnecessary deaths from heat.

Francesco Rocca
IFRC President

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Introduction

WHY THIS GUIDE?

Heatwaves are deadly disasters that are increasingly common and can seriously affect human health and well-being. When a heatwave strikes, the most vulnerable are the most impacted. In the past decade severe heatwaves have been responsible for numerous fatalities, including over 400 deaths in The Netherlands in 2019, over 1,500 deaths in India in 2015, 4,870 deaths in Paris, France in 2003, and over 10,000 deaths in Russia in 2010. These are likely underestimates because there is no systematic way to count deaths from heatwaves. It is therefore increasingly important for the Red Cross Red Crescent to be aware of the dangers that heatwaves can pose, to understand the vulnerability of specific groups and to take practical action to save human lives. Even if you live in a country where it is hot most of the year, where heat has not been an issue in the past, it may be an issue now due to increasing temperatures from climate change. Urgent, timely action at scale during a heatwave can drastically reduce deaths due to extreme heat. Actions are also simple, low-cost and well within the mandate of the Red Cross Red Crescent.

This guide is based on the comprehensive Heatwave Guide for Cities[1] but it is tailored towards practical actions that can be led by Red Cross Red Crescent branches in preparing for, and responding to, heatwaves in towns and cities. While aspects of these actions may be new, most recommended actions can be easily integrated into existing branch activities.

While heatwaves can affect both rural and urban areas, this guide is tailored towards actions in urban areas. Temperatures in towns and cities tend to be hotter than the surrounding rural areas due to the many surfaces – such as densely packed buildings, roads and pavements – that absorb heat and release it slowly. This effect makes towns and cities hotter for longer. A branch located in a rural area may choose to modify some of the actions to be better suited for this area.

1 Singh, R., Arrighi, J., Jjemba, E., Strachan, K., Spires, M., Kadihasanoglu, A., *Heatwave Guide for Cities*. 2019. Red Cross Red Crescent Climate Centre

We wrote this guide as a team, consulting widely with key colleagues from the National Societies and IFRC. We trust this guide is a useful resource for National Society staff and volunteers to take action in preparation and response to heatwaves. We appreciate feedback and comments on this guide, or stories of how recommendations have been applied. Please feel free to share them via email cities@climatecentre.org.

HOW TO USE THIS GUIDE

The guide is structured to be easy to navigate – following a simple roadmap. The main sections are *Understanding Heatwaves* that provides basic information on heatwaves, high-risk locations and vulnerable groups; *Preparing for a Heatwave* focused on partnerships with city stakeholders; *During the heatwave* which outlines actions to help reduce the risk of heat impacts among various vulnerable groups; and *Taking Stock and Lessons Learnt* that provides guidance on conducting an after-action review as well as integrating learning into *Preparing for the Next Heatwave* that is the final section of this guide.

In each section there are activity sheets, action cards and case studies that can support you in your own planning process. These different resources are indicated by these symbols:

CASE STUDY

ACTIVITY SHEET

ACTION CARD

TELL US WHAT YOU THINK!

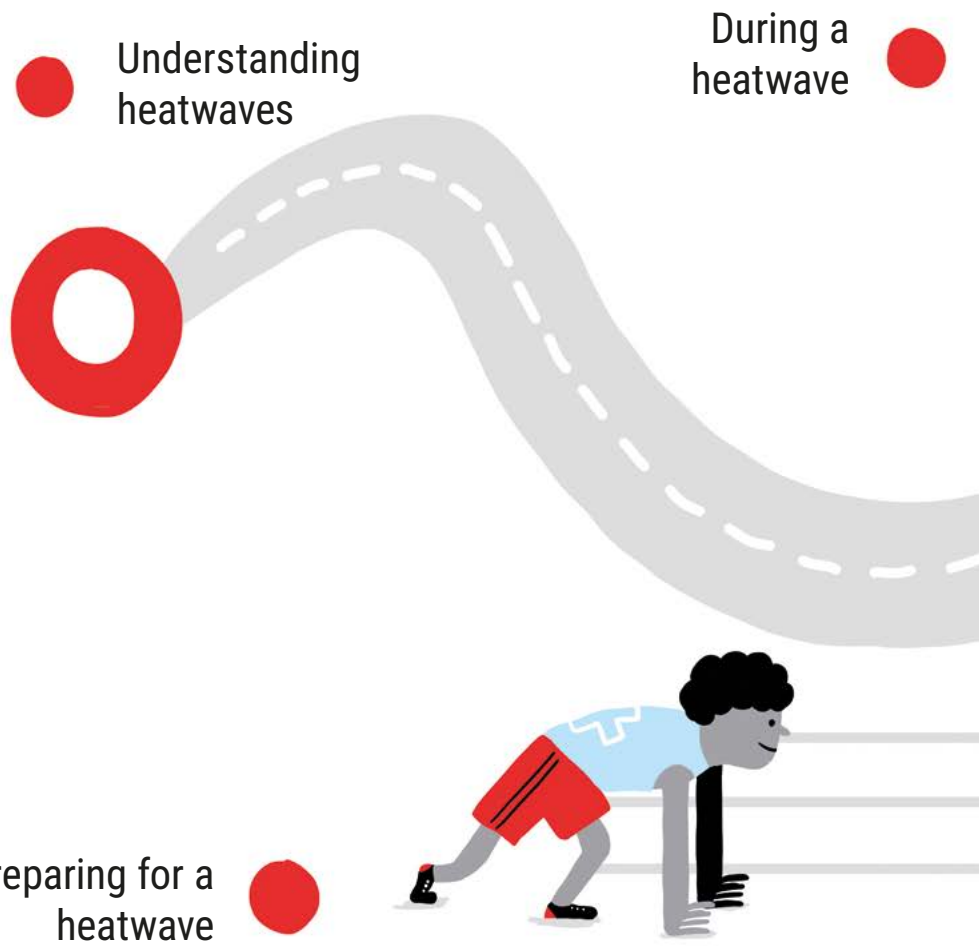
Often we will put something out in the world and never know whether or not it is useful and how it can be improved.

Please take 3 minutes to give us some feedback on this guide by following this link: bit.ly/HWguideform

We plan to use this feedback to make improvements in future versions of the guide, and to create additional resources to support your work on heatwaves.

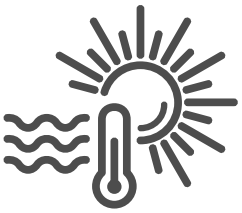
BOX 1: **The heatwave roadmap**

Heatwave preparedness roadmap




Preparing for the next heatwave
Taking stock

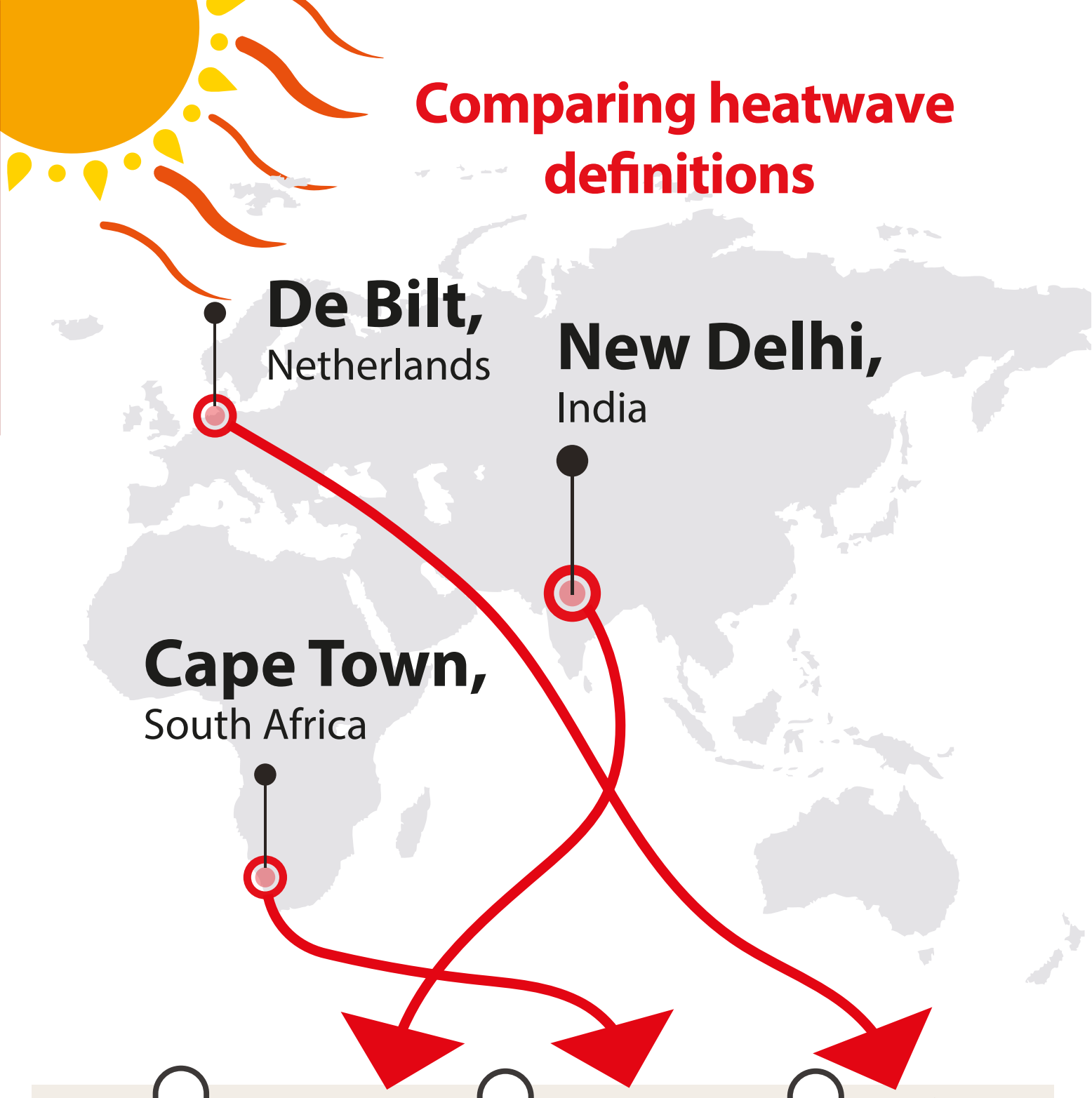
1. Understanding heatwaves



1.1 WHAT IS A HEATWAVE?

Extreme heat is a risk to human health and well-being, and this risk is increasing due to climate change. Numerous studies have shown that climate change has already resulted in hotter, more frequent, and longer heatwaves than in the past. This trend is expected to continue, and get worse in the future. One form of extreme heat is called a "heatwave." A heatwave is an often-deadly disaster which results from unusually high temperatures, or high temperatures in combination with high humidity, which can be dangerous to health. Heatwaves typically have a noticeable start and end, last for a period of days and have an impact on human activities and health. There is no single, universal definition for a heatwave because different temperatures often have varying impacts in different parts of the world. For example, in London, United Kingdom, a high of 28°C is considered to be a heatwave, while in the plains of India the temperature must be higher than 40°C to qualify as a heatwave. High temperatures at night can be an important factor in determining a heatwave because it is harder for the human body to recover from high daytime temperatures without cool nights. High humidity also makes it harder for sweat to evaporate off of the skin, one of the main mechanisms for the human body to cool off. Thus, temperature and humidity are both important when considering heat risk.

Comparing heatwave definitions



	De Bilt, Netherlands	New Delhi, India	Cape Town, South Africa
Heatwave definition	At least two consecutive days with maximum daily temperature over 40°C	At least three consecutive days with maximum daily temperature over 30°C	At least five consecutive days with maximum daily temperature over 25°C
Heat season	April – June	December – February	June – August
Possible actions	Individual cooling methods are used, such as sleeping with a wet sheet wrapped around you	White roofs are created by painting them, which reflects sunlight and reduces the temperature in buildings	Cooling facilities are opened throughout the city where people can relax in a public air-conditioned space and avoid the heat

1.2 WHO IS VULNERABLE TO EXTREME HEAT?

It is important to know that anyone can suffer from negative health effects or even death due to extreme heat. However, certain groups of people are typically at a higher risk, including older adults, very young children, pregnant and lactating women, people with pre-existing medical conditions, lower income populations, people working outside or cooking indoors in densely built areas such as informal settlements and shared occupancies, and people who are homeless. People in these groups may be more exposed to the heat and/or their bodies may have a harder time regulating the heat.

BOX 2: Identifying vulnerable populations

VULNERABLE POPULATION	RISK FACTORS
Older adults (such as over 65)	Are less able to adapt to extreme heat, may be socially isolated, and may not perceive extreme heat as a risk. Older adults also tend not to feel thirsty in higher temperatures, which makes them more vulnerable to dehydration. They may also be taking medication that makes it harder to regulate their body heat.
Individuals with chronic medical conditions	These include heart disease, lung and kidney conditions, diabetes and mental illness. Many medications can also worsen the impact of extreme heat.
Children under five years old	Are sensitive to the effects of extreme heat and must rely on others to keep them cool and hydrated.
Women and girls	Depending on local cultural norms, women and girls may have limited access to a variety of media which limits their interaction with heatwave warnings. They may sleep in ill-ventilated rooms or lack private bathing space, especially during menstruation, which can help to keep them cool.
Pregnant and lactating women	Pregnant women are more likely to go into early labour in the week following a heatwave. This risk goes up with more consecutive days of extreme heat. Lactating women require more drinking water as breastfeeding is extremely dehydrating.
Outdoor workers (incl. traffic police, security guards, street vendors, construction workers etc.)	Are often engaged in strenuous labour while directly exposed to sunlight as well as heat and air pollution. They are more likely to become dehydrated and suffer from heat-related illness. They may need to reduce the amount of jobs they take which will also reduce their family's income.
Athletes	Engage in intense physical activity, often outdoors, that can rapidly increase body temperature and result in water loss through sweating.
People who are isolated or living alone	May not readily receive warning information or may not be able to access help quickly.
Individuals with disabilities	May have limited access to cool spaces and may not be able to access help quickly.
Overweight and obese individuals	May be more sensitive to extreme heat and their bodies may have difficulty regulating body heat.

VULNERABLE POPULATION	RISK FACTORS
Individuals with low socio-economic status	May have limited access to information about heatwaves and/or cooling centres as well as fewer resources. They may not be able to afford time off work to take care of family members. They may have to travel longer distances to access cool spaces and may feel unwelcome in certain neighbourhoods. In some locations they may also have limited access to clean drinking water.
Migrants and refugees	May not have access to current information about heat advisories and health risks or may experience heat conditions that are different to their place of origin. Negative legal or cultural norms toward migrants and refugees may also increase their hesitancy to contact emergency services.
People living in densely built areas	In densely built urban areas – such as slums, informal settlements, mobile-home parks and high-rise buildings – multiple families share small spaces. Densely built areas can magnify the urban heat island effect.
Homeless people	May not receive timely early warning messages, may be unaware of cooling centres and may have limited access to other cooling measures (e.g. cool showers or baths). May also feel unwelcome at cooling centres due to marginalization and stigma.
People with limited literacy and non-native language speakers	Cannot read current information about heat advisories and health risks. Non-native language speakers may not be able to understand advisories broadcast on TV and radio.
Tourists	May not be able to understand advisories in local languages. May not know how to access cooling centres, green spaces or other resources, including emergency management systems. May also be from cooler climates and less adapted to the heat.
Eventgoers	May be outdoors, exposed to the hot sun, or in close quarters with other people without access to proper ventilation, water, or cooling.
Other stigmatized groups such as LGBT, geographically isolated or culturally isolated groups	Varies depending on the group, but mainly linked to stigma and marginalization. People who are marginalized may feel unwelcome at cooling centers and they may be hesitant to seek medical attention.
Animals/livestock/pets	Dependent on owner for adequate protection from the heat.

Adapted from the Kansas Extreme Heat Toolkit [2]

2 Kansas Extreme Weather Workgroup (2014), Kansas Extreme Heat Toolkit, Topeka, Kansas. Retrieved from http://bit.ly/2ZHE6oy

1.3 WHERE IS IT THE HOTTEST?

The built environment in a city – the concrete, asphalt and steel – can absorb heat and radiate it out, making temperatures in the city hotter than the surrounding rural areas. This is called the urban heat island effect. In some cities, there can also be parts of the city that are hotter than other areas. For example, in Nairobi, Kenya the informal settlements regularly have temperatures that are hotter than the surrounding city due to the density and types of buildings and the lack of green space. This means people living in these areas are more exposed to extreme heat, and may be at a higher risk of heat-related illness. When working with local government to plan interventions, it is important to consider how temperatures can vary within the city, where temperatures are higher, and where more vulnerable people are located. These considerations help to target interventions. As a general approximation, areas with more green spaces tend to be cooler. Partnering with a local university can be a helpful way to identify specific information regarding your city.

CASE STUDY 1: Kenya Red Cross Society

The Kenya Red Cross works with partners to identify heightened heat risks in Nairobi's informal settlements.

CASE STUDY 2: Viet Nam Red Cross Society

The Viet Nam Red Cross Society, with technical support from the German Red Cross, developed an impact mapping methodology aimed at selecting project implementation areas in Hanoi, Viet Nam.

1.4 HOW TO MONITOR EXTREME HEAT

In many parts of the world, heat risk is seasonal – there is an expected time of year when it is typically very hot. For example, in India this is from April to June before the onset of the rainy season, while in Southern Africa this is usually during the summer months from November to February. Heatwaves will often occur during these seasons; but they may equally occur on the edges of these seasons too. It is important to be aware if there is a "hot season" in your city and when that season is, so that you can focus your monitoring during those months. Heatwaves that occur earlier in the season tend to be deadlier because people are less adjusted to the warmer temperatures. In some parts of the world, the temperatures are consistent year-round; and, if this is the case, it's important to keep checking the weather forecast for unusually high temperatures throughout the year. Your meteorological service may already issue "high temperature" or "heat" warnings during those times. If not, it is important to get in touch with the local meteorological office to explore developing such a warning system. Work together with national Red Cross Red Crescent headquarters and the corresponding government agencies, such as the National Meteorological Service and the Ministry of Health, to monitor extreme heat, and make sure you are always aware of the weather forecast for the coming days.

CASE STUDY 3: French Red Cross

Working with local authorities, the French Red Cross monitors heat risks from seasons to weeks to days in order to activate lifesaving measures.

ACTIVITY SHEET 1: Outlining a heatwave

This activity sheet will guide you through a few key questions to understand the current state of heatwave information in your city.

2. Preparing for a heatwave

2.1 HOW TO ENGAGE YOUR CITY

Your city may already have a Heat Action Plan that outlines when a heatwave occurs who does what before, during and after the heatwave, as well as long-term urban planning strategies. If this document does exist, please familiarize yourself with it (or consult it). This plan may not explicitly list a role for the Red Cross or Red Crescent Society, so it is important to understand and communicate what you can offer.

If no plan exists, the Red Cross or Red Crescent Society can work with city stakeholders to develop one. The Heatwave Guide for Cities, developed by the Red Cross Red Crescent in partnership with over 25 partners, is an excellent resource to recommend to your city counterparts to improve heatwave action planning.

Key city departments working on heat include the health department, meteorological services and emergency management services. Working with the planning department to incorporate risk reduction measures for heatwaves in the city development plans is highly recommended. The Heatwave Guide for Cities is also a good resource to promote long-term risk reduction measures for cities.

ACTIVITY SHEET 2: Prioritizing stakeholders
This activity sheet provides basic guidance on identifying and prioritizing stakeholders to partner with to reduce heat impacts.

CASE STUDY 4: The Netherlands Red Cross
The Netherlands Red Cross works together with local and national stakeholders to develop a heat action plan for The Netherlands.

2.2 COLLABORATING WITH STAKEHOLDERS

Civil society organizations play a key role in heatwave preparedness because they are often the ones who are already working with the most vulnerable people and trusted by communities. It's important to reach out to city officials and other civil society actors to coordinate activities so that each organization builds on its strengths and avoids duplicating efforts[3]. Additional stakeholders to connect with include media outlets, healthcare professionals, faith-based organizations, schools and childcare providers, private-sector partners and academia.

2.3 FUNDING FOR HEAT ACTION

In order to prepare for heatwave work, it is important to understand what resources you may need and what possible sources are available in your national or regional context. Possible sources of funding can be accessed through national or municipal programmes focusing on climate change and health. If you are planning a larger campaign it might be worthwhile considering whether to apply for a grant from a donor who is funding work in your area and who is supporting climate change adaptation projects. You may also take advantage of an opportunity to develop a public–private partnership with companies in your city that are looking to do social good. In this case, the company can provide resources such as donations of space to develop cooling centres, or of resources like water or fans that can be distributed to the community.

2.4 PREPARING FOR HEAT ACTION

Each of the actions outlined in the next section of this guide require some preparation before a heatwave occurs. This includes reviewing heatwave response plans, developing messages for the public on heat safety, educating volunteers, vulnerability mapping, identifying water distribution points and developing household visit routes. As you review the following section, with examples of actions that can save lives during a heatwave, remember to also think about the preparation that is needed to take action quickly. This preparation can be done in the months prior to the start of the heat season. Refer to the activity sheets and action cards in the next section for more detailed guidance on how to prepare.

3 Public authorities have the responsibility to issue warnings. Depending on national laws, civil organizations can, or cannot, have a mandate to assist in warnings.

3. During the heatwave

Urgent, timely action at scale during a heatwave can drastically reduce deaths due to extreme heat. Actions are simple, low-cost and well within the mandate of the Red Cross Red Crescent. Ensuring that people stay cool, well hydrated and receive medical attention when needed will save lives during a heatwave. Here are some key actions to prevent heatwave deaths:

3.1 PUBLIC MESSAGING

Branch staff and senior volunteers can play an important role in ensuring the public knows what risks they face during a heatwave and what actions they can take to reduce key risks[4]. Media interviews are an excellent way to ensure key messages reach the widest audience possible. When a heatwave forecast is issued, or as soon as possible thereafter, the branch can issue a media advisory to inform local radio, TV and print media that Red Cross Red Crescent experts are available to provide guidance on how to stay safe during a heatwave. The IFRC's Community-Based Health and First Aid toolkit includes guidance on how to develop behaviour change messages. The branch should also use social media channels such as Twitter, Facebook, WhatsApp and TikTok to reach additional key audiences with lifesaving messages. If there is no forecast available, branches can also plan regular messaging at the start of the hot season when the risk of heatwaves is highest.

ACTION CARD 1: Media advisory
This action card is a template for developing a media advisory before or during a heatwave. Once completed, it can be posted online and shared with local media contacts.

ACTION CARD 2: Media talking points
This action card provides key messages to share with the public during a press interview.

4 Messages about how to stay safe during a heatwave are well within the mandate of most Red Cross or Red Crescent Societies. However, it is always a good idea to coordinate with government counterparts, such as the Ministry of Health, to ensure good, consistent messaging.

CASE STUDY 5: India Red Cross Society
The India Red Cross Society's innovative approach to public messaging to raise awareness about heat risks in New Delhi.

CASE STUDY 6: Argentine Red Cross
The Argentine Red Cross raises public awareness on heat risks via social media.

3.2 HOUSEHOLD VISITS

One of the most at-risk groups during a heatwave are older people with pre-existing medical conditions, who are socially isolated and living alone. People in this demographic routinely experience the largest spike in deaths during a heatwave. In this regard, every effort to check on their well-being, ensuring they are hydrated and receiving medical attention as needed, will save lives. One of the best strategies to reach this demographic, and other vulnerable groups, is through door-to-door household visits by Red Cross Red Crescent volunteers. A telephone hotline system that proactively calls to check-in on pre-registered clients can also be highly effective. Volunteers making door-to-door visits should be trained to recognize the signs of heat illness and provide basic first aid if needed.

ACTIVITY SHEET 3: Planning household visits
This activity sheet provides guidance on prioritizing neighbourhoods and households to visit during a heatwave campaign.

ACTION CARD 3: Household visits
This action card provides guidance on conducting household visits and provides key messages to share during these visits.

CASE STUDY 7: Australian Red Cross
The Telecross REDi service where volunteers from the Australian Red Cross call pre-registered clients daily to check on their well-being during heatwaves.

CASE STUDY 8: Spanish Red Cross
The Spanish Red Cross shares vital information with at-risk populations through a telephone information campaign.

3.3 SCHOOL VISITS

Red Cross Red Crescent volunteers can work with local schools to communicate key messages on heatwave safety to children. In addition to sharing basic information with students on how to stay safe during a heatwave, collaborating with schools can also help to convey important messages about heat risk to parents and families. Asking students to ask their parents to check on older neighbours and family members can ensure that isolated, older populations are cared for during a heatwave. Schools located in the most densely populated parts of the city, where the urban heat island effect is greatest, should be among those prioritized. Some schools may require cooling measures to ensure classes can continue safely.

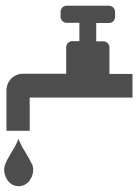
ACTION CARD 4: School visits
This action card provides guidance on conducting school visits. It provides key messages to share with school administrators as well as directly with students in the classroom.

ACTION CARD 5: School visits brochure
This action card is a brochure that can be printed and shared with students.

ACTIVITY SHEET 4: Planning household visits
This activity sheet provides guidance on prioritizing schools to visit during a heatwave campaign.

CASE STUDY 9: Hong Kong Red Cross
The Hong Kong Red Cross provides school training programmes to raise awareness on heat risks and extends information-sharing to the wider community.

3.4 DRINKING WATER DISTRIBUTION POINTS



Water can be distributed to the general population as well as targeted in places where vulnerable populations frequent. For the general population, distributing water in busy places is a good strategy to reach as many people as possible. Consider locations such as public parks, outdoor markets, mass transportation hubs and tourist attractions. In addition to the general population, it is important to target water distribution in places frequented by populations that are particularly vulnerable to extreme heat. These locations include construction sites, community centres and lower income neighbourhoods. The branch can also partner with other institutions, such as places of worship or local government offices, to ensure the adequate spread of water distribution points. All water distribution should be accompanied by targeted messaging informing people how to stay safe during a heatwave. Finally, it's important to provide safe and sanitary drinking water, with considerations for waste. For example, you may want to avoid using single-use plastic water bottles and instead use reusable containers if practical.

ACTIVITY SHEET 5: Identifying drinking water distribution points
Use this activity sheet to identify and prioritize water distribution points during a heatwave campaign.

CASE STUDY 10: Red Crescent Society of Tajikistan
The Red Crescent Society of Tajikistan activates drinking water distribution points based on a forecast.

3.5 COOL SPACES

Staying cool, for at least a few hours a day, can help the human body to cope with periods of extended heat. Red Cross Red Crescent staff should collaborate with local authorities to ensure those most vulnerable to heat stress have adequate access to cool spaces. Community centres, public libraries and places of worship, as well as other enclosed public spaces, can be good locations in which to establish cooling centres by ensuring they are retrofitted with active and passive cooling technologies, are well signposted and are open to the public during heatwaves. (Note that schools should not be used as public gathering spaces during school hours). Red Cross Red Crescent volunteers can help staff cooling centres and raise public awareness of their location. It is also important to ensure cool spaces have drinking water available and are adequately distributed throughout the city, allowing quick access for everyone in need. Public parks and other green spaces can also act as cooler spots during heatwaves.

ACTIVITY SHEET 6: Cool spaces
This activity sheet provides guidance on the location of cool spaces and possible cooling centres and how they can be accessed.

CASE STUDY 11: Viet Nam Red Cross Society
During a heatwave in August 2019 the Viet Nam Red Cross Society opened cooling centres and mobile cooling buses to help residents of Hanoi, Viet Nam cope with soaring temperatures.

3.6 FIRST AID

Appropriate first aid and emergency medical care can be lifesaving during a heatwave. It is important that volunteers with first aid skills can recognize the various levels of heat stress, provide emergency first aid services to patients in need and refer to emergency medical services in the most extreme cases. With these skills in place, staff and volunteers can provide additional surge support to local government authorities during a heatwave by being available at sporting events, public gatherings and cooling centres etc. Existing first aid training and materials should be reviewed and updated to reflect best available and specific guidance on heatwave treatment. Some forms of heat illness can be confused with other conditions and the wrong treatment can be deadly. Volunteers who are first aid certified but have not received specific training on treating heat-related illnesses should be given additional training. Also check out the IFRC First Aid app which includes heatwaves. This phone application is available in the Google Play Store as well as Apple's App Store. Basic first aid for heat-related illness can also be integrated into Red Cross or Red Crescent Action Team (RCAT) training.

ACTION CARD 6: Recognizing heat stress
This action card is an infographic on how to recognize the signs of heat stress.

ACTION CARD 7: Providing first aid for heat exhaustion
This action card is an infographic of first aid for heat exhaustion.

ACTION CARD 8: Providing first aid for heatstroke
This action card is an infographic of first aid for heatstroke.

3.7 BEACH AND WATER SAFETY

Accidental drownings increase during extreme heat as people take to the beaches and other water points – such as lakes, rivers and reservoirs – to stay cool. Volunteers can be positioned to provide safety messaging, first aid stations and certified lifeguarding skills around these points of water. Before or after the heatwave, branches can also work with local authorities to increase the number of safer water spaces in urban plans, such as spray parks and fountains where people can cool off during times of extreme heat.

CASE STUDY 12: Spanish Red Cross

The Spanish Red Cross works to reduce accidental drownings during heatwaves.

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3.8 WORKPLACE AND WORKER SAFETY

Work environments may increase exposure to heatwaves, especially those in buildings with limited ventilation or in close proximity to activities that create additional heat. People who have strenuous outdoor jobs are among the most vulnerable to the health impacts of heatwaves. This can include professions such as factory workers, construction workers, day labourers, traffic police and landscapers etc. The Red Cross Red Crescent can work with employers to help raise awareness of heightened risk and encourage employers to provide drinking water, frequent breaks and adequate ventilation and/or to suspend work during the hottest times of the day. Employers should encourage employees to follow all protections put in place. Employees and employers should also be trained to recognize the warning signs of heat stress and provide basic first aid.

ACTION CARD 9: Speaking to business owners

This action card provides guidance and key messages on speaking to business owners and business managers about the risks of extreme heat and worker safety.

ACTION CARD 10: Employee safety during extreme heat

This action card is an infographic for employees on how to prevent heat stress in the workplace. It can be printed and shared with their colleagues and managers. A poster version of this card is also available.

3.9 VOLUNTEER SAFETY

During a heatwave, it is crucial to ensure volunteer safety. Conducting door-to-door household visits and staffing water distribution points can be straining during intense heat. It is important to remind volunteers to stay well hydrated and require them to take frequent breaks in cool spaces to ensure their own health and well-being as they help others. Volunteer positions should be well staffed so that shifts are shortened. Any volunteers exhibiting signs of heat stress should be provided with appropriate first aid or medical treatment immediately.

ACTION CARD 11: Volunteer safety

This action card provides guidance to volunteers on staying safe during heatwave outreach activities.

BOX 3: Motivating and retaining volunteers[5]

Efforts to minimize the impacts of heatwaves will rely on the actions of volunteers. Ensuring that volunteers are motivated and rewarded for their efforts to reduce heat risks is crucial to the overall success of the branches' efforts in this area.
Volunteer recognition is one of the most effective ways to motivate and retain volunteers. It can come in many forms. It should be provided in alignment with the motivations of the volunteer and it should be personalized, ongoing and provided to all volunteers. Some ideas that can be adapted to fit any culture include:

- give them an honest and heartfelt "thank you"
- arrange for them to receive a personal note from their supervisor
- include their name and photograph in a newsletter or newspaper
- take them out for coffee or lunch
- remember their Birthday
- ask their opinion and allow them the opportunity to participate in decisions
- evaluate their work meaningfully and sensitively
- develop a career plan with them within the Red Cross Red Crescent
- give them the opportunity to create innovative ideas
- send letters from the board, unit manager or secretariat
- promote them to more responsibility
- offer them opportunities to participate or train beyond the unit
- praise them in front of their friends
- allow time to listen to their ideas
- include them in staff meetings
- name an ongoing site or programme after them
- name a new technique, process or system after the volunteer who designed it
- share appreciation from clients, customers and partners
- recognize their contributions during major events
- provide them with a certificate or nominate them for an award

5 This content is adapted from 'Supervision of Community-based volunteers: Training Guide' published by the International Federation of Red Cross Red Crescent Societies in 2009. Detailed information is found on pages 39–41.

4. Taking stock and lessons learnt after a heatwave

During a heatwave, action is often urgent and focused on implementation. After a heatwave campaign it is important to use the time wisely to reflect as a team:

- What have we achieved?
- What was unexpected?
- What did not work so well?
- What would we do differently next time?

It is really important to take this time to reflect as it is a unique opportunity to learn from experience, improve strategic planning and, ultimately, advance the implementation of activities prior to and during a heatwave. It is equally important to document these team reflections and integrate the lessons learnt within future plans.

Activity sheet 7 provides guidance on conducting a post-heatwave stocktake. During this exercise it is important to remember that such an after-action review should be conducted shortly after the end of the heatwave, while details are still fresh in people's memories. It is recommended to hold an after-action review within the first month after the end of the heatwave.

In order to strengthen future heatwave actions, it is important that everyone has a chance to share their views and everyone knows that all views are welcome. When citing what went wrong, participants should be encouraged to suggest how improvements can be made in the future. When sharing what worked well, it is important to be specific so that good practice can be noted and replicated. It is important that all participants are made to feel they have an equal voice and that their views matter, even if they differ from those of more senior staff or volunteers.

ACTIVITY SHEET 7: Post-heatwave stocktake
A guide on how to conduct an internal after-action review and document lessons learnt once a heatwave has ended.

5. Preparing for the next heatwave

Immediately after a heatwave is also a good time to build momentum for the next heatwave campaign by working closely with strategic partners – such as local government, universities, businesses, civil society, faith-based organizations and others – to update coordination plans for the next heatwave campaign, while capturing lessons from the most recent heatwave action.

This is also a good moment to focus strategically on fundraising for your next (improved) heatwave campaign, so that you can be ready to take effective action as soon as a heatwave is announced. It is equally important to incorporate heatwaves into the disaster preparedness and response plans of the National Societies and branches. In addition, branches can adjust existing tools such as Vulnerability and Capacity Assessments to add heatwaves.

In addition to planning for the next campaign, Red Cross branches should work with city officials to ensure that longer term urban planning measures reduce the intensity of future heat extremes as well as the impacts of heatwaves. Branch staff can play an important role in encouraging community advocates and liaising with local government authorities to adopt smart urban planning measures to reduce the overall temperature of the city.

Priority measures include protecting and increasing green spaces around the city, increasing access to public water points, retrofitting buildings with reflective roofs and passive cooling strategies as well as working with health systems to be prepared for future demands. These recommendations are detailed in the Heatwave Guide for Cities[6]. It is a useful starting point to share this resource with local government counterparts in discussing longer term strategies to reduce heatwave risks.

6 Singh, R., Arrighi, J., Jjemba, E., Strachan, K., Spires, M., Kadihasanoglu, A., Heatwave Guide for Cities. 2019. Red Cross Red Crescent Climate Centre

Activity sheets

Climate-KIC is supported by the EIT, a body of the European Union

ACTIVITY SHEET 1: Outlining a heatwave

This activity sheet will guide you through a few key questions to understand the current state of heatwave information in your city.

ABOUT YOUR CITY

This activity sheet will help you to self-assess the information, capacity and opportunities that your National Society has to engage in heatwave response.
It will help you understand which areas may require further attention as you start working on heatwaves.

Is there a "hot season" in your city where temperatures tend to be the highest?
If so, what time(s) of the year is it? (e.g. April to May) _____
What are considered extreme, or dangerous, temperatures in your city? _____
Is your city a humid place? _____

Is there a heatwave forecast issued by your local meteorological service?
If so, how do you access it? _____
How many days in advance of a heatwave is it typically issued? _____
Who is your main point of contact in the met service? _____

Does your city have a Heatwave Action Plan?
If so, which government departments are involved? _____
Who is your main point of contact in the city government? _____
Do you have a copy of the plan? _____

What is your capacity and knowledge?
Is your National Society knowledgeable about the risks associated with heatwaves? _____
Does your National Society know the lifesaving activities it can implement? _____
Does your National Society have a first aid protocol adapted to heatwaves? _____

What can the Red Cross or Red Crescent offer?
What are the core services your National Society provides? _____

Can heatwave preparedness, early action or response be integrated into these core services?
If so how? _____
What resources do you need to do this? _____

ACTIVITY SHEET 2: Prioritizing stakeholders

This activity sheet provides basic guidance on identifying and prioritizing stakeholders to partner with to reduce heat impacts.

A mandate to reduce heat risks does not fit squarely with one organization, sector or city department. Rather, there are a variety of stakeholders that have crucial roles to play in the overall effort to reduce the consequences of extreme heat. Establishing or strengthening partnerships with these actors will help to ensure efficient and effective responses to extreme heat events, while also creating opportunities for longer term heat reduction strategies. Take a moment to identify key stakeholders to connect with by using this sheet.

National meteorological organization or other entities in charge of issuing heatwave warnings:

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»

Local government points of contact in urban planning, emergency management and social services:

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Community centres, faith-based groups and other civil society organizations who provide services to the elderly and other vulnerable groups:

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»

Media contacts to help spread messages on actions to reduce heat risks:

»

»

»

Partners (government, public- and private-sector) with employees who work outdoors or in areas with limited ventilation:

»

»

»

Academic institutions/departments researching heat extremes in the city:

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»

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Health institutions (hospitals, major clinics, elder care homes etc.):

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»

»

Note: schools are also important partners. Activity Sheet 4 provides more in-depth information on schools.

ACTIVITY SHEET 3: Planning household visits

This activity sheet provides guidance on prioritizing neighbourhoods and households to visit during a heatwave campaign.

Which neighbourhoods in your city tend to have more older people than other neighbourhoods?

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Which neighbourhoods in your city are low-income?

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»

»

Which residential neighbourhoods in your city tend to be hottest? (Most likely neighbourhoods with fewer green spaces and with building materials that absorb heat.)

»

»

»

Are there neighbourhoods where many newcomers or migrants typically reside? If so, which ones?

»

»

»

What resources do you need to do this?

»

»

»

Combined, these neighbourhoods are the best places to prioritize door-to-door visits, especially neighbourhoods that appear on two or more of these lists. In addition, here are some other tips:

1. Collaborate with organizations active in the identified neighbourhoods in order to have a greater impact. See *Activity Sheet 2* for ideas on organizations to partner with. Your city may have an office of the ageing that can provide advice on other ways to reach older populations.

2. Invite people to register in advance, or during a heatwave, for a volunteer check-in. This could be done over the phone or by visiting community centres and other spaces frequented by older populations.

3. Contact local universities to determine if they have done relevant studies of the urban area which more specifically define at-risk neighbourhoods and households.

During a heatwave campaign, reaching those who are most vulnerable to heatwaves is one of the most impactful activities you can undertake. This sheet provides basic guidance on how to identify and prioritize the most vulnerable households through a neighbourhood approach. Once you have prioritized neighborhoods for visits, you can follow existing guidance such as the Community-based Health and First Aid guidelines[7] on how to conduct household visits.

7 International Federation of Red Cross Red Crescent Societies (IFRC), Community-based Health and First Aid. 2009, IFRC Geneva, Switzerland

ACTIVITY SHEET 4: Planning school visits

This activity sheet provides guidance on prioritizing schools to visit during a heatwave campaign.

During a heatwave campaign, you will likely need to prioritize which schools to visit to educate students and teachers about heat risks and how to protect themselves. This activity sheet provides guidance on how to prioritize.

One way to prioritize schools is by thinking about which schools are in low-income neighbourhoods. You might also consider whether or not a school is located in a "hotspot" within the city where temperatures tend to be hotter due to a lack of green spaces and a more built environment. Often, these characteristics overlap. You might also consider schools that are more crowded, or do not have air-conditioning because the students in those schools may be exposed to higher temperatures. Using this information, make a list of all schools in your city that are highly vulnerable and/or exposed to extreme heat. With a heat campaign, you don't have to wait until its very hot. Plan ahead – schedule visits with the schools towards the beginning of the hot season:

»

ACTIVITY SHEET 5: Identifying drinking water distribution points

Use this activity sheet to identify and prioritize water distribution points during a heatwave campaign.

This activity sheet can guide a quick brainstorming process among branch staff and volunteers in identifying locations for drinking water distribution during a heatwave.

To reach the general public, the following locations have been prioritized

Transportation hubs:

»

»

Public parks, markets and other gathering spaces:

»

»

Busy tourist attractions or event spaces:

»

»

To reach the most vulnerable, the following locations have been prioritized

Construction areas:

»

»

Lower-income neighbourhoods (consider local government offices and places of worship in order for the drinking water to be adequately dispersed):

»

»

Now check:

1. Are there any neighbourhoods missing? Is there an over-concentration in any neighbourhoods?

2. Are lower-income neighbourhoods adequately captured?

3. Are there enough volunteers to staff these locations while utilizing shortened shifts to ensure their own health and well-being?

TIPS:

- Consult with local communities when positioning water distribution points. For example, a point identified on a map may look suitable but may not be easily accessible by public transport.
- Make a plan for how the more vulnerable in the community, who may not be able to leave their homes or access the distribution points, can still receive support and water.
- When setting up drinking water distribution points, make sure there is shade so that people don't have to wait in long queues in the sun.
- Try to find a sanitary and safe alternative to disposable water cups and plastic water bottles where possible. When disposable cups must be used, paper is more sustainable than plastic and styrofoam.
- However, in some cases – such as when both severe drought and heat are occurring in tandem – water bottles may be the best option.

ACTIVITY SHEET 6: Cool spaces

This activity sheet provides guidance on the location of cool spaces and possible cooling centres and how they can be accessed.

A cooling centre is a place in a community where you can cool down during hot weather, especially if you do not have access to air-conditioning. Typically, cooling centres have air-conditioning and are freely accessible to all people in a city. If air-conditioned cooling centres are not available then outdoor recreational areas – such as local parks, splash pads/ spray parks and life-guarded beaches, lakes and community pools – are other places to cool down. Temporary centres can be set up in tents with fans and air-conditioning. These tents should have access to electricity and water, and be set up in the shade (e.g. under a tree). In addition, ensure that the people who are staffing the cooling centre are trained in first aid for heat-related illnesses.

What are the possible locations of cooling centres in your city?
Remember cooling centres include indoor air-conditioned facilities such as libraries, community and senior centres, universities and shopping malls.

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Cooling centres provide an opportunity for public–private partnerships. Are there private companies in your city who might be willing to let the Red Cross or Red Crescent use their air-conditioned spaces during a heatwave? Make a list of possible partners:

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If air-conditioning is not available, are there any other cool spaces that city residents can use to cool down? Make a list of the locations:

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»
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Are there ways to temporarily create cool spaces? For example, by creating a spray park or adding shade to certain public areas? List your ideas:

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How will people get to the cool spaces? It may be that a pick-up and delivery service is needed during a heatwave, especially if there are only a limited number of public cooling centres open and they are not easily accessible to all. List your ideas for providing transport:

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»
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ACTIVITY SHEET 7: Post-heatwave stocktake

A guide on how to conduct an internal after-action review and document lessons learnt once a heatwave has ended.

First round of reflection: What went well?

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Second round of reflection: What was difficult? What did not go so well?

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Third round: What will we do differently next time?

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After taking some heatwave action, it is important to gather the team and to reflect on what was achieved, what challenges were encountered and what to do differently next time. This is an important step to ensure that strategic planning can be updated – taking into consideration important lessons learnt.

Action cards

Climate-KIC is supported by the EIT, a body of the European Union

ACTION CARD 1: Media advisory

This action card can be used as a guide when developing a media advisory before or during a heatwave by replacing all text located in [brackets] with event-specific information. It can then be posted online and shared with local media contacts.

MEDIA ADVISORY: [PLACE NAME] HEATWAVE – RED CROSS EXPERTS AVAILABLE

[Place], [Issue date] – **Red Cross experts are available to discuss the potential humanitarian impact of this week's** [place name] **heatwave, as well as the simple and affordable steps that can be taken to protect lives.**

Temperatures are expected to climb over the coming days, placing huge pressure on health and social welfare systems, and potentially threatening the lives and well-being of vulnerable people.

Red Cross experts can highlight some of the practical, lifesaving measures that individuals and authorities can take to reduce the potential humanitarian impact of the heatwave.

Available experts include:
In [place]: [name], [title], [specific area of expertise when applicable]
In [place]: [name], [title], [specific area of expertise when applicable]

Media contact:
In [place]: [name], [title], [phone], [email]

ACTION CARD 2: Media talking points

This action card can be used as a guide when developing a media advisory before or during a heatwave by replacing all text located in [brackets] with event-specific information. It can then be posted online and shared with local media contacts.

Note: These are sample key messages that need to be contextualized in consultation with your Ministry of Health.

Key message 1:

Heatwaves are deadly, but heat deaths are preventable with simple low cost actions

- Although heatwaves do not have the same striking visual impact of other disasters like floods and cyclones, they are amongst the deadliest natural disasters when they occur.
- People most at risk of being impacted by the heat are young children, older people, people with chronic health conditions (such as heart disease, lung diseases, diabetes and mental health issues), people who work outdoors and people who are isolated.

Key message 2:

Staying well hydrated can reduce the impacts of extreme heat

- One of the most effective ways to beat the heat is to stay well hydrated, drinking water before feeling thirsty.
- During extreme heat you should also avoid beverages containing caffeine and alcohol.

Key message 3:

Staying cool for a few hours a day can help your body to cope with extreme heat

- These are places in the city where you can go to cool off: [insert names of specific locations in the city such as air-conditioned spaces, public parks, life-guarded points of water, spray parks etc.]
- If you are heading to the [beach, lake etc.] or other points of water, remember water safety! Accidental drownings increase during heatwaves.

Key message 4:

Check on your family, friends and neighbours. If you or your loved ones begin exhibiting signs of severe heat stress, cool off quickly and seek emergency medical assistance

- Signs of severe heat stress include vomiting, confusion, disorientation, hot dry skin and unconsciousness.

TIPS:

- Media interviews are often quite short, be prepared to share key messages in two to three minutes. Ask your media contact how many minutes you will have so that you can prepare.
- The messages in bold typeface are the most important, be sure to share all of them in the time allocated.
- Check to make sure your National Society has a knowledgeable spokesperson to do media interviews.

ACTION CARD 3: Household visits

This action card provides key messages for volunteers to share during household visits. Print it out and take it with you.

Key messages:

- This area is currently experiencing a period of high heat.
- Heat can be harmful to you and your family, especially the elderly, young children, pregnant women and those with diabetes, heart or respiratory problems.
- You and your family can stay safe by staying well hydrated, by drinking water before feeling thirsty and avoiding beverages containing caffeine or alcohol.
- You and your family can also stay safe by visiting cool spaces to get a break from the heat. Your nearest cool space is [INSERT LOCATION].
- You can help your friends and family to stay safe by passing along these messages and regularly checking on those who are most at risk.
- If you or someone you know starts to show signs of heat-related illness, please take the affected person to the closest hospital or health centre. Serious signs include vomiting, confusion, disorientation, hot dry skin and unconsciousness.
- Keep your home cooler by:
  - **a.** Ventilating your house in the evening if it is cooler outside than inside.
  - **b.** Keeping windows covered during the day, to keep out the sun, if it is hotter outside than inside.
  - **c.** Avoid indoor cooking, eating cold meals instead. If you need to cook indoors, cover pots to reduce indoor humidity.

Note: These are sample key messages that need to be contextualized in consultation with your Ministry of Health.

ACTION CARD 4: School visits

This action card provides guidance on conducting school visits. It provides key messages to share with school administrators as well as directly with students in the classroom.

Note: These are sample key messages that need to be contextualized in consultation with your Ministry of Health.

Key messages for teachers:

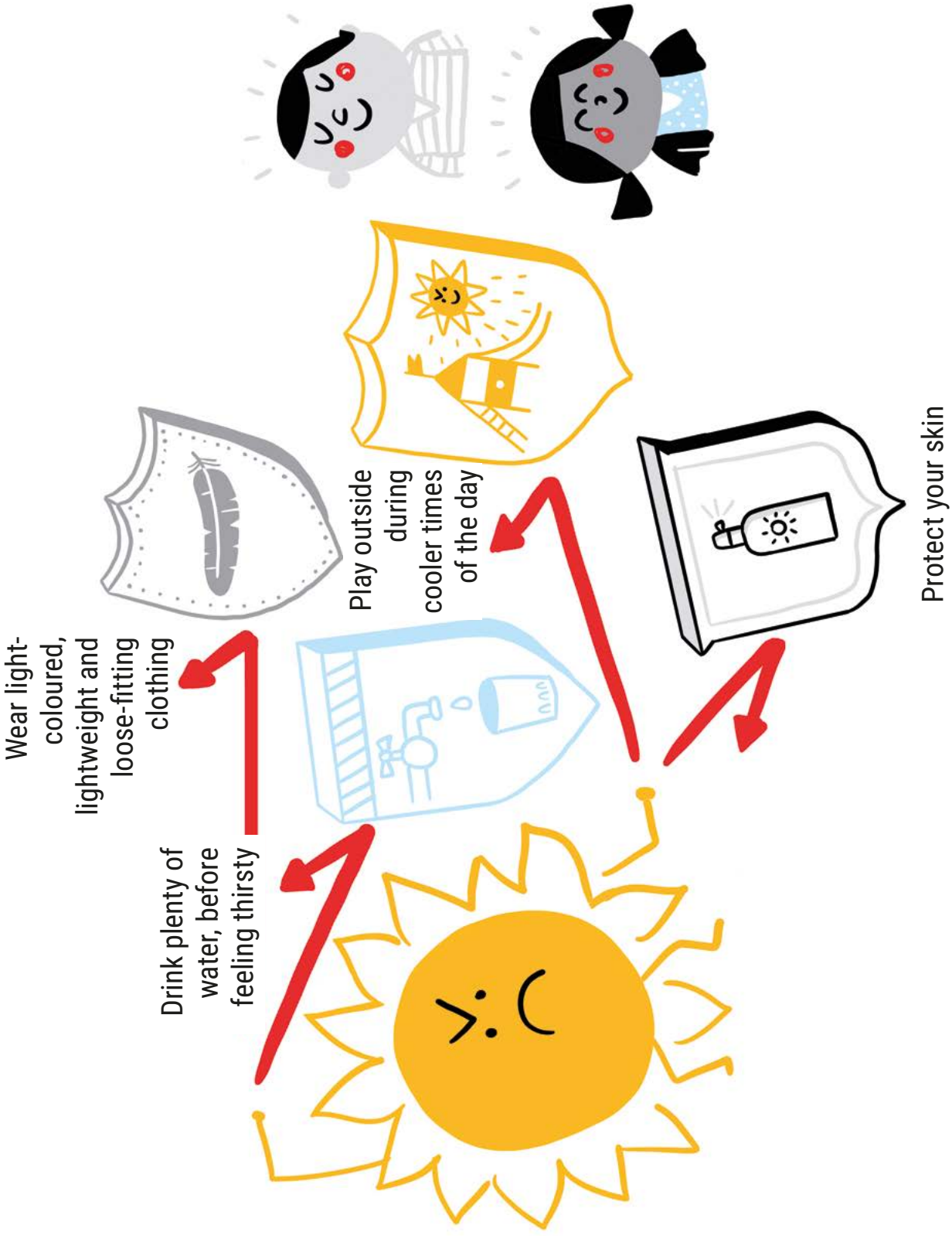
- This area is currently experiencing a period of extremely high heat.
- Extreme heat can be deadly, it can also have a negative impact on students' ability to focus on learning, and may even increase disagreements and disputes. It is crucial to ensure that you and your students stay safe during this heatwave.
- Ensure that students stay well hydrated. Encourage them to drink plenty of water, before feeling thirsty.
- Consider cancelling and rescheduling sporting events until after the heatwave.
- Consider moving sports practice to cooler times of the day, such as early morning.
- If your building is air-conditioned, consider holding breaktimes indoors. If your building is not air-conditioned, consider holding breaktimes or classes in shady places, if they are cooler than the indoor air temperature.
- Students are crucial agents of change to ensure that loved ones stay safe during a heatwave. To help this important advice to reach home, please share the following key messages with your students.

Key messages for students:

- This area is currently experiencing a period of high heat.
- Heat can be harmful to you and your loved ones. Stay safe and help others by sharing information to beat the heat.
- During a heatwave, it is important to stay well hydrated by drinking plenty of water, even before feeling thirsty.
- During a heatwave, it is important for you and your family to spend at least a few hours a day in a cooler space. This could be public buildings that are air-conditioned, parks in your city or other cool spaces that have been opened due to this heatwave. [VOLUNTEER TO INSERT NEARBY EXAMPLES]
- It is also important to check on older relatives and neighbours. Encourage your parents to think of the older people that they know. Ask your parents to give them a call or stop by their house to check on their well-being.

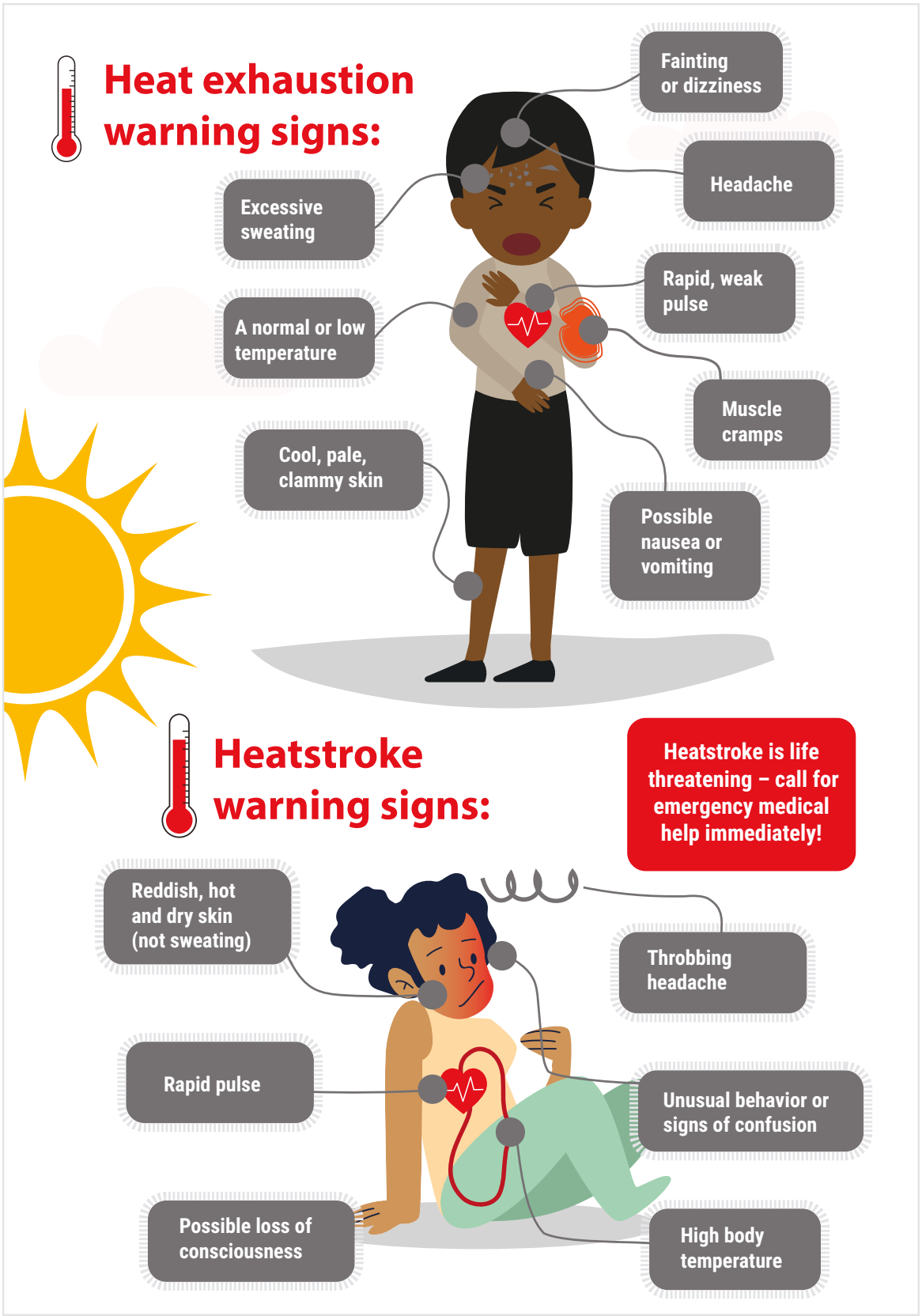
ACTION CARD 5: School visits brochure

This action card is a brochure that can be printed and shared with students.



ACTION CARD 6: Recognizing heat stress

This action card is an infographic on how to recognize the signs of heat stress.

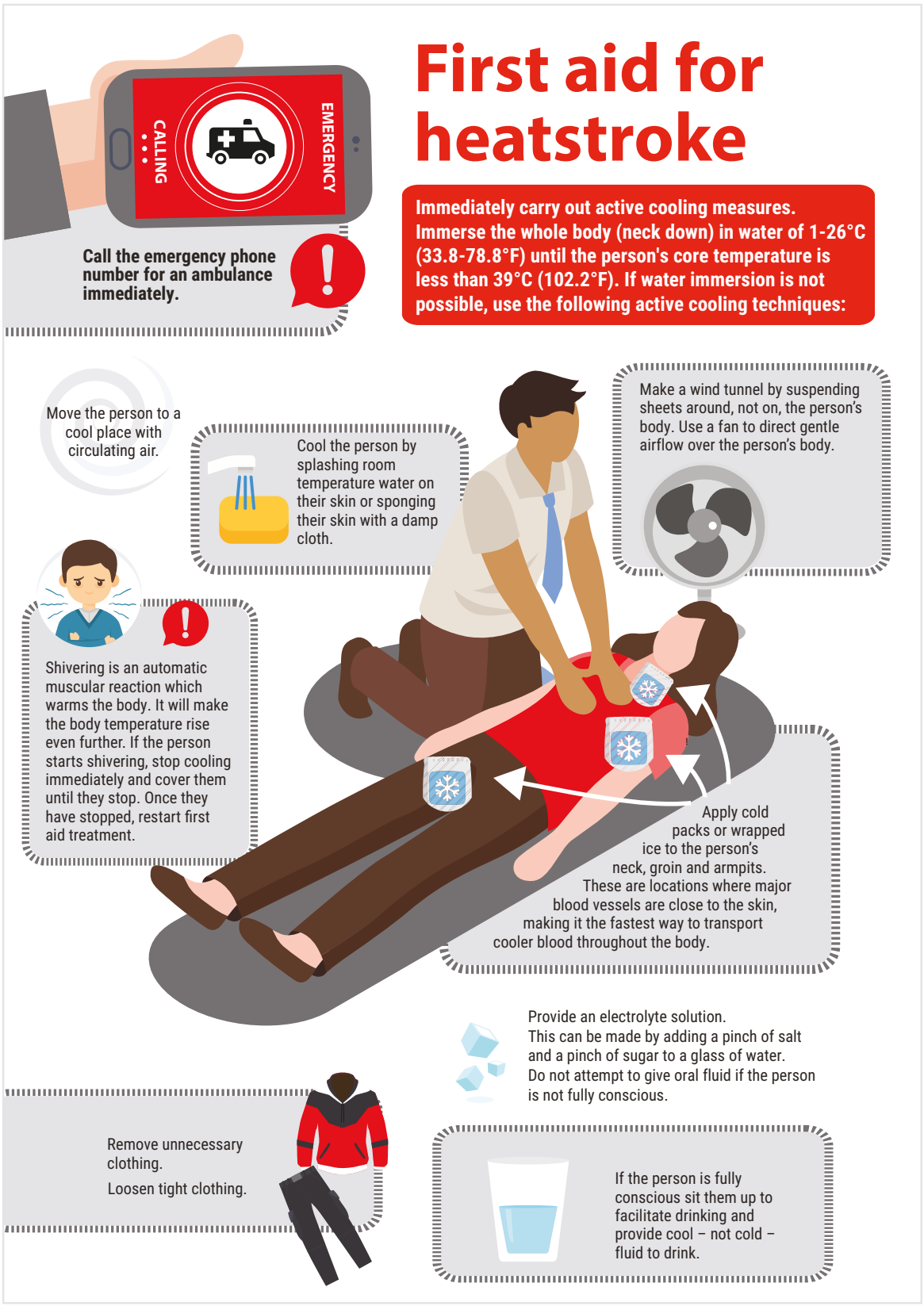


ACTION CARD 7: Providing first aid for heat exhaustion

This action card is an infographic of first aid for heat exhaustion.

ACTION CARD 8: Providing first aid for heatstroke

This action card is an infographic of first aid for heatstroke.



ACTION CARD 9: Speaking to business owners

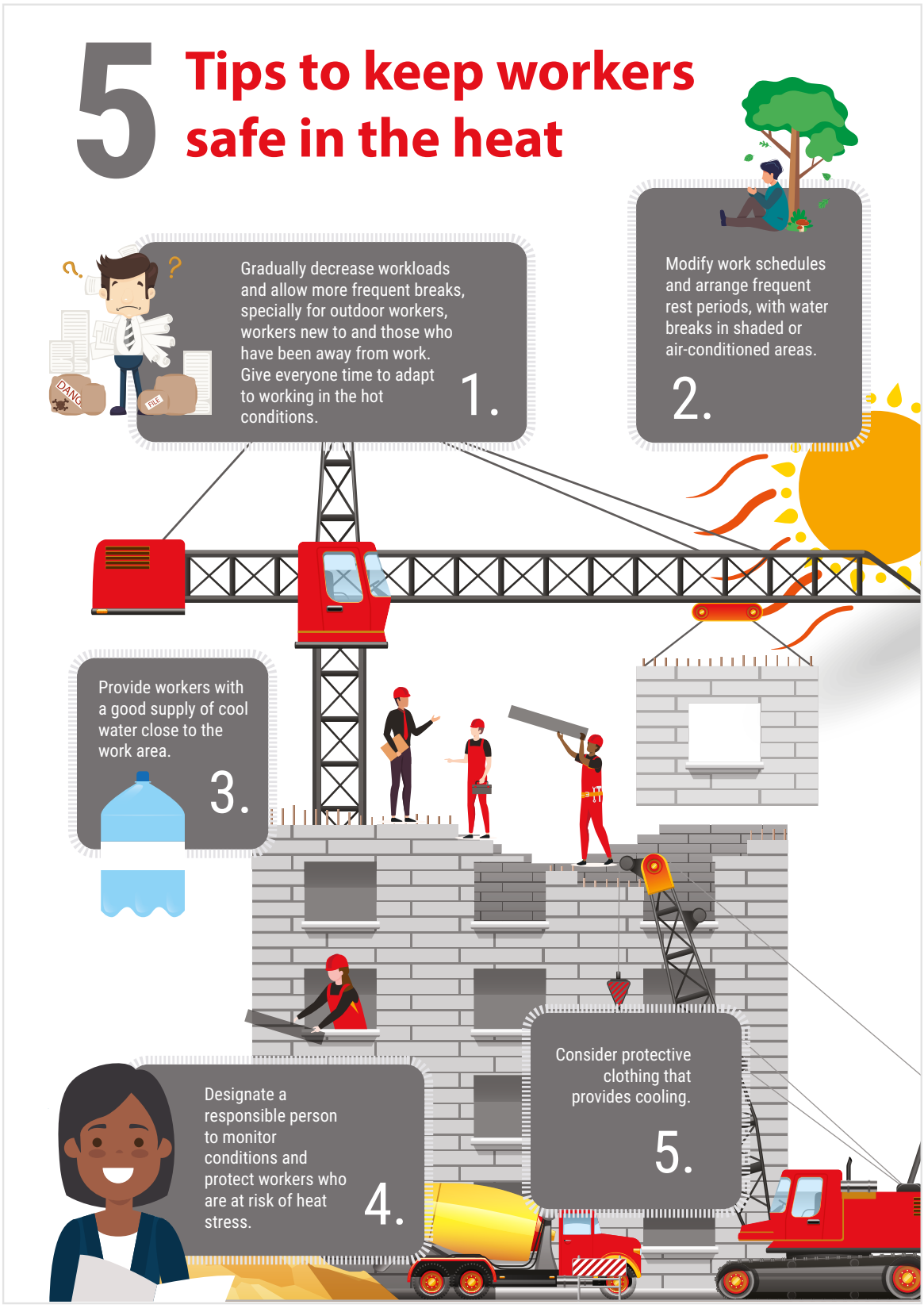
This action card provides guidance and key messages on speaking to business owners and business managers about the risks of extreme heat and worker safety.

Key messages:

- This area is currently experiencing a period of high heat.
- Extreme heat can be deadly, it can also have a negative impact on your business. It is crucial to ensure that you and your employees stay safe during this heatwave.
- You can adjust working hours so that people spend less time outside during the hottest times of the day. For example, deliver goods early in the morning or later in the evening.
- Ensure staff have access to drinking water at all times and encourage them to stay well hydrated.
- Make sure that offices, shops and all other workspaces are kept cool.
- Be flexible on work times as public transport can be affected by the hot weather.
- Encourage staff to wear light-coloured, lightweight and loose-fitting clothing to stay cool. Consider relaxing requirements on neck ties and suits.
- Provide frequent breaks and adequate ventilation for older people, pregnant women, people with chronic health conditions, and others listed in *Box 2: Identifying vulnerable populations*.

ACTION CARD 10: Employee safety during extreme heat

This action card is an infographic for employees on how to prevent heat stress in the workplace. It can be printed and shared with their colleagues and managers. A poster version of this card is also available.



ACTION CARD 11: Volunteer safety

This action card provides guidance to volunteers on staying safe during heatwave outreach activities.

Key messages:

Your safety is of paramount importance. When you are safe then you can help others to be safe.

- Stay well hydrated with water. Be sure to drink before you feel thirsty.
- If exposed to the heat, make sure that you take frequent breaks. Consider wearing a wide-brimmed hat, sunscreen and light-coloured, lightweight and loose-fitting clothing to avoid direct exposure to the sun and stay cool.
- In some places, high heat and humidity may lead to an increase in mosquitoes. If this is the case where you are, consider using mosquito repellent.
- Shorten volunteers' shifts during the hottest times of the day.
- Make phone calls instead of physical visits where possible.
- Choose a lightweight Red Cross Red Crescent jacket or wear just a badge/ name tag during periods of high heat.
- Check-in with other volunteers to make sure they are safe.
- Recognize the signs of heat illness in yourself and your colleagues.

Case studies

CASE STUDY 1: Kenya Red Cross Society

The Kenya Red Cross Society works with partners to identify heightened heat risks in Nairobi's informal settlements.

UNDERSTANDING HEAT-RISK HOTSPOTS

During the 2015/16 hot season in Nairobi, Kenya researchers investigated temperature variations throughout the city through a combination of remote sensing and a temporary network of heat sensors. Findings from this study show the existence of micro-heat islands over Nairobi's informal settlements. Here, temperatures were regularly several degrees hotter than that recorded by Nairobi's official temperature monitoring station, located in a relatively green part of the city. This temperature difference is probably due to the density and type of buildings in the settlements as well as a lack of green spaces. It is also consistent with the temperature variations shown in other studies to have a negative impact on public health. Research findings from Nairobi raise important questions for emergency managers in the city, such as how to incorporate the hotter temperatures found in the informal settlements into early warning system development, potentially triggering warnings in parts of the city sooner than in others.

This research was completed through a collaboration of the Kenya Red Cross Society, the Intergovernmental Authority on Development Climate Prediction and Applications Centre, the American Red Cross, the Red Cross Red Crescent Climate Centre, Johns Hopkins University in Baltimore, Maryland, USA and Virginia Polytechnic Institute in Blacksburg, Virginia, USA.

A Kenya Red Cross volunteer speaks about fire risks in Mukuru, Nairobi. The same project assessed temperature variations throughout the city. *Photo: Juozas Cernius/ American Red Cross*

CASE STUDY 2: Viet Nam Red Cross Society

The Viet Nam Red Cross Society, with technical support from the German Red Cross, developed an impact mapping methodology aimed at selecting project implementation areas in Hanoi, Viet Nam.

IMPACT MAPPING IN HANOI TO SELECT IMPLEMENTATION AREAS

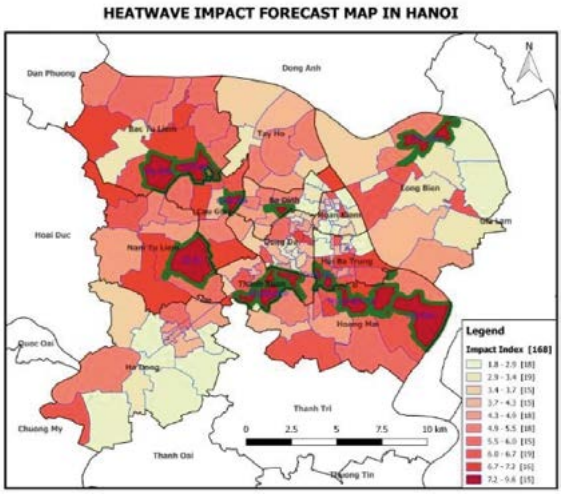
The high population density of the city of Hanoi and the variability in housing quality and conditions made it difficult to identify potential beneficiaries of early actions for reducing the heath impacts of heatwaves. The Viet Nam Red Cross Society needed to answer the following questions: Who are we going to help? Who are the most vulnerable? Where are the sites of highest heat exposure in the city? Where are the most vulnerable populations located?

To find the answers, the Viet Nam Red Cross Society – with technical support from the German Red Cross – developed a mapping methodology to support the selection of beneficiary and project areas. This decision-making tool is software-based and produces three layers of information (vulnerability, exposure and hazard) with which to find the areas of greatest potential impact.

The software enabled the Viet Nam Red Cross Society and German Red Cross to conduct a city-wide survey and develop three maps representing vulnerability, exposure and hazard across Hanoi's 12 districts and 168 wards. The three layers of data were as follows:

- Vulnerability: identifies and quantifies the total population of the most vulnerable groups (children under 5 years old, the elderly and people with disabilities).
- Exposure: identifies and quantifies the total population that live in slum areas and in low-income houses without access to air-conditioning.
- Hazard: shows the distribution of urban heat islands across Hanoi provided by the Vietnam Institute for Meteorology, Hydrology and Climate Change.

French Red Cross volunteers distribute water during a heatwave in 2015. A map of the areas most prone to heat risks within Hanoi. *Photo: German Red Crosss*



After combining these three layers of information, an Impact Forecast Map (also known as a Targeting Map) is created which shows the most at-risk wards where high exposure and vulnerability overlap with the hazard.

In 2019, the most at-risk areas within Hanoi were 12 urban districts and 168 wards (shown in darker and green boundaries on the map to the left).

CASE STUDY 3: French Red Cross

Working with local authorities, the French Red Cross monitors heat risks from seasons to weeks to days in order to activate lifesaving measures.

MONITORING AND RESPONDING TO HEAT WARNINGS WITH THE GOVERNMENT

The French Red Cross collaborates with government counterparts at the local, regional and national levels to monitor forecasts and respond to heatwave events. Four activation levels are monitored:

1. A seasonal watch
2. Anticipation and preparation
3. Commissioning activities for responding to the heatwave
4. Extensive, emergency mobilization of resources for responding to an extreme heatwave

In 2019, France experienced two heatwaves. The first was a nine-day event in which over 1,160 French Red Cross volunteers were mobilized to distribute drinking water, operate cooling shelters and conduct door-to-door household visits to check on the well-being of vulnerable people. Volunteers provided over 34,000 hours of support which helped 7,323 people. The national government in coordination with local government and the French Red Cross is currently revising its existing heatwave plan to be better prepared for a future of more frequent and intense heatwaves due to climate change.

French Red Cross volunteers distribute water during a heatwave in 2015. *Photo: Croix-Rouge française - COM DT 75 - Benjamin Vancrayenest*

CASE STUDY 4: The Netherlands Red Cross

The Netherlands Red Cross works together with local and national stakeholders to develop a heat action plan for The Netherlands.

DEVELOPING THE NETHERLANDS' HEAT ACTION PLAN WITH THE GOVERNMENT

The Dutch government developed a National Heat Plan in 2007 in the wake of the deadly hot summer of 2006. The Netherlands Red Cross, The Netherlands National Institute for Public Health and the Environment and other partners led the development of the plan. Their main objective was to outline protocols to communicate preparedness messages to the public, triggered by weather predictions by the Royal Netherlands Meteorological Institute. Accompanying this process, The Netherlands Red Cross further developed its own communication strategy focused on specific, highly vulnerable target groups.

Since this planning process, The Netherlands Red Cross has led a variety of activities including door-to-door visits with older people to provide wellness checks and share key messages on staying safe during a heatwave. The Red Cross also provides first aid during concerts and outdoor sporting events. In addition, The Netherlands Red Cross uses games to raise awareness, such as 'Bloedhete Bingo' or 'Bloody Hot Bingo' which is a fun way to spread key messages on staying safe during a heatwave.

Looking to the future, in 2019 the Dutch government started an initiative to implement long-term solutions at local level through measures such as developing more green spaces and increasing shaded areas as well as the number of facilities offering drinking water. The Netherlands Red Cross is an important partner in these discussions, given its ability to relay community concerns and on the ground experiences in reducing heat risks since 2006.

Netherlands Red Cross volunteers check on a neighbour during a heatwave in 2018. *Photo: Netherlands Red Cross Society*

CASE STUDY 5: Indian Red Cross Society

The Indian Red Cross Society's innovative approach to public messaging to raise awareness about heat risks in New Delhi.

FLASHMOBS FOR HEAT ACTION IN NEW DELHI, INDIA

The Indian Red Cross Society and the Indian Meteorological Department began working closely together on heatwave forecasts in 2017 to reduce impacts on vulnerable populations.

In June 2017, 15 young staff and volunteers of the Indian Red Cross Society found a novel way of informing people on how to prepare for an impending heatwave: a flashmob. A flashmob is a coordinated movement of song and dance, done in a public space without announcement, to capture the attention of passersby; and, in this case, convey an important message.

The messages were simple: drink more water, keep your head covered and "rest, rest, rest" between 12:00 and 15:00 – the hottest hours of the day.

A total of eight flashmobs were held over four days in different parts of New Delhi. Onlookers gathered as the flashmobbers made their moves. Delhi's Airport Authority even invited the Red Cross to hold flashmobs in four different parts of the international and national airport to inform visitors and workers on how to deal with heatwave temperatures. The messages were well received and often repeated verbatim. In Sarojini Nagar Market in south Delhi street vendors, shoppers, shop owners and passersby stopped in their tracks to take in the flashmob.

Indian Red Cross volunteers perform a flashmob during a heatwave in 2017. *Photo: Aditi Kapoor/ Climate Centre*

CASE STUDY 6: Argentine Red Cross

The Argentine Red Cross raises public awareness on heat risks via social media.

USING SOCIAL MEDIA TO SPREAD AWARENESS ON STAYING COOL IN THE HEAT

The Argentine Red Cross has identified social media as one of the most convenient ways to reach out to people. As a result, it has developed a range of information and education materials to increase awareness of how to respond in a heatwave. These materials are distributed via Facebook, Instagram, Twitter and WhatsApp.

Branches send out these materials periodically, especially before the summer months. They are also issued by the Argentine Red Cross as soon as an alert of high temperature days is received from the national meteorological service.

Clients have acknowledged the usefulness of these materials as well as the easy access through social media. The Argentine Red Cross is now in discussions with the local government of Buenos Aires on developing a comprehensive heat action plan for the city.

CASE STUDY 7: Australian Red Cross

The Telecross REDi service where volunteers from the Australian Red Cross call pre-registered clients daily to check on their well-being during heatwaves.

A CALL SERVICE FOR RESIDENTS

The Telecross REDi service supports people by calling them daily during declared heatwaves. It is activated by the South Australian Department of Human Services when an extreme weather event is declared. Volunteers from the Australian Red Cross call pre-registered clients to check on their well-being. The callers ask people how they are coping and remind them of important measures that will help them through the extreme weather. If a call goes unanswered or if someone is in distress, an emergency procedure is activated to ensure the safety and well-being of the client. People in the community who are at risk during extreme weather events and require telephone support during this time are encouraged to register for the service. This includes people who live alone, have a disability, are experiencing mental illness, are housebound, frail, aged, recovering from an illness or accident, or have an ongoing illness such as diabetes or a heart condition. For more information please visit the Telecross REDi webpage.

An Australian Red Cross volunteer calls vulnerable people during a heatwave. Photo: Australian Red Cross

CASE STUDY 8: Spanish Red Cross
The Spanish Red Cross shares vital information with at-risk populations through a telephone information campaign.

TELEPHONE INFORMATION CAMPAIGN

The Spanish Red Cross operates a telephone information campaign every year from July to September in the provinces where it typically gets very hot during the summer. Aimed at those known to be more vulnerable to high temperatures, the campaign aims to assess the health of clients and provide advice that will help them cope with the high temperatures.

Usually, the operator will make up to three telephone calls, asking survey questions and providing personalized advice. For example, the operator might ask: "How much fluid do you normally drink during a summer's day? (This should be water, natural fruit juice or other soft drinks, not caffeinated, sugary or alcoholic drinks.)". The operator can then provide information, such as: "We should drink at least 1.5 litres of water per day to stay healthy, even if we aren't thirsty or don't feel hot.". Then s/he can make recommendations, such as: "Always carry a small bottle of water when you're out and about and drink in small sips. Try to drink a glass of water every two hours, using an alarm or other type of reminder to prompt you."

A Spanish Red Cross volunteer calls vulnerable people during a heatwave.
Photo: Spanish Red Cross Society

The three telephone calls are scheduled automatically, with heatwave calls made every 15 days. The operator always follows the same survey questions, but is not prompted to ask those already answered affirmatively by the client in earlier calls.

CASE STUDY 9: Hong Kong Red Cross

The Hong Kong Red Cross provides school training programmes to raise awareness on heat risks and extends information-sharing to the wider community.

ENHANCING COMMUNITY RESILIENCE TO HEATWAVES

In 2017, the Hong Kong Red Cross (HKRC), a branch of the Red Cross Society of China, introduced a five-year strategic plan to enhance community resilience. Heat was identified as an emerging risk due to climate change and therefore integrated within the strategy.

Having identified children and older people as highly vulnerable during heatwaves, in 2018 the HKRC started a training programme for schoolchildren, including those from kindergarten and primary and secondary schools. This programme involved a new *Disaster Preparedness Integrated Training Package*, covering topics such as climate change, heatwaves, cold spells, fires in buildings, communicable disease, and basic and psychological first aid.

Seventy-seven staff and volunteers were trained as trainers and began conducting courses in March 2019. Students are taught about the concept of climate change and heatwaves and given tips to reduce their impacts. They were encouraged to save energy and protect the environment to minimize the causes of heatwaves. In 2019, over 2,600 students from 13 schools were trained.

In parallel, the HKRC started a home-assessment programme for older people, evaluating their access to electricity and cooling equipment. Homes in need were provided with electric fans, especially those divided into flats or small units within larger apartment buildings.

The school training programme was also extended into the community to raise awareness of the impacts of climate change, while improving people's responsiveness during disasters. Their awareness was raised and the response has been very positive. They are now willing to participate in activities, demonstrating that interaction is one of the most effective ways to build community resilience.

A Hong Kong Red Cross volunteer walks with an older community member during a caring visit. *Photo: Hong Kong Red Cross Society*

CASE STUDY 10: Red Crescent Society of Tajikistan

The Red Crescent Society of Tajikistan activates drinking water distribution points based on a forecast.

ACTIVATING DRINKING WATER DISTRIBUTION BASED ON A FORECAST

On 10 July 2019, a 7-day heatwave alert (12–18 July 2019) was issued by the National Hydrometeorological Service of the Republic of Tajikistan for the southern, northern and central parts of the country, where temperatures were forecast to soar as high as 44–46°C. The alert was extended twice – until 10 August 2019. In response, the Red Crescent Society of Tajikistan (RCST) opened drinking water distribution points, working closely with the Committee of Emergency Situations and Civil Defense of Tajikistan and local authorities.

Access to water is a major problem for people during heatwaves in Tajikistan, so the distribution of drinking water is a priority. Working alongside government authorities, the RCST distributed daily supplies of drinking water to Orzu Village, Zafarobod District to vulnerable people severely affected by the heatwave. Following a comprehensive countrywide analysis, this region is considered one of the most vulnerable to heatwaves. As a result, 180 households (900 people) received 13,500 litres of water every day at the rate of 15 litres per person per day in line with humanitarian standards (SPHERE) for a household to use for drinking and domestic hygiene. By 8 August 2019, 391,500 litres of water had been distributed over a 29-day period.

Red Crescent Society of Tajikistan distributes drinking water during a heatwave in 2019.
Photo credit: Red Crescent Society of Tajikistan

In line with the RCST's communication strategy, information campaigns were conducted in target communities and hospitals as well as in public places. These activities included messaging on how to reduce the risk of heatstroke.

CASE STUDY 11: Viet Nam Red Cross Society

During a heatwave in August 2019, the Viet Nam Red Cross Society opened cooling centres and mobile cooling buses to help residents of Hanoi, Viet Nam cope with soaring temperatures.

OPENING COOLING CENTRES BASED ON A FORECAST

When a heatwave hit Hanoi on 11–14 August 2019, the Viet Nam Red Cross Society, with support from the German Red Cross, opened four community cooling centres and provided three buses equipped with cooling systems to offer air-conditioned rest places for vulnerable people. The cooling buses travelled the streets of Hanoi, sharing awareness messages and stopping in strategic places to reach street vendors and motorcycle riders. Volunteers were also trained in emergency first aid to help people exhibiting signs of heat stress.

The centres and buses received 1,787 visitors during the four days they were open. Of the visitors, 24 per cent were street vendors, 23 per cent were motorcyclists and 15 per cent were day-labourers. On average, the centres were 7°C cooler than the scorching heat outside. Street vendors were the group with the highest proportion of recurring visits, with 60 per cent visiting more than once. Visitors came to the centres to avoid, reduce or recover from symptoms related to heat exhaustion, demonstrating their ability to recognize symptoms as well as their willingness to act upon them. The cooling centres were well received, with 95 per cent of visitors evaluating the impact of the centres as 'positive' or 'very positive'.

Speaking with street vendors about the risks associated with extreme heat

Photo: Viet Nam Red Cross Society

CASE STUDY 12: Spanish Red Cross

The Spanish Red Cross works to reduce accidental drownings during heatwaves

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ENSURING RESIDENTS STAY SAFE DURING BEACH VISITS

The Spanish Red Cross provides beach safety for residents during the summer months, typically activating in June when people flock to the beaches to enjoy the summer heat and cool off in the ocean. The Spanish Red Cross is responsible for 40 per cent of the preventive services provided at beaches and inland waters (e.g. lakes, rivers, etc.) across the country. It is also provides services such as first responders in case of an emergency, ambulances, rescue boats and amphibious chairs for people who are disabled.

At the beach, Red Cross volunteers and staff speak with beach-goers and hand out leaflets that describe how to stay safe on the beach and avoid risks, such as heat exhaustion and heatstroke, sunburn, jellyfish stings and drowning. This includes beach workshops on the meaning of a coloured-flag system that provides swimmers with information on whether or not it is safe to go into the water.

Spanish Red Cross volunteers speak with beach-goers during a heatwave. *Photo: Spanish Red Cross Society*

Notes

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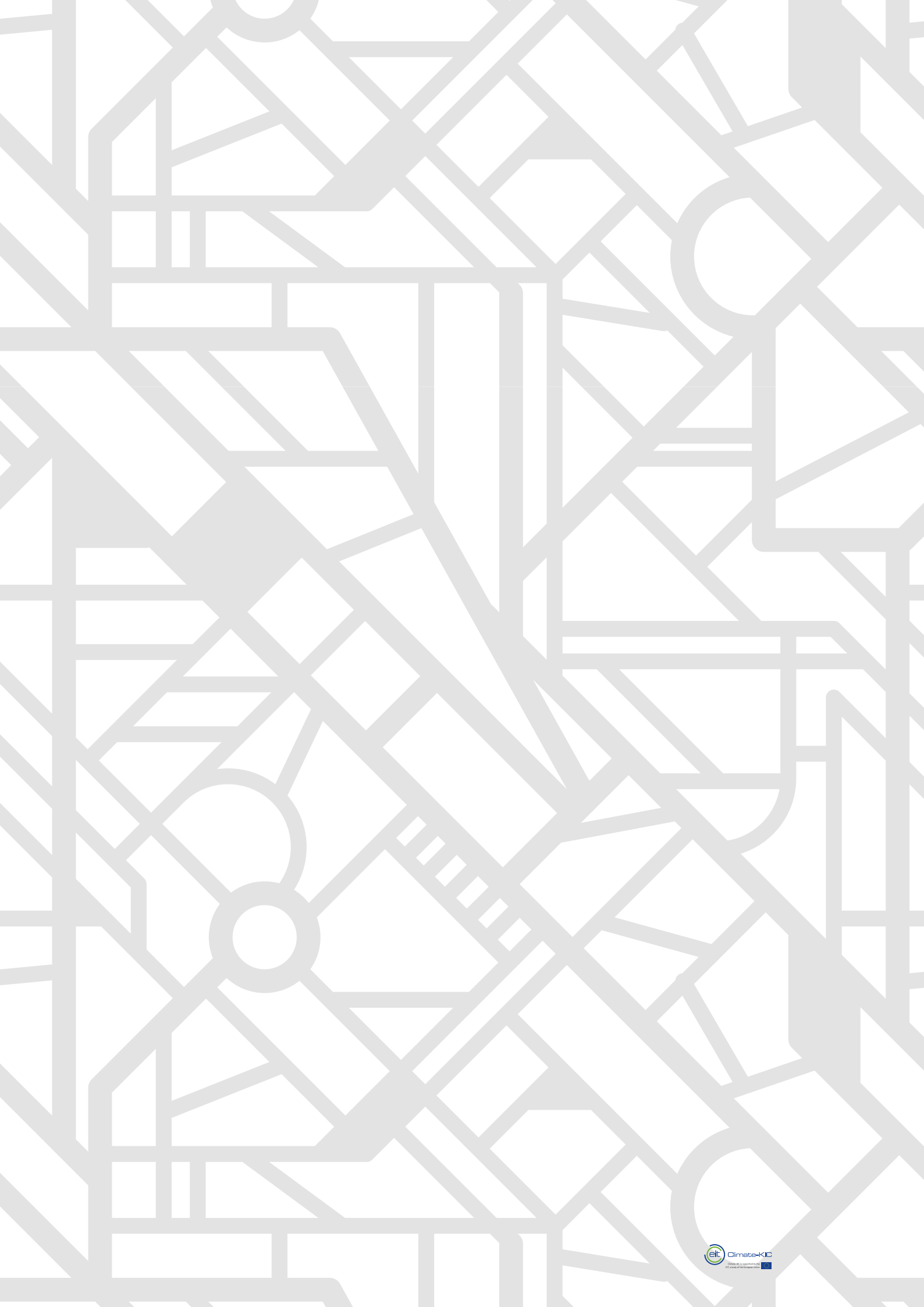
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