



Croatian Red Cross volunteers assist a vulnerable elderly woman during an exceptional cold snap



# Preparedness for winter weather and response by National Societies in Europe and Central Asia

## Reckoning with the changing hazards of winter

The winter of 2023-24 in Europe and Central Asia brought a variety of impactful weather events to the region, as global temperatures continued to be the [warmest on record](#). In November 2023 there was widespread disruption associated with snowfall across eastern Europe. In December 2023 a [series of storms](#) impacted north-western Europe, resulting in widespread flooding and record average flow across the European river network; in Central Asia, parts of Kazakhstan experienced record cold temperatures.

Global temperatures continue to be the warmest on record, and while National Societies in Europe and Central Asia are preparing for and responding to extreme weather events, they are also adjusting their activities to adapt to the changing picture of extreme weather in this warmer climate.

This briefing note outlines common winter weather hazards experienced across Europe and Central Asia, and the ways in which National Societies are preparing for and responding to them. It also provides insights into how our changing climate is influencing weather hazards, and highlights how National Societies can adapt plans, programmes and operations to take into account these changing risks. Through the exchange of experiences between National Societies, we hope to scale up climate action across the region.



## The hazards of winter weather in Europe and Central Asia

### COLD WAVES AND SNOWFALL

A [cold wave](#) is characterized by a drop in temperature to well below the average of a region for an extended period. Cold waves can feel colder during periods of high winds and can be accompanied by other significant winter weather such as blizzards or ice storms. Cold waves can have many negative impacts on people's health, crops, property and services. Although cold waves are projected to decrease with climate change, it is important to note that [less severe](#) and [less frequent cold waves](#) may be more impactful than past ones if risk perception and preparedness decrease due to the less frequent event occurrences.



### AVALANCHES AND MUDSLIDES

In mountainous areas these rapid downhill movements of snow threaten communities and infrastructure. They commonly occur after periods of heavy snowfall on top of a previously frozen or unstable snowpack. Triggers include sudden changes in weather, earthquakes or human activity.



### RIVER FLOODING

River flooding in winter is typically associated with periods of prolonged rainfall which saturate the river catchments. In Central Asia and Eastern Europe, flooding has also been caused by ice jams when a build-up of ice blocks river flow. Towards the end of winter, the warmer temperatures and rainfall can cause a rapid thaw of the snowpack, resulting in large rises in river levels and flooding downstream.



### WIND STORMS

Wind storms are driven by low-pressure weather systems forming over the Atlantic Ocean and moving eastwards towards Europe. They are characterized by strong winds, heavy rain or snow and in coastal areas dangerous waves and flooding from storm surges.



Test activation for early action for extreme cold in Tajikistan included mattresses, shawls, pillows, bedding, insulation materials for homes, and Thermos flasks

## Practical examples of winter preparedness and response by the IFRC network

Most National Societies in the Europe region have activities in place to prepare for and respond to the hazards of winter weather. This section shows some practical examples of these types of activities.

### Winter preparedness and anticipatory action

The goal of preparedness and anticipatory activities is to prevent and reduce the impacts of disasters on communities. Institutional preparedness means having the right resources, knowledge and capacities in place to respond to a disaster. [Anticipatory action](#) focuses on preventing or lessening potential disaster impact before a shock happens. Some examples of winter preparedness and anticipatory activities that are happening in this region are:

- **Community education and awareness raising.** This involves educational activities that help communities learn about disaster risks and what they can do to prepare for emergencies. Some examples of this in practice are these:
  - In the Russian Red Cross, there is a module in each first aid course on how to deal with hypothermia and frostbite, even for schoolchildren. During the autumn-winter period, this specific module is taught at public events. In 2023, a project was implemented in which instructors travelled to isolated settlements and taught people the basics of first aid in cases of hypothermia and frostbite. Also, in the run-up to the hunting season, free first aid masterclasses are organized for hunters, where they are also taught the basics of hypothermia care.
  - The British Red Cross has created several web pages with information on winter weather hazards, how to prepare oneself, and how to seek help from the Red Cross: coping with [snow and winter](#), [keeping warm in the winter](#) and [staying safe during a storm](#).
- **Early action protocols.** These are formal plans produced by National Societies that outline the early actions that will be taken when a specific hazard is forecast to impact communities. An EAP provides pre-approved funding for up to five years and includes pre-positioning of stocks to enable early action, annual readiness activities and early action designed to save lives and livelihoods once a hazard is forecast. In Central Asia, two countries have *simplified* EAPs for cold waves in place:
  - The [Kazakhstan Red Crescent's](#) includes awareness raising and first aid training, and the provision of hot food and non-food items during cold waves.
  - The [Tajikistan Red Crescent's](#) includes insulation for housing, an annual awareness campaign, and the distribution of essential food items.

- **Preparation of National Society logistics.** The pre-positioning of stock for household items can be part of an EAP or a separate action by a National Society to be ready for distribution during a winter weather event. For example:
  - Every year the Russian Red Cross, undertakes the preparatory procurement of thermal blankets, Thermos flasks and first aid kits.

## Response to winter weather

- **When extreme winter weather strikes,** some examples of response activities in this region are:
  - The Lithuania Red Cross undertakes home visits to vulnerable, mostly elderly people and advice is given on staying indoors, keeping warm, preventing slips and falls (e.g. clearing pathways around the home), dressing warmly (e.g. layering clothes), staying hydrated, checking regularly on elderly neighbours or family members, keeping communication open (e.g. having a phone nearby) and planning for transportation. By distributing these tips, The Red Cross can help ensure the safety and well-being of elderly individuals during extreme winter weather.
  - The Romanian Red Cross [distributes cash](#) aid to Ukrainian refugees and [helps people heat their homes](#). The Norwegian Red Cross maintains an [avalanche rescue team](#).
- **Providing shelter for vulnerable people.** Some National Societies have specific protocols in place for providing shelter for vulnerable people during extreme weather. An example of this in practice is:
  - The Netherlands Red Cross provides shelter for homeless people when the temperature drops to a certain level in areas where no alternative exists. Additionally, the Red Cross provides shelter for stranded travellers when there is a disturbance in public transport due to extreme winter weather.



Moldova Red Cross visit elderly people to check their safety in winter

## Changing climate hazards in winter

The European region has [warmed faster than](#) any other continent, and with this warming the frequency and intensity of different climate hazards has changed too. The [IPCC WG1 report states](#) that in Europe and Central Asia many changes have been observed already, and climate modelling is used to indicate how these hazards are expected to change further.

These climate model projections indicate an increase in the frequency of severe wind storms affecting Northern Europe, and the impacts of these storms will be exacerbated by rising sea levels and increases in winter precipitation.

Increases in winter precipitation totals have been observed across the European and Central Asia region, and in Western and Central Europe there has been an observed increasing trend in river flooding, with that trend projected to continue.

While National Societies continue to support communities affected by severe winter weather, across Europe and Central Asia the number of cold waves and amount of snowfall has decreased. Although cold waves are projected to decrease with climate change, [less severe and less frequent cold waves](#) may be more impactful than past ones if risk perception and preparedness decrease due to the less frequent event occurrences.

Earlier snowmelt has affected the [timing of flood events](#) in many locations in the region, and a warmer climate may increase the likelihood of rain-on-snow events, a reduction in permafrost in mountain environments, and alongside this earlier snowmelt high-mountain debris flows ([landslides and mudslides](#)) may occur earlier in the year and become more a feature of winter in mountainous areas,

While the European Environment Agency warned that Europe is not prepared to cope with or address its changing climate risks, within the Red Cross Red Crescent Movement there are many tools in use to help National Societies to adapt to the changing nature of winter weather. For more detail on the climate risks in each part of the region, please refer to the [Eurasia](#) and [Central Asia](#) climate fact sheets from the Red Cross Red Crescent Climate Centre.



Flash floods in Valencia, Spain after a late October *dana* or "cold drop" triggered one of the most lethal disasters in the country's history

## Adjusting our work to a changing climate

As we witness the changes in winter weather, the urgency grows for National Societies in the Europe region to look into potentially necessary changes in our preparedness and response activities. In the following section we are looking at tools that the region's National Societies can use to take changing risks into account in their plans, programmes and operations. We will continue this discussion and explorations in the context of the implementation of the [Europe Region Climate Action Roadmap](#).



**Climate smart programmes and humanitarian operations.** A starting point for National Societies is the integration of available short-term weather and seasonal forecasts and long-term climate projections in designing and/or adjusting all programmes and operations. When we analyse the changing risks at country and regional levels and understand the humanitarian impacts, we can adjust our work accordingly. In doing so, programmes and operations ensure that, at a minimum, they do not place people at increased risk in the future, considering probable new climate extremes and growing vulnerabilities. The guide to [climate-smart programmes and humanitarian operations](#) explains how this can be achieved. The main tools for this are the national climate risk assessment, climate smart screening and planning - see chapter 3 and Annex I.

**Anticipatory action.** Advances in weather forecasting and climate science enable us to act before disasters strike, rather than investing primarily in humanitarian response afterwards. This enables more people to receive the needed assistance ahead of predictable shocks. Where applicable, National Societies should develop [early action protocols](#) for specific hazards, that outline the early actions that will be taken to protect people before a disaster strikes, based on forecast and impact information. The EAPs also support National Societies to mobilize the funds needed to take these anticipatory actions.

**Vulnerability mapping.** This helps National Societies identify urgent vulnerable areas, groups and sectors in their country, initially through the national climate risk assessment. A more locally applicable tool that facilitates a further deep dive in vulnerability mapping is the [Enhanced Vulnerability and Capacity Assessment](#), a participatory community risk assessment. This tool enables communities to assess the risks they face, where they come from and which members of the community are most exposed, what coping capacities are available, and what initiatives can be undertaken to strengthen coping capacities and reduce the risks.

**Locally led adaptation.** Locally led adaptation provides an innovative and useful framework for National Societies to create climate solutions, guided by community wisdom and lived experience. While most National Societies have extensive experience working on resilience and disaster risk reduction, addressing climate adaptation often requires an increased understanding of changing climate risks, alongside new programmes and partnerships to address them. The [Climate Action Journey](#) provides an overview of this approach, with locally led adaptation as a central goal. (A new guide will examine each step of the Climate Action Journey to demonstrate how National Societies can use existing community resilience to advance climate adaptation at the local level.)

## Resources

Want to read more on the topic? Please refer to:

### IFRC RESOURCES ON WINTER WEATHER HAZARDS

- [Cold waves \(IFRC\)](#)
- [Floods \(IFRC\)](#)
- [Landslides \(IFRC\)](#)
- [Cold waves and cold weather \(part of the IFRC epidemic control toolkit\)](#)
- [Anticipation Hub](#)
- [Climate Action Journey](#)
- [Locally led adaptation \(A how-to guidance forthcoming in mid-2024\)](#)
- [Guide to climate-smart programmes and humanitarian operations](#)
- [IFRC first aid manual \(includes guidelines on frostbites and hypothermia\)](#)

### PRACTICAL EXAMPLES

- [British Red Cross response to Storms Isha and Henk](#)
- [British Red Cross response to Storm Babet](#)
- [Winterization strategy 2023–24 in Ukraine and other affected countries](#)

### RESEARCH INTO CHANGING WEATHER AND CLIMATE

- [European Climate Risk Assessment \(EEA\)](#)
- [Climate change impacts of heat and cold extremes on humans \(European Commission\)](#)
- [“Extreme cold will still occur in Northern Europe, although less often, risking decreasing preparedness and higher vulnerability” \(World Weather Attribution\)](#)
- [What will the future bring when it comes to climate hazards? \(EEA\)](#)

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