

Climate resilience in Europe: The clock is ticking

In the wake of another year of climate extremes across Europe, **Rosalind Cook**, **Sirkku Juhola** and **Jaroslav Mysiak** say we have a window of opportunity to deliver a safe and sustainable world, but we must act now

The Intergovernmental Panel on Climate Change's (IPCC) report on 1.5°C of global warming, published on October 8, has major implications for Europe and disaster risk reduction (DRR). The findings highlight that crossing the threshold of 1.5°C could have severe impacts, including sea level rise, extreme weather events and damage to ecosystems.

IFRC President Francesco Rocca commented on the IPCC report, saying: "More than half of our operations are now in direct response to weather-related events, and many others are compounded by climate shocks and stresses. If this is the situation now, then it is difficult to comprehend the scale of crises confronting vulnerable communities in a world that is 1.5°C or 2.0°C hotter."

In Europe, these climate impacts can turn into threat multipliers on migration flows and geopolitical instability, as well as having negative effects on infrastructure and public health or access to food and water.

This summer, Europe experienced devastating extreme weather and climate-related events, which exposed once again the vulnerability of citizens and natural ecosystems to climate variability and change.

The number of forest fires in the EU has more than doubled amid high temperatures and lower-than-normal rainfall. At least 74 people in Greece lost their lives in wildfires and Sweden experienced its most serious wildfire season in modern history. Storms followed the heatwave, with Italy being particularly badly affected – more than 30 people died in October and early November, and Rome was left knee-deep in hailstones after a freak storm.

Heatwaves, storms and floods all cause severe damage to critical infrastructure, but many European countries must also deal with ageing infrastructure that is in need of renovation interventions, given the societal and economic changes that have taken place, including the new risks Europe faces. The Genoa bridge tragedy that occurred in August, causing the loss of 43 lives (see p24), highlights the need to readdress the challenges of infrastructure safety in Europe as a matter of urgency.

Slow-onset events and longer-term changes in temperature and precipitation may also contribute to increasing disaster risks in Europe, for example climatic changes bringing about greater exposure to disease outbreaks. The European Centre for Disease Prevention and Control (ECDC) notes that the impact on public health from climate change may be far reaching and include: Deaths and hospitalisations owing to heatwaves; hypothermia from blizzards; injuries and death from flooding; and potential shifts in the transmission ranges of vector-borne diseases.

"Most importantly," it says, "the potential population health impacts of environmental changes extend far into future, if environmental conditions deteriorate further. Changes can be abrupt and unexpected but they can also be protracted and gradual and thus pose considerable challenges to public health."

Climate change may also alter the distribution and transmission of communicable diseases, either through affecting pathogens directly, or the distribution of vectors that carry diseases. Climate change can also affect human behaviour, leading to changing patterns of exposure to infectious diseases, for example through increased time spent outdoors in woodlands where ticks live.

Authors

ROSALIND COOK, *External Relations Officer, UN Office for Disaster Risk Reduction*; SIRKKU JUHOLA, *Professor, University of Helsinki*; JAROSLAV MYSIAK, *Director, Division Risk Assessment and Adaptation Strategies, Euro-Mediterranean Centre on Climate Change*

"Meanwhile, food-borne diseases like salmonellosis have been observed to be highly temperature sensitive, meaning that increased annual average temperatures could have important effects on food safety. Climate change may influence water quality and availability (drinking and bathing) while also leading to increased risks of flooding in some regions," it says. "Thus water-borne diseases, such as those caused by *Cryptosporidium* in drinking water and *Vibrio* bacteria in bathing water, need to be further examined for their potential links to climate change, along with air-borne diseases and rodent-borne diseases."

Fast and slow onset disasters are already affecting many lives and cause high economic damage and losses. In fact, climate-related disasters accounted for 77 per cent of direct economic losses globally, which totalled \$2,908 billion. This, in turn, is having a major effect on people's lives, with disasters pushing an estimated 26 million people into poverty each year.

Under the Sendai Framework, governments and stakeholders have recognised these challenges. The agreement defines ambitious targets on reducing their human toll and economic burden and ensuring that a national strategy on DRR is in place by 2020. There are also major efforts underway to ensure coherence on sustainable development, disaster risk reduction and climate adaptation with interrelated and consistent action plans.

However, the scale of the challenge of managing climate risk calls for much greater action. Current pledges made under the *Paris Agreement* ('Nationally Determined Contributions') are only sufficient to limit global warming to 3°C or more. This means

Vit Paroulek | 123rf



These climate impacts can turn into threat multipliers on migration flows and geopolitical instability, as well as having negative effects on infrastructure and public health, or access to food and water

that emission reductions are currently insufficient to avoid disastrous impacts and Europe, along with other continents, will continue to be increasingly affected by more severe and less predictable extreme events.

In November 2018, hundreds of multi-stakeholder delegates from 55 countries in Europe convened at the European Forum for Disaster Risk Reduction in Rome to discuss this challenge and to identify concrete action to step up efforts. The Forum, organised by the Government of Italy and the UN Office for Disaster Risk Reduction (see Comment, p3), takes place every two years, with the aim of showcasing inspiring action and identifying regional challenges.

Climate related risk

The Forum examined the latest scientific evidence in Europe on climate change and looked at how to ensure that efforts to manage disaster risk keep pace with the rapidly evolving scientific evidence of climate change impacts. As European countries develop their national DRR strategies, it is clear that all actors will need to stress-test their systems and policies against realistic climate change scenarios. As the international frameworks on climate change and DRR have common goals to deliver greater resilience, there is a significant opportunity to create synergies at the national and subnational levels by jointly developing or better aligning existing measures to reduce climate-related risk.

Connecting agendas will support the integration of previously disconnected sectors, as well as maintaining a balanced focus on acute and unfolding disasters, and longer-term changes in hazard exposure and societal vulnerability. More attention also needs to be paid to the interconnectedness of impacts and multiplier effects across different continents.

The latest scientific evidence from the IPCC alongside the data on increasing disasters losses makes clear that DRR action will need to accelerate much faster, focusing on preventing risk rather than response.

There is a window of opportunity to deliver a safe and sustainable world, but we must act now. 