

DISPLACEMENT, CLIMATE, URBAN RISKS AND URBANISATION

Climate Training



For key concepts and terms please refer to Fact Sheets 1, 2 & 3

Forced out by conflict, environmental degradation or eroded livelihoods—possibly exacerbated by climate change—and drawn to cities for better access to jobs and services, displaced people are often among the most vulnerable in rapidly growing, poorly planned urban environments.

Urbanisation: Facts & Figures

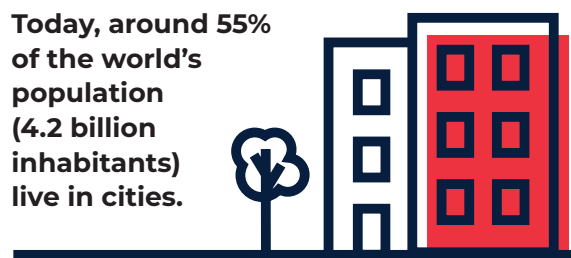
Over half of the world's population now lives in urban centres and most of the world's migratory movements are towards or between urban areas. Many people move to urban areas in search of increased job and livelihood opportunities, particularly for those who have lost their livelihoods due to climate or weather patterns or events. Urban centres can provide more security in terms of access to healthcare, education and other basic services and facilities.

What is urbanisation?

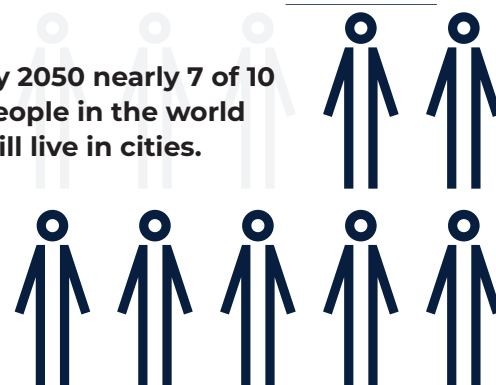
"Urbanisation is a complex socio-economic process that transforms the built environment, converting formerly rural into urban settlements, while also shifting the spatial distribution of a population from rural to urban areas. It includes changes in dominant occupations, lifestyle, culture and behaviour, and thus alters the demographic and social structure of both urban and rural areas. A major consequence of urbanisation is a rise in the number, land area and population size of urban settlements and in the number and share of urban residents compared to rural dwellers."

Source: World Bank, [Urban Development Overview 2020](#)

Today, around 55% of the world's population (4.2 billion inhabitants) live in cities.



By 2050 nearly 7 of 10 people in the world will live in cities.

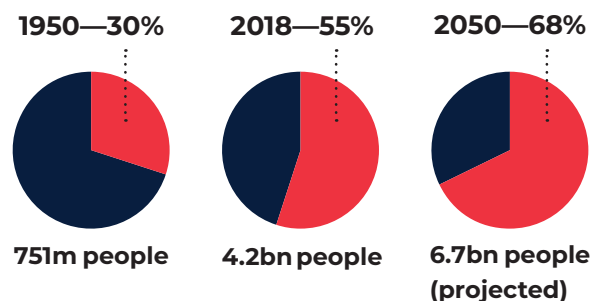


Source: World Bank, [Urban Development Overview 2020](#)

Growth in the urban population is driven by an overall population increase and by the upward shift in the percentage living in urban areas, with almost 90% of this growth occurring in Asia and Africa.

Source: UN Department of Economic and Social Affairs, [World Urbanization Prospects 2018 Highlights](#)

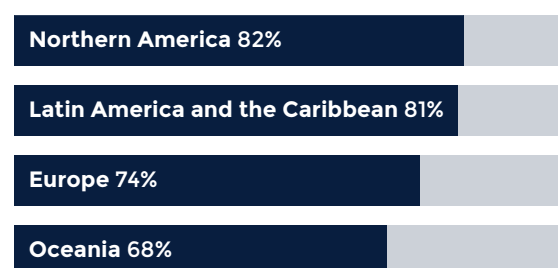
Percentage of people living in urban areas



Source: UN Department of Economic and Social Affairs, [World Urbanization Prospects 2018 Highlights](#)

Displacement, climate change and urban risks

Today, the most urbanized regions include Northern America (with 82% of the population living in urban areas), Latin America and the Caribbean (81%), Europe (74%) and Oceania (68%).



Source: UN Department of Economic and Social Affairs, [World Urbanization Prospects 2018 Highlights](#)

The level of urbanisation in Asia is now approximating 50%. Meanwhile, Africa remains mostly rural, with 43% of its population living in urban areas.

Source: UN Department of Economic and Social Affairs, [World Urbanization Prospects 2018 Highlights](#)

Close to half of the world's urban dwellers reside in settlements with fewer than 500,000 inhabitants, while around one in eight live in 33 megacities with more than 10 million inhabitants. By 2030, the world is projected to have 43 megacities, most of them in developing regions.

Source: UN Department of Economic and Social Affairs, [World Urbanization Prospects 2018 Highlights](#)

The challenges of rapid urban growth

Growing populations can create increased pressure on existing urban infrastructure and services. With rapid urban population growth, key infrastructure and services are straining to meet population demands.

For example, people from lower income families tend to relocate to informal settlements or the outskirts of urban areas which are more affordable, but where basic needs, such as healthcare and education, are difficult to access. If they access those services elsewhere, they can place an additional strain in those areas which in turn, makes those services less able to withstand hazards, such as cyclones or floods.

Poorly planned urban growth and governance increases vulnerability to climate hazards and disaster. When urban growth is not well managed, it can result in high density populations living in high risk areas.

For example, the number of people living in urban floodplains in Asia is expected to reach 188 million by 2060. Not only will these individuals be at higher risk of experiencing flood-related events but the population density will result in a much bigger disaster, with a greater proportion of people being impacted by every event. Such situations also increase the risks of large-scale climate-related displacement.

Displacement, climate change and urban risks

The links between urbanisation, climate change and displacement

Climate change increases urbanisation

The World Bank estimates that by 2050, unless urgent climate and development action is taken at both global and national levels, up to 140 million people globally would be forced to move from increasingly non-viable areas of their countries due to impacts of climate change such as water scarcity, crop failure, sea-level rise and storm surge. Current trends show that many of these people would be moving to urban and peri-urban areas, straining existing infrastructure and accelerating unplanned, poorly managed urbanisation in developing countries. As of 2018, the average length of displacement is between 20 to 30 years and 6 out of 10 refugees are in urban areas, in cities and towns across the globe. At least half of all IDPs are also in urban areas.

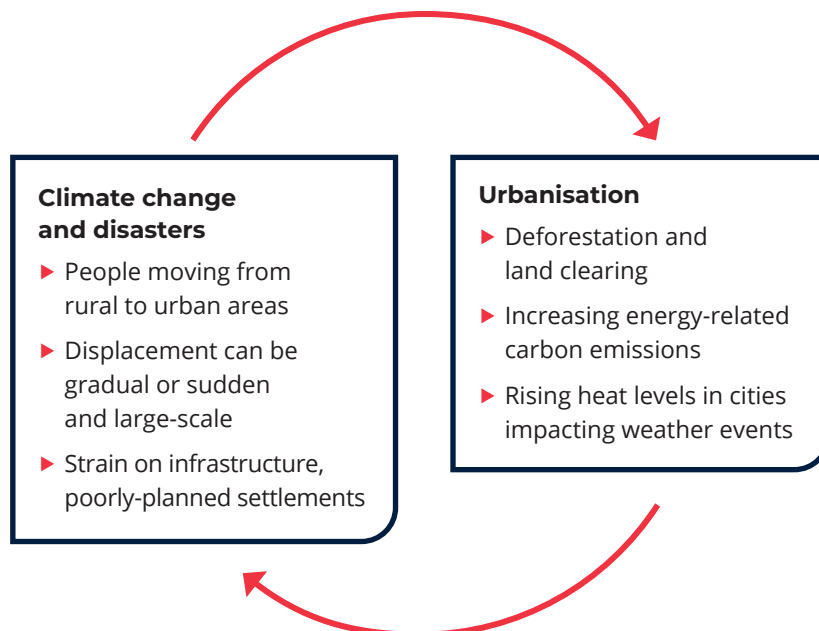
Sources: World Bank (2018). [Groundswell: Preparing for Internal Climate Migration](#). ODI (2015). [Protracted displacement: uncertain paths to self-reliance in exile](#). IDMC (2015) [Global Overview 2015: People internally displaced by conflict and violence](#).

It is estimated that the number of people relocated to escape from sea-level rise, drought and desertification, as well as from extreme weather events, will rise from 200-250 million to possibly 1 billion people by the middle of the 21st century.

Source: Leal-Arcas, R in Serraglio, D.A, et. al (2019) [Climate-Induced Migration and Resilient Cities: a New Urban Agenda for Sustainable Development](#).

It is projected that between 100 and 200 million people will leave their homes to seek shelter in other locations due to climate change by 2100.

Source: IOM in Serraglio, D.A, et. al (2019) [Climate-Induced Migration and Resilient Cities: a New Urban Agenda for Sustainable Development](#).



It is anticipated that “a total of 4.5 billion hectares around the world—fully 35% of the Earth’s land surface—are in various stages of desertification. These areas are home to more than 850 million people.”

Source: UN Environment (UNEP) in Serraglio, D.A, et. al (2019) [Climate-Induced Migration and Resilient Cities: a New Urban Agenda for Sustainable Development](#).

Since 2000, El Salvador city’s population has grown by more than 30 percent to 1.1 million, largely as a result of migration from rural areas driven by widespread drought, food insecurity, and violence.

Source: Lopez, L and Blake, J (2020) [Climate Migration and Cities: Preparing for the Next Mass Movement of People](#).

Urbanisation increases climate change

Urbanisation has also been found to exacerbate the causes of climate change. As urban populations grow, so does the need for land. In fact, urban land cover is expanding at twice the rate of urban population growth. Deforestation and land clearing encroaches on and destroys ecosystems that sustain life and provide a buffer against climate change.

The links between displacement, climate change and urbanisation

Cities also affect weather and climate at local, regional and global scales. Cities account for over 70% of global energy-related carbon emissions. They also release enormous heat into the city surroundings and consequently impact the frequency and intensity of local rainfall and thunderstorms.

Urban areas are highly vulnerable to climate change and disasters

Many of the world's major cities are highly vulnerable to the impacts of climate change and disasters due to their location, such as those in coastal areas or floodplains. The high concentration of people, infrastructure and assets increase the scale of disasters, with urban areas often experiencing more fatalities and greater economic losses than rural areas. Rapid and uncontrolled urbanisation further increases these risks, with a lack of adequate urban planning, land use and governance.

Urban vulnerability

- ▶ High-density built areas in locations that are exposed to hazards.
- ▶ Poorly constructed buildings using inferior materials and not compliant with risk reduction measures and building codes.
- ▶ Challenges with drainage and watershed management due to the built-up environment.
- ▶ Disruptions to public utilities due to extreme weather and low rainfall affecting large numbers of people.
- ▶ High dependency on external food production (rural agriculture and imported goods), which are susceptible to changing climate and market conditions.
- ▶ Lack of awareness of local hazards among new arrivals to urban areas.

Source: IFRC (2013) [A Guide to Mainstreaming Disaster Risk Reduction and Climate Change Adaptation](#).

The increasing number of extreme heat days caused by climate change is also impacting the health of vulnerable people living in congested and polluted cities. Heat also exacerbates urban air pollution, which in turn can cause a number of health-related issues including heart and lung diseases.

- ▶ One third of the global population experience at least 20 extreme heat days per year and this could rise to 74% by 2100.
- ▶ It has been estimated that every year, more than half a million children under 5 die from respiratory disease linked to air pollution.

Displaced people in urban areas are especially vulnerable

The world's poorest people are especially vulnerable to becoming displaced, of which 20 to 30 million are estimated to move each year from rural to urban areas. Drawn to cities for better access to jobs and services, many displaced people find themselves on the fringes of rapidly growing, poorly planned urban environments, facing the brunt of climate risks and disasters.

The urban poor living in peri-urban areas and informal settlements are especially vulnerable and tend to reside in high risk areas and unsafe housing, with limited access to basic and emergency services, and a general lack of economic resilience.

Displaced people and migrants, particularly those who are undocumented, are invisible to the authorities and may exist outside of systems established to protect communities. As such, they may be inadvertently or intentionally excluded from awareness and preparedness strategies. They may also be excluded from access to protection and justice and face a higher risk of exploitation and abuse.

What can be done?

Vulnerabilities of new arrivals to urban areas

- ▶ Dwelling in densely built, overcrowded and often informal settlements in highly hazardous areas often with heightened risk of extreme temperatures because of lack of open, green spaces.
- ▶ Lack of adequate and reliable access to basic services such as water and sanitation, education, health and housing and property rights.
- ▶ Lack of awareness of local hazards and access to early warning messages due to language barriers.
- ▶ Persistent systemic issues such as poverty, inequality, and poor urban governance system.

What can be done?

Reducing risk in urban environments

There are a number of measures that help to minimise climate-related risks in urban areas and to ensure the health, safety and development opportunities for people who are displaced or at risk of becoming so.

For example:

- ▶ Ensuring that urban development is well-planned, inclusive, sustainable and adapted to the climate context.
- ▶ Putting in place key disaster risk reduction measures to ensure the safety and climate-resilience of housing, infrastructure and services in urban areas.
- ▶ Addressing social and economic barriers and inequalities in urban environments, in particular for people in informal settlements who are poor, marginalised or displaced.
- ▶ Reducing the carbon emissions and other factors which contribute to climate change in urban environments.

As many as 13.1 million people living along U.S. coastlines could face flooding by the end of the century because of rising sea levels.



Source: Befus, K.M., Barnard, P.L., Hoover, D.J. et al. [Increasing threat of coastal groundwater hazards from sea-level rise in California](#). Nat. Clim. Chang. 10, 946–952 (2020).

Urban opportunities for climate risk management

Urban populations and governance systems also tend to have inherent capacities for reducing disaster and climate change risk, such as:

- ▶ Diverse and innovative livelihood strategies that spread risk and adapt to change.
- ▶ Availability of human capital (including professionals and skilled labourers) for designing and implementing resilience measures.
- ▶ Presence of multiple governmental institutions, urban development legislation, policies, and resources.
- ▶ Economies of scale that make protection of large numbers of people and economic activities easier and more cost-effective.

Source: IFRC (2013) [A Guide to Mainstreaming Disaster Risk Reduction and Climate Change Adaptation](#).

What are we doing?

The RCRC has developed a number of resources which contribute to understanding and addressing displacement and climate-related risks in urban contexts.



What are we doing?

Climate Training Kit: Urban and Climate Module (RCRC Climate Centre)

Covers the impact of climate change in urban areas and the associated humanitarian challenges, and the design of climate-smart programmes in the urban context, including examples of urban work by National Societies.

Heatwave Guide for Cities (RCRC Climate Centre, 2019)

Provides information and recommendations for technical staff within city government, including on: working with partners to understand city-specific heatwave risks; operational approaches to prepare for an imminent heatwave; response strategies to reduce human harm during a heatwave; and ways to learn from a heatwave that has just ended.

City Heatwave Guide for Red Cross Red Crescent Branches (RCRC Climate Centre, 2020)

This new guide is tailored towards practical actions that can be led by RCRC branches in preparing for, and responding to, heatwaves in towns and cities.

Building urban resilience: A guide for Red Cross and Red Crescent engagement and contribution (IFRC, 2017)

Highlights key issues, challenges, lessons learned and essential elements for National Societies engaging in building urban resilience. It covers issues of capacity building, advocacy and programming relating to risk reduction and disaster management in urban contexts.

Gender and Diversity for Urban Resilience: An Analysis (IFRC, 2015)

Highlights specific issues relating to gender and diversity in urban environments, including for women, people with disabilities and migrants. Makes a number of recommendations relating to these issues in the context of urban disaster risk reduction and disaster management programmes.

Integrating climate change and urban risks into the VCA (IFRC, 2014)

Provides guidance on how to integrate information on the additional risks and vulnerabilities linked to climate change when carrying out a VCA, identifying what needs to be done differently when conducting a VCA in an urban context.

A Guide to Mainstreaming Disaster Risk Reduction and Climate Change Adaptation (IFRC, 2013)

Provides guidance on the systematic integration of risk reduction measures into planning, describing key issues to be considered across different sectors and contexts, and the types of measures that can be put in place. It also details the key elements that need to be in place to create an enabling environment.

Sustainable Reconstruction in Urban Areas: A Handbook (IFRC, and SKAT, 2013)

A guide for field practitioners undertaking housing reconstruction in urban areas, providing technical information, examples and checklists on sustainable neighbourhoods, integrated settlement approaches and reconstruction techniques.

World Disaster Report 2010: Focus on Urban Risk (IFRC, 2010)

Analysis, key data and case studies on many aspects of urban risk and resilience.

Case studies

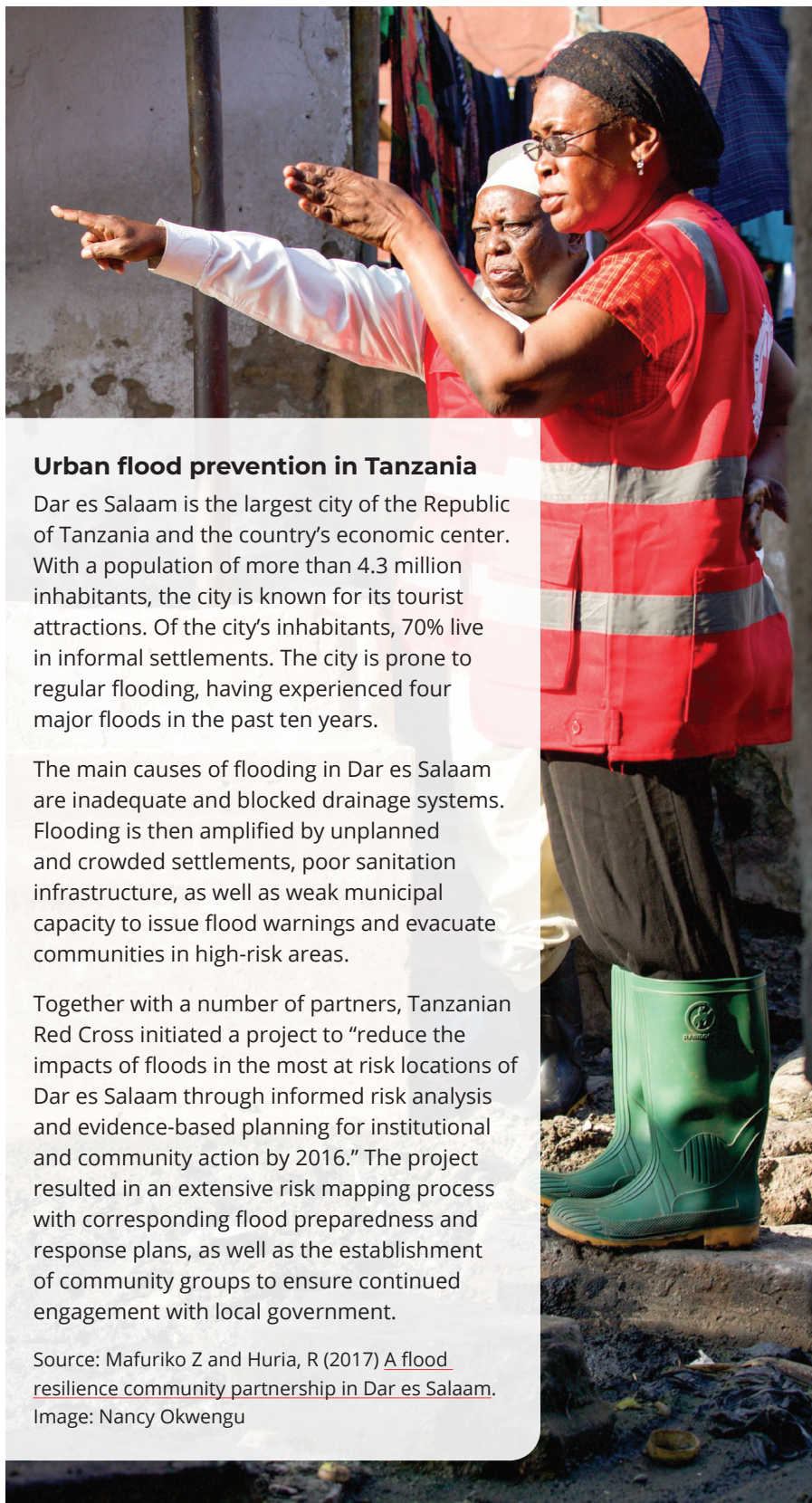
Urbanisation and climate change in Asia and the Pacific

“In the Asia Pacific region, exposure and vulnerability (and resulting displacement) is driven by population growth and urbanisation – including to highly hazard-prone urban areas. In East Asia and the Pacific, the number of people and assets exposed to floods and cyclones is thought to have increased by around 70% between 1980 and 2015, largely as a result of urban expansion driven by the region’s economic growth.

Exposure and risk in Asia Pacific are also linked to the increasing numbers of people living in low-lying coastal cities and delta regions in South East, South and East Asia. This risk is also expected to rise, as the regional coastal population is predicted to double in Bangladesh, India, the Philippines and Viet Nam by 2060. The population living in urban floodplains in Asia is also estimated to rise from 30 million to 188 million people by 2060.

In the Asia Pacific region, the vulnerability of urban populations—particularly the urban poor—has also increased. Inadequate governance, unevenly distributed economic development and poorly managed urbanisation have contributed to the growth of informal settlements and entrenched poverty. In some countries, more than half the population resides in densely-populated slums prone to flooding and which lack basic infrastructure, increasing displacement risk. Overall, an estimated 25% of urban residents across East Asia and the Pacific live in slums and other settlements less able to withstand the impacts of sudden- and slow-onset hazards.”

Source: IFRC (2018) [Disasters And Displacement In A Changing Climate: The Role Of Asia Pacific National Societies](#)



Urban flood prevention in Tanzania

Dar es Salaam is the largest city of the Republic of Tanzania and the country’s economic center. With a population of more than 4.3 million inhabitants, the city is known for its tourist attractions. Of the city’s inhabitants, 70% live in informal settlements. The city is prone to regular flooding, having experienced four major floods in the past ten years.

The main causes of flooding in Dar es Salaam are inadequate and blocked drainage systems. Flooding is then amplified by unplanned and crowded settlements, poor sanitation infrastructure, as well as weak municipal capacity to issue flood warnings and evacuate communities in high-risk areas.

Together with a number of partners, Tanzanian Red Cross initiated a project to “reduce the impacts of floods in the most at risk locations of Dar es Salaam through informed risk analysis and evidence-based planning for institutional and community action by 2016.” The project resulted in an extensive risk mapping process with corresponding flood preparedness and response plans, as well as the establishment of community groups to ensure continued engagement with local government.

Source: Mafuriko Z and Huria, R (2017) [A flood resilience community partnership in Dar es Salaam](#).
Image: Nancy Okwengu

Case studies



Preventing urban displacement in Mongolia

The Mongolian Red Cross Society (MRCS) is implementing a project to assist rural migrants through a set of activities aimed to equip them with knowledge and skills to cope with socio-economic challenges they face in the city of Ulaanbaatar. Working with a range of national and city authorities, MRCS provides trainings for rural migrants on small enterprise and business management training along with disaster risk reduction which will allow them to keep safety measures at household level.

Sources: IFRC (2018) [Disasters And Displacement In A Changing Climate: The Role Of Asia Pacific National Societies](#) and IFRC (2018) [Red Cross Red Crescent Disaster Risk Reduction in Action Case Studies: Winter shelters for rural herder communities](#).

Image: MRCS/Elderly herder family who benefited from winter shelter activity, Darkhan-Uul province. March 2018.



Nepal's SURE program

Nepal Red Cross Society (NRCS), with support from British Red Cross, has been implementing a program on Strengthening Urban Resilience & Engagement (SURE). Working in seven municipalities across three of Nepal's major urban centres over a 5 year period, the programme is designed to improve the urban disaster resilience of municipal governments, the NRCS and citizens, including specific vulnerable groups. To support this work a specific Vulnerability and Capacity Assessment (VCA) tool was developed, using multi-hazard and informal network approaches to better understand and build the overall disaster resilience of municipalities, and also consider the impact of climate change.

Source: Nepal Red Cross, British Red Cross (2017) [Strengthening Urban Resilience & Engagement \(SURE\) programme Nepal Urban Assessment \(VCA\) Guidelines](#).

Image: Sailendra Kharel/IFRC

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