

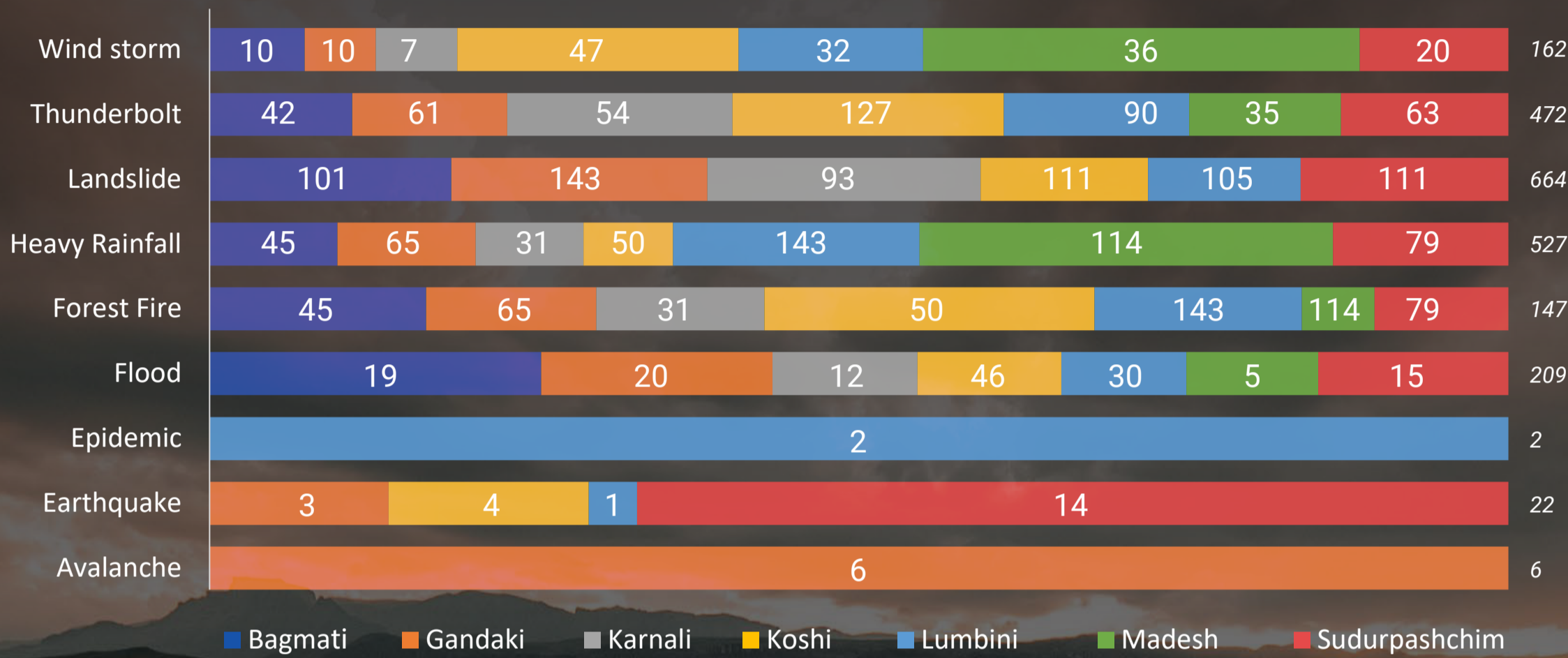
HOW REAL ARE THE IMPACTS OF CLIMATE CRISIS IN NEPAL?

Despite abundant evidences and experts' cautions, many people worldwide are in denial that climate change is real but if we look at the case of a country like Nepal, reportedly the face of global climate crisis, climate change is irrefutably real, and its impacts are tangibly felt by the ecosystems and communities not only in the Himalayas, but across its' three geographical belts.

Let's take a look at how these impacts of climate crisis are felt in Nepal.

OCCURRENCE OF CLIMATE-RELATED NATURAL HAZARDS IN NEPAL (JAN 1, 2021 – DEC 31, 2022)

Source: Nepal Disaster Risk Reduction Portal



5,945
Total Affected Families

1,602
Injured

5,62
Total Death

52,26,34,755
Estimated Loss (NPR)

Here, data shows that one way or another, climate-induced disasters affect all provinces of Nepal, and its impacts are felt across multiple sectors and by diverse groups.

LET'S TAKE A CLOSER LOOK AT WHAT THESE IMPACTS ARE ON DIFFERENT AREAS.

IMPACT OF CLIMATE CHANGE

ON HUMAN LIVES



- About 56% of poor households of Nepal are exposed to climate-induced disasters
- Over 4 million Nepalese are facing health impacts caused by extreme heat
- 80% of the population in Terai and hills of Nepal are vulnerable to vector-borne diseases induced by climate-induced events like floods, heavy rainfalls, extreme heat, etc.
- Around 42,115 Nepalese die each year from illnesses related to air pollution



ON INFRASTRUCTURES

- Direct cost of damage repairs caused by climate incidents accounts for 0.11% of annual GDP and indirect cost amounts to around 50-75% of the direct cost for the same duration
- 1/5 of the rural population lose access to the district headquarters during rainy season
- At present, probability of a flood destroying 2.55% of built infrastructure and capital stock is 2%
- As temperature rises that probability triples to 5.7% with 1.5 degree C of additional warming and more than triples to 18.4% under 3.2 degree C additional warming

ON ECONOMY



- Increase in public debt-to-GDP ratio of around 1% point of GDP per year
- Agricultural land degradation is directly associated with food scarcity and increased food costs
- Lower agricultural yields due to extreme heat are projected to reduce overall GDP of Nepal
- Decline in tourist flow due to different climate events can directly hamper the national economy
- Extreme weather events lead to damage of hydropower and drinking water infrastructures, housing and destroy livelihoods



ON ENVIRONMENT

- Rising temperatures are causing mountains of Nepal to lose their glaciers at a fast rate
- Decline in flows of spring water in winters by 15 to 30%
- In 2021, PM2.5 concentration in Nepal was estimated 9.2 times higher than WHO standards
- Changes in ecosystem and topographical isolation of local species
- Increased rate of species endangerment and extinction

FUTURE PROJECTION ON EFFECTS OF CLIMATE CHANGE IN NEPAL

In absence of or poor climate related interventions taken against the climate crisis, Nepal is expected to encounter following effects in the future (under the highest emission scenario, RCP8.5):

- Nepal is projected to warm by 1.2°C–4.2°C, by the 2080s (baseline period 1986–2005)
- Probability of heatwave is projected to increase by 27% by the 2090s
- Median annual probability of drought is expected to increase by at least 10% by 2080-2090
- Up to 43,000 people are expected to be affected by extreme flood events by 2035-2044
- Approx 61.9 climate related deaths per million population by the year 2050
- Winters in Nepal are projected to be drier, and rainfall may increase by three folds
- Nepalese affected annually by river floods caused by climate change could more than double to around 350,000 by 2030 (from 157,000 in 2010)
- Heat-induced mortality is more likely to increase to around 53 deaths per 100,000, annually by the 2080s (compared with four deaths per 100,000 between 1961 and 1990)

Source: www.iqair.com (IQAir Nepal) | Country Climate and Development Report Nepal, The WB Group, 2022 | Current Climate Crisis in Nepal, The Himalayan Times, 2021 | Living Climate Changes: Behind the scenes in Nepal, BBC | Nepal Disaster Risk Reduction Portal | Global Assessment Report on Disaster Risk, UNDRR, 2022 | Climate Risk Country Profile Nepal, The World Bank Group, 2021