

AMNESTY INTERNATIONAL PUBLIC STATEMENT

Date: 8 July 2022 Index number: ASA 33/5828/2022

EXTREME WEATHER: SEARING HEAT WAVES AND TORRENTIAL RAINS IN PAKISTAN AND THEIR IMPACT ON HUMAN RIGHTS

In the last three months, thousands living in Pakistan experienced searing heat waves crossing 50 degrees Celsius (122F) in some places.¹ Scientists have attributed these heat waves to the climate crisis² and the Intergovernmental Panel on Climate Change warned that the frequency of such severe heat waves is likely to increase in the future in the region due to climate change.³ From March-May 2022, Pakistan recorded some of the highest temperatures in the country in the last 60 years.⁴

65 persons are estimated to have died in Pakistan including at least three children⁵ reportedly linked to the effects of the heat wave- but the actual numbers may be higher.⁶ Extreme heat can be deadly especially for children, older people, people with disabilities and chronic diseases. Consequences of heatwave on human health include impacts on the body's ability to regulate its temperature result in heat strokes, cramps, and exacerbate existing health issues. It can lead to chronic diseases like diabetes and can result in death or accelerate illness.⁷

The heat waves from March to mid-June are now followed by the onset of the monsoon in parts of the country with flash flood warnings and torrential rains causing loss of life and damage to property.⁸ A glacial lake also burst due to the combined effect of high temperatures and rain in Laspur Valley of Khyber Pakhtunkhwa Province, blocking roads.⁹ In May 2022, climate change triggered a melting glacier and flash floods damaged a bridge and homes and businesses in Gilgit-

¹ NBC News. 24 May 2022 "South Asia's intense heat wave a 'sign of things to come', nbcnews.com/science/environment/south-asias-intense-heat-wave-sign-things-come-rcna30239

² World Weather Attribution. 2022. "Climate Change made devastating early heat in India and Pakistan 30 times more likely". worldweatherattribution.org/wp-content/uploads/India_Pak-Heatwave-scientific-report.pdf

³ Intergovernmental Panel on Climate Change. "Regional Fact Sheet Asia". ipcc.ch/report/ar6/wg1/downloads/factsheets/IPCC_AR6_WGI_Regional_Fact_Sheet_Asia.pdf

⁴ UN News. 29 April 2022. "Extreme heat impacting millions across India and Pakistan". news.un.org/en/story/2022/04/1117272

⁵ The Borgen Project. 8 June 2022. "Severe Heat Wave in Pakistan". borgenproject.org/severe-heat-wave-in-pakistan/. The Express Tribune. 15 May 2022. "Three children die as scorching heatwave bakes Pakistan". tribune.com.pk/story/2356736/three-children-die-as-scorching-heatwave-bakes-pakistan; CBS news. 9 May 2022. "Severe heat wave kills dozens in India and Pakistan in a "snapshot" of what's to come from climate change, expert says". cbsnews.com/news/india-heat-wave-pakistan-climate-change-snapshot/

⁶ Columbia Climate School. 13 May 2022. "Bridge Collapse in Pakistan Due to Glacier Lake Outburst Flood". news.climate.columbia.edu/2022/05/13/bridge-collapse-in-pakistan-due-to-glacier-lake-outburst-flood/; Vox. 11 May 2022. "The extraordinary heat wave in India and Pakistan, explained". vox.com/23057267/india-pakistan-heat-wave-climate-change-coal-south-asia; CBS news. 9 May 2022. "Severe heat wave kills dozens in India and Pakistan in a "snapshot" of what's to come from climate change, expert says". cbsnews.com/news/india-heat-wave-pakistan-climate-change-snapshot/

⁷ World Health Organization. 1 June 2018. "Heat and Health". who.int/news-room/fact-sheets/detail/climate-change-heat-and-health

⁸ Pakistan Meteorological Department. 5 July 2022. Press release "More Monsoon Rains predicted in the Country during the week". nwfc.pmd.gov.pk/new/press-releases.php

⁹ Floodlist. 5 July 2022. "Pakistan – Fatalities Reported After Floods in Balochistan". floodlist.com/asia/pakistan-floods-balochistan-july-2022

Balkhistan in northern Pakistan.¹⁰ Previously in 2020, melting glaciers and similar flash floods damaged orchards and livelihoods in Hassanabad in Hunza district, Pakistan.¹¹

Monsoonal rains in parts of Pakistan like Sindh and Punjab were above normal in June 2022.¹² Pakistan is one of the most affected countries in the world by climate change according to the Global Climate Risk Index published by NGO Germanwatch.¹³

MARGINALISED GROUPS ARE MOST AFFECTED

According to reports, marginalised groups such as people living in poverty in Pakistan are some of the most impacted by the crisis unfolding, and it may take months to determine the real extent of impact on such groups.¹⁴ Some of the most at risk to severe weather linked to climate change are people with disabilities, women and children, farmers, people living in poverty in urban areas and migrants.¹⁵

Torrential monsoonal rains in July caused floods, washing away mud homes and make-shift shelters in Quetta with at least six people reported dead due to the floods as of 4 July with the death toll rising.¹⁶ At least 38 people are believed to have died in just three weeks between 14 June and 3 July due to floods and rain related causes linked to the severe monsoon in 2022.¹⁷ In June alone, national rainfall was estimated to be 68 percent above normal.¹⁸

Multiple reports including Amnesty's own investigations in Jacobabad in 2021 reveal how the marginalised groups are the most impacted by the severe weather conditions.¹⁹

DROUGHT AND PUBLIC HEALTH CONCERNS

Access to water is also threatened, linked to a drought brought about by the heatwave. Sindh and Balochistan received below normal rainfall during the month of May with mild to moderate drought conditions observed in these areas.²⁰ The

¹⁰ Democracy Now. 10 May 2022. "Melting Glacier Triggers Flash Floods in Northern Pakistan After Record Heat Wave". democracynow.org/2022/5/10/headlines/melting_glacier_triggers_flash_floods_in_northern_pakistan_after_record_heat_wave

¹¹ Al Jazeera. 9 June 2020. "Millions at risk as melting Pakistan glaciers raise flood fears". [aljazeera.com/news/2020/6/9/millions-at-risk-as-melting-pakistan-glaciers-raise-flood-fears](https://www.aljazeera.com/news/2020/6/9/millions-at-risk-as-melting-pakistan-glaciers-raise-flood-fears)

¹² Pakistan Meteorological Department. June 2022. "Drought Bulletin of Pakistan". ndmc.pmd.gov.pk/new/assets/bulletins/1657008905.pdf.

¹³ Germanwatch. 2020. "Global climate risk index 2020". [germanwatch.org/sites/default/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_14.pdf](https://www.germanwatch.org/sites/default/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_14.pdf)

¹⁴ The Borgen Project. 8 June 2022. "Severe Heat Wave in Pakistan". <https://borgenproject.org/severe-heat-wave-in-pakistan/>.

¹⁵ IFRC. Climate Centre. April 2021. "Climate Change Impacts On Health And Livelihoods:Pakistan Assessment". climatecentre.org/wp-content/uploads/RCRC_IFRC-Country-assessments-PAKISTAN-3.pdf

¹⁶ Floodlist. 5 July 2022. "Pakistan – Fatalities Reported After Floods in Balochistan". floodlist.com/asia/pakistan-floods-balochistan-july-2022; The News. 6 July 2022. "Quetta declared calamity-hit as heavy rains kill 13 in Balochistan". [thenews.com.pk/latest/971891-quetta-declared-calamity-hit-as-heavy-rains-kill-13-in-balochistan](https://www.thenews.com.pk/latest/971891-quetta-declared-calamity-hit-as-heavy-rains-kill-13-in-balochistan); The Tribune. 5 July 2022. "25 die as rain pummels Balochistan for two days". tribune.com.pk/story/2364822/quetta-declared-calamity-hit-as-heavy-rains-kill-at-least-25-in-balochistan

¹⁷ Floodlist. 5 July 2022. "Pakistan – Fatalities Reported After Floods in Balochistan". floodlist.com/asia/pakistan-floods-balochistan-july-2022; WTOP News. 5 July 2022. "Monsoon rains lash Pakistan; 9 killed in country's southwest". [wtop.com/asia/2022/07/monsoon-rains-lash-pakistan-6-killed-in-countrys-southwest/](https://www.wtop.com/asia/2022/07/monsoon-rains-lash-pakistan-6-killed-in-countrys-southwest/).

¹⁸ Pakistan Meteorological Department. June 2022. "Pakistan monthly climate summary". pmd.gov.pk/cdpc/Pakistan_Monthly_Climate_Summary_June_2022.pdf

¹⁹ Columbia Climate School. 13 May 2022. "Bridge Collapse in Pakistan Due to Glacier Lake Outburst Flood". news.climate.columbia.edu/2022/05/13/bridge-collapse-in-pakistan-due-to-glacier-lake-outburst-flood; Amnesty International. 28 October 2021. "Pakistan: "Unliveable for humans": A visual documentation of Jacobabad, one of the world's hottest cities". [amnesty.org/en/documents/asa33/4876/2021/en/](https://www.amnesty.org/en/documents/asa33/4876/2021/en/).

²⁰ Pakistan Meteorological Department. May 2022. "Drought Bulletin of Pakistan". ndmc.pmd.gov.pk/new/assets/bulletins/1654155872.pdf

intensity of droughts in Pakistan have increased over the last century according to the International Food Policy Research Institute.²¹ March 2022 was the ninth driest month nationally in Pakistan since 1961.²²

The drought conditions experienced in parts of Pakistan during April and May 2022 and related health concerns were exacerbated by a deadly cholera outbreak coinciding with water scarcity in May 2022.²³ Outbreaks of cholera are linked to inadequate access to safe drinking water. Those living in underserved settlements in cities like Karachi are deemed highly vulnerable to health consequences like cholera as access to safe drinking water is impacted by overcrowding, poor sanitation and climate induced impact like drought.²⁴ In Sindh alone 234 cases were reported between 15 January and 27 May 2022 with over 25 and 31 cases respectively also reported in Punjab and Balochistan.²⁵ 49 percent of those impacted are children below the age of nine according to the World Health Organization.²⁶

Similarly, those living in areas with poor access to health facilities remain highly vulnerable to public health issues arising from or contributed to by severe weather incidents.

INCREASED ENERGY DEMAND

The heat wave is also preventing people from accessing public spaces in Pakistan, as people stay indoors to survive the heat during the day in the most affected areas, for example in Karachi, Sindh. The increased demand for electricity to cool homes and offices also led to load shedding (that is, regular disruptions of power supply to manage increased demand) by the resource-constrained energy sector in areas like Karachi, further exacerbating the experiencing of heat related health consequences, especially for people living in poverty.²⁷

Increased heat waves led to excessive demand for coal for cooling homes and offices, further exacerbating the pollution through coal energy sources. The country pledged to have 60% of all energy produced become renewable by 2030 at COP26. However, buried in the Nationally Determined Contributions is that Pakistan will continue to develop local coal production, forming 15% of its energy sources.²⁸

REDUCED ACCESS TO FOOD

The severe weather in the region also impacted rainfall having a devastating impact on the agriculture dependent communities and triggering concerns for food security.²⁹ In May, the average national rainfall in Pakistan was 48.4

²¹ IFPRI. 2022. "Global Food Policy Report 2022: Regional Developments".
ifpri.org/utis/getfile/collection/p15738coll2/id/135892/filename/136097.pdf#page=15

²² Pakistan Meteorological Department. March, 2022. Pakistan's Monthly Climate Summary.
pmd.gov.pk/cdpc/Pakistan_Monthly_Climate_Summary_March_2022.pdf

²³ The Guardian. 23 May 2022. "Pakistan town blames deadly cholera outbreak on government neglect". <https://www.theguardian.com/global-development/2022/may/23/pakistan-town-blames-deadly-cholera-outbreak-on-government-neglect>

²⁴ Khan HA, Masood W, Siddiqui A, Ahmad S, Salman Y, Essar MY. 31 May 2022. "The Cholera outbreak in Karachi, Pakistan: Challenges, efforts and recommendations". *Ann Med Surg (Lond)*. 2022 Jun;78:103873. doi: 10.1016/j.amsu.2022.103873. Epub. PMID: 35663121; PMCID: PMC9151462.

²⁵ World Health Organization. 17 June 2022. "Outbreak at a glance ". [who.int/emergencies/disease-outbreak-news/item/2022-DON391](https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON391)

²⁶ World Health Organization. 17 June 2022. "Outbreak at a glance ". [who.int/emergencies/disease-outbreak-news/item/2022-DON391](https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON391)

²⁷ The Express Tribune. 15 May 2022. "Heat wave to persist till May end". <https://tribune.com.pk/story/2356680/heatwave-to-persist-till-mays-end>

²⁸ White, Iron, *We Don't Believe in Net Zero at the Moment – Pakistan's Top Climate Official at COP26*, The Third Pole, 4 November 2021.
<https://www.thethirdpole.net/en/climate/we-dont-believe-in-net-zero-pakistan-top-climate-official-at-cop26/>

²⁹ Al Jazeera. 21 May 2022. "'Perfect climate storm': Pakistan reels from extreme heat". [aljazeera.com/news/2022/5/21/hold-heatwave-in-pakistan-and-climate-change](https://www.aljazeera.com/news/2022/5/21/hold-heatwave-in-pakistan-and-climate-change); International Food Policy Research Institute. 2022. "Global Food Policy Report 2022".
ebrary.ifpri.org/utis/getfile/collection/p15738coll2/id/135889/filename/136101.pdf

percent below normal.³⁰ Many places in Sindh, Punjab and Balochistan had nil rainfall or only traces in May 2022.³¹ Balochistan was the worst affected, with the province receiving 90 percent less than the normal rainfall in May.³²

The rising temperatures have impacted crops in Pakistan with reports of an estimated 50-60 percent reduction in the country's prized mango harvest in 2022.³³ Other crops like wheat are also at risk. Reports suggest that wheat crops reduced in 2022 due to the early onset of summer temperatures in parts of Punjab for example.³⁴ By 2030, 40 million Pakistanis will be pushed to hunger due to climate change according to the International Food Policy Research Institute.³⁵

IMPACTS ON ADEQUATE STANDARD OF LIVING

Reports indicate that the heat waves have ripple effects on livelihoods, economies and energy sustainability in the hardest hit areas. Amnesty International documented in 2021 how marginalised groups in Jacobabad in Pakistan including people living in poverty, persons with disability and day-wage workers, particularly those involved in outdoor work are some of the most at risk of heat-related impacts, suffering from ill health and with a negative impact on their standard of living.³⁶ People have a right to an adequate standard of living which is protected under international human rights law.³⁷ The right to adequate food is enshrined in international human rights treaties ratified by Pakistan and includes the physical and economic access to adequate food or means for its procurement.³⁸ It is also guaranteed by Article 38 of Pakistan's constitution, whereby the "state shall provide basic necessities of life including food, clothing, housing, education and medical relief."³⁹ In the context of heat waves, poverty, food scarcity, negatively affect physical and economic access to adequate food.

Pakistan has been facing an acute power shortage during some of the hottest months that the country faces. The people residing in parts of Karachi city have reported 14-hour power cuts,⁴⁰ while some rural areas in Jacobabad received

³⁰ Pakistan Meteorological Department. May 2022. "Pakistan monthly climate summary". pmd.gov.pk/cdpc/Pakistan_Monthly_Climate_Summary_May_2022.pdf

³¹ Pakistan Meteorological Department. May 2022. "Pakistan monthly climate summary". pmd.gov.pk/cdpc/Pakistan_Monthly_Climate_Summary_May_2022.pdf

³² Pakistan Meteorological Department. May 2022

³³ Al Jazeera. 21 May 2022. "Perfect climate storm: Pakistan reels from extreme heat". [aljazeera.com/news/2022/5/21/hold-heatwave-in-pakistan-and-climate-change](https://www.aljazeera.com/news/2022/5/21/hold-heatwave-in-pakistan-and-climate-change); Morning Star. 2 July 2022; Reuters. 26 May 2022. "Pakistan's mango production to fall by 50% due to heatwave, water shortage". [reuters.com/world/asia-pacific/pakistans-mango-production-fall-by-50-due-heatwave-water-shortage-2022-05-26/](https://www.reuters.com/world/asia-pacific/pakistans-mango-production-fall-by-50-due-heatwave-water-shortage-2022-05-26/)

Climate change in Pakistan: a terrifying crisis. [morningstaronline.co.uk/article/f/climate-change-pakistan-terrifying-crisis](https://www.morningstaronline.co.uk/article/f/climate-change-pakistan-terrifying-crisis).

³⁴ Dawn. 29 April 2022. "Footprints: Wheat Worries". [dawn.com/news/1687366](https://www.dawn.com/news/1687366); Technology Times. 17 June 2022. "Recurring Heat Waves And Pakistan's Climate Change". [technologytimes.pk/2022/06/17/recurring-heat-waves-and-pakistans-climate-change/](https://www.technologytimes.pk/2022/06/17/recurring-heat-waves-and-pakistans-climate-change/)

³⁵ International Food Policy Research Institute. 2022. "Global Food Policy Report 2022". [ebrary.ifpri.org/utis/getfile/collection/p15738coll2/id/135889/filename/136101.pdf](https://www.ifpri.org/utis/getfile/collection/p15738coll2/id/135889/filename/136101.pdf) at p.149.

³⁶ Amnesty International. 28 October 2021. "Pakistan: "Unliveable for humans": A visual documentation of Jacobabad, one of the world's hottest cities". <https://www.amnesty.org/en/documents/asa33/4876/2021/en/>.

³⁷ Article 15, Universal Declaration of Human Rights.

³⁸ General Comment 12, Committee on Economic, Social and Cultural Rights, 1999.

³⁹ Constitution of the Islamic Republic of Pakistan, Article 38

⁴⁰ BOL News. 8 June 2022. "Recurring power outages reach up to 14 hours in Karachi". [bolnews.com/pakistan/2022/06/recurring-power-outages-reach-14-hours-in-karachi/amp/](https://www.bolnews.com/pakistan/2022/06/recurring-power-outages-reach-14-hours-in-karachi/amp/); Gulf News. 28 June 2022. "Pakistan: Karachi residents protest against worst power cuts". [gulfnews.com/world/asia/pakistan/pakistan-karachi-residents-protest-against-worst-power-cuts-1.88904807](https://www.gulfnews.com/world/asia/pakistan/pakistan-karachi-residents-protest-against-worst-power-cuts-1.88904807)

electricity for only six hours in the day.⁴¹ A water shortage also exists, further showing the pressure that climate change on access to safe drinking water.⁴²

People in Karachi began protests against the lack of water and electricity supplies early evening on 27 June 2022, but according to media reports, the police violently dispersed the protest with the use of batons and teargas when they refused to unblock an arterial road to the port.⁴³

Assistance to cope with extreme weather events remains challenging. According to the UN World Food Program, Pakistan's Disaster Risk Management policies are ambitious, but suffer from a lack of implementation. The gaps are attributed to insufficient coordination, a dearth of funds, resources and expertise.⁴⁴

The primary responsibility to take climate change adaptation measures to remain resilient in such instances of extreme weather and to provide response and remedy falls on the state. Authorities in Pakistan have an obligation to adopt all necessary measures to assist people to adapt to the foreseeable and unavoidable effects of climate change, thus minimizing the impact of climate change on the enjoyment of human rights. They should also take all feasible measure to support people affected by extreme weather events and other climate change-related impacts.

However, other nations who have resources to assist, also hold responsibility to support states that are experiencing the impact of the climate crisis through financial and technical co-operation. Besides urgently increasing their emission reduction targets and rapidly phase out fossil fuels, wealthy industrialized states must also substantially increase funding for human rights-consistent climate mitigation and adaptation initiatives in less wealthy countries. This means that they should make concrete pledges reflecting their level of responsibility and capacity with a specific timeline for delivery. They must also specifically raise new and additional finance to support and compensate people in developing countries whose rights have been negatively affected as the result of loss and damage caused by the climate crisis.

BACKGROUND

Whilst hot weather is normal in the South Asia region preceding the monsoon seasons, the searing temperatures this year have been above average⁴⁵ while rainfall has been below normal in the months of March, April and May. Since mid-June, torrential rains have buffeted parts of the country as the monsoon set in.

In 2021, Amnesty International documented the impact of heat waves on people in Jacobabad in Pakistan.⁴⁶ People used whatever means necessary to survive the intense heat waves that are becoming more frequent in the region.⁴⁷ In Pakistan, mean daytime temperatures were 2.21 degrees Celsius above normal temperatures in May in several parts of the country according to its meteorological department.⁴⁸ On 14 May, Jacobabad in Pakistan recorded the hottest temperatures in the month of May across Pakistan at 51 degrees Celsius.⁴⁹ The national mean monthly temperature in

⁴¹ Al Jazeera. 16 May 2022. "Water crisis, power cuts worsen misery in Pakistan's hottest city". [aljazeera.com/news/2022/5/16/water-crisis-power-cuts-worsen-misery-in-pakistans-hottest-city](https://www.aljazeera.com/news/2022/5/16/water-crisis-power-cuts-worsen-misery-in-pakistans-hottest-city)

⁴² Dawn. 17 May 2022. "Pakistan's water crisis to deepen with climate change". [dawn.com/news/1690086](https://www.dawn.com/news/1690086); DW. 9 November 2017. "How climate change is aggravating Pakistan's water crisis". [dw.com/en/how-climate-change-is-aggravating-pakistans-water-crisis/a-41315151](https://www.dw.com/en/how-climate-change-is-aggravating-pakistans-water-crisis/a-41315151); ANI. 17 May 2022. "Pakistan's water woes to worsen with climate change". [aninews.in/news/world/asia/pakistans-water-woes-to-worsen-with-climate-change20220517172348/](https://www.aninews.in/news/world/asia/pakistans-water-woes-to-worsen-with-climate-change20220517172348/)

⁴³ Amnesty International, *Pakistan: Authorities must protect and facilitate the right to protest*, Press Release, 28 June 2022

⁴⁴ Savelli, A. et al WFP Critical Corporate Initiative: Climate Response Analysis Pakistan. The Alliance of Bioversity and The International Center for Tropical Agriculture; World Food Programme. 2021 <https://www.wfp.org/publications/climate-response-analysis-pakistan>

⁴⁵ NPR. 3 May 2022. "South Asia's heat wave leaves a billion people in danger of related health problems". <https://www.npr.org/2022/05/03/1096075550/south-asias-heat-wave-leaves-a-billion-people-in-danger-of-related-health-proble>

⁴⁶ Amnesty International. 28 October 2021. "Pakistan: "Unliveable for humans": A visual documentation of Jacobabad, one of the world's hottest cities". <https://www.amnesty.org/en/documents/asa33/4876/2021/en/>.

⁴⁷ Amnesty International. 28 October 2021. "Pakistan: Life in one of world's hottest cities reveals devastating impact of climate crisis for world's poorest". <https://www.amnesty.org.uk/press-releases/pakistan-life-one-worlds-hottest-cities-reveals-devastating-impact-climate-crisis>

⁴⁸ Pakistan Meteorological Department. May 2022. "Pakistan's Monthly Climate Summary". http://www.pmd.gov.pk/cdpc/Pakistan_Monthly_Climate_Summary_May_2022.pdf. At p.1

⁴⁹ Pakistan Meteorological Department. May 2022. At p.3

Pakistan overall was 2.17 degrees warmer than normal average temperatures in the country and was the fifth warmest May in Pakistan since 1961.⁵⁰

⁵⁰ Pakistan Meteorological Department. May 2022. At p.3