



Islamic Relief Worldwide

“THE LAND IS ACHING”

EXTREME CLIMATE-CHANGE INDUCED FLOODING IN PAKISTAN



FOREWORD

Pakistan is facing an unprecedented humanitarian disaster, with millions of people having lost their homes, their belongings, their livelihoods, and their land. The estimated population of people displaced as a result of the floods is nearly five times the amount of people displaced in Ukraine due to the war, while the flooded area is larger than the entire land mass of the United Kingdom. According to the eyewitness account of Islamic Relief's own CEO Waseem Ahmad, the amount of suffering among flood-affected communities is "almost too big to fully comprehend." Desperate families are seeking refuge in makeshift shelters without adequate access to food and water, pregnant women are giving birth in unhygienic camp situations without access to maternal care, workers are facing the loss of their livelihood, and children are grappling with a more precarious future than ever before.

As millions await help which does not arrive, the stories and voices of the affected communities are already fading from international media. The short attention span of the news cycle and the international community at large is threatening the erasure of focus on Pakistan, despite the floods constituting one of the worst climate-induced disasters in recent history. The international community, for all their words and pledges, are not doing their part in providing the support that the people of Pakistan need to recover and rebuild, nor are they sufficiently working towards ensuring that similar catastrophes are not repeated elsewhere.

What the people of Pakistan need right now is not charity; it is justice. Devastation of this scale could have been prevented if the loss and damage funding promised in 2009 had materialised and wealthy countries responsible for the bulk of historic gas emission had made serious commitments around addressing climate change and climate justice. We already know what needs to be done: we need to stop burning fossil fuels, stop the commodification and exploitation of nature for the sake of unending economic growth, and establish financial facilities to address loss and damage for those that are the most vulnerable. The continued absence of serious commitments around these issues is a taint on high-income countries, who have amassed their wealth through the exploitation of the Earth and its resources yet refuse to take meaningful action to address its consequences.

The level of calamity in Pakistan now is a warning that must be taken seriously. If we continue our current path of economic and corporate greed without taking serious climate action, disasters of this scale will only become increasingly common. Today it is the people of Pakistan, tomorrow the devastation may lie elsewhere, with another vulnerable nation.



Shahin Ashraf, MBE
Head of Global Advocacy

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Cover Image: "Coverage of Pakistan's floods has quantified the loss of material goods but has not acknowledged that the land is also aching. I was raised with the belief that the land holds a memory, that it is a living being.

"Many of the tribal, indigenous people and sharecroppers who have been forced to flee are not only hurting from the loss of their homes, they are aching for their land, which connects them to generations of family members before them.

"It will never be the same, the soil will not be the same, the seed will not grow the same. It is beyond material loss, it's spiritual and emotional. The land is in pain, we feel it too."

- Ayisha Siddiqa, Pakistani environmental rights advocate

SUMMARY

Pakistan is currently experiencing destruction and suffering on an unfathomable scale. Early estimates show that 33 million people – including 16 million children – have been affected by the floods, translating to roughly about one in every seven people in Pakistan. As of 28 September 2022, hundreds of thousands of homes, roads, bridges, schools, and hospitals have been damaged or destroyed, 4.4 million acres of crops have been ruined, and over 1,600 lives have been lost. Millions of people have lost their loved ones, their homes, their livelihoods, and the land on which they built their entire lives. Women have been among the worst impacted, with 73,000 pregnant women having been expected to give birth in September alone.¹

Unequivocally, Islamic Relief notes that this level of harm was not unavoidable or inevitable. In the aftermath of the 2010 ‘superfloods’ in Pakistan, which devastated around 22 million people, Islamic Relief was among those persistently calling for a better system of disaster management and climate adaptation based on principles of locally-led adaptation, historical responsibility, and global solidarity.² The evidence at the time accurately suggested that the next severe flooding incident was around the corner, and the international community’s repeated failure to learn its lessons would result in further loss and suffering. Yet, the warnings of environmentalists and climate change experts went largely unheeded and there was only limited progress in bettering the climate response.

Now, as Pakistan suffers from its worst humanitarian disaster in living memory, we face another pivotal moment in which urgent and decisive action is necessary. The consequences of climate change are no longer a future problem - they are here now. And worse still, they are largely impacting the most vulnerable communities with the least culpability in driving climate change. As the news cycle inevitably moves onto the next crisis, wealthier countries must not be allowed to forget their historical responsibility to ensure that the needs of these communities are addressed through appropriate loss and damage mechanisms, and that they receive the support and resources necessary to adapt to future crises. Otherwise, Pakistan and other vulnerable countries will continue to plunge further into debt and despair with every impending disaster – with the most marginalised populations bearing the brunt.

Lessons (not) learned

Although early attribution studies have already established a link between the extreme intensity of rainfall this monsoon season and climate change, it is equally important to remember that the extent of the losses incurred during the floods is also due to Pakistan’s extreme vulnerability caused by poverty, colonial legacy, and poor governance. Despite Pakistan consistently ranking among the top 10 countries most vulnerable to climate change, the country still lacks adequate climate response to combat the effects of extreme weather events.

One of the most critical problems in this regard is poor infrastructure and development. The decaying water management structure is unable to meet the demands of the population and is hazardous in the face of intensified weather patterns. Houses built along rivers and other bodies of water, constructed by poor communities with insecure access to land, are extremely vulnerable to flooding and cannot withstand the shocks of extreme weather. Lack of comprehensive flood planning means that entire villages and communities are exposed to the risks amplified by climate change.

Such problems require a well-defined and integrated disaster management plan, but Pakistan lacks the resources, expertise, and political will to create a better system. Poor governance and mismanagement, particularly due to competition between government agencies, prevent already scarce resources from being used effectively. Moreover, in the face of a number of other pressing concerns, climate change and adaptation often get neglected, leading to ill-prepared disaster management measures.

Islamic Relief on the ground: Our adaptation efforts

Islamic Relief has been operational in Pakistan for almost 30 years, during which time we have worked towards sustainable adaptation that marries climate action with Sustainable Development Goals (SDGs) and poverty reduction. Our interventions have included structural measures such as retrofitting public institutes, improving flood protection measures, and constructing water retention structures, as well as non-structural measures such as strengthening local capacity by forming of community-based disaster risk management (CBDRM) committees, disaster risk reduction (DRR) workshops, and early warning systems. Throughout our work in Pakistan, we have prioritised the needs of local communities and followed a participatory development approach which ensures community ownership. In doing so, we have been able to produce more interaction, coordination, and social cohesion among the communities with which we work – paving the way for collective action against climate change and for mobilising local resources.

Where adaptation ends

While mitigation and adaptation are critical actions which minimise harm, we also recognise that there remain consequences of climate change to which adaptation is impossible, or to which adaptation is possible but is inaccessible due to lack of resources or feasible measures. This is referred to as loss and damage in climate change terminology and includes both economic and non-economic loss and damage.

It is no secret that although vulnerable poorer countries have contributed the least to global cumulative gas emissions, they often bear the brunt of loss and damage – particularly as they lack the resources to adapt. This makes loss and damage an issue of climate justice, which wealthier countries that are responsible for a disproportionately large contribution to gas emissions have a historical debt to vulnerable countries that are suffering the consequences of a crisis created by the former. The current tragedy unfolding in Pakistan is paradigmatic of loss and damage in action and proves once again the necessity of an appropriate financial mechanism to address loss and damage where adaptation is not possible. As negotiations of loss and damage take centre stage again at the pivotal climate conference COP27 this year, it is critical that serious commitments are made around loss and damage finance on the basis of climate justice and global solidarity.

Emergency relief by Islamic Relief Pakistan

Responding to the recent flooding, Islamic Relief has been quick to reach the worst hit communities in Balochistan, Khyber Pakhtunkhwa and Sindh due to our strategic geographical footing across Pakistan. As of 24 September, we had reached over 276,200 affected people with lifesaving aid including tents, food packages, drinking water, kitchen sets, hygiene kits, tarpaulin sheets, and multipurpose cash grants. Although this is a good start, we aim to scale up our response to ensure that affected communities are safe from further harm and can rebuild their lives and livelihoods. To that end, we plan on boosting our funding to £30 million to rebuild housing and infrastructure, revitalise agriculture, provide cash grants and employment opportunities, step up efforts prevent gender-based violence, address the psychological impact of floods, and provide support for the most vulnerable groups including people with disabilities and pregnant women.

Looking ahead

Geographically, Pakistan is in a region which is particularly vulnerable to climate change, with an estimated annual temperature increase that is above the global average. Coupled with Pakistan’s lack of preparedness for extreme weather events, this means that the next humanitarian disaster might just be around the corner. As Islamic Relief, we call on the international community and the government of Pakistan to take significant and urgent action to prevent further suffering.

We believe the international community, UN bodies, and NGOs should:

- increase their pledges to respond to the immediate and urgent needs of flood-stricken communities, with a predictable and flexible payment schedule
- create a post-catastrophe debt relief fund which allows Pakistan to focus its limited financial resources on recovering and rebuilding
- make interest-free debt moratoriums automatic for all developing countries experiencing climate disasters
- finance longer-term recovery and adaptation efforts in Pakistan by providing financial and technical support
- establish a loss and damage financial facility with a fair allocation for Pakistan in line with the polluter pays principle
- convey accessible messaging to citizens of countries that are expected to finance loss and damage facilities .

We believe the government of Pakistan should:

- produce an integrated and holistic disaster management plan at all scales of governance which places women at the centre of decision-making
- develop assessments of district vulnerabilities and capacities to inform future plans
- divide and delegate power between different levels of government with the aim of improving cooperation and decrease overlap
- build local capacity and community engagement to strengthen adaptation
- prioritise the needs and voices of the most vulnerable populations to ensure no one is left behind
- aim to ‘build back better’ and prioritise inclusivity and sustainability over the commodification of nature and ecology
- rebalance spending on infrastructure and tackling poverty to ensure that current challenges around the lack of food security are addressed
- produce an actionable plan of securing land rights for poor populations, indigenous people, and women in particular
- create public awareness around climate change diplomacy and loss and damage
- put together a concerted effort to make the case for additional funding at COP27.

Hundreds of thousands of displaced pregnant women are facing unsanitary and unsafe camp conditions with little access to maternal health services. The United Nations Population Fund (UNFPA) estimated that there are almost 650,000 pregnant women in flood-affected areas, with 73,000 expected to give birth in September.³



INTRODUCTION

From mid-June 2022 until late August, Pakistan experienced record-breaking monsoonal rainfall and the worst flooding in its history, with over 1,500 lives lost. At the height of the floods, one-third of the country was thought to be underwater.

Pakistan has always been particularly vulnerable to disasters, both due to its hazard-prone geographic and strategic location and anthropogenic factors such as rapid population growth, uncontrolled development, and poor infrastructure.⁴ In recent years, Pakistan has faced several major disasters including floods, earthquakes, landslides, and droughts⁵ – all of which have led to further strain on a country that is already struggling with high inflation, political instability, and crushing debt.

The current floods, have already far exceeded the impact of any previous disaster, with 33 million people affected (one in seven people), compared to 22 million affected in the 2010 floods,⁷ which had previously been the worst humanitarian disaster in Pakistan. The intense monsoon rains which began in June resulted in flash floods, landslides, burst glaciers, and the overflowing of the Indus River which burst its banks across thousands of square kilometres.⁸ The rainfall levels, compounded by flash flooding and riverine floods in certain areas, were observed to be 2.9 times higher than the national 30-year average. The worst hit provinces were Balochistan and Sindh, with the former receiving 5.1 times its 30-year average rainfall as of 27 August⁹, while Sindh received 5.7 times its 30-year average. According to an attribution study by World Weather Report, the five-day maximum rainfall levels were found to be 75 per cent more intense than they would have been had the climate not warmed by 1.2C, while the 60-day rainfall was found to be 50 per cent more intense.¹⁰

“No picture can convey the scope of this catastrophe. The flooded area is three times the size of my entire country, Portugal.”

– Antonio Guterres

| | |
|-------------------------|------------------------------------|
| 1.6K | People killed |
| 12.9K | People injured |
| 13K | Kilometres of roads damaged |
| 765K | Houses destroyed |
| 2M | Houses damaged |
| 4.4M⁶ | Acres of crops damaged |

To date, 81 districts across Pakistan have been declared 'calamity hit', meaning that over 70 per cent of their agriculture, livestock, and infrastructure have been destroyed.¹¹ Although the numbers remain fluid, reports suggest that thousands of homes have been destroyed or damaged, over 12,700 km of roads have been damaged, 1,500 lives have been lost, and 7.6 million people temporarily displaced as of 27 September.¹² The rain has largely stopped for now, but it will be months before all the water recedes, leaving Pakistan to deal with its aftermath and consequences, including increased poverty, food insecurity, and public health crises.

The price of a kilogram of rice has reportedly risen by nearly 80 per cent from earlier in the year. With most of the country relying on agriculture and farmland for their income, Pakistan is facing a rapidly deteriorating situation of food insecurity.¹³ The prevalence of global acute malnutrition (GAM) and severe acute malnutrition (SAM), which is already high in Balochistan and Sindh, is expected to worsen further with the impact of the floods.¹⁴ On a global scale, this also risks exacerbating the global food market crunch caused by the Covid-19 pandemic and the war in Ukraine.¹⁵

Moreover, the combination of stagnant and contaminated water, hot humid air, and lack of access to clean water supplies and sanitation systems risks an impending public health disaster.¹⁶ Recent reports show increased incidences of malaria, dengue, acute watery diarrhoea, and cholera.¹⁷ With over 1,460 public health facilities damaged and medical supplies inaccessible due to destroyed roads, people at increased risk of succumbing to disease are less likely to receive the medical attention they need.¹⁸

Invariably, every major disaster also exacerbates existing socio-political and socio-economic inequalities, with the most vulnerable and marginalised communities most severely affected. This disaster is no different. Many people who have been living in poverty will have lost their homes as they likely lived in inadequate and poor-quality housing along bodies of water, low-lying areas, and

areas with poor infrastructure.¹⁹ Moreover, women and girls will experience additional challenges due to an increased risk of gender-based violence and gender discrimination which can result in early and forced marriage, sexual abuse, harassment, and exploitation. The United Nations Population Fund²⁰ noted that there are almost 650,000 pregnant women in flood-affected areas, of which almost 73,000 were due to give birth in September. These women are particularly vulnerable and face numerous health and safety risks. With the lack of adequate protection and safeguarding mechanisms in flood-affected districts, women and girls will be largely cut off from the support they need.

There is an urgent need to act now. While the immediate support and funding commitments of the international community are appreciated, they are not enough. Millions of people are suffering, and we need to act urgently and decisively to prevent further suffering. Our rapid needs assessment reports show that people devastated by the floods are in critical need of food items, multi-purpose cash grants, and temporary shelter. To protect them from mosquitos spreading malaria, affected communities require tents, mattresses, and tarpaulin sheets as well as mosquito nets and repellents. As a matter of safety and sanitation, they also need portable latrines and hygiene kits. To address these immediate needs, and ensure long-term rehabilitation, the international community must step up and provide the resources that Pakistan needs to recover.²¹



DOUBLE WHAMMY FOR WOMEN AND GIRLS

While major disasters affect every person within the scope of their location, the extent of this impact is rarely felt equally. Research shows that women and children are **14 times more likely** than men to die in major disasters due to a number of intersecting factors including lack of access to education, limited adaptation, economic conditions, and cultural norms.²³

This rings particularly true in Pakistan, where gender parity is ranked second to worst in the world according to the 2022 World Economic Forum’s Global Gender Gap Index report.²⁴ Majority of women within the flood-affected regions come from ultra conservative and traditional backgrounds in which their social roles confine them to their homes and significantly limit their mobility and education. Cultural restrictions resulting in minimal outside exposure, and the consequent lack of access to critical adaptation skills such as swimming, navigation, or self-defence, mean that these women are far more vulnerable to the consequences of flooding than their male counterparts.²⁵

For example, many women, are not able to evacuate the areas where they live as a result of lack of adaptative skills or patriarchal norms which exclude them from leaving their homes. Where they are able to evacuate, the camps in which they are forced to stay for protracted periods of time do not offer much relief. Women living in camps are confronted with a number of challenges regarding their safety and wellbeing, including gender discrimination, abuse, a shortage of safe hygiene and sanitation systems, a lack of access to health services (particularly for pregnant women) and a lack of adequate safeguarding mechanisms.²⁶ Girls face an increased likelihood of being forced into early marriage as families become unable to provide for their children, while displaced women face a rise in domestic violence and sexual abuse within unsafe camp conditions.²⁷ The absence of consideration of gender within the humanitarian sphere means that women are prevented from receiving humanitarian relief on the same scale as men, as preconditions for relief such as ID cards and marriage certificates create an access barrier, and patriarchal practices result in men monopolising the already limited resources.²⁸ Women and girls also economically recover much more slowly than men in the aftermath of disasters, as they lack access to the resources and land that they need to rebuild their lives.

The lack of adequate gender-responsive policies to address the needs of women has consequences beyond the immediate impact on women themselves. Women are often the backbone of their communities and play a significant role in maintaining social cohesion and community adaptation. Research shows that women invest in their families and communities at a higher proportion than men and are more likely to encourage children’s access to education.²⁹ The devastating impacts of the floods on women consequently have knock-on effects within wider communities, which suffer when women are harmed. It is critical, therefore, that policy solutions and climate action prioritise the voices of local women and embed gender justice into every stage of decision-making to ensure that women and girls receive the support that they need within disaster contexts. In practical terms, this means gender conscious DRR programmes, prioritisation of women’s needs within camps and relief services, targeted trainings to develop women’s adaptative capacities, and economic empowerment of women through skills development, entrepreneurship, and land rights – all of which require serious funding commitments by the government of Pakistan and the wider international community.



BACKGROUND

Pakistan is situated between the Karakoram Mountain range, the Himalayas, and China in the northeast, bordered by Afghanistan in the northwest, Iran in the southwest, the Arabian Sea in the south, and India in the east. It occupies a position of great geostrategic significance in South Asia and covers an area of 770,880 km³⁰ with a population of over 230 million people, making it the fifth most populous country in the world.³¹

The geographical area of Pakistan consists of five major regions: the Hindu Kush and Western mountains, the Himalayan and Karakoram ranges, the Balochistan Plateau, the submontane plateau, and the Indus River Plain which flows from China and enters Pakistan through Gilgit Baltistan. In terms of administrative units, Pakistan is a federation of the provinces of Punjab, Sindh, Balochistan, and Kyber Pakhtunkhwa, federal territory Islamabad Capital, and autonomous administrative territories Azad Jammu and Kashmir and Gilgit-Baltistan— with each administrative division being unique in its ethnic, linguistic, and ecological make-up.³² The topography varies widely across these regions, consisting of remarkably flat plain lands in the south and high mountainous ranges in the north.³³

The weather is similarly varied in Pakistan, with a mostly arid desert climate in the southern provinces and cooler weather in the northern uplands and Himalayas. Although most of the country receives very little rainfall, inter-annual rainfall varies significantly in the northern region where monsoons lasting from July to September can carry heavy rainfall to upwards of 200 mm a month. El Nino is a significant influence on climate variability in Pakistan and can cause anomalies which lead to severe flooding, affecting half a million people annually.³⁴

Due in part to its location between two precipitation-bearing weather systems (monsoon rains in the summer and westerly disturbances from the Mediterranean Sea during winter), Pakistan is generally prone to extreme weather events and natural catastrophes.³⁵ As climate change worsens and strengthens the effects of these extremes, Pakistan is predicted to become more vulnerable to disasters. There is already strong evidence of an increasing trend in extreme rainfall in South Asia, with an intensified monsoon season, though the extent of human influence on this trend is not yet evidenced.³⁶ The current floods, caused by a number of factors including the La Nina climate pattern and an unusually hot summer which enhanced an intense depression from the Arabian sea, is only the latest in a series of worsening humanitarian disasters that is predicted to hit the country. With a Human Development Index of 0.557 and 38.8 per cent of the population living in poverty,³⁸ Pakistan is largely unprepared and unequipped to cope with such impending disasters.

LESSONS (NOT) LEARNED

“We kept crying and screaming after the 2010 floods. We kept telling local authorities that it will take years to rebuild if another flood hits us. Look where we are now. People here don’t know whether to stay or leave.”³⁹

While climate change has been at the forefront of the conversation on the floods in Pakistan, it is important to note that the extent to which it has played a role in the devastation will only be fully determined once the necessary attribution studies have been completed. While some of these studies are underway and the World Weather Attribution has already established a link between climate change and the worsening floods,⁴⁰ it remains difficult to quantify the extent to which climate change has been a factor. Attributing any singular weather event to climate change carries the risk of obscuring a more complicated picture.

Nevertheless, climate experts claim that it is evident climate change is a factor in the increasingly severe and unpredictable weather patterns in Pakistan.⁴¹ Research already tells us that monsoons are getting more extreme and changing their traditional patterns because of climate change. We also know that warmer temperatures due to global warming are leading to more moisture in the air and the accelerated evaporation of water, while higher temperatures at sea are producing clouds with a greater ability to travel further over land, resulting in increased rainfall over an extended area which may include places not previously subject to flooding.⁴²

According to the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report,⁴³ disaster events such as heatwaves and floods will be more intense and frequent in South Asia this century due to climate change. Earlier in 2022, during its pre-monsoon season, Pakistan experienced sweltering heatwaves, with temperatures exceeding 40 degrees celsius for prolonged periods. According to an attribution study conducted in May, climate change made such temperatures 30 times more likely.⁴⁴ Although meteorologists began expressing concern in April that these extreme temperatures would likely result in stronger monsoons with above normal rainfall levels, this warning largely fell on deaf ears.⁴⁵

It is very likely that climate change, largely induced by the carbon emissions of wealthy countries, is a major driver of the extreme floods we see today. **While climate change generates extreme weather events and increased exposure to risk, however, we also need to consider that much of the loss incurred during the floods is equally a result of extreme vulnerability caused by poverty, colonial legacy, and poor governance.** As Ayesha Siddiqi, a co-author of the World Weather Attribution study explains: “It is important to remember that the disaster was a result of vulnerability constructed over a number of years. And it shouldn’t be seen ahistorically as the outcome of one kind of sudden or sporadic weather event.”⁴⁶

Indeed, Pakistan has been consistently ranked among the top 10 most vulnerable countries for the past 20 years. Since the 2010 super-floods, which laid bare the failings within Pakistan’s disaster management mechanisms, there have been only limited and transitory attempts to flood-proof communities and mitigate disasters.⁴⁷ Despite extensive research and repeated warnings from local communities, climate experts, non-governmental organisations (NGOs), and even the Supreme Court of Pakistan,⁴⁸ the actions taken after the 2010 disaster by disaster management authorities and the government of Pakistan have, for the most part, failed to incorporate the lessons learned and build back better.

According to a United States Institute of Peace report,⁴⁹ the majority of the damage caused by the recent floods was to structures that never should have been there in the first place. Large communities, hotels, and houses with poor construction regulations were built alongside rivers and areas vulnerable to flooding – and in many cases, areas that were already damaged by the 2010 floods. The main reason for this is simple: people living in poverty, or who have had to migrate due to climate change induced droughts and low agricultural productivity, are forced to settle in impoverished areas near nullahs (ravines or gullies) where they are vulnerable to extreme weather events.⁵⁰

As the population of these areas increases, so too do the losses from heavy floods. Poor governance and lack of resources mean that instead of discouraging such settlements and providing alternatives, the state institutionalises this vulnerability by not only allowing houses to be built, but also by providing facilities and services to the region.⁵¹ It is also important to note that this poverty and insecure housing is in large part driven by lack of land ownership and access to arable land for poor rural populations.⁵² Roughly 60 per cent of Pakistan's population live in rural areas, and more than 65 per cent depend on agriculture for subsistence,⁵³ yet most of the land is concentrated in the hands of a powerful few who rent it out in exchange for bonded labour⁵⁴. This feudal system further marginalises poor and indigenous populations, and women in particular, who are denied economic opportunities and dignified livelihoods due to lack of land ownership.

Alongside inequality and poverty, another significant problem which drives extreme vulnerability in Pakistan is poor infrastructure and decrepit water management systems. In Karachi, for example, an estimated population of nearly 17 million citizens rely on drainage pipelines that were built during British rule for a population of 46,000 people.⁵⁵ The infrastructure development path taken during and since the British colonial era rests on a competitive and zero-sum relationship with nature and insists on obstructing water flow and choking its passages⁵⁶. The more recent construction of mega-dams like the Mohmand Dam, for instance, is testament to the persisting commodification of nature and ecology.⁵⁷ Such developments not only fail to take into account for the wellbeing of vulnerable and poor communities but also constitute a greater flood and drought hazard in the long term. As climate change continues to intensify weather events, this infrastructure becomes increasingly inadequate and hazardous. The lack of comprehensive flood policy and planning that considers maintenance of flood infrastructure and building of flood walls, among other measures such as land use zoning, floodplain management, reforestation etc., makes Pakistan especially vulnerable to the effects of climate change and extreme weather events.

To combat these challenges and build back better, Pakistan needs a well-defined and integrated disaster management plan, which includes risk reduction, preparedness, and response.⁵⁸ At present, none of these components are sufficiently fulfilled, and Pakistan lacks the necessary tools, funds, resources, and political will to create a better DRR system. With Pakistan's economy already in crisis, a costly DRR plan is likely to be difficult to achieve. The other primary challenge in this regard is mismanagement and poor governance. Disaster management institutions (which include the National Disaster Management Authority, Provincial Disaster Management Authorities, and federal level institutions) are not only unable to cooperate, but actively compete over resources and power, leading to poorly organised roles and overlapping responsibilities among institutions.⁵⁹ Because power is not delegated to local level institutions, top-down planning fails to address the specific and varying needs of the local populations.⁶⁰ Additionally, accounts of deviant workplace behaviours such as resource waste, corruption, and clientelism are not uncommon, preventing disaster management institutions from acting efficiently and productively.⁶¹ This mismanagement, combined with significant economic constraints and a lack of resources, leads to a range of barriers to adaptation for Pakistan, including the lack of comprehensive flood laws, technical expertise and newer technologies, and inadequate adaptation strategies.

A particularly important deficiency in this regard is also the lack of awareness, training, and education programmes provided to local communities.⁶² Despite communication and awareness playing a significant role in reducing the worst impacts of the flood, local communities in flood-affected areas generally lack comprehensive risk awareness and education in flood management,⁶³ though this varies by province. Moving forward, government institutions and NGOs must provide gender sensitive DRR and water, sanitation and hygiene training to local communities so that they are aware of flood preparations, evacuation plans, early warnings, and emergency procedures.

People-centred adaptation

Islamic Relief believes much of the work around adaptation should be driven and led by the priorities and knowledge of local people.

As the Pakistan’s Nationally Determined Contribution says: “Communities and local populations have long observed and endured concurrent extreme events at different locations, often well before their validation by scientists.”

It is crucial, therefore, that local people, institutions, and agencies are involved in every stage of adaptation, from scoping and planning to implementation and assessing.

Indeed, studies in Sindh after the 2010 floods showed that when local communities were not adequately involved in projects, the solutions presented often did not meet community needs. Where communities had access to community-based organisations, on the other hand, they were able to actively contribute to emergency management and community development in the aftermath the disaster event, leading to better project outcomes.

Accordingly, it is critical that future recovery and adaptation efforts are driven by local communities, institutions, and agencies to ensure that local voices are prioritised over those of self-identified and often external technical experts.

No climate action without poverty reduction

“The world’s poorest and most vulnerable people have contributed the least to the climate crisis but are the most affected by it. The Paris Agreement aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty. Reducing poverty is crucial for adaptation to climate change.

“People in poverty tend to live in areas more vulnerable to climate change and in housing that is less resistant to its effects. They lose more, in relative terms, when affected and have fewer resources to respond to the changing climate. Poverty often means getting less support from social safety nets and the financial system to prevent or recover from the impact. Livelihoods and assets are more exposed and people in poverty are more vulnerable to disease, crop failure, spikes in food prices and death or disability caused by natural disasters.

“For climate action to assist very poor people, it must reduce their poverty as part of the process. Similarly, **adaptation to climate breakdown provides the means by which poverty reduction can be robust and long lasting.** Islamic Relief’s work in the context of the climate emergency is to fulfil our mission to help communities to emerge from poverty and suffering.”⁶⁴



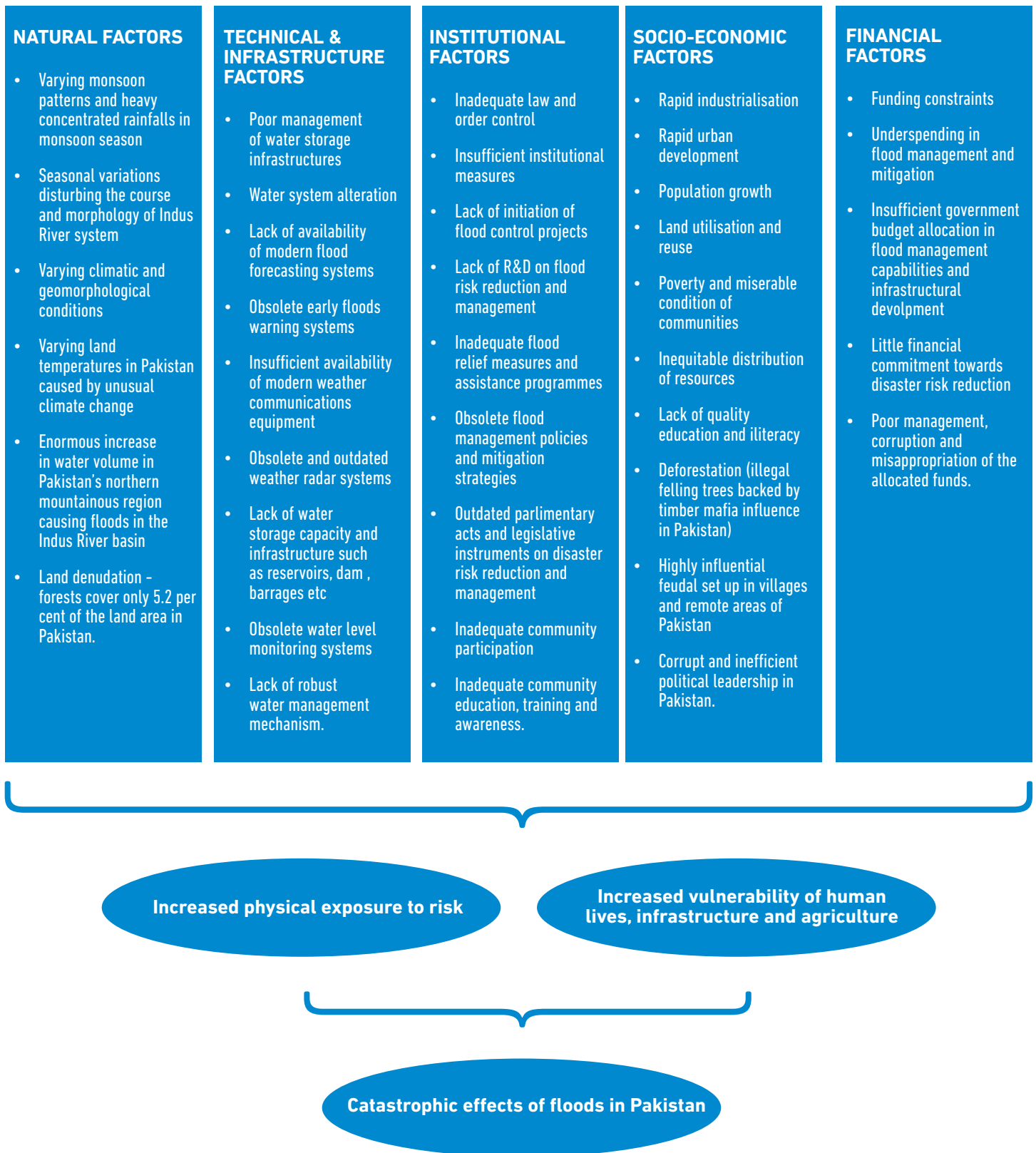


Figure showing the various factors contributing to the catastrophic effects of floods in Pakistan ⁶⁵

ISLAMIC RELIEF ON THE GROUND: OUR ADAPTATION EFFORTS



Water reservoir constructed in Chagai, Balochistan under Drought Resilience Agricultural Modeling DRAM Project.

Islamic Relief has been operational in Pakistan for almost 30 years, and in Balochistan for over two decades. To date, we have invested nearly £20 million in 150 projects with the aim of building the resilience of the community to the shocks of climate change, benefitting nearly 3,904,000 people directly and over 966,300 indirectly. We have worked towards adequate food security and livelihoods, efficient water management systems, the introduction of alternative energy options, and effective disaster risk reduction mechanisms, which include both structural and non-structural interventions.

On a structural level, we have invested in retrofitting public institutes, improving flood protection structures, and managing water flow through appropriate channels. For instance, through our project SALWA (Sustainable Action for Livelihood and Water Assistance) in drought-stricken Balochistan, we constructed water ponds, channels, reservoirs, water retention structures and check dams, as well as demand-based irrigation channels and gabion walls. These

activities resulted in improved access to water in targeted communities and have led to improvement in water use for agriculture, which had taken a hit due to the drought. Moreover, the improved infrastructure supported effective water resource management, institutional strengthening, and building of capacities of the concerned communities through economic empowerment. As a result, while the monsoonal floods destroyed millions of homes, our teams on the ground saw first-hand that villages with protection walls and water reservoirs built by Islamic Relief were saved from the flood waters – once again proving the importance of disaster-resilient structures.⁶⁶

Alongside structural interventions, we have also worked towards strengthening the capacity for non-structural adaptation plans through activities such as the formation of CBDRM committees, DRR workshops, capacity-building initiatives, development of union-council-level disaster management plans, and school-based disaster risk management programmes. As part of

projects SALWA and RAPID (Resilient and Adaptive Population in Disaster), Islamic Relief conducted resilience training workshops for 150 villages (100 in Sindh and 50 in Balochistan) and invested in enhancing the knowledge and capacities of multi-stakeholders in DRR, disaster risk management (DRM), and emergency first aid, which included:

- capacity building
- strengthening communication and early warning mechanisms
- developing an effective mechanism for coordinated response at the community level through CBDRM
- implementation of contingency and response plans
- networking with stakeholders.

The beneficiaries of the programmes reported enhanced knowledge and capacities about DRR, DRM, and emergency first aid, and were able to increase their resilience through improved infrastructures, strengthened communication and establishing early warning mechanisms.

People-centred approach

As Islamic Relief, we recognise that communities and local grassroots agencies are the best placed to understand their own adaptation needs – so all our projects follow a participatory development approach, which ensures community ownership for a sustainable development process. This means that community participation and leadership is embedded within each stage of the project cycle and that decision-making powers are often conferred on community members, community organisations, and people served by the project.

As part of this approach, Islamic Relief Pakistan has formed over 48 VDRMOs (village disaster risk management organisations) under project RAPID and over 60 community organisations under project TACVA (Transformation and Adaptation

against Climate Variability-affected Areas) across villages in Pakistan. These organisations have been trained and invited to participate in every stage of the project from beginning to end, including in identifying needs, conducting technical surveys, and site identification of community physical infrastructure (CPIs). Through effective community social mobilisation, local people and agencies have been able to meaningfully contribute to adaptation projects and build their capacity for collective action and advocacy. In some instances, members of local community organisations formed by Islamic Relief were subsequently elected to sit on a higher-level group at union council level, linking the people we serve to local government. Beneficiaries of such projects reported that although they previously lacked the confidence or connections to

advocate for themselves, they were now able to do so as a result of Islamic Relief's work. Accordingly, targeted communities were able to enhance their capacities, reduce dependency, and increase self-reliance and ownership. In particular, gender mainstreaming in these projects allowed women, often from very traditional and conservative backgrounds, to build capacity and gain confidence for self-advocacy through the formation of community organisations for women and girls. Overall, it was found that community involvement resulted in more interaction, coordination, and social cohesion among the concerned communities – paving the way for collective action against social issues and for mobilising local resources.



Disaster Risk Reduction and Management Training conducted in Quetta, Balochistan, under DRAM project.

WHERE ADAPTATION ENDS

Article 8 of the Paris Agreement recognises "the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change". While the first components of the article, i.e. averting and minimising, are actioned through mitigation and adaptation, there remain consequences of climate change to which adaptation is not possible or to which adaptation is possible but not accessible due to lack of resources or feasible measures. This is widely known as loss and damage in climate change policy parlance, and includes both economic (e.g., housing, markets, and sectors) and non-economic (e.g. human life, disease, community, culture) damage and losses.⁶⁷

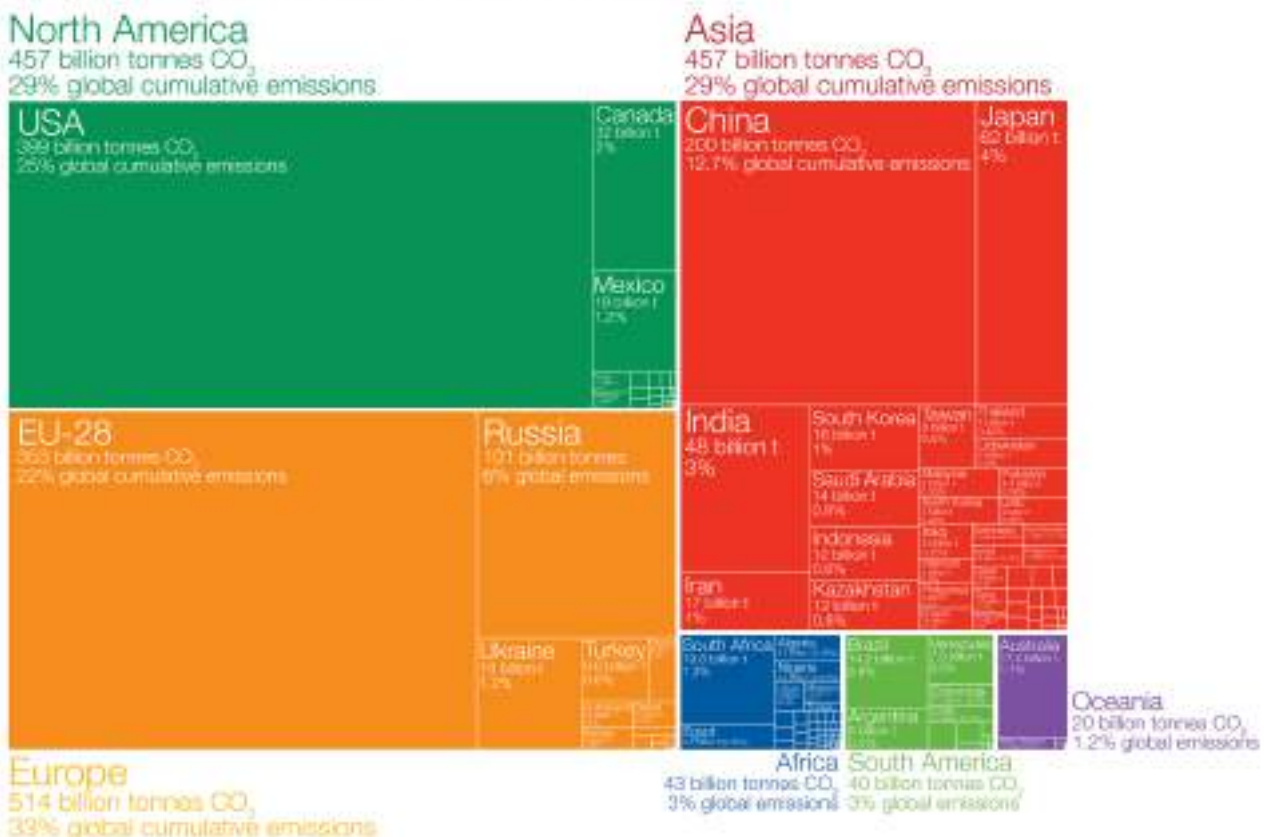
While much of the current coverage on Pakistan's floods focuses on the very serious effects of material economic loss, it is important to also pay attention to suffering that is not as easily quantifiable.⁶⁸

As Ayisha Siddiqi, a Pakistani environmental rights advocate, explains, "The land is also aching. Many of the tribal, indigenous people and sharecroppers who have been forced to flee are not only hurting for the loss of their homes; they are aching for their land, which connects them to generations of family members behind them. It is beyond material loss; it's spiritual and emotional. In so many of the interviews of villagers that's one thing they keep expressing, the living earth crying out. So many poor and tribal peoples have lived in the same area for centuries, especially in Balochistan, Sindh, and parts of Punjab. The loss they have experienced cannot be put into words; everything including memory, connection to their histories, where they took their first steps, the homes they built with their own hands, the wells they gathered water from, the rocks they stepped on – everything has been thrown out of balance."⁶⁹

Who has contributed most to global CO₂ emissions?

Our World in Data

Cumulative carbon dioxide (CO₂) emissions over the period from 1751 to 2017. Figures are based on production-based emissions which measure CO₂ produced domestically from fossil fuel combustion and cement, and do not correct for emissions embedded in trade (i.e. consumption-based). Emissions from international travel are not included.



Figures for the 28 countries in the European Union have been grouped as the "EU-28" since international targets and negotiations are typically set as a collective target between EU countries. Values may not sum to 100% due to rounding.

Data source: Data compiled by Our World in Data based on data from the Global Carbon Project (GCP) and Carbon Dioxide Analysis Center (CDAC).

This is a visualization from Our World in Data.org, where you find data and research on how the world is changing.

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Lives and livelihoods swept away by the floods

As the floods wreaked havoc on homes and infrastructures in Pakistan, local communities have been left to deal with its aftermath. "The floods have completely destroyed more than 250 houses in the village," says Abdul, who lives in a village in Sindh. "Many inhabitants of the village were sleeping while the water seeped into their houses. The water demolished several houses and partially dismantled others. Our houses are gone, and we are spending our days out in the open."

Due to the swiftness of the floods and the lack of early warning, people in affected areas were forced to leave behind their possessions and life savings to run for their lives. "I was not able to take any of my belongings with me, not even a single cup," explains Said, a father of eight. "The floods destroyed our home and I have moved to a temporary shelter, where we have been living for the past three days."

Ambaarhi, a widower from Dodo Khan Laghari village in Sindh, shares a similar story: "It has been two years since I lost my husband. My three children and I have lost our house in the flood and had to spend seven days under the open sky. No one came to help. The abundance of mosquitos made it difficult for my children to live in the open. News of more flooding in the coming days is making me anxious. Where would I seek shelter with my children?"

Alongside losing their homes, thousands of people also lost their livelihoods, particularly those reliant on agriculture and fishing. Multiple shocks induced by climate change in the past few decades have left people with little hope: "We have had dry weather for too long in our area, but the recent heavy rain that lasted for five hours left nothing behind," mourns Abdul Qadir, an older farmer whose greenhouse was destroyed by the floods, "Now I have lost everything, and I have nothing to live for."



Sindh 28 August

Although wealthy countries are responsible for a disproportionately large contribution of cumulative gas emissions, loss and damage affects poorer countries and vulnerable communities the most – particularly since they lack the necessary tools and financial resources to adapt. This extreme disparity in culpability versus impact, caused by colonial history and global inequality, makes loss and damage an issue of climate justice, where countries with a greater responsibility for greenhouse gas emissions have a moral imperative to address the impact of climate change in vulnerable countries like Pakistan. In other words, to speak of loss and damage is to speak of the **historical debt** of wealthier countries to vulnerable countries.

This critical issue has been at the forefront of the concerns of poorer nations since the United Nations Framework Convention on Climate Change (UNFCCC) was formed in the early 1990s.⁷⁰ While it was for the most part rebuffed at the time by wealthier nations, it has recently picked up momentum during the COP26 proceedings in 2021, with some support from a handful of wealthy countries such as Canada, Denmark, Germany, New Zealand, and Scotland. The momentum continued into the Bonn UN climate negotiations in June 2022, albeit with limited success.⁷¹ As negotiations around loss and damage once again take centre at COP27 in November, it is critical that serious commitments are made around a long-term loss and damage facility. Currently, only a small portion of climate financing as per the Paris Agreement goes to loss and damage, despite this being the most critical issue for many countries.⁷² While finance is mobilised towards averting and minimising loss and damage through mitigation and adaptation, funding for addressing loss and damage outside of ad hoc humanitarian aid remains lacking.

“What is happening in Pakistan demonstrates the sheer inadequacy of the global response to the climate crisis, and the betrayal and injustice at the heart of it.”

– United Nations Secretary-General
António Guterres

The current tragedy unfolding in Pakistan is paradigmatic of the urgent need to scale up support to address loss and damage through a dedicated finance facility. Adaptation to climate change can only extend so far, particularly when countries do not have the resources to manage extreme weather events. As climate justice activist Vanessa Nakate explains: “Many communities on the frontlines of the climate crisis are already experiencing loss and damage. Communities cannot adapt to extinction; communities cannot adapt to starvation. The climate crisis is pushing so many people in places where they cannot adapt anymore.”⁷³ Indeed, with one-third of Pakistan having been submerged, the importance of a loss and damage mechanism is as glaring as ever – not only to address the injustice and suffering inflicted on these communities but also to prevent further losses of this scale. As poorer countries and marginalised communities have been advocating for years, we urgently need sufficient loss and damage finance on the basis of equity, historical responsibility, and global solidarity, applying the polluter pays principle.⁷⁴ In the sustained absence of such a commitment, vulnerable communities will continue to sink deeper into debt and poverty every time they are hit by climate disasters they did not cause.

Limits to adaptation: Reforestation efforts diminished by floods

Pakistan has been at the forefront of global reforestation efforts with its Ten Billion Tree Tsunami Project.⁷⁵ The ambitious project, which aims to plant 10 billion trees across the country by 2023, began in 2018 after the success of the previous Billion Tree Tsunami project piloted in Khyber Pakhtunkhwa in 2014 under the leadership of the then-prime minister Imran Khan. According to a World Wildlife Fund (WWF) audit, the Billion Tree Tsunami was regarded to be a large success 872.3 million seedlings were planted with an average survival rate of almost 89 per cent, growing the province's forests by 350,000 hectares and surpassing its commitment to the Bonn Challenge.⁷⁶

Although climate activists raised several concerns about the initiative (including complaints of corruption, bureaucratic missteps, and concerns over the choice of species)⁷⁷, the project was nevertheless praised globally for leading reforestation efforts, reviving Pakistan's wildlife, and creating local employment in the process. "Large scale restoration initiatives such as the Ten Billion Tree Tsunami Project are central to Pakistan's efforts to support the UN Decade on Ecosystem Restoration and to increase ecosystem restoration," said Dechen Tsering, United Nations Environment Programme's Regional Director for Asia and the Pacific. "We are at a point in history where we need to act, and Pakistan is leading on this important effort."⁷⁸

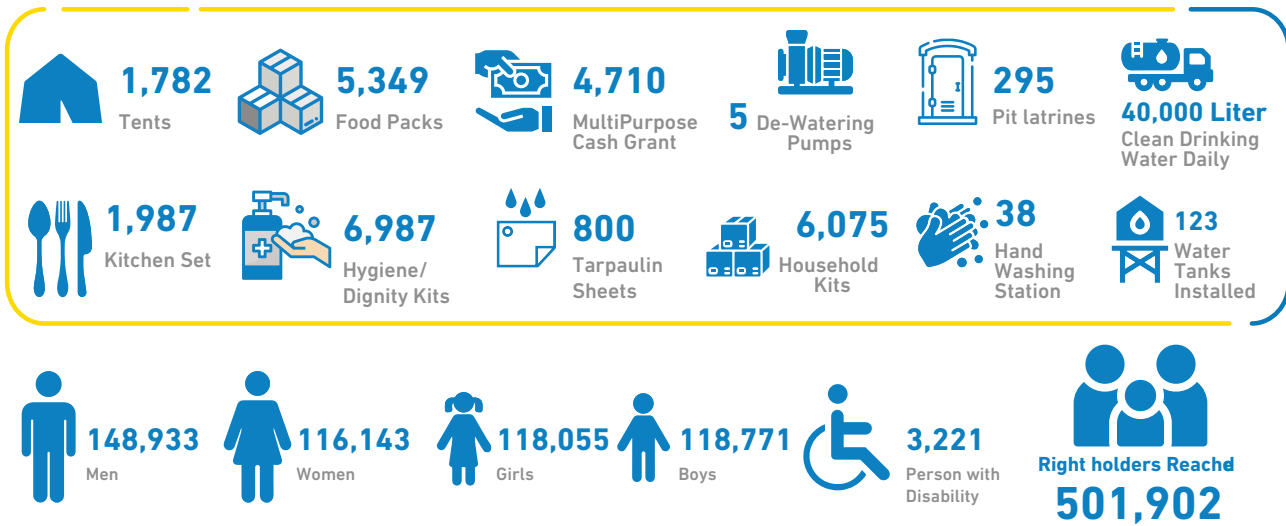
Earlier in the year, Al Jazeera published an article on the initiative in which Mulazim Hussain, 61-year-old father of two in Karachi who was employed for the project, was interviewed on the success of reforestation. Mulazim reported significant results in his community, despite harsh heatwaves and a painstaking process: **"I have raised these plants like my children over the last four years,"** he told Al Jazeera.⁷⁹

Now, much of this tireless work stands to be lost as the country is overwhelmed by the floods and the social issues arising in their aftermath (including health problems, governance issues, and increased poverty). Although the extent of the impact of the floods on the reforestation is not yet quantified, it is clear that the project will be greatly impacted by the floods. This is a clear demonstration that mitigation and adaptation are not sufficient if loss and damage are not also addressed. The adaptation efforts of vulnerable countries cannot keep up with the rapidly accelerating effects of climate change, especially without significant material support from wealthier countries. Devastating levels of loss and damage will continue to occur, despite the best efforts of poorer countries. This is precisely where the international community must **step in and pay up.**

EMERGENCY RELIEF BY ISLAMIC RELIEF

While loss and damage continues to be negotiated without consensus in the international arena, the people of Pakistan face tremendous suffering and require urgent support to feed their children and shelter their families, as well as services to support pregnant and breastfeeding mothers, and healthcare against diseases such as dengue, cholera, and malaria. Islamic Relief's emergency response plan aims to meet the acute needs of the most vulnerable people affected by the floods, including newly displaced people, people living in poor shelter conditions, people

who have lost their income or livelihood, female-headed households, and people with disabilities residing in flood-affected areas. As a first step, this includes coordinating with national and provincial stakeholders in providing temporary shelter, food items and survival items, water, sanitation and hygiene services, and unconditional multipurpose cash transfers. To that end, Islamic Relief Pakistan has reached over 270,000 rights holders as of 25 September, including nearly 60,000 women and over 2,500 persons with disabilities.⁸⁰



Although this is a good place to start, the scale of the crisis means that much more is needed to ease the suffering of flood-affected communities. Islamic Relief Pakistan is now aiming to boost its funding to £30 million to help rebuild communities and provide ongoing support for 500,000 people across Balochistan, Khyber Pakhtunkhwa, Sindh, and Punjab. Islamic Relief Pakistan's response plan going forward focuses on ensuring that people are safe from further harm and can live in dignity by rebuilding their lives and livelihoods. To realise this goal, Islamic Relief is working closely with national government, local government, and partner organisations to:

- rebuild housing and infrastructure by constructing new, flood resilient and sustainable shelters for families and rehabilitating water supply systems and sanitation facilities
- revitalise agriculture by distributing seeds and organic fertiliser and ensuring that surviving livestock stay healthy through providing vaccinations, deworming, and fodder
- provide cash grants to local people to ensure their needs are met and that local markets are supported, and employ local people on cash-for-work projects to remove debris and repair damaged roads and infrastructure
- step up efforts to prevent gender-based violence by establishing safe spaces for women and children, setting up referral pathways so that at-risk people in camps can access gender-based violence prevention and response services, and constructing toilets and washing facilities that are safe and gender appropriate
- address the psychological impact of the floods through counselling and psychosocial support
- focus on the most vulnerable by providing nutritional support for pregnant and breastfeeding women, and ensuring that services benefit people with disabilities.⁸¹



Immediate relief

(1-3 months)

- Temporary shelter
- Provision of food and survival items
- Water, sanitation and hygiene
- Unconditional multipurpose cash transfers to meet basic needs



Early recovery

(9-24 months)

- Permanent/semi-permanent shelter
- Livelihoods recovery/food security
- Water, sanitation and hygiene
- Protection and mainstreaming



Long-term rebuilding

- Rebuild damaged homes and infrastructure
- Repair water supply systems and sanitation facilities
- Build zero carbon low cost and flood resistant shelters
- Revitalise agriculture and rebuild the livelihoods of farmers and pastoralists
- Provide cash support
- Keep vulnerable people safe by addressing gender-based violence
- Address the psychological impact of the floods
- Focus on the most vulnerable by providing support for pregnant women and people with disabilities

LOOKING AHEAD

South Asia, and more specifically Pakistan, is particularly sensitive to the impacts of climate change due to its distinct geography, demographic trends, socio-economic factors, and lack of adaptive capacity. In the last 50 years, Pakistan’s annual temperature has increased by roughly 0.6 degrees celsius, and it is expected to continue to rise by three to five degrees celsius by the end of this century in a central global emissions scenario (or four to six degrees on a higher global emissions scenario).⁸² This is significantly higher than the global average, which rests between 1.1. and 5.4 degrees celsius. As a result, the vulnerability of Pakistan to the adverse impacts of climate change is expected to increase in the coming decades, with the country likely face future occurrences of heavy rainfall and extreme weather disasters. Indeed, the data on the frequency of floods in the last 60 years reveals a worrying trend, with the possibility of floods virtually doubling every decade.⁸³ As outlined in the Intergovernmental Panel on Climate Change 6th Assessment report, this is most likely to affect the poorest people who live on marginal lands and fragile ecosystems, as they are least prepared to manage the adverse effects of climate change. It is therefore critical that government of Pakistan and the international community take serious steps towards tackling the worst impacts of climate change.⁸⁴

We are all responsible for taking action against climate change. Islamic Relief has consistently advocated for better disaster management and climate adaptation system based on principles of local leadership, historical responsibility, and global solidarity. Islamic Relief calls on funders, donors, governments and all stakeholders to endorse and work with the Principles for Locally Led Adaptation to improve existing efforts and meet the urgent need for effective adaptation. All governments are obliged to reduce greenhouse gas emissions so that climate change can be prevented from having even more catastrophic effects. Climate change adaptation efforts should also be supported by those countries that have historically contributed to increased climate change effects, such as the top emitters in Europe and North America.

OUR RECOMMENDATIONS

For the international community, UN bodies, and NGOs

- We thank all governments that have responded in solidarity to the immediate needs of those affected by the crisis. The need is unprecedented, and more financial support and relief assistance are urgently requested.
- We call on all governments to increase their pledges to aid organisations providing humanitarian responses in Pakistan. There should be a predictable schedule in bilateral and multilateral financial support and flexibility in its application.
- We call for the International Monetary Fund (IMF) and the World Bank to create a 'post-catastrophe debt relief fund' for Pakistan. The effects of climate change are disproportionately felt by the poorest communities, with more intense and frequent disasters diverting limited financial resources away from vital public expenditures.
- An interest-free moratorium on debt payments should become automatic for all developing countries experiencing climate disasters to provide immediate access to resources which are already in the hands of the authorities and thus do not have to be mobilised through lengthy pledging exercises.
- Going beyond emergency relief, the international community, including the UN and European Civil Protection and Humanitarian Aid Operations, must support the government of Pakistan in longer-term recovery and adaptation efforts, which include rebuilding, improving capacity, and preparing for future climate shocks. This must include both financing and the transfer of knowledge and technology in DRR, climate smart agriculture, clean energy, and climate-resilient infrastructure.
- We urge the international community to establish a loss and damage finance facility to address loss and damage, with a fair allocation for Pakistan in view of the disproportionate and devastating impacts of climate change experienced. A fit for purpose Santiago Network for loss and damage can be operationalised in this regard.
- In order to establish a political mandate to act, we ask that accessible messaging is conveyed to citizens in countries expected to 'pay up.'

For the government of Pakistan

- Pakistan joined over 193 countries in ratifying the Paris Agreement, and their 2021 Nationally Determined Contributions (NDC) has become the measure of Pakistan's intent. In the wake of the disaster, Pakistan's government has an obligation to take serious measures to achieve its NDC commitments and produce an integrated and holistic disaster management plan with women at the centre of decision making. Urgent forecasting investments in resilience are required, including scaled-up early warning systems, disaster management, protective infrastructure, repair/rehabilitation of irrigation channels, and building flood defences, including dam management which pay off economically in the long run.
- Assessments of district vulnerabilities and capacities needs to be developed urgently. All plans, whether short, medium, or long-term, including five-year plans, should be informed by these metrics. Gender and power analyses should be led by women and people with disabilities, as well as minority groups to ensure their needs are met.
- The authority of national disaster management agencies should be divided and delegated among provincial and local levels with the aim of decreasing overlapping roles, building capacity at a local level, and improving cooperation among agencies of all scales.
- We recognise that communities and local grassroots agencies are best suited to understand their own adaptation needs. At the grassroots level, there is a critical need to build up local power and community engagement by introducing capacity building, advocacy and mobilisation with youth, civil society, academia, faith leaders, the legal fraternity, media, and other stakeholders. Local government systems must also be strengthened to prioritise localised schemes.
- The needs of the most vulnerable, including women, children, people with disabilities, older persons, and people living in poverty should be prioritised and integrated into recovery plans to ensure that no one is left behind.
- Development and construction should aim to build back better and be prevented from rebuilding on vulnerable sites. Future rural and urban development should prioritise inclusivity and sustainability over the commodification of nature and ecology.
- Food security challenges alongside the increase in commodity prices are threatening the situation in Pakistan. Spending on infrastructure and tackling poverty should be rebalanced.
- An actionable plan of securing land rights, particularly for indigenous people and women, should be produced.
- Pakistanis should be informed about international climate change diplomacy and what is at stake for them in terms of negotiations around financing and loss and damage.
- Climate justice actors and Pakistan's government should make a concerted effort to make the case for additional funding at COP27.

ENDNOTES

- ¹ Baloch, Shah Meer. “‘The Hospital Has Nothing’: Pakistan’s Floods Put Pregnant Women in Danger”. The Guardian, 2022, <https://www.theguardian.com/world/2022/sep/14/the-hospital-has-nothing-pakistans-floods-putpregnant-women-in-danger>.
- ² Islamic Relief. Flooded And Forgotten. Islamic Relief, 2011, p. 4.
- ³ Baloch, Shah Meer. “‘The Hospital Has Nothing’: Pakistan’s Floods Put Pregnant Women in Danger”. The Guardian, 2022, <https://www.theguardian.com/world/2022/sep/14/the-hospital-has-nothing-pakistans-floods-putpregnant-women-in-danger>.
- ⁴ Ali, Arshad, and M Jawed Iqbal. “National Disaster Management Act, 2010 Of Pakistan: A Review”. Journal Of Disaster and Emergency Research, 2021, p. 53. Knowledge E, <https://doi.org/10.18502/jder.5810>.
- ⁵ Ahmad, Junaid et al. “A Review of Pakistan National Disaster Response Plan 2010 A Tool of Environmental Framework on Disaster & The Shortcoming of Framework”. Asian Journal of Social Sciences & Humanities, vol 3,no. 3, 2014, p. 173.
- ⁶ Islamic Relief. Pakistan Floods Situation Report. Islamic Relief, 2022, Islamic Relief’s Pakistan Floods Response 2022 (24 September, 2022) - Pakistan | ReliefWeb. Accessed 11 Oct 2022.
- ⁷ “Disaster Beyond a Disaster as Sheer Scale of Pakistan Flooding Becomes Clear, Leaving Thousands Stranded, Hungry, And with A Health Crisis Looming”. Disasters Emergency Committee, 2022, <https://www.dec.org.uk/pressrelease/disaster-beyond-a-disaster-as-sheer-scale-of-pakistan-flooding-becomes-clear-leaving>.
- ⁸ World Weather Attribution. Climate Change Made Devastating Early Heat in India and Pakistan 30 Times More Likely. World Weather Attribution, 2022, https://www.worldweatherattribution.org/wp-content/uploads/India_Pak-Heatwave-scientific-report.pdf.
- ⁹ Islamic Relief Pakistan. Emergency Response Plan. 2022, p. 5. Accessed 27 Sept 2022.
- ¹⁰ World Weather Attribution. Climate Change Made Devastating Early Heat in India and Pakistan 30 Times More Likely. World Weather Attribution, 2022, https://www.worldweatherattribution.org/wp-content/uploads/India_Pak-Heatwave-scientific-report.pdf.
- ¹¹ Islamic Relief Pakistan. Emergency Response Plan. 2022, p. 4.
- ¹² UN OCHA. PAKISTAN: 2022 Monsoon Floods Situation Report No. 7. OCHA, 2022, pp. 1-2.
- ¹³ IRC. Pakistan Floods Will Devastate the Economy, Likely Leading to Widespread Hunger And Violence Against Women, Warns IRC. 2022, <https://www.rescue.org/press-release/pakistan-floods-will-devastate-economy-likely-leading-widespread-hunger-andviolence#:~:text=Islamabad%2C%20Pakistan%2C%20September%2012%2C,increase%20in%20violence%20against%20women>.
- ¹⁴ UN OCHA. PAKISTAN: 2022 Monsoon Floods Situation Report No. 6. OCHA, 2022, p.2.
- ¹⁵ Lu, Christina. “The Lingering Impact of Pakistan’s Floods”. Foreign Policy, 2022, <https://foreignpolicy.com/2022/09/15/pakistan-floods-humanitarian-disease-food-crisis-climate/>.
- ¹⁶ “Disaster Beyond a Disaster as Sheer Scale of Pakistan Flooding Becomes Clear, Leaving Thousands Stranded, Hungry, And With A Health Crisis Looming”. Disasters Emergency Committee, 2022, <https://www.dec.org.uk/press-release/disaster-beyond-a-disaster-as-sheer-scale-of-pakistan-flooding-becomesclear-leaving>.
- ¹⁷ UN OCHA. PAKISTAN: 2022 Monsoon Floods Situation Report No. 6. OCHA, 2022, p.2.
- ¹⁸ UN OCHA. PAKISTAN: 2022 Monsoon Floods Situation Report No. 6. OCHA, 2022, p.2.
- ¹⁹ “Pakistan: Deadly Floods Reminder to Wealthy Countries to Remedy Unfettered Climate Change”. Amnesty International, 2022, <https://www.amnesty.org/en/latest/news/2022/08/pakistan-deadly-floods-reminder-to-wealthycountries-to-remedy-unfettered-climate-change/>.
- ²⁰ “Women And Girls Bearing the Brunt of The Pakistan Monsoon Floods”. UNFPA Pakistan, 2022, <https://pakistan.unfpa.org/en/news/women-and-girls-bearing-brunt-pakistan-monsoon-floods>.
- ²¹ Islamic Relief Pakistan. Emergency Response Plan. 2022, p. 6. Accessed 8 Sept 2022.
- ²² UN OCHA. 2022 FLOODS RESPONSE PLAN PAKISTAN. UN OCHA, 2022, Pakistan | OCHA (unocha.org). Accessed 11 Oct 2022.
- ²³ Bradshaw, Sarah, and Maureen Fordham. “Double Disaster”. Hazards, Risks, And Disasters In Society, 2015, pp. 233-251. Elsevier, <https://doi.org/10.1016/b978-0-12-396451-9.00014-7>.
- ²⁴ World Economic Forum. Global Gender Gap Report. World Economic Forum, 2022, https://www3.weforum.org/docs/WEF_GGGR_2022.pdf. Accessed 6 Oct 2022.

- ²⁵ Feroz, Nabila. "Deep-Rooted Gender Inequities Make Women More Vulnerable During Climate Disasters". Common Dreams, 2022, <https://www.commondreams.org/views/2022/10/06/deep-rooted-genderinequities-make-women-more-vulnerable-during-climate-disasters>.
- ²⁶ "Women And Girls Bearing The Brunt Of The Pakistan Monsoon Floods". UNFPA Pakistan, 2022, <https://pakistan.unfpa.org/en/news/women-and-girls-bearing-brunt-pakistan-monsoon-floods>.
- ²⁷ Ahmad Bukhari, Syed Ijaz, and Shahid Hassan Rizvi. Impact Of Floods On Women: With Special Reference To Flooding Experience Of 2010 Flood In Pakistan. 2022.
- ²⁸ Feroz, Nabila. "Deep-Rooted Gender Inequities Make Women More Vulnerable During Climate Disasters". Common Dreams, 2022, <https://www.commondreams.org/views/2022/10/06/deep-rooted-genderinequities-make-women-more-vulnerable-during-climate-disasters>.
- ²⁹ Investing In Women And Girls. OECD, 2010, p. 5, <https://www.oecd.org/dac/gender-development/45704694.pdf>.
- ³⁰ "Land Area - Pakistan Data". World Bank, 2022, <https://data.worldbank.org/indicator/AG.LND.TOTL.K2?end=2020&locations=PK&start=2020&view=bar>.
- ³¹ "Pakistan Population". Worldometers, 2022, <https://www.worldometers.info/world-population/pakistanpopulation/#:~:text=The%20current%20population%20of%20Pakistan,the%20latest%20United%20Nations%20data>.
- ³² Islamic Relief. Climate Induced Migration in Pakistan: Global Discourse, Local Realities and Governance. Islamic Relief, 2022, p. 17., https://www.islamic-relief.org/wpcontent/uploads/2021/11/IRWClimateInducedMigration_Digital-V2.pdf.
- ³³ Ahmed, Kamal et al. "Spatiotemporal Changes In Aridity Of Pakistan During 1901–2016". Hydrology And Earth System Sciences, vol 23, no. 7, 2019, p. 3082. Copernicus GmbH, <https://doi.org/10.5194/hess-23-3081-2019>.
- ³⁴ "World Bank Climate Change Knowledge Portal". Worldbank, 2021, <https://climateknowledgeportal.worldbank.org/country/pakistan/climate-data-historical>.
- ³⁵ World Weather Attribution. Climate Change Made Devastating Early Heat in India and Pakistan 30 Times More Likely. World Weather Attribution, 2022, https://www.worldweatherattribution.org/wp-content/uploads/India_Pak-Heatwave-scientific-report.pdf.
- ³⁶ World Weather Attribution. Climate Change Made Devastating Early Heat in India and Pakistan 30 Times More Likely. World Weather Attribution, 2022, https://www.worldweatherattribution.org/wp-content/uploads/India_Pak-Heatwave-scientific-report.pdf.
- ³⁷ World Weather Attribution. Climate Change Made Devastating Early Heat in India and Pakistan 30 Times More Likely. World Weather Attribution, 2022, https://www.worldweatherattribution.org/wp-content/uploads/India_Pak-Heatwave-scientific-report.pdf.
- ³⁸ Islamic Relief. Climate Induced Migration in Pakistan: Global Discourse, Local Realities and Governance. Islamic Relief, 2022, p. 17., https://www.islamic-relief.org/wpcontent/uploads/2021/11/IRWClimateInducedMigration_Digital-V2.pdf.
- ³⁹ Siddiqui, Zuha. "Pakistan Floods Pose Urgent Questions Over Preparedness and Climate Reparations". The New Humanitarian, 2022, <https://www.thenewhumanitarian.org/news-feature/2022/09/05/Pakistan-floods-urgentquestions-climate-crisis>.
- ⁴⁰ World Weather Attribution. Climate Change Made Devastating Early Heat in India and Pakistan 30 Times More Likely. World Weather Attribution, 2022, https://www.worldweatherattribution.org/wp-content/uploads/India_Pak-Heatwave-scientific-report.pdf.
- ⁴¹ Khan, Rina Saeed. "Climate Scientists Explain Pakistan's 'Unprecedented' Floods | China Dialogue". China Dialogue, 2022, <https://chinadialogue.net/en/climate/climate-scientists-explain-pakistan-floods-2022/>.
- ⁴² Zahidi, Farahnaz. "'Climate Change Only One Factor In Pakistan Flood Devastation' — Ali Tauqeer Sheikh". The Friday Times - Naya Daur, 2022, <https://www.thefridaytimes.com/2022/09/06/climate-change-only-one-factor-in-pakistan-flood-devastation-ali-tauqeer-sheikh/>.
- ⁴³ IPCC. The IPCC'S Fifth Assessment Report: What's in It for South Asia? 2022, pp. 1-5, <https://cdkn.org/sites/default/files/files/CDKN-IPCC-Whats-in-it-for-South-Asia-AR5.pdf>. Accessed 27 Sept 2022.
- ⁴⁴ "Climate Change Made Heatwaves in India and Pakistan "30 Times More Likely"". World Meteorological Organization, 2022, <https://public.wmo.int/en/media/news/climate-change-made-heatwaves-india-and-pakistan-30-times-more-likely>.
- ⁴⁵ "Normal To Above Normal Rainfall Forecast for Southwest Monsoon". World Meteorological Organization, 2022, <https://public.wmo.int/en/media/news/normal-above-normal-rainfall-forecast-southwest-monsoon>.
- ⁴⁶ Harvey, Chelsea. "Climate Change Likely Worsened Pakistan's Devastating Floods". Scientific American, 2022, <https://www.scientificamerican.com/article/climate-change-likely-worsened-pakistans-devastating-floods/>.

- ⁴⁷ Khan, Imran et al. “Investing in Disaster Relief And Recovery: A Reactive Approach Of Disaster Management In Pakistan”. *International Journal of Disaster Risk Reduction*, vol 75, 2022, p. 102975. Elsevier BV, <https://doi.org/10.1016/j.ijdr.2022.102975>.
- ⁴⁸ Ali, Arshad, and M Jawed Iqbal. “National Disaster Management Act, 2010 Of Pakistan: A Review”. *Journal Of Disaster and Emergency Research*, 2021, p. 57. Knowledge E, <https://doi.org/10.18502/jder.5810>.
- ⁴⁹ Khan, Sahar, and Jumaina Siddiqui. “Why Pakistan Is Drowning”. United States Institute of Peace, 2022, <https://www.usip.org/publications/2022/09/why-pakistan-drowning>.
- ⁵⁰ Zahidi, Farahnaz. “‘Climate Change Only One Factor In Pakistan Flood Devastation’ — Ali Tauqeer Sheikh”. *The Friday Times - Naya Daur*, 2022, <https://www.thefridaytimes.com/2022/09/06/climate-change-only-one-factor-inpakistan-flood-devastation-ali-tauqeer-sheikh/>.
- ⁵¹ Zahidi, Farahnaz. “‘Climate Change Only One Factor in Pakistan Flood Devastation’ — Ali Tauqeer Sheikh”. *The Friday Times - Naya Daur*, 2022, <https://www.thefridaytimes.com/2022/09/06/climate-change-only-one-factor-inpakistan-flood-devastation-ali-tauqeer-sheikh/>.
- ⁵² Oxfam. *My Land, My Right: Putting Land Rights at The Heart of The Pakistan Floods Reconstruction*. 2011, pp.7-11.
- ⁵³ Government of Pakistan. *Agriculture*. 2021, https://www.finance.gov.pk/survey/chapters_21/02-Agriculture.pdf. Accessed 24 Sept 2022.
- ⁵⁴ Oxfam. *My Land, My Right: Putting Land Rights at The Heart of The Pakistan Floods Reconstruction*. 2011, p.9.
- ⁵⁵ Zahidi, Farahnaz. “‘Climate Change Only One Factor in Pakistan Flood Devastation’ — Ali Tauqeer Sheikh”. *The Friday Times - Naya Daur*, 2022, <https://www.thefridaytimes.com/2022/09/06/climate-change-only-one-factor-inpakistan-flood-devastation-ali-tauqeer-sheikh/>.
- ⁵⁶ Sheikh, Ali. “Man-Made Catastrophes”. *DAWN*, 2022, <https://www.dawn.com/news/1706704>.
- ⁵⁷ Sawas, Amiera, and Sobia Kapadia. “Loss And Damage in Pakistan”. *Green Economy Coalition*, 2022, <https://www.greeneconomycoalition.org/news-and-resources/loss-and-damage-in-pakistan>.
- ⁵⁸ Ahmad, Junaid et al. “A Review of Pakistan National Disaster Response Plan 2010 A Tool of Environmental Framework On Disaster & The Shortcoming Of Framework”. *Asian Journal of Social Sciences & Humanities*, vol 3, no. 3, 2014, p. 175.
- ⁵⁹ Ali, Arshad, and M Jawed Iqbal. “National Disaster Management Act, 2010 Of Pakistan: A Review”. *Journal Of Disaster and Emergency Research*, 2021, p. 53. Knowledge E, <https://doi.org/10.18502/jder.5810>.
- ⁶⁰ Siddiqui, Zuha. “Pakistan Floods Pose Urgent Questions Over Preparedness and Climate Reparations”. *The New Humanitarian*, 2022, <https://www.thenewhumanitarian.org/news-feature/2022/09/05/Pakistan-floods-urgentquestions-climate-crisis>.
- ⁶¹ Ali, Arshad, and M Jawed Iqbal. “National Disaster Management Act, 2010 Of Pakistan: A Review”. *Journal Of Disaster and Emergency Research*, 2021, p. 57. Knowledge E, <https://doi.org/10.18502/jder.5810>.
- ⁶² Munawar, Hafiz Suliman et al. “Post-Flood Risk Management and Resilience Building Practices: A Case Study”. *Applied Sciences*, vol 11, no. 11, 2021, p. 9. MDPI AG, <https://doi.org/10.3390/app11114823>.
- ⁶³ Aslam, Muhammad. “Flood Management Current State, Challenges and Prospects in Pakistan: A Review”. *Mehran University Research Journal of Engineering and Technology*, vol 37, no. 2, 2018, p. 304. Mehran University of Engineering and Technology, <https://doi.org/10.22581/muet1982.1802.06>.
- ⁶⁴ Islamic Relief. *Islamic Relief Climate Policy: Our Position*. Islamic Relief, 2022, pp. 16-17.
- ⁶⁵ Rehman, Junaid et al. “Applying Systems Thinking to Flood Disaster Management for A Sustainable Development”. *International Journal of Disaster Risk Reduction*, vol 36, 2019, p. 7. Elsevier BV, <https://doi.org/10.1016/j.ijdr.2019.101101>.
- ⁶⁶ Islamic Relief. *Pakistan Floods Situation Report*. Islamic Relief, 2022, *Islamic Relief’s Pakistan Floods Response 2022 (24 September, 2022) - Pakistan | ReliefWeb*. Accessed 11 Oct 2022.
- ⁶⁷ IPCC. *Climate Change 2022: Mitigation of Climate Change*. IPCC, 2022, p. 1469, https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_Full_Report.pdf.
- ⁶⁸ For a more detailed look at the intersection between displacement and loss of culture, see: Islamic Relief. *Climate Induced Migration in Pakistan: Global Discourse, Local Realities and Governance*. Islamic Relief, 2022, pp. 13-53, https://www.islamic-relief.org/wp-content/uploads/2021/11/IRWClimateInducedMigration_Digital-V2.pdf.
- ⁶⁹ Siddiqa, Ayisha [@ayisha_sid]. Infographic. Instagram. 2 Sept 2022, www.instagram.com/p/CiAoAnfhh0k/?igshid=YmMyMTA2M2Y=.

⁷⁰ Bhandari, Preety et al. "What Is "Loss and Damage" From Climate Change? 6 Key Questions, Answered". World Resources Institute, 2022, <https://www.wri.org/insights/loss-damage-climate-change>.

⁷¹ Nevitt, Mark. "Climate Justice and Loss and Damage In The Pakistan Flood Crisis". Lawfare, 2022, <https://www.lawfareblog.com/climate-justice-and-loss-and-damage-pakistan-flood-crisis>.

⁷² Bhandari, Preety et al. "What Is "Loss and Damage" From Climate Change? 6 Key Questions, Answered". World Resources Institute, 2022, <https://www.wri.org/insights/loss-damage-climate-change>.

⁷³ Nakate, Vanessa. "Vanessa Nakate: Climate Change Is About the People". United Nations, 2022, <https://www.un.org/en/climatechange/vanessa-nakate-climate-change-is-about-people>.

⁷⁴ Islamic Relief. Islamic Relief Climate Policy: Our Position. Islamic Relief, 2022, p. 47.

⁷⁵ Hess, Lily. "Pakistan Is on Its Way to Planting A 10 Billion Tree Tsunami. Here's How". Landscape News, 2022, <https://news.globallandscapesforum.org/52934/pakistan-is-on-its-way-to-planting-10-billion-tree-tsunami-hereshow/>.

⁷⁶ Hess, Lily. "Pakistan Is on Its Way to Planting A 10 Billion Tree Tsunami. Here's How". Landscape News, 2022, <https://news.globallandscapesforum.org/52934/pakistan-is-on-its-way-to-planting-10-billion-tree-tsunami-hereshow/>.

⁷⁷ Khan, S. "Pakistan: Environmentalists Slam '10 Billion Trees' Project". DW, 2021, <https://www.dw.com/en/pakistan-environmentalists-slam-10-billion-trees-project/a-59062200>.

⁷⁸ "Pakistan's Ten Billion Tree Tsunami Leading the Way In Ecosystem Restoration Decade". Stockholm50, 2022, <https://www.stockholm50.global/fr/node/125>.

⁷⁹ "Photos: Pakistan Tree Plantation Drive Amid Rising Temperatures". Aljazeera, 2022, <https://www.aljazeera.com/gallery/2022/8/17/photos-pakistan-tree-plantation-drive-amid-rising-temperatures>.

⁸⁰ Islamic Relief. Emergency Response Plan Pakistan Monsoon Floods. Islamic Relief Pakistan, 2022, p. 10.

⁸¹ Islamic Relief. Emergency Response Plan Pakistan Monsoon Floods. Islamic Relief Pakistan, 2022, pp. 18-19

⁸² Asian Development Bank. Climate Risk Country Profile: Pakistan. World Bank Group, Washington, 2021, <https://www.adb.org/sites/default/files/publication/700916/climate-risk-country-profile-pakistan.pdf>.

⁸³ Islamic Relief. Flooded And Forgotten. Islamic Relief, 2011, p. 19.

⁸⁴ IPCC. Climate Change 2022: Mitigation Of Climate Change. IPCC, 2022, https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_Full_Report.pdf.



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