

FORUM:	Advisory Panel
ISSUE:	Measures to Mitigate the Impact of Climate Change and Natural Disasters in Pakistan
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Introduction

Attempts to mitigate climate change have been addressed infinitely and at local, national, and global levels. International agreements were also signed. The goal of limiting global warming to well below 2 °C of earth was agreed upon in the Paris Agreement, signed by 196 countries in 2015. However, 2024 data shows countries still fall short of the 2 °C targets, and have not reached the minimum target, which was 1.5 Celsius. Not only did it stop the agreements signed on a global scale, but there were also national-level attempts. Most frequently seen attempts are bans and regulations that are often seen in our daily lives. Countries also aim for net-zero emissions by 2050 to 2070. Nonetheless, if minimum temperature can't be attained, mere words would not be a solution for the incessant problem of climate change. Diving into the precise example of national devastation caused by climate change, it will be Pakistan.



Areas of Pakistan submerged by water.

Pakistan has faced these climate change and natural disaster almost every year. As this challenge is estimated to come every year, the Pakistanis lost their hope to reconstruct everything they had. Others might advise Pakistan to reconstruct its infrastructure to a degree that can still be maintained even if the flood comes. However, these simple statements are not plausible for Pakistanis. Pakistan has complex interconnected problems. Economic Instability, unemployment, and poverty rate. All of these factors strongly correlated with the current situation of Pakistan. Climate change increases monsoon intensity, glacial melting, and sea level rise. These are all the factors that specifically contribute to the reasons that cause floods in Pakistan. Pakistan has experienced 29 major floods since gaining independence in 1947. The first flood occurred in 1950, with 28 subsequent floods reported from 1951 to 2014. Since 2010, Pakistan has faced severe flooding almost every year. This report intends to focus on the status, find the



challenges at hand, and suggest practical and tangible ways that could help minimize the suffering among citizens in Pakistan while at the same time seeking a permanent fix to this problem.

Background

Pakistan is a country that is vulnerable to most natural hazards. Geographic position, such as large glacial mountain ranges and extensive river system are the reason why Pakistan is vulnerable to these disasters. The Pakistan Floods of 2010 occurred in late July and August 2010. The results of the flood were devastating. In an estimate, approximately 20 million people were affected, and 1,200 to 2,200 people were affected as a result. Beyond the human cost, the economic impact has been profound. Factories have shut down, supply chains have been disrupted, and the livelihoods of innocent Pakistanis have been taken. Pakistan has faced these multi-faceted challenges almost every year. As this challenge is estimated to come every year, the Pakistanis lost their hope to reconstruct everything they had. Others might advise Pakistan to reconstruct its infrastructure to a degree that can still be maintained even if the



Citizen of Pakistan has made shelter above the water.

flood comes. However, these simple statements are not plausible for Pakistanis. Pakistan has complex interconnected problems. Economic Instability, unemployment, and poverty rate. All of these factors strongly correlated with the current situation of Pakistan.

One of the recent floods that Pakistan faced is the 2022 Pakistan flood. This flood happened due to two main reasons. Unusually heavy monsoon rain was one of the reasons. The monsoon rain rate was three times its average monsoon rainfall. Namely, in Sindh and Balochistan provinces, rainfall was 400 to 800% higher than usual. Fluctuation of the rainfall can be tolerated until 40%. However, 400% unusualness in the weather aspect is a peculiar number that is rarely seen. The reason is clearly shown – climate change. Climate change, the second reason, directly corroborates the way of the current climate change situation. Overall, warmer temperatures have increased global moisture in the atmosphere, which has led to heavier rains. Not to mention, this correlates to the first reason, the unusualness of monsoon rain. Due to this flood, over 33 million people, which is about 15% of the whole Pakistani population, were affected by the flood. A population of 15% of a single country is a tremendous number. Not only did Pakistanis lose their homes and were coerced into temporary shelters, but even after the flood ended, they had nowhere to go. The houses were all corrupted with walls falling out, and roofs were floating



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around the city in top of water. The factories and workplaces that they have worked in, the schools that children went to, and the stores and markets that they went to get supplies. The 2022 flood has caused an estimated \$30+ billion USD in economic losses. It was all corrupted by a devastating flood – only a single flood. However, the Pakistanis are enduring this year after the flood.

Problems Raised

Humanitarian Crisis

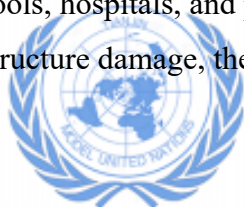
A severe humanitarian crisis has affected everyone in Pakistan. Citizens from Pakistan have to keep themselves in tents where all the displaced people from the floods are. They have poor infrastructure, such as limited access to sanitation, health care, clean water, and education. Another way, the health of the citizens of Pakistan is not well-promised due to issues such as chronic diseases, mental illnesses, and a lack of nutrition. With these promises not being kept, the humanitarian crisis of citizens in Pakistan worsens over time. The basic need for life, food, is also disturbed; then the following humanitarian needs are all disturbed. Over 8 million people were displaced from their homes. And this is only half of the Pakistanis who have been displaced from their homes. 15% of Pakistan's population was affected by the flood, leading to despair and anguish among the citizens. Apart from the basic humanitarian needs, education is also one of the basic needs that citizens should take care of. Children of every country have the right to get a proper education while growing up. Especially in their childhood, they should get the minimum education that will provide them with the basic information and knowledge for adaptation to societal change. This humanitarian need will deteriorate in a country like Pakistan that already has a low rate of children getting mandatory education.



Pakistan women walking around, their houses have been submerged.

Economic Devastation

The total economic loss in Pakistan due to the flood accounts for 15% of Pakistan's GDP for 2022. 2.1 million homes were severely damaged, causing citizens to be left with nowhere to go. Basic services such as schools, hospitals, and power infrastructure are not being fixed. Not even far enough to talk about the infrastructure damage, the agricultural losses are the biggest problem. 2 million acres of



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crops were destroyed. In that two million destroyed crops, cotton and rice were also included. Those two crops are critical for Pakistan's economy and food security. The flood has caused a 2.2% contraction of Pakistan's GDP. And the pundits estimated that to recover Pakistan's economic impact, they have to recover 9 million people who have been pushed into poverty by the flood.

International Actions

Adaptation Funding

Other nations have provided financial support to vulnerable countries to build flood-resilient infrastructure to improve disaster preparedness. Those funds have been raised by the Green Climate Fund (GCF). Pakistan has received billions of dollars for climate adaptation after the 2022 flood and has partially recovered. After the major floods, international organizations have also lent a hand and provided emergency aid such as food, clean water, and medical supplies.

Disaster Risk Reduction

Since the flood in Pakistan is not a single-time flood, but it is happening consecutively, UNDRR works with the government to create policies and frameworks to reduce the flood risk. Disaster happens at any time, and often in ways that we can't imagine. So, there is nothing that we can do to stop natural disasters. However, what we can do is to prevent the risks. UN agencies have been helping to construct the advancement, including sustainable water management, land use planning, etc. These implements risks of further disasters.



People trying to help the result of flood caused by climate catastrophe

Key Players

Green Climate Fund (GCF)

The Green Climate Fund (GCF) was established by the United Nations Framework Convention on Climate Change (UNFCCC) in 2010. In 2014, the Green Climate Fund successfully raised US\$9.3 billion and have saved it for future uses. The Green Climate Fund aims to foster a paradigm shift towards low-emission, climate-resilient development pathways in developing countries. As mentioned as official website. Also, The Green Climate Fund has approved \$66 million grant for the “Recharge Pakistan” project. It benefited around 687,000 people directly.



Logo of Green Climate Fund

United Nations Office for Disaster Risk Reduction (UNDRR)

The United Nations Office for Disaster Risk Reduction (UNDRR) was established in 1999, and its headquarters are in Geneva, Switzerland. The main framework of UNDRR is to “Oversee implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030.” As mentioned in the official website.



Logo of United Nation Office for Disaster Risk Reduction

UNDRR coordinates global disaster data collection and has experts to train public officials about disaster risk governance. In February 2023, UNDRR partnered with Pakistan’s NDMA and UNICEF to deliver the Sendai Framework training. Sendai Framework training offers online courses to build capacity for disaster risk reduction.

Possible Solutions

Bolster Climate-Resilient Infrastructure

The total economic loss of Pakistan due to the flood accounts for 15% of Pakistan’s GDP for that year. 2.1 million homes were severely damaged, causing citizens to be left with nowhere to go. Basic services such as schools, hospitals, and power infrastructure are not being fixed; referring to the previous notion, Pakistan must invest in a long-term plan. Disasters are inevitable, so removing the existing infrastructure that is old and poorly maintained should be one of the priorities. Build cities for extreme climate events and develop from it, such as Japan, a country that is suitable for enduring natural disasters.

Seeking International Aid



The local population is struggling to survive the harsh circumstances that they are given. Disasters that sweep the whole neighborhood, corrupt the factories, and loss of loved ones are an annual event for Pakistanis. All of these catastrophic scenes are never-ending scenes for Pakistanis, as climate change is exacerbating each year. Thousands killed, outbreaks of infectious disease, and destroyed infrastructure are seen every year in Pakistan. It will be pivotal to solve the current ongoing natural disasters to prevent further exacerbation of other factors that will lead to a fracture of peace in normal lives. In order to do that, tackling climate change should be prioritized above all other concerns. In order to achieve all of these, there are many other requirements. However, the global support trying to reduce disasters caused by climate change should be encouraged too. Pakistan cannot shoulder the cost of the disaster and recovery. The cost of climate change is borne by all countries.



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