

**Forum:**

Special Conference

**Issue:**

Establishing measures to minimize the detrimental effects of floods  
in South Asia

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## Introduction

Floods are the second most common natural disasters encountered in the world, just behind fires. It is particularly unfortunate that the count of flood deaths is highest in Southern Asia. Countries located in South Asia such as Pakistan, Nepal, India, and Bangladesh suffers from regular floods mainly stemming from the monsoon climate of the region. Being exposed to heavy rainfalls, these countries' water bodies cannot convey the huge amount of water and eventually overflow. The impacts of floods on the people, the economy, agriculture, livestock, and infrastructures are unimaginably devastating. Especially when the countries do not have the financial resources to prevent or deal with the impacts of floods, this natural disaster becomes their worst nightmare. Worst floods recorded in history that South Asia has faced took place in 2007, causing millions of deaths and tremendous losses. These floods were caused by the unusual monsoon patterns, rainfall and therefore the overflow of Brahmaputra River. As a result of this incident, approximately 20 million people were displaced in the South Asian region (Manik, Somini).

## Definition of Key Terms

**Flood:** An unexpected overflow of water bodies over regions that are normally dry.

**South Asia:** South Asia refers to the southern region of the Asian continent, which contains the following countries: Afghanistan, Bangladesh, Bhutan, India, Nepal, Maldives, Pakistan, and Sri Lanka. It is bordered by the Indian Ocean, as well as West Asia, Central Asia, East Asia and Southeast Asia.

**Embankment:** A structure, usually made of stone, built with the purpose of holding water back.

**Dam:** A barrier constructed to prevent the flow of water.

**Monsoon:** A seasonal wind that causes dry and wet periods, affecting mainly the tropics.



Picture 1: South Asia Map

## **General Overview**

Flood refers to the overflow of a great amount of water over lands, resulting in severe damages on both humans and on nature. There are several reasons why these natural disasters may occur, the main known reason being heavy rainfalls. When water bodies do not have the capacity to carry this excess water, flooding occurs. Another reason why floods may occur, although it is less likely, is when dams break. When dams fail to carry out their purpose, which is to hold the collected water, the region might face terrible consequences. Since dams contain huge amount of water behind them, the overflow of water would be with a significantly destructive force. Another reason of floods would be melting of snow, which has increased with the effects of climate change. When deep snow melts, it results in large amounts of water, which elevates the water levels of water bodies such as rivers. When these water bodies do not have the capacity to carry this water, the water overflows and therefore, floods occur.

South Asia is a region that feels the negative effects of climate change, such as higher temperatures, more precipitation, and eventually higher water levels. Considering the region's climate, it is not surprising that the countries in this region experience very intense floods. The climate of South Asia is mainly controlled by the summer monsoon and the winter monsoon. Summer monsoon brings about heavy rainfall, along with humid weather. Even though summer monsoon has a lot of benefits to South Asia's economy and industry, the heavy rainfall that it brings is the main reason of flooding in the region. On the other hand, winter monsoons are not commonly associated with floods.

## **What Are the Effects of Floods on South Asia?**

The most detrimental effects of floods are clearly on the people, severely affecting their health and belongings. The 2010 floods in Pakistan killed more than 2,000 people and impacted 18 million, which is a huge number considering that Pakistan's population isn't any more than 183 million (Thomson Reuters Foundation). This means that almost one-tenth of the whole population of the country was critically affected by these floods. Monsoon rainfall has caused the Indus River to overflow, sweeping through homes of millions. Approximately 11 million people were homeless as a result. An estimated number of 1 million livestock died, and most crops were destroyed. Consequently, the prices of foods increased extremely, which made it almost impossible for low-income families to survive. These consequences are very similar in other countries in South Asia facing flood as well. After the 2007 South Asia floods a total of 16 million people were displaced: 11 million being in India, 4.5 million in Bangladesh and 250,000 in Nepal ("Timeline of Major Floods in World History"). Overall, floods are not only killing people but also creating very harsh economic and social conditions to live in for the people that have survived.

## **Why Are Countries in South Asia Especially Vulnerable?**

The main reason why countries located in South Asia are especially vulnerable to natural disasters is poverty. Low incomes, low education levels, poor infrastructures, and lack of social security are factors that deteriorate the situation in this region. Not having the financial resources, these countries

lack infrastructures such as dams and levees, which are necessary to prevent floods. These infrastructures are crucial in countries that face such rainfall, in order to prevent the overflowing of rivers and water streams. Moreover, because of the aforementioned reasons such as deficiency in education, these regions suffer from the absence of services such as health care facilities and emergency response teams. The obstacle of low education levels prevents people of the South Asian region from acquiring professions that require an advanced education, such as engineers and doctors. Financial and educational shortage are deeply interconnected with the issue of unpreparedness and vulnerability to floods.

## Major Parties Involved and Their Views

**Bangladesh:** Bangladesh experiences floods annually, which stems from the fact that the rivers in this country are massive, and 75% of the country is below ten meter above sea level. In addition, Bangladesh is exposed to a great deal of rain. This means that the country is very prone to experiencing floods. As a result of floods, a great deal of people loses their lives.

**India:** The main cause of floods that occur in India is rainfall, along with overflowing rivers and lakes. This is why most of the floods in India happen in rainy seasons.

**Pakistan:** In the summer of 2010, Pakistan has experienced floods that killed millions of people and destroyed homes. Unexpected monsoon rains caused the Indus River to overflow, covering approximately one-fifth of Pakistan's land.

## Timeline of Events

1943	Rajputana flood occurred in India, killing nearly 5 thousand to 10 thousand people.
1974	Flood in Bangladesh due to monsoon rain, which caused the death of nearly 29 thousand people.
1988	Monsoon flooding in Bangladesh killed 2,500 people and left 28 million homeless.
2007	2007 South Asia floods took place, displacing roughly 16 million people.
2010	Pakistan faced the worst flood that the country ever has.

## UN Involvement

### UNESCO (United Nations Educational, Scientific and Cultural Organization)

UNESCO is an organization of the United Nations that aims to provide everyone with access to education, scientific development, freedom, and a cultural environment. UNESCO works in collaboration with other establishments such as WMO (World Meteorological Organization), UNISDR (The United Nations Office for Disaster Risk Reduction), and UNU (United Nations University) to create the International Flood Initiative (IFI). The main objective of this initiative is to help countries better understand and react to

floods, as well as reducing the detrimental effects of floods on these countries. The initiative works on research, and provides countries with education, training, and technical assistance. ("Introducing UNESCO")

### **UNISDR (The United Nations Office for Disaster Risk Reduction)**

UNISDR is a part of the United Nations that aims to reduce the effect of disasters on people, economies and on infrastructure. They coordinate all efforts that are being made internationally in disaster risk reduction. Floods being a major natural disaster, UNISDR has been working on reducing the risks of floods for many years. They aim to inform the public in ways such as publishing guidelines, and providing statistics. ("Who We Are")

### **UNICEF (The United Nations Children's Fund)**

UNICEF is a United Nations program that aims to defend children's rights providing them safety, education, and equality. In the case of a crisis, UNICEF seeks to help the children and families in the region, they take humanitarian action wherever possible. In the event of a flood, UNICEF provides people with clean drinking water, medications, vaccinations and health care. ("What We Do")

### **FAO (Food and Agriculture Organization of the United Nations)**

FAO is an organization of the United Nation that strives to eliminate hunger, and provide support to countries so that they can be prepared for food and agricultural emergencies. In cases of floods, FAO tries to help farmers in the region by providing seeds and veterinary care to ensure the animals' health. They also help countries to prevent the risk of floods by, for example, helping farmers to build embankments around their crops. ("About")

## **Relevant UN Documents**

Strengthening emergency relief, rehabilitation, reconstruction and prevention in the wake of devastating floods in Pakistan, 19 August 2010 (A/RES/64/294)

## **Treaties and Events**

**Sustainable Development Goals (SDGs):** SDGs are a set of goals adopted by the United Nations Development Programme (UNDP). Although they don't tackle the issue of floods directly, they aim to solve issues that lead to flooding. For instance, the thirteenth goal aims to "take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy".

## Evaluation of Previous Attempts to Resolve the Issue

So far, mainly actions specific to particular flood events were taken rather than a general approach to the issue. Non-governmental organizations such as UNICEF (The United Nations Children's Fund), FAO (Food and Agriculture Organization of the United Nations), and UNESCO (United Nations Educational, Scientific and Cultural Organization) have been providing the regions undergone flood with humanitarian support, whereas organizations such as UNISDR (The United Nations Office for Disaster Risk Reduction) focused more on preventing floods from happening. UNISDR has published guidelines for reducing flood losses that can be found at the following link: [http://www.unisdr.org/files/558\\_7639.pdf](http://www.unisdr.org/files/558_7639.pdf). This was an important step in educating the public however it does not take any direct measures to help the countries carry out these guidelines. The previous attempts to resolve this issue were not unsuccessful; however they were not effective enough. In order for this issue to be resolved, we need more direct measures to be taken.

## Possible Solutions

While tackling the issue at hand, it is more reasonable to take protective measures rather than preventive measures, since floods are natural disasters that are almost impossible to foresee and prevent. Even though it is difficult to predict when floods will occur, it is possible to determine where they will occur since the main causes of floods are well-known: rising water levels and rainfall. In countries that are facing continuous floods, a constant monitoring of water levels is highly recommended. Governments should detect the areas at most risk and prohibit residence in the area. Another important course of action is to build flood barriers such as embankments to increase protection. In addition, there should be well trained and well-equipped rescue teams available at all times. It would be wise to ask non-governmental organizations' help for financial support if the countries cannot afford to take these measures.

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