

**Forum:** Economic and Social Council (ECOSOC)

**Issue:** Creating an international framework for minimizing the effects of natural disasters

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## Introduction

Natural disasters are one of the most prominent causes of death, economic instability and social disturbance globally, however, are also the most uncontrollable and unforeseen circumstances as well. Therefore, the detrimental effects of natural disasters create an environment of chaos no matter what. Thus, building international frameworks to minimize these effects in order to control them is crucial. Natural disasters that lead to prominent death tolls can be categorized as earthquakes, tsunamis, floods, volcanic eruptions, wildfires, and more on. The fact that there are such a vast amount of differing disasters, along with the fact that their effects on ecosystems, economics and the continuation of social life also differ makes natural disasters a very unpredictable hazard.

It is very important to note that the natural disasters themselves are not the only cause of their detrimental effects. The actions of humans have a role to play in this as well. The correct procedural actions need to be taken post-natural disasters; the necessary infrastructure needs to be built to reduce harm, and economic frameworks need to exist in order for the effects of said disasters to be reduced. Otherwise, the effects of the mistakes made by governments, civilians, as well as those in charge of said infrastructures lead to more death tolls and economic loss than what would have been if such measures were to be taken. In countries that are at high risk of natural disasters, and especially in LEDC's (Less Economically Developed Countries), the effects of natural disasters become detrimental to another extent. The effects of natural disasters are dealt with both internally and externally. However, countries need to be able to have the necessary infrastructures in order to support displaced civilians, as well as the incoming assistance. Countries need to be able to both prepare in advance for unpredictable natural disasters, and support their citizens, their economies, and their environments post-disaster. Therefore, international frameworks for minimizing these effects are necessary. There are already existing frameworks in order to minimize the effects of natural disasters such as the "Sendai Framework for Disaster Risk Reduction 2015-2030" which is a project working in cooperation with the United Nations (UN). However, applicable and effective frameworks that are both for preventative measures, and for aid following a disaster that can be applicable on a global scale still remain necessary.

## Definition of Key Terms

**Natural Disaster:** A natural disaster is an extreme, natural and unforeseen environmental effect leading to mass destruction and death.

**Framework:** A framework can be described as the structure behind a system or concept. They can come in various different ways, such as legal frameworks, technological frameworks, economic frameworks and so on.

**Infrastructure:** Infrastructures are basic organizational elements that are within cities, countries ect. Such as roads. They are basic systems serving urban areas.

**Disaster Risk Management:** This term refers to policies and measures that are used to prevent the negative effects of natural disasters and in preventative measures.

**Risk Assessment:** This is the process of evaluating the issues and risks that may arise in a systematic manner.

## General Overview

### Major Natural Disasters

Accounting specific natural disasters with detrimental effects that occurred in different countries is very important to work towards minimizing said effects on a global scale. The earthquake and tsunami that took place in the Indian Ocean during December 26th, 2004 can be noted as one of the largest recorded tsunamis to date. After an earthquake with a magnitude of 9.1-9.3 hit the coastline of Indonesia, a tsunami reaching 30 meters followed right after. This tsunami affected 14 countries in total and led to the death of approximately 230.000 people. This disaster showed that it is necessary for nations to be prepared for extreme natural disasters that might affect multiple areas at once, and the need for global cooperation.

Another natural disaster that created a prominent impact was a cyclone that occurred in Myanmar in 2008, under the name of Cyclone Nargis. The tropical cyclone led to landfall as well as other storms. Multiple towns and areas in the country were destroyed, with the death toll being more than 100.000 in various areas. Other than the high death rates, towns and homes were also destroyed to a very large extent with many left displaced. The deaths that occurred from the disaster itself were the first wave. The second wave of deaths came from the lack of proper action taken after the disaster; from the spreading of diseases and the lack of relief. This disaster cost Myanmar around 12 billion dollars.

Moreover, a natural disaster that was recorded in history as one with extremely high death rates was the 1999 earthquake that took place in Türkiye, İzmit. The earthquake had a magnitude of 7.6, and together with the gulf of İzmit, it also affected other areas such as Istanbul. Türkiye has 81 provinces

and 10 of them were affected by the earthquake. While the official casualty number is around 17,000, it can be noted that reports state the real number as at least double the amount. A very considerable amount of damage was done towards property and homes of civilians, together with high death tolls. The catastrophic effects of the earthquake sowed themselves for many years within the nation, especially economically. The 1999 earthquake shed light on contractors using cheap materials in construction and the lack of proper guidelines being followed in construction sites.

### **The Effects of Natural Disasters**

The effects of natural disasters can be categorized into three sections. These can be noted as economic, social and environmental effects. All of these effects combined lead to instability of nations, cities and urban areas, directly affecting the livelihoods of civilians. The economic effects of natural disasters are quite difficult to determine exactly. The reason for this being the fact that they cause loss in terms of both market-crashes due to the economic livelihoods of numerous civilians coming to a halt, but also thorough physical losses such as damages to land, housing, and other assets. The time following a large-scale natural disaster is a time where economic activity in the area becomes nearly zero. While this affects the country's economic system and market as a whole, more importantly, it affects civilians directly. Civilians being unable to attend their jobs, activities such as farming, as well as tourism and transportation coming to a halt all lead to small-scale and large-scale economic instability for citizens individually and nations as a whole.

The most important effects of natural disasters are those on citizens and society as a whole. First and foremost, natural disasters are one of the most major causes of death for both LEDC's and MEDC's. The collective grief period that comes after the occurrence of natural disasters leads to the shifting of social life and understandings. The effect on the psychological state of individuals, as well as the sociological state of the population cannot be denied. Natural disasters which have led to a large number of deaths, and the incorrect response by governments and nations following said disaster can lead to an environment of chaos. The halt in work, education, and regular life also affects economic activity. The environmental effects of natural disasters in urban areas go hand in hand with economic activity as well.

### **The Role of Human Action**

Relief actions post-natural disasters conducted by governments and organizations, as well as preparations to ensure decreasing its effects before a natural disaster is very important. However, the lack of transparency and proper action taken, increase the detrimental effects of disasters. The primary reasons for damages done to property after natural disasters such as earthquakes are low-quality concrete, under-reinforced columns, large stirrup spacings. Contractors aiming to make profit through cutting down on material costs, by either using faulty materials or not using enough materials needed, in turn endangers civilians living in said homes during natural disasters. The most significant flaws found in structures damaged by natural disasters, especially earthquakes, are those relating to inadequate load-bearing systems or architecture. It is very difficult to transform an existing

structural system into one that is resistant to earthquakes. Most MEDC's are able to endure earthquakes with average magnitudes, however, the situation differs when the lack of transparency and faulty practices in construction come into play as well. Therefore, making sure that nations have the correct infrastructure, and ensuring this through frameworks on a global scale is very important.

The actions of humans following natural disasters are also key factors in either increasing or decreasing the detrimental effects of natural disasters. The necessary steps regarding evacuations, aid, healthcare and housing need to be provided by governments in order for the detrimental effects of natural disasters, as well as death tolls to be minimized, and for the social structure of the affected region and nation to go back to normal. Therefore, frameworks to ease these periods are necessary. While the primary attention given to natural disasters on an international basis is on the occurrence of the disaster itself and short-term response, there is more that goes into the disaster-management cycle. While short term responses are incredibly important to decrease the number of deaths caused by natural disasters; many people die from the event's long lasting effects such as the spreading of diseases and the lack of safe housing. Therefore, long-term responses are just as important as short-term ones. Actions in the fields of recovery, rehabilitation, and reconstruction are part of the post-disaster phase.

## Major Parties Involved and Their Views

**Türkiye:** The nation of Türkiye is built on multiple earthquake fault lines, and multiple regions of the country are in direct risk of earthquakes and other natural disasters. On the other hand, it can be noted that the country has been already affected by multiple earthquakes throughout the decades, where the death tolls increased even more following the actual disasters due to the lack of urgent relief, unstable and faulty construction with the lack of proper regulations and the lack of enough healthcare services in the affected are, together with economic instability for affected families.

**Japan:** Much like the country of Türkiye, Japan is also a nation that is heavily affected by natural disasters such as earthquakes and tsunamis. However, they can be noted as a country who has effective frameworks in place when it comes to minimizing the effects of said disasters. Unlike many countries, Japan has earthquake-resistant construction in most areas of the country, leading to lives lost due to the collapsing of buildings during a disaster to be kept to a minimum. The country also has a very well developed communication system, as well as an organized and active direct-relief operations at hand.

**Haiti:** Haiti is also a nation that is heavily affected by natural disasters such as floods, tropical storms, and earthquakes. Compared to various other Caribbean nations, Haiti experiences many more natural disasters due to the fact that it stands on a geological faultline, and is prone to heavy storms, flooding and mudslides. An earthquake that hit the nation during 2010, led to more than 200.000 citizens dead, more than 1 million citizens displaced, and led to recovery costs surpassing the country's GDP.

**Thailand:** Other than droughts and other geological emergencies, Thailand is especially prone to natural disasters such as tsunamis as well as earthquakes. The 2004 Indian Ocean tsunami and earthquake became one of the deadliest natural disasters recorded in history. Thailand has been building a strong disaster-management system over the past few decades. The country's first natural disaster prevention law was put in place in 1979. During 2002, the Thai Government created the Department of Disaster Prevention and Mitigation (DDPM). Following the 2004 Tsunami, the country further developed said system.

**United States of America:** The USA is a very prominent country within the topic of natural disasters as they are one of the countries that experience the most amount of tornadoes and extreme storms. The United States of America experiences around 1200 tornadoes on an annual basis and also experiences the most number of tornadoes rated EF4/EF5 according to the Enhanced Fujita Scale globally. For risk management in the event of a tornado, the USA has FEMA, a tornado safety initiative that creates technical manuals for engineers and architects, as well as working with state governments in order to recommend safety standards. The USA still needs additional resources for direct action following tornados and projects to minimize effects through preventative measures.

**Nepal:** Nepal is another nation that is very prone to natural disasters, specifically to landslides. Landslides triggered by landslides are a cause of major economic loss as well as death tolls, displacement and social instability. Unstable mountain terrains and urban areas/housing located in said terrains, unplanned and unregulated road building as well as construction all lead to the effects of landslides being increased. GSFC's Landslide Hazard Assessment for Situational Awareness (LHASA) is a tool used to map and forecast landslides and provides nearly real-time overview of the risks of landslides, however, only does so for the Mekong Region which Nepal is not a part of.

**Mexico:** When it comes to natural disasters, Mexico is most at risk for volcanic eruptions. The nation is home to 37 holocene volcanoes. According to the US Geological Survey, in the instance of a volcano erupting within Mexico, more than 100.000 citizens would be in immediate danger. Therefore, the necessary pre-disaster action needs to be taken.

**Australia:** The Australian wildfire has had detrimental effects on the nation ever since the disaster occurred and said effects are still showing themselves to this day. The bushfires that took place in 2019-2020 lead to nearly 19 million hectares worth of land being burned as well as nearly 3 billion animals being affected (injured, killed or displaced). Climate change, as well as deforestation all have roles to play in this. The livelihoods of citizens were affected y by these fires, but the wildfires additionally led to a climate and ecological crisis as well.

## Timeline of Events

<p><b>1965</b></p>	<p>With the resolution 2034, the General Assembly requested Member States assistance in cases of natural disasters to</p>
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	inform the Secretary-General of the type of emergency assistance they are in a position to offer
<b>1971</b>	The United Nations Disaster Relief Office (UNDRO) was created.
<b>23-27 May, 1994</b>	The “World Conference on Natural Disaster Reduction” took place in Yokohama.
<b>1999</b>	The International Decade for Natural Disaster Reduction (IDNDR) ended. The IDNDR Programme Forum took place.
<b>August-September, 2022</b>	The Johannesburg Plan of Action was submitted in “The World Summit on Sustainable Development (WSSD)”.

## UN Involvement

There are various frameworks and projects already in place in order to decrease the harm that arises from the occurrence of natural disasters that is being put in place with the United Nations. One of these frameworks is the Sendai Framework for Disaster Risk Reduction 2015-2030, created by UNESCO. This framework underlines seven targets and four actions in order to reduce said risks. These actions are as stated: “(i) Understanding disaster risk; (ii) Strengthening disaster risk governance to manage disaster risk; (iii) Investing in disaster reduction for resilience, and; (iv) Enhancing disaster preparedness for effective response.” (UNESCO.org) Within this framework, UNESCO aims to help Member States in dealing the effects of disasters. This framework is under the UNDRR (United Nations Disaster Risk Reduction).

Another project aiming to help with reducing the effects of natural disasters under the United Nations is the 2030 United Nations Development Goals. There are 17 goals in total, and some of them underline reducing the risks of natural disasters . The UN is also involved in minimizing the effects of disasters through the “New Urban Agenda”. This Agenda aims to solve the issue of large cities being unable to withstand the severe impacts of natural disasters such as earthquakes. The two main goals of the New Urban Agenda is firstly, connecting different global agendas with each other, and secondly, improving reporting systems with auctions such as the implementation of new data platforms.

## Relevant UN Documents

**General Assembly resolution 77/29:** This resolution was passed under the agenda item of “Strengthening of the coordination of humanitarian and disaster relief assistance of the United Nations,

including special economic assistance: strengthening of the coordination of emergency humanitarian assistance of the United Nations”.

**General Assembly Resolution 46/182:** This resolution aimed to improve the coordination of humanitarian emergency assistance provided by the United Nations.

**General Assembly Resolution 50/57:** This resolution was passed under the agenda item of “Strengthening of the coordination of emergency humanitarian assistance of the United Nations”.

## Treaties and Events

**International Disaster Response Law (IDRL):** This law was introduced by “The International Federation of Red Cross and Red Crescent Societies” in order to reduce the vulnerability of civilians suffering from the effects of natural disasters. This law aimed to promote the development of law mechanisms regarding international disaster response.

**The Paris Agreement:** This agreement took place between 178 nations. Its aim was to, other than working towards minimizing the effects of climate change, also provide support to developing countries.

**The Law on Natural Disaster Prevention and Control:** This law underlines both the rights and obligations that agencies, organizations, households and individuals that take part in natural disaster prevention have. It looks at state management in regards to resources that have to do with natural disaster prevention.

## Evaluation of Previous Attempts to Resolve the Issue

While there are many projects as well as frameworks and goals, such as the Sendai Framework, set in place to minimize the effects of natural disasters, they do not stand as adequate enough in order to reduce the number of civilian deaths on their own. The main reason for this is the fact that these projects are not fully globalized. This means that while they may be realistic and applicable to many countries, they are not to all; especially for countries who lack the proper economic and infrastructural support. Other than this, governments turning a blind eye to faulty construction, and the lack of proper regulations in many countries when it comes to infrastructures leaves these projects as unrealistic.

## Possible Solutions

It is important for delegates to look at the issue at hand from a collective and global standpoint while searching for solution ideas. While certain countries already have protective measures in place both for detecting natural disasters, and aiding in relief after them; some countries have much less efficient measures, and some countries do not have any frameworks in place at all. Therefore, delegates must make sure that the frameworks that they create can be applicable to most nations.

An important solution idea that delegates should think about is separating frameworks for post and after-natural disasters, and taking measures for both aspects. When it comes to building international frameworks for minimizing their effects by looking at before the natural disaster itself happens, delegates should think about improving the infrastructure of densely populated urban areas. Creating regulations on faulty construction being allowed by contractors, as well as creating frameworks to ensure the safety of water and electricity based infrastructures is very important. It is important to note that before a disaster occurs, delegates should also look at frameworks for risk assessment in order to create preventative measures.

The other solution ideas that delegates should explore is building frameworks for after the natural disaster happens. This can be looked into within two different categories. The first would be improving the direct aid given after a disaster happens such as organized search and rescue parties and evacuation plans. International communication is key when it comes to this aspect. The next category would be frameworks for long-term relief. This would be combatting the spreading of diseases and lack of proper healthcare, as well as the lack of adequate housing for most citizens affected by a natural disaster. Delegates should also think about working on improving the economical state, as well as the special environment of both individual citizens and families, and nations as a whole.

## Notes from the Chair

It should be noted that while LEDCs are very susceptible to the damages caused by natural disasters, MEDC's are can also be gravely affected by them. Therefore, one should keep in mind making sure to, while focusing on countries who lack the infrastructure and economic stability to apply said frameworks, also focus on improving the frameworks and infrastructures of MEDC's as well.

It is very important for delegates to work towards frameworks that look at preventative measures as well. Within this, improving global communication and cooperation is incredibly important. Making sure to enhance the communication of nations and relief teams so that search and rescue parties can work together is really important. Another important note is for delegates to keep in mind the legal implications of the frameworks they will work towards creating for each nation.

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