

Committee: United Nations Development Programme (UNDP)

Issue: “Future proofing”: enhancing disaster risk reduction and resilience schemes in crisis-affected states

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Position: Deputy President

PERSONAL INTRODUCTION

Dear delegates,

My name is Ivi (Paraskevi) Galiotou, I am 17 years old and I live in Patras, Greece. My school is Arsakeio of Patras and this will be my last year in high school. For my second time chairing I have the honour to serve as one of your deputy presidents in this year’s ATSMUN and I am more than delighted.

Considering the study guide, I hope that it will be a helpful source for starting your research but I should advise you in order to be well-prepared and informed to search for a variety of information on the topic elsewhere. By doing so you will be able to thoroughly understand the topic and relate it to your country’s policy. This study guide required a lot of time in order to be completed and it was made with care and interest but it remains a general approach on the issue.

About your research I believe that it would be fruitful if you tried to seek information in a variety of sources in order to gather valid data and to have a valid viewpoint. Focus on your research and try to be as thorough as possible in order to participate actively during the procedure. I will be more than happy to help you with any questions that may arise to you, please do not hesitate to contact me via e-mail. I am truly looking forward to meeting you all and I hope that this ATSMUN is going to be as amazing as it has always been. See you in November!

At your disposal,

Ivi Galiotou

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INTRODUCTION

Throughout time, the world has suffered from a variety of issues that differ from place and time. In this day and age, we are considered quite fortunate as our society has been given the opportunity and the right tools to face these issues and quickly recover from them. But most importantly we have the ability to prevent them, which is the focus of this topic.

The topic could be divided into two categories, resilience and prevention. “Future proofing” means to shield any upcoming situation in order to protect the world from possible threats. We have to focus more on investing in being prepared for situations that have a serious impact on our society and its balance. This method can prevent a lot of harmful situations and ensure safety and stability. Instead of providing only emergency aid, international efforts should help states invest in early help forces and actions.

On the other hand, it is of paramount importance, after we apprehend the existence of an issue and roughly its characteristics, to be able to find solutions in order to successfully recover from its consequences. That is the meaning of resilience, investing in the ability to get past post-disaster situations and other issues. We are obliged to protect the world’s balance, its species, its places. Member states ought to shield their future and take action upon the issues that threaten their stability.

DEFINITION OF KEY TERMS

Climate change

Climate change is a phenomenon regarding long-term shifts in temperature and weather patterns and has a serious impact on nature and humanity. Therefore, it is a main cause of natural disasters and acting against it could be a way to prevent them.

Crisis

A crisis is considered a time of great suffering, confusion and stress that can have a serious impact on something or someone. Some types of crises can be financial, natural disasters, terrorism, violence, and many others. Crisis-affected states are considered countries that face a situation which is difficult to handle and resolve.

Disaster preparedness

Disaster preparedness consists of a combination of measures undertaken in advance by governments, organisations, communities, or individuals to better respond and cope with the immediate aftermath of a disaster, whether it be human-induced or caused by natural hazards. The objective is to reduce the loss of life and livelihoods.¹

Disaster risk

Disaster risk is the potential loss of life, injury, or destroyed and damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.²

Future proofing

Future proofing is the process of anticipating the future and developing methods of minimizing the effects of shocks and stresses of future events. By future proofing something you form it and adapt it in order to continue being successful and useful in the future if there is a change of state.³

¹ European Commission. "Disaster preparedness." *Europa*, [civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness_en](https://humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness_en).

Accessed 7 Aug. 2023.

² "Disaster risk." *United Nations Office for Disaster Risk Reduction*, undrr.org/terminology/disaster-risk. Accessed 7 Aug. 2023.

³ "Future-proofing." *Cambridge Dictionary*, dictionary.cambridge.org/dictionary/english/future-proofing. Accessed 8 Aug. 2023.

Resilience

The ability to withstand or to recover quickly and successfully from difficulties and disasters is known as resilience. Part of the procedure of facing a disaster is not only preventing it but also being able to recover from it and preferably in the most efficient way.⁴

BACKGROUND INFORMATION

Every year, millions of individuals experience shocks ranging from localized extreme weather to large disaster events like drought, floods, and storms, as well as, as COVID-19 has shown, pandemic and epidemic disease. In addition, climate change and irresponsible resource use are causing environmental changes that make many people and ecosystems more vulnerable, which increases the size and frequency of risks they are exposed to. Without significant investment in resilience-building, these changes threaten to not only slow down but in extreme cases halt completely the progress being made towards achieving the Sustainable Development Goals (SDGs) and realizing the 2030 Agenda.

It is also important to point out that while hazards and climate change may affect everyone who is exposed, not everyone is equally impacted. Climate and disaster hazards interact with other risks and worsen socioeconomic vulnerabilities rather than existing in a vacuum. The needs of those most in need and at risk must be addressed, and their capacities must be built in a way that addresses their unique difficulties and vulnerabilities. This will ensure that efforts to manage disaster and climate risk are inclusive of all stakeholders.

It is imperative that we gain a better understanding of disaster risk, in all its dimension if we want to break the vicious cycle of "Disaster, respond, recover, repeat."⁵

⁴ "Resilience." *Cambridge Dictionary*,
dictionary.cambridge.org/dictionary/english/resilience. Accessed 8 Aug. 2023.

⁵ <https://www.preventionweb.net/understanding-disaster-risk>

Types of disasters

It is reported that 80-90% of all documented disasters from natural hazards during the past decade have been caused by floods, droughts, cyclones, earthquakes and more. Floods are a major natural disaster which is an overflow of water. Floods can be threatening against agriculture, public health and safety, civil engineering etc. Floods are usually caused by massive rainfalls, the melting of snow, the overflowing of rivers, collapsed dams, deforestation, climate change and many more factors. As a result, floods threaten human lives, lead to the destruction of property, and obstruct access to public services. The effects of floods can be long-term and costly.

Another catastrophic disaster is a cyclone, which is a large system of air that circulates around a centre of low atmospheric pressure. Cyclones are caused mainly by atmospheric disturbances and have significant impacts on human life and property, such as storm surge, flooding, extreme winds, lightning and tornadoes.

A drought is also one of the most dangerous and impactful natural disasters. A drought is considered a period of drier-than-normal conditions, characterised by the lack of precipitation which results in water shortages. According to the WHO approximately 55 million people are affected by drought since it threatens livelihood, agriculture, and human health. Drought is mainly evoked by climate change and water shortage.⁶

Additionally, earthquakes are considered a severe natural disaster. An earthquake is the shaking of the surface of the earth that results from a sudden release of energy from the lithosphere (the solid, outer part of Earth, including the brittle upper portion of the mantle and the crust)⁷. Earthquakes are known to cause severe damage on properties and humanity, but they can also result in soil liquefaction, landslides, fire, tsunamis, fissures etc. According to the WHO between

⁶ "Drought." *World Health Organization*, [who.int/health-topics/drought#tab=tab_1](https://www.who.int/health-topics/drought#tab=tab_1). Accessed 7 Aug. 2023.

⁷ Evers, Jeannie, et al. "Lithosphere." *National Geographic*, education.nationalgeographic.org/resource/lithosphere/. Accessed 8 Aug. 2023.

1998-2017 earthquakes caused more than half of all deaths related to natural disasters which was roughly 750.000 deaths globally.⁸

Disasters are not limited only to natural ones, there are man-made disasters as well. Man-made disasters are considered fires, deforestation, epidemic, chemical pollution, and war. They are all caused by humans, and they have similar impacts on humanity and the environment to natural disasters.

Taking into consideration our current situation the circumstances are not favourable when it comes to disaster risk. With the population rapidly increasing, climate change, widespread poverty, and other worldwide problems more and more people are often exposed to danger. Consequently, we need to invest in prevention rather than in emergency response since it has been verified that by doing so there is less cost, fewer disasters, and deaths.



Figure 1 Photo: Paul Jeffrey. ACT Alliance. The Philippines.

A case study: the Landslides in Saint Lucia

⁸ "Earthquakes." World Health Organization, [who.int/health-topics/earthquakes#tab=tab_1](https://www.who.int/health-topics/earthquakes#tab=tab_1). Accessed 7 Aug. 2023.

In Saint Lucia, an island in the eastern Caribbean, landslides are a common phenomenon that has made the area suffer numerous fatalities since 1872. Since landslides have been a socioeconomic problem for the island, in 2008 the World Bank invested in building hillside drains in some areas of Saint-Lucia. After two years when hurricane Thomas struck on October 29th 2010, many areas were affected by it except the areas where the hillside drains were built that showed no damage at all.



Figure 2: Landslides in Saint Lucia in 2010.⁹

The Management of Slope Stability in Communities, or MoSSaiC, has both addressed the effects and reduced disaster risk in a three-pronged approach: First a science-based approach that traces causes and finds appropriate measures, then a community-based approach that educates and trains residents in order to be able to protect themselves and fellow citizens. Further, an evidence-based approach that implements the suitable measures. This three-pronged approach had a general positive impact on the island and turned out to be successful.

The case of 2012 Indian Ocean earthquakes

⁹ McDonald, Nicole. "PM explains pace of Tomas recovery." *The STAR*, 3 Nov. 2011, stluciar.com/pm-explains-pace-of-tomas-recovery/.

On April 11th 2012 the Indian Ocean, near the province of Aceh, Indonesia, was struck by two undersea earthquakes that were magnitude 8,6 and 8,2 M_w respectively. Afterwards the Indonesian authorities thought that the two earthquakes would cause a tsunami and so there was a tsunami warning that was delivered across all countries of the Indian Ocean.

The earthquake struck India, Indonesia, and Thailand. It has been reported that many people reached higher grounds after the tsunami warnings and especially in Aceh people were terrified due to the 2004 Indian Ocean tsunami that killed 31.000 people.¹⁰ Although in the end there was not a massive tsunami following, people in India, Sri Lanka, and Thailand were evacuating metro stations, malls, they abandoned coastal areas. Moreover, toll charges were removed and there was a general action of preparedness for the possible tsunami. All those measures led to a well-prepared community, which prevented any possible loss of human life and property.

¹⁰ "2012 Indian Ocean earthquakes." *Wikipedia*,
en.wikipedia.org/wiki/2012_Indian_Ocean_earthquakes. Accessed 7 Aug. 2023.

DISASTER MANAGEMENT CONTINUUM

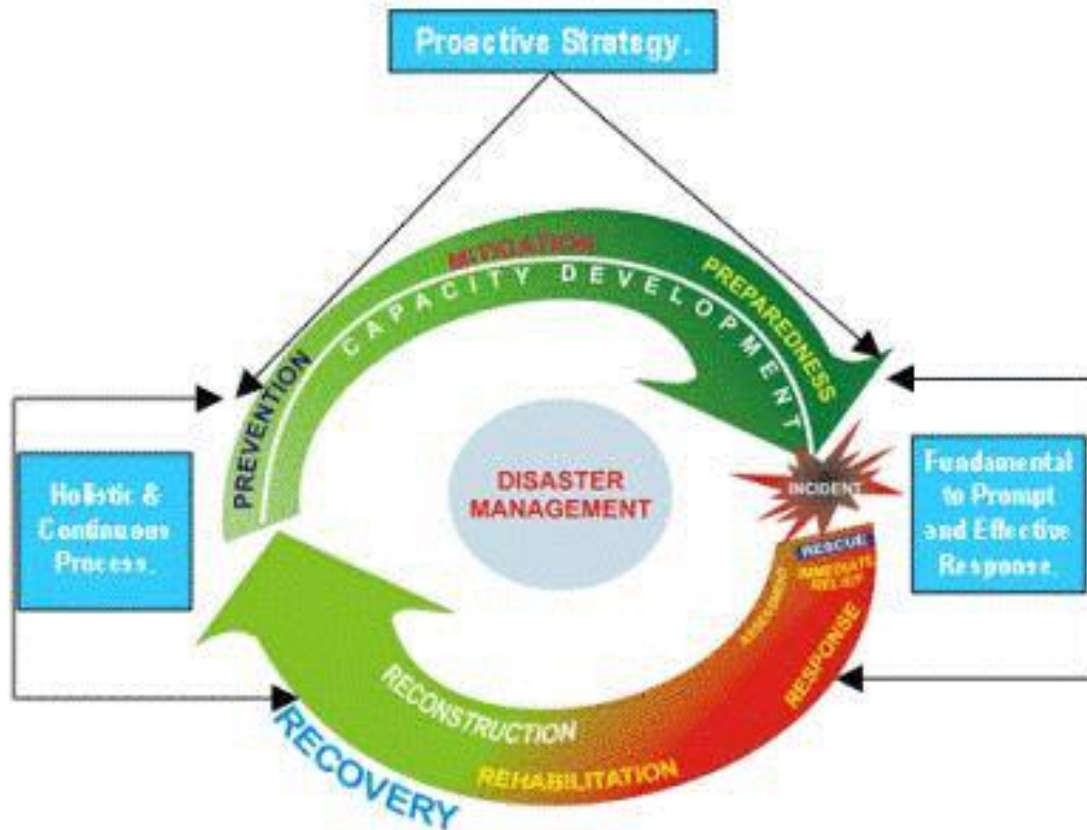


Figure 3: A legal and institutional framework binding all of the elements of the disaster management continuum together.¹¹

¹¹ "Background of Disaster management." *InsightsIAS*, insightsonindia.com/disaster-management/background-of-disaster-management/. Accessed 8 Aug. 2023.

MAJOR COUNTRIES AND ORGANISATIONS INVOLVED

Afghanistan

Two years ago, in August 2021 the Taliban took over Afghanistan causing a tremendous economic and health crisis, violence, deaths and many more. 1.659 civilians were killed and more than 3.000 were injured in the first half of the year. Furthermore women of all ages face high levels of gender-based violence. As a result millions of citizens have been forced to leave their homes, schools are open only to males, the health system is torn apart and there is a massive economic crisis.¹²

Ethiopia

The country has been suffering from drought for a long time and consequently the economy is destroyed. Additionally, there are ongoing conflicts in northern Ethiopia with the Tigray People's Liberation Front (TPLF) that heighten humanitarian needs and risks to civilians, leading to more than 20 million people facing food insecurity which can lead to many severe health issues.¹³

Syria

The country of Syria is confronting one of the most complex crises. For more than a decade Syria has been dealing with an ongoing conflict between the Syrian Arab Republic and various foreign forces. The conflict has aroused severe issues in human lives, human rights, the economy, the healthcare system and has forced as of 2015 about 3,8 million people to be refugees. Additionally, there was a catastrophic

¹² UN Humanitarian. "Nine things you need to know about the situation in Afghanistan right now." *United Nations Office for the Coordination of Humanitarian Affairs*, 6 Oct. 2021, unocha.exposure.co/nine-things-you-need-to-know-about-the-situation-in-afghanistan-right-now; "Conflict and Crisis in Afghanistan." *Afghanaid*, afghanaid.org.uk/news/conflict-in-afghanistan. Accessed 8 Aug. 2023.

¹³ IRC. "Crisis in Ethiopia: Drought and conflict put 28 million in need." *Rescue*, 1 Mar. 2023, rescue.org/article/crisis-ethiopia-drought-and-conflict-put-28-million-need.

earthquake in February 2023 that killed at least 8.476 people and injured more than 14.500.

South Sudan

For over 2 decades South Sudan has been a conflict zone since there is a civil war taking place. As for late 2021 the civil war has resulted in 8,3 million people being in need of humanitarian aid. Furthermore, there are 2,3 million Sudanese refugees, 1,4 million children and 483.000 women suffering malnutrition. Having faced a flood recently, also, 809.000 people are seriously affected by flood.

Ukraine

Since February 2022 Ukraine has been at war with Russia. It is considered the most severe humanitarian crisis to have taken place in Europe this century. The main effect of this conflict is the massive displacement of people leading to a lot of Ukrainian refugees and property destruction. More than 8 million Ukrainian citizens have abandoned their homes and have fled to neighbouring countries as refugees. Furthermore, there has been a major attack against the health system resulting in lack of ambulances and hospitals, creating damages estimated to \$2,5 billion and rising.

Japan

Japan is the most developed country in the field of disaster preparedness and resilience. The country has implemented the world's most advanced earthquake and tsunami warning systems, taking into consideration its past disasters. The latter consists of 300 sensors and 80 aquatic sensors that acknowledge seismic activity.

Indonesia

The constant threat of flood, tsunami, volcanic eruptions and earthquakes has mobilised Indonesia to take action upon disaster preparedness. Consequently, the Natural Disaster Management Agency was established in 2008 throughout the country. Additionally, Indonesia received \$558,4 million from 2006-2011 for disaster risk reduction assistance mostly from Japan and in 2012 about one percent of the country's GDP was allocated to disaster risk limitation.

Philippines

Being one of the most vulnerable countries to natural disasters, the Philippines has received \$834,6 million from the international community, mainly from Japan and \$500 of that went towards emergency response and recovery. Apart from that the government has implemented new laws and policies concerning building and land management but there is a lot more to be done regarding disaster risk reduction.

European Union (EU)

The EU, having signed the Sendai Framework (2015-2030), which is one of the most significant frameworks on disaster management, is one of the most significant organisations regarding risk reduction and preparedness since it adopts this ideology to all their policies and projects. Moreover, it allocates more than €75 million of the annual humanitarian funding towards disaster preparedness activities. This action results in a more efficient response from local preparedness systems. Included in these actions is the publishing of a Disaster Preparedness Guidance Note in 2021 by the EU's Civil Protection and Humanitarian Aid Operations department. The note contains information on disaster risk humanitarian response.

International Federation of Red Cross and Red Crescent Societies (IFRC)

The IFRC has been preparing countries all over the world in order for them to deal with disaster and reduce its damage. First of all, it cooperates with national authorities to inform them on what risks and hazards are going to prepare for and trains millions of volunteers to be able to respond first in a wide range of hazards. Furthermore, they set up early warning systems and they invest in researching new means of technology to cope with disasters.

Food and Agriculture Organization (FAO)

FAO established a Disaster Management Act in 2005 targeting the country of India that proposes a variety of mechanisms for disaster management in order to assist the National Authority of India. The National Authority ought to approve policies, projects and guidelines for action upon disaster management in the government of India.

TIMELINE OF EVENTS

Date	Description of Event
December 26 th 2004	The Indian Ocean was hit by a major earthquake and tsunami.
October 8 th 2005	Pakistan was struck by an earthquake in Kashmir.
January 26 th 2008	Indonesia established a Natural Disaster Management Agency.
April 27 th 2008	Myanmar was hit by cyclone Nargis.
May 12 th 2008	China faced an earthquake in Sichuan.
January 12 th 2010	Haiti was hit by a massive and destructive earthquake.
March 11 th 2011	An earthquake struck the Tōhoku region of Japan, causing a tsunami and by extension the Fukushima nuclear disaster.
March 18 th 2015	The Sendai Framework for Disaster Risk Reduction was established by the United Nations (UN).
September 25 th 2015	Agenda 2030 was signed by the UN.
April 22 nd 2016	The Paris Agreement was signed.
October 20 th 2016	The New Urban Agenda was adopted in a UN conference in Ecuador.
September 20 th 2017	Hurricane Maria hit Puerto Rico.
October 1 st 2019	Australia faced a high number of severe bushfires.

PREVIOUS ATTEMPTS TO SOLVE THE ISSUE

Sendai Framework for Disaster Risk Reduction

The Sendai Framework for Disaster Risk Reduction is a major agreement that was adopted by 187 UN member states on March 18th 2015. It is a framework

designed for the next 15 years (2015-2030) and it aims at the reduction of global mortality, reduction of the affected populations, reduction in economic losses, reduction of damage to critical infrastructure and the attacks on health and education departments. Adding to that it aims to increase the number of countries that follow risk reduction strategies, further increase international cooperation and enhance access to early-warning systems for any type of possible hazard.

Paris Agreement

A major response from the UN is the Paris Agreement which was also held in 2015. The Paris Agreement is an international treaty which was adopted by 196 member states at the UN Climate Change Conference. Its aim is to reduce climate change and consequently its effects on nature, meaning droughts, floods, heat waves and many more. Dealing with climate change is one of the most efficient ways to reduce disaster risk since a good majority of disasters are natural and caused mainly by the impact of climate change. The implementation of the Paris Agreement calls for an economic and social transformation. More specifically the formulation of long-term low greenhouse gas emission development strategies (LT-LEDS). Every action will be financed by the more economically developed countries in order to provide everything needed.

Agenda 2030

Moreover, there is Agenda 2030, a UN agenda focusing on the resolution and the reduction of poverty and hunger in crisis-affected areas and also ensure the protection of human and women's rights. Generally speaking, it is an agenda that aims towards sustainable economic growth that will eventually be a serious response to the matter of disaster risk reduction and resilience in crisis-affected states.

New Urban Agenda

The UN has also established the New Urban Agenda, at the UN conference on 20 October 2016. This agenda is also about a more sustainable future but it is designed for urban areas. Similar to Agenda 2030 but it is made considering the standards of urban areas, since it is considered the localisation of the Agenda 2030.

It is an action-oriented document targeting Member States and other powers in order to customise urban sustainable development at the local level.

POSSIBLE SOLUTIONS

Early-warning and evacuation systems

An early-warning system can monitor hazards, can predict and forecast and it is a measure that will strengthen the communication and preparedness in crisis-affected states in order for the population to be informed and ready to respond in emergency situations. Apart from the individuals it can prepare governments, communities and businesses to take action in time in order to prevent hazardous events. Additionally in times of disaster it is important that member states have the ability to evacuate crowded places and provide refuge in other public services without causing chaos.

Education

Like the majority of the issues that the world tackles, disaster risk reduction ought to be a matter of education. Enhanced education in schools, relative seminars provided to the public, advertisements and many more is the kind of education that applies to the topic. By educating mostly individuals, there could be well-informed citizens that could contribute not only in case of emergency but also by donating and acting upon the issue. Furthermore, the matter of disaster management should be widespread since it occurs to countries all around the world and awareness should be spread.

Humanitarian aid

Humanitarian aid should be provided in disaster affected states and governments and NGOs should invest in solving the humanitarian hazards. Some examples of disaster preparedness in humanitarian aid interventions are to support communities in Bangladesh to act ahead of monsoon floods, to advise governments in Philippines in scaling up inclusive cash assistance programmes for marginalised urban communities affected by disasters. Furthermore, support local governments in

Mozambique in using drone and satellite data to understand people's needs after a natural hazard. Lastly enhancing emergency preparedness and response in the Caribbean through the amelioration of humanitarian logistics in the case of natural hazard.

Implementation of frameworks and agendas

It is of paramount importance not only to create agendas and frameworks regarding building policies, land management, alarming systems, food distribution and more about sustainability and management of disaster but also be able to implement them. As a result, it should not be difficult especially for less economically developed countries to apply the suggested solutions.

Sustainable growth

It is of paramount importance for the international community to develop according to the Sustainable Development Goals (SDGs). By applying a more sustainable way of development it is easier to achieve the reduction of natural hazards caused by climate change and the greenest possible way to recover from them.



Figure 4: The 17 Sustainable Development Goals.¹⁴

¹⁴ "Sustainable Development Goals." *University of Crete*, sdgs.uoc.gr. Accessed 8 Aug. 2023.

FURTHER READING

UNDRR. "Sendai Framework for Disaster Risk Reduction." *United Nations Framework Convention on Climate Change*, 3 June 2023, unfccc.int/sites/default/files/resource/UNDRR%20Presentation_Sendai%20Framework-GGA6%20%281%29.pdf.

United Nations, General Assembly. Transforming our world: the 2030 Agenda for Sustainable Development. Resolution 70/1, 21 Oct. 2015. *United Nations*, documents-dds-ny.un.org/doc/UNDOC/GEN/N15/291/89/PDF/N1529189.pdf?OpenElement

"Disaster Management Act, 2005." *Food and Agriculture Organization of the United Nations*, 23 Dec. 2005, fao.org/faolex/results/details/en/c/LEX-FAOC077864/.

"From disaster response to disaster prevention | Rachel Kyte | TEDxSendai (English)." *YouTube*, uploaded by TEDx Talks, 13 Oct. 2012, youtube.com/watch?v=cWYcXhMhJF4.

BIBLIOGRAPHY

General bibliography

Conte, Niccolo. "Mapped: Countries With the Highest Flood Risk." *Visual Capitalist*, 14 Sept. 2022, visualcapitalist.com/countries-highest-flood-risk/.

European Commission. "Disaster preparedness." *Europa*, civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness_en. Accessed 7 Aug. 2023.

Evers, Jeannie, et al. "Lithosphere." *National Geographic*, education.nationalgeographic.org/resource/lithosphere/. Accessed 8 Aug. 2023.

Habitat III. "The New Urban Agenda." *United Nations Conference on Housing and Sustainable Urban Development*, habitat3.org/the-new-urban-agenda/. Accessed 8 Aug. 2023.

Imperiale, Angelo Jonas, and Frank Vanclay. "Barriers to Enhancing Disaster Risk Reduction and Community Resilience: Evidence from the L'Aquila Disaster." *Politics and Governance*, vol. 8, no. 4, 2020, pp. 232-243, [doi:10.17645/pag.v8i4.3179](https://doi.org/10.17645/pag.v8i4.3179).

IRC. "Crisis in Ethiopia: Drought and conflict put 28 million in need." *Rescue*, 1 Mar. 2023, rescue.org/article/crisis-ethiopia-drought-and-conflict-put-28-million-need.

---. "The top 10 crises the world can't ignore in 2023." *Rescue*, 14 Dec. 2022, rescue.org/article/top-10-crises-world-cant-ignore-2023.

Kelman, Ilan. "Climate Change and the Sendai Framework for Disaster Risk Reduction." *International Journal of Disaster Risk Science*, vol. 6, no. 2, 2015, pp. 117-127, [doi:10.1007/s13753-015-0046-5](https://doi.org/10.1007/s13753-015-0046-5).

McDonald, Nicole. "PM explains pace of Tomas recovery." *The STAR*, 3 Nov. 2011, stluciastar.com/pm-explains-pace-of-tomas-recovery/.

Muttarak, Raya, and Wiraporn Pothisiri. "The Role of Education on Disaster Preparedness: Case Study of 2012 Indian Ocean Earthquakes on Thailand's Andaman Coast." *Ecology and Society*, vol. 18, no. 4, 2013, [doi:10.5751/ES-06101-180451](https://doi.org/10.5751/ES-06101-180451).

UN Humanitarian. "Nine things you need to know about the situation in Afghanistan right now." *United Nations Office for the Coordination of Humanitarian Affairs*, 6 Oct. 2021, unocha.exposure.co/nine-things-you-need-to-know-about-the-situation-in-afghanistan-right-now.

UNDRR. "Sendai Framework for Disaster Risk Reduction." *United Nations Framework Convention on Climate Change*, 3 June 2023, unfccc.int/sites/default/files/resource/UNDRR%20Presentation%20Sendai%20Framework-GGA6%20%281%29.pdf.

---. "Sendai Framework for Disaster Risk Reduction 2015-2030 (A/CONF.224/CRP.1)." *ReliefWeb*, 18 Mar. 2015, reliefweb.int/report/world/sendai-framework-disaster-risk-reduction-2015-2030-aconf224crp1.

United Nations, General Assembly. Transforming our world: the 2030 Agenda for Sustainable Development. Resolution 70/1, 21 Oct. 2015. *United Nations*, documents-dds-ny.un.org/doc/UNDOC/GEN/N15/291/89/PDF/N1529189.pdf?OpenElement.

UN-Habitat. "The New Urban Agenda." *Urban Agenda Platform*, urbanagendaplatform.org/nua. Accessed 10 Aug. 2023.

Van Westen, Cees. "National Scale Landslide Susceptibility Assessment for Saint Lucia." *Caribbean Handbook on Risk Information Management*, 2016, charim.net/sites/default/files/handbook/maps/SAINT_LUCIA/SLULandslideReport.pdf.

World Bank. "Management of Slope Stability in Communities (MoSSaiC) in Saint Lucia." *Project Highlights*, no. 12, 2012, worldbank.org/content/dam/Worldbank/document/LAC/PH_Issue_12_MOSSAIC.pdf.

"Background of Disaster management." *InsightsIAS*, insightsonindia.com/disaster-management/background-of-disaster-management/. Accessed 8 Aug. 2023.

"Conflict and Crisis in Afghanistan." *Afghanaid*, afghanaid.org.uk/news/conflict-in-afghanistan. Accessed 8 Aug. 2023.

"Disaster Management Act, 2005." *Food and Agriculture Organization of the United Nations*, 23 Dec. 2005, fao.org/faolex/results/details/en/c/LEX-FAOC077864/.

"Disaster preparedness." *IFRC*, ifrc.org/our-work/disasters-climate-and-crises/disaster-preparedness. Accessed 8 Aug. 2023.

“Disaster risk.” *United Nations Office for Disaster Risk Reduction*,
undrr.org/terminology/disaster-risk. Accessed 7 Aug. 2023.

“Drought.” *World Health Organization*, who.int/health-topics/drought#tab=tab_1.
Accessed 7 Aug. 2023.

“Early warning system.” *United Nations Office for Disaster Risk Reduction*,
undrr.org/terminology/early-warning-system. Accessed 8 Aug. 2023.

“Earthquakes.” *World Health Organization*, [who.int/health-
topics/earthquakes#tab=tab_1](https://who.int/health-topics/earthquakes#tab=tab_1). Accessed 7 Aug. 2023.

“Floods – Definition and Different Causes of Floods.” *Toppr*,
[toppr.com/guides/chemistry/environmental-
chemistry/floods/#Download Floods and Causes of Floods Cheat Sheet PDF](https://toppr.com/guides/chemistry/environmental-chemistry/floods/#Download_Floods_and_Causes_of_Floods_Cheat_Sheet_PDF).
Accessed 7 Aug. 2023.

“From disaster response to disaster prevention | Rachel Kyte | TEDxSendai
(English).” *YouTube*, uploaded by TEDx Talks, 13 Oct. 2012,
youtube.com/watch?v=cWYcXhMhJF4.

“Future-proofing.” *Cambridge Dictionary*,
dictionary.cambridge.org/dictionary/english/future-proofing. Accessed 8 Aug. 2023.

“Resilience.” *Cambridge Dictionary*,
dictionary.cambridge.org/dictionary/english/resilience. Accessed 8 Aug. 2023.

“Saint Lucia: Leaders in reducing landslide risk.” *World Bank*, 11 June 2013,
[worldbank.org/en/news/feature/2013/06/11/saint-lucia-oecs-leader-reducing-
landslide-risk](https://worldbank.org/en/news/feature/2013/06/11/saint-lucia-oecs-leader-reducing-landslide-risk).

“Somalia emergency.” *World Food Programme*, [wfp.org/emergencies/somalia-
emergency](https://wfp.org/emergencies/somalia-emergency). Accessed 8 Aug. 2023.

“Sustainable Development Goals.” *University of Crete*, sdgs.uoc.gr. Accessed 8 Aug.
2023.

“Syrian crisis.” *UNICEF*, [unicef.org/emergencies/syrian-crisis](https://www.unicef.org/emergencies/syrian-crisis). Accessed 8 Aug. 2023.

“The Paris Agreement.” *United Nations Framework Convention on Climate Change*, unfccc.int/process-and-meetings/the-paris-agreement. Accessed 8 Aug. 2023.

“The South Sudan crisis, explained: 5 Things you need to know in 2022.” *Concern Worldwide*, 13 Dec. 2021, concernusa.org/news/south-sudan-crisis-explained/.

“Tropical Cyclones.” *World Meteorological Organization*, public.wmo.int/en/our-mandate/focus-areas/natural-hazards-and-disaster-risk-reduction/tropical-cyclones. Accessed 7 Aug. 2023.

“2012 Indian Ocean earthquakes.” *Wikipedia*, en.wikipedia.org/wiki/2012_Indian_Ocean_earthquakes. Accessed 7 Aug. 2023.

“2023 Turkey–Syria earthquake.” *Wikipedia*, en.wikipedia.org/wiki/2023_Turkey–Syria_earthquake. Accessed 8 Aug. 2023.

“3 Countries Who Take Emergency Preparedness Seriously | SkySaver Rescue Backpacks.” *SkySaver*, skysaver.com/blog/3-countries-take-emergency-preparedness-seriously-skysaver-rescue-backpacks/. Accessed 8 Aug. 2023.

Multimedia bibliography

McDonald, Nicole. “PM explains pace of Tomas recovery.” *The STAR*, 3 Nov. 2011, stluciastar.com/pm-explains-pace-of-tomas-recovery/.

World Bank. “Management of Slope Stability in Communities (MoSSaiC) in Saint Lucia.” *Project Highlights*, no. 12, 2012, worldbank.org/content/dam/Worldbank/document/LAC/PH_Issue_12_MOSSAIC.pdf.

“2012 Indian Ocean earthquakes.” *Wikipedia*, en.wikipedia.org/wiki/2012_Indian_Ocean_earthquakes. Accessed 7 Aug. 2023.

“Sustainable Development Goals.” *University of Crete*, sdgs.uoc.gr. Accessed 8 Aug. 2023.