

World Health Organization

Establishing protocols to provide health care in natural
disaster areas



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Main Chair

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Introducing Your Chairs

Hello everyone!

Before you read this research report and write your position papers, I would like to introduce myself.

My name is Elin van Oosten, I am 17 years old and I live in Arnhem. I am in my final year of high school and I go to the Lorentz Lyceum, which you may recognize because LmunA is organized there. I actually have been in the Organizing Committee twice so you may have seen me before there or at SkyMUN 2023 at the Kandinsky College in Nijmegen.

Next to participating in MUNs, this is my 10th MUN, I like to read, write and listen to music, play the violin and dance.

I hope all of you are as excited as I am for FAMUN 2024 and I'm looking forward to meeting all of you.

See you at FAMUN!

An Introduction to the Issue

Natural disasters cause so much damage to the world and environment. Now, with climate change still getting worse every year, despite the efforts of every single country trying to fight it, the chance of a natural disaster happening is so much bigger. The uncontrollable changes in the weather cause heat waves, floodings, tsunamis, hurricanes and so much more.



Figure 1: Natural Disaster Flooding



Figure 2: Natural Disaster Forest Fire

Due to drought forest fires are the cause of deforestation and so many people losing their homes. The floodings destroy entire cities. With all this destruction comes the destruction of people's health and lots of people get wounded or die during all these natural disasters. These people are often inaccessible due to the environmental damage.

That means that getting the necessary health care to the people in natural disaster areas is a very difficult challenge that is still faced every day. 45000 people die every year because of natural disasters. A large percentage of that number dies because of the lack of medical attention and therefore could have been saved if there had been high-quality and professional health care. Therefore, it is important that countries work together and help each other in times of crisis. Solving this problem requires global collaboration and cooperation.

Definition of Key Terms

As there are some key terms used in this research report, this is where some of the most important terms are explained so that it is easier to understand the information.

Health care

Health care consists of everything that is related to medicines and medical issues. It consists of services and the delivery of those services that are related to the health and well-being of individuals and communities. These include medical supplies, medical instruments, institutions and professionals. Health care relates to both physical and mental health and should always be provided by medical or mental health professionals. (American Psychological Association, z.d.)

Natural disasters

Natural disasters or natural hazards are caused by any type of extreme weather circumstances that are able to pose as a threat to the health and safety of humans. They can occur seasonally or they can come out of nowhere. This causes surprise and unpreparedness, because of that a region or country can potentially live in periods of insecurity, chaos and loss. (Homeland Security, z.d.)

Climate change

Climate change is the shifts in temperature and weather over long periods of time. These changes can be natural due to, for example, the intensity of the sun. But over the last few centuries, human activity is the main cause for climate change. This is because of the burning of resources that release greenhouse gasses, trapping the warmth of the sun close to the surface of the Earth. This is what is slowly raising the temperature of the Earth. (United Nations, z.d.)

Less Economically Developed Countries (LEDC's)

Less Economically Developed Countries (LEDC's) is a term that is designated by the United Nations for countries that exhibit the lowest indicators of socioeconomic development, including low income, weak human assets, and economic vulnerability. The classification is based on criteria such as income, human assets (health and education), and economic vulnerability. (UNCTAD, 2021)

A General Overview of the Issue

Causes of the issue


Creating an effective healthcare system in response to natural disasters is both difficult and complex. It concerns such factors as preparedness, resource allocation, infrastructural development and organizational management. In particular, creation of an educated awareness of the reasons for the failure of medical response after natural disasters will help to develop measures that can improve relief efforts and reduce damage to stricken communities.

One major cause of this kind of trouble among medical care providers is insufficient preparations for future public emergencies. In certain parts of the world where particular types of natural disaster are apt to recur, but no standard disaster preparedness system exists that can handle the healthcare requirements of these unique times and places, not having all such details worked out means troubles later on. Absolute disaster medical knowledge of health workers in general means that they lose infrastructure advantages to which they might otherwise be entitled; whether real-life healthcare drills are regularly conducted or otherwise, there is not a learning attitude and practice Doesn't get practiced enough to be effective

Hospitals, clinics, emergency facilities, and other parts of the healthcare infrastructure are extensively damaged in natural disasters. After this, it will take longer for the medical service to be re-established and the normal provision of care removed. Those long-standing deficiencies of the medical infrastructure are in places where damage can have particularly serious consequences after disasters. Lack of appropriate sites for providing care adds yet another difficulty to problem-solving in the field of medical assistance, leaving endangered communities entirely on their own to pick up the pieces once the disaster has passed.

The demands of getting medical resources in place quickly after natural disasters can cause impediment. The roads would be damaged, airports inaccessible and transport disrupted to those areas stricken by disaster. Medical resources, which includes medicine, equipment, and medical personnel, are all in short supply. This is by now universally recognized that right after a disaster, along with dividing up one's life into pieces of paper and handing them out to ensure some semblance of continuity, the most serious problem is filling these gaps with healthcare essentials.

When a natural disaster strikes, it's important to be able to maintain and put into operation the rules of healthcare. For example, after the recent catastrophic events in Mexico, many were left without water supplies or electricity and public transport had ceased to function. Disrupted communication lines, networks saturated beyond capacity and improper collaboration among various organs of communication threaten the timely internal dissemination of important information. Health care providers may suffer when there are no clear lines of communication to follow for treatment as different forms of communication may



give rise to inefficiencies and potential lapses in care.

The vulnerability of natural disaster-hit communities is often framed in terms of health, of which social determinants include economic status and access to social. Educational facilities Marginalized populations may find it harder to get medical help during a disaster or when rebuilding afterwards, because they already face obstacles in getting regular healthcare. Differences in social determinants result in different outcomes for health, which also act as a barrier to the proper establishment of healthcare routines sensitive to special circumstances found among various groups.

Natural disaster response needs efficient governance, multi-level coordination and priority care. There could very well be hindrances to rapid, synchronous adoption of health protocols due to political instability, corruption or failed governance structures. In these situations, response efforts will turn out useless, while allocations of resources may not align with healthcare priorities.

Things such as earthquakes, hurricanes and floods can strike without warning, with little time for health-care institutions to get their act in order. This kind of event needs a system that can be quickly adapted to change appropriately and that fits across different scenarios; protocols must also be flexible enough within the same scene to accommodate continuations of policy which are just a bit off from where they were originally When developing protocols dependent upon these sorts of natural disasters you must recognize that it is an ongoing effort, a matter of evolution rather than simply one project.

When it comes to natural disasters, the inequality of healthcare globally leads to disparities in coping procedures. The impact of natural disasters is primarily borne by regions with weak medical systems and labor resources. And no wonder, disaster preparedness in the health care field has not received investment. In addition to this, there are a great many difficult and unresolved problems to be confronted on a daily basis. To address global health inequalities is vitally important if it is to be achieved that all communities--regardless of their financial stand or geographic location-- are able to establish healthcare protocols during and immediately after natural disasters.



The current situation


When it comes to natural disasters, the inequality of healthcare globally leads to disparities in coping procedures. Currently, the establishment of protocols for healthcare delivery in natural disaster areas continues to be a great challenge with some successes and obstacles. The international community has seen positive developments in acting before disasters occur and during their occurrence, but there are still gaps particularly in those regions that are vulnerable.

There are several positive developments that are contributing to the ongoing efforts towards the development of effective health care protocols in natural disaster areas. To begin with, international organizations, governments as well as non-governmental organizations have been involved in training health professionals on issues related to disaster medicine and emergency response. Additionally, there have been standardized protocols such as the World Health Organization's Emergency Medical Teams (EMTs) initiative which has facilitated better coordination of health services at times of crisis. Besides this, technology is advancing at an unprecedented speed with telemedicine and mobile health units making it possible for medical resources to be deployed faster and more efficiently to affected regions of natural disasters is primarily borne by regions with weak medical systems and labor resources. And no wonder, disaster preparedness in the health care field has not received investment. In addition to this, there are a great many difficult and unresolved problems to be confronted on a daily basis. Addressing global health inequalities is vitally important if it is to be achieved that all communities, regardless of their financial stand or geographic location, are able to establish healthcare protocols during and immediately after natural disasters.

While progress has been made, there are still many problems that need to be solved today. In many places, healthcare infrastructure is not fully developed, so it's difficult to create and keep up with treatment strategies during and after natural disasters. The lack of proper logistics, like transportation of doctors and other medical supplies to distant places, remains a significant obstacle in providing prompt treatment. Natural disasters are still unpredictable; therefore, we must have procedures that can accommodate many different situations and environments.

Global health inequities are responsible for the disparities experienced in the formulation of healthcare protocols in disaster areas. The most affected communities are usually the disadvantaged and marginalized ones who find difficulties in accessing timely and appropriate healthcare services. Economic inequality, political instability as well as social determinants of health aggravate this problem thus; it becomes more difficult for some particular individuals to benefit from these improved guidelines.

The growing number and strength of natural calamities due to climate change creates complex issues while implementing health care policies. The need to change plans and prepare for possible challenges is urgent because the sea level is rising, climate is changing, and some diseases patterns are changing. These



changes require new plans and taking action to protect ourselves epidemiologist and public health specialist are continuously monitoring disease pattern and give warning if something is going to happen It is important for healthcare systems to be designed in such a way that they can handle climate change impacts. Healthcare structures should be made in a way that they can withstand any conditions caused by a changing climate. It is important for healthcare providers to have proper machinery and protocols to handle the consequences of extreme weather conditions.

This pandemic has given us an understanding of the difficulties faced in implementing healthcare procedures on a global level during an emergency. The pandemic lessons highlight the importance of flexibility, quick acting and global cooperation when creating and putting into practice health care measures. The Coronavirus crisis impacts not only the physical health but also the psychological, social and long-term wellbeing of individuals which needs immediate attention and effective measures.

There are a number of international organizations working towards the betterment of health treatment in disaster zones. To be better ready for any calamity, various groups of people like the International Federation of Red Cross and Red Crescent Societies (IFRC), Doctors Without Borders and different national disaster response organizations are working together to improve their preparation, training and coordination.

Historical Background


Setting up protocols to deliver care in disaster struck areas is an important part of managing catastrophic incidents. It has come into being over time because natural disasters pose special problems with which the critic must cope, and it is this that we shall discuss here. This historical background describes the origin of disaster response, examines how to formalize and organize healthcare procedures for large quantities of victims in a timely manner during moments regarded as critical windows with time progressing very quickly (i.e., what kind? What type? How many? samples taken using micro-suction), discusses refining these various protocols on an ongoing basis now that such crisis

Natural disasters early on were usually immediately confronted by local and community responses stemming from survival needs rather than organized methods. According to historical records, when communities were hit by floods and earthquakes or other such natural catastrophes, they turned for help not to doctors but rather tried industry-wide manpower arrangements. They often relied on traditional folk treatments of all kinds; chances are the medical knowledge available then was thin indeed.

Toward the end of our century in 1968, we grabbed grasp feelings to humanize disaster response. Rapid industrialization, which brought with it increased urbanity and concentration of population added to disaster vulnerability. The governments responded with the development of civil defense and emergency management systems. These early frameworks, because they only provided for basic survival and evacuation, as well as immediate need attention rather than comprehensive medical care.

Disaster medicine naturally was given a thrust forward by World War II. Medical responses to these mass casualties and humanitarian crises became more sophisticated and refined. Experiences gained in wartime also provided a grounding for disaster medicine. Given the unique problems that disasters bring to public health, specific emergency operation procedures were once again called into question--disaster medicine cannot be thought of as a subcategory of regular medical treatment or surgery; it has its own special characteristics and requires preparation separate from what is needed to deal with infectious diseases alone. The post-World War II years witnessed an increasing awareness of the role needed for international cooperation in disaster response. After the establishment of the United Nations in 1945, countries have an opportunity to cooperate on world problems like disaster relief. But healthcare in the early following of disasters is still largely carried out according to purely emergency medical services techniques, without any systematic, long-term healthcare planning.

During the latter half of this century, disaster medicine as a special field started to take shape. The Red Cross, Médecins Sans Frontières (Doctors Without Borders), and others had a key role in disaster response by sending medical personnel to areas suffering from disasters. Nevertheless, healthcare legalisms were often jerry-rigged bits and pieces on the spot while comprehensive disaster medicine planning was just in its baby shoes.



The 1980s and '90s marked the development of international activities in disaster preparedness. In the hopes of achieving such improvements in standards, disaster response mechanisms were begun by an institution within The International Federation of Red Cross and Red Crescent Societies (IFRC). Furthermore, a safer world: the 1994 Yokohama Strategy and Plan of Action for Disaster Risk Reduction stressed protection in healthcare.

The 2020s have brought the world an unprecedented challenge in the way of global COVID-19. Although the pandemic is not a natural disaster in the usual sense of catastrophes, it nevertheless revealed that health care needs to be backed up by strong protocols and raised glaring questions about all countries 'weak points. In fact, many lessons from dealing with the disaster are undoubtedly going to influence future revisions of natural-disaster protocols for health care.

Naturally, to date the landscape of natural disaster area health care protocols is changing constantly. In such circumstances, and at the same time that many of the challenges faced by emergency planners are being exacerbated (by new emergent threats to health), and others situations exploding in relative terms due technical or other advances as predicted for emerging conditions characterizing several diseases; a flow of practical experiences from working on-site with affected communities have been helping refine, tailor (protocol The confluence of public health, emergency medicine and disaster management therefore remains a vital area for research and action. It underlines the need to integrate medical services into an all-encompassing system that copes with disasters of natural origin It also underlines that it is equally necessary to have these various branches or aspects of our social structure working together as one.

The historical trajectory in establishing protocols to deliver health care services reflects the changing nature of response efforts. That journey was one of three steps: from the communal first reactions that tried as best they could, through formalizing disaster medicine and standardizing protocols for emergencies with large quantities involved; to recognizing how natural disasters present unique problems. Efforts which are continuing now will determine the future of healthcare protocols. Hopefully, communities all around the world can respond effectively and compassionately in disaster's wake.

Major Parties Involved

The International Federation of Red Cross and Red Crescent Societies

The International Federation of Red Cross and Red Crescent Societies is the largest humanitarian non-governmental organization that has the goal of improving people's lives in the context of health emergencies and before, during and after natural disasters. (The International Federation of Red Cross, z.d.)

The World Health Organization

The World Health Organization is a United Nations branch that is responsible for dealing with and finding solutions for any major international health problems. With the ultimate goal of people, everywhere in the world, having the highest level of health possible. The World Health Organization has written multiple guidelines on how to act and response to health problems during natural disasters. It has also established Emergency Medical Teams that act during times of crisis and disaster. (World Health Organization, z.d.)

Countries that have a high number of natural disasters yearly

There are numerous countries that experience natural disasters, and that number is only increasing due to climate change. The following countries just have terribly high risk of natural disasters yearly.

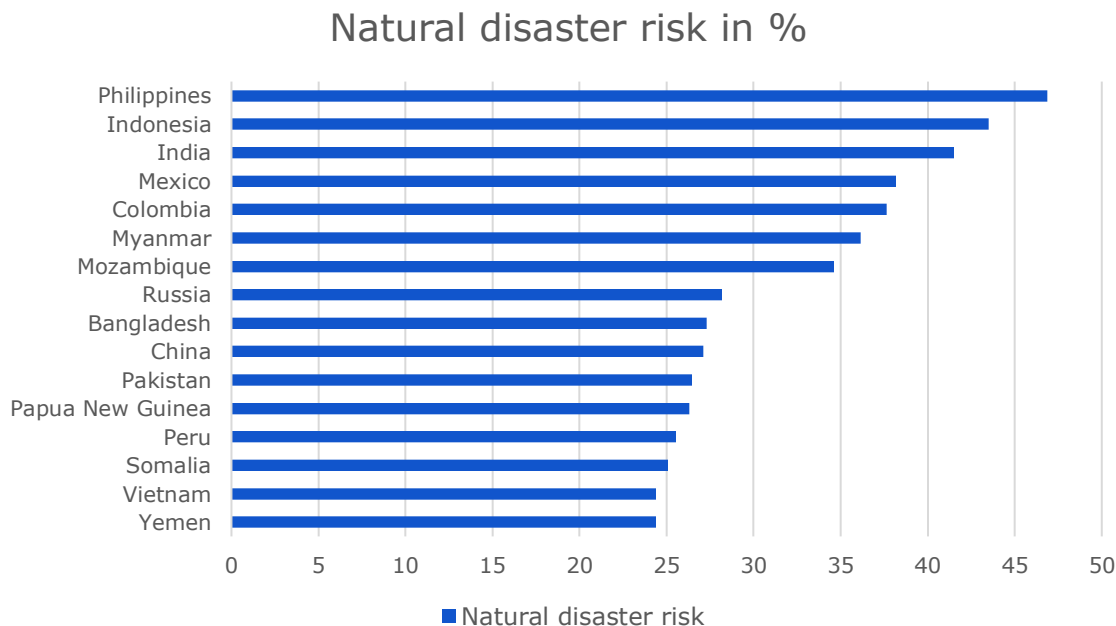


Figure 3: Natural Disaster Risk in % (Burgueño Salas, 2023)

Previous Attempts to Solve the Issue

Organizations for disaster response

Lots of different organizations have been formed due to the large increase in natural disasters over the last century. For example, national disaster management organizations have been set up to nationally improve the response to natural disasters by providing health care, rescue teams and much more. International organizations also have been formed. The International Federation of Red Cross and Red Crescent Societies (IFRC) is an organization that looks out for people in natural disaster areas globally by, for example, sending medical help, nutrition and rebuilding teams.

Worldwide guidelines

Many guidelines, rules and protocols have been developed and adopted worldwide to improve the aftermath of a natural disaster and to make sure people know what to do or who to call for help when a natural disaster takes place. One of those guidelines is the Sphere Project, which calls for improvements in the quality for humanitarian reaction, that also includes healthcare.

United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

The United Nations has set up a separate branch and body in the United Nations structure, one of the goals of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) is to coordinate different agencies and organizations that are involved in the response to natural disasters. Among these organizations and agencies are also health care providers.

Implementation of health care in disaster risk management strategies

There are lots of different strategies that call for actions and give guidelines and information in the case of natural disasters. Those often still missed a part that provided health care in particular. Nowadays there are more and more strategies that have implemented considerations for health in disaster reduction strategies. This shows that these strategies recognize how important measures to eliminate health risks are.

Emergency Medical Teams (EMTs)

The World Health Organization (WHO) has established the Emergency Medical Teams (EMTs). These teams are sent out to natural disaster areas internationally. This initiative sets a standard on national and international level for health care teams that react to emergencies and crises. By setting this standard on national and international level, it ensures that response to natural disasters becomes more effective and coordinated.

Possible Solutions for the Issue

As this is an incredibly difficult issue to find solutions to, the following possibilities for solutions to this problem are provided to have a starting point in researching the best possible solutions to the topic of ensuring equal access to innovative health care.

Education and community contribution

By educating local health care providers and emergency teams, they will be able to respond more effectively and readily in case of a natural disaster. There are a lot of feelings and emotions involved around a natural disaster and by medical professionals and teams practicing keeping calm and acting responsibly according to the situation, the readiness to act will be enhanced and less panicked or chaotic. In communities that live close to frequent natural disaster areas, there should also be given education to be more prepared during the disaster and to learn about health care protocols so the community can take an active role in helping others in times of crisis.

Protocols and plans

The creation of protocols and rules for health care during times of a natural disaster is important. These protocols should be easily accessed by the public, generated for multiple and different kinds of natural disasters and it should be able to be applied in different contexts. These protocols should be updated regularly as health care and the technology around it is still continuously developing. One of these protocols should be a plan on how to communicate in case of a crisis or natural disaster. This plan should include communication from and to the community, health care services, authorities and medical institutions and organizations.

International and interorganizational collaboration

Collaboration and cooperation on national, international and interorganizational level are of crucial importance. By having these collaborations, global and local health providers, authorities on different levels of operation are all in contact with each other to create and send help in the most effective and coordinated manner. International collaboration is important, because then resources and information can be shared with neighboring countries.

Technology and medical supplies

A separate storage or building for medical supplies in disaster areas creates the availability of medical supplies in times of natural disaster. This increases the time in which a person in need can get the medical attention they really need. This allows medical professionals to help more people in a shorter time span, working more effectively. Technology can assist in tracking locations of people in need of help, provide medical information and guidelines, regulate medical supplies and other resources and technology can help in collecting data.



Medical teams

Training of local Emergency Medical Teams (EMTs) that are an initiative of the World Health Organization (WHO). By recruiting local teams, they can get to the places of people that need medical attention faster and more coordinated. These teams do need to meet the international standards that the WHO has established to ensure the most efficient response in the health care area. There should also be teams that have basic tools, medical supplies and medical professionals to ensure that more rural and remote areas can be reached as effectively and fast as possible.

Timeline Of Key Events

Throughout history, there have been some key events in providing health care in natural disaster areas and on how to deal with climate change and natural disasters in general.

Date

5th of May 1919

Event

International federation of the red cross and red crescent societies

1950s-1960s

With the focus on civil defense and emergency management, early development of disaster response frameworks happened.

1970s

Recognition for the need of specialized and high-quality medical protocols in natural disaster areas.

14th of December 1971

The United Nation Disaster Relief Coordinator's Office (UNDRO) was established, this is predecessor of the present United Nation branch that is called the United Nations Office for the Coordination of Humanitarian Affairs.

July 1997

The Sphere Project was launched; it has the goal to develop humanitarian standards in natural disaster areas. For example, health care protocols.

22nd of July 1998


The United Nation published the Guiding Principles on Internal Displacement. It highlights the importance of healthcare for people in disaster areas that are internally displaced.

18th-22nd of January 2005

At the World Conference on Disaster Reduction in Kobe, the Hyogo Framework for Action was adopted. It is a global outline for disaster reduction that includes healthcare.

12th of January 2010

There was a earthquake in Haiti with



a magnitude of 7.0. Through that earthquake, the need for medical attention in the aftermath of natural disaster areas became more visible.

18th of March 2015

At the Third United Nations World Conference on Disaster Risk Reduction in Sendai in Japan, the Sendai Framework for Disaster Risk Reduction was adopted. It stressed the need for the implementation of health care into disaster risk reduction strategies.

10th of June 2015

The Operational Framework for Building Climate Resilient Health Systems is published by the World Health Organization (WHO). It talks about the need for health care in climate-change related natural disaster areas.

September 2015

The Sustainable Development Goals are adopted by the United Nations, including Goal 3: 'Ensure healthy lives and promote well-being for all at all ages.'. These goals are meant to be achieved by 2030.

2017

The Emergency Medical Team (EMT) Minimum Data Set (MDS) is developed by the World Health Organization (WHO). It is used for international data collection in natural disaster areas and public health emergencies.

13th of June 2017

The Emergency Response Framework is launched by the World Health Organization (WHO), this provides information and help on important health care services during crisis and emergencies.

2020s

Due to the COVID-19 disaster, there is continuous and ongoing refinement and development of disaster health protocols.


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Further Reading

- ✓ World Health Organization. (2015, 10 juni). *Operational framework for building climate resilient health systems*. Geraadpleegd op 25 december 2023, van <https://www.who.int/publications/i/item/9789241565073>
- ✓ World Health Organization. (2017, 13 juni). *Emergency Response Framework (ERF), 2nd Edition*. Geraadpleegd op 25 december 2023, van <https://www.who.int/publications/i/item/9789241512299>

Bibliography

- American Psychological Association. (z.d.). *Health care*. Geraadpleegd op 28 december 2023, van <https://www.apa.org/topics/health-care>
- Burgueño Salas, E. (2023, 20 december). *Disaster Risk Index of most affected countries 2023* | Statista. Statista. Geraadpleegd op 28 december 2023, van <https://www.statista.com/statistics/1270469/disaster-risk-index-most-affected-countries/>
- Homeland Security. (z.d.). *Natural Disasters*. Geraadpleegd op 28 december 2023, van <https://www.dhs.gov/natural-disasters>
- The International Federation of Red Cross. (z.d.). *About the IFRC*. IFRC. Geraadpleegd op 28 december 2023, van <https://www.ifrc.org/who-we-are/about-ifrc#:~:text=The%20International%20Federation%20of%20Red,for%20the%20good%20of%20humanity.>
- Kubo, T., Chimed-Ochir, O., Cossa, M., Ussene, I., Toyokuni, Y., Yumiya, Y., Kayano, R., & Salio, F. (2022). First activation of the WHO emergency medical team minimum data set in the 2019 response to tropical cyclone IDAI in Mozambique. *Prehospital and Disaster Medicine*, 37(6), 727–734. <https://doi.org/10.1017/s1049023x22001406>
- UNCTAD. (2021, 27 september). *The Least Developed Countries Report 2021*. Geraadpleegd op 28 december 2023, van <https://unctad.org/publication/least-developed-countries-report-2021>
- UN High Commissioner for Refugees (UNHCR), & McNamara, D. (1998, 22 juli). *Guiding Principles on Internal Displacement*. RefWorld. Geraadpleegd op 25 december 2023, van <https://www.refworld.org/docid/3c3da07f7.html>
- United Nations. (z.d.). *Ensure healthy lives and promote well-being for all at all ages*. Sustainable Development Goals United Nations. Geraadpleegd op 24 december 2023, van <https://sdgs.un.org/goals/goal3>
- United Nations. (z.d.). *What is climate change?* Geraadpleegd op 28 december 2023, van <https://www.un.org/en/climatechange/what-is-climate-change>
- World Health Organization. (z.d.). *About WHO*. Geraadpleegd op 28 december 2023, van <https://www.who.int/about>



World Health Organization. (2015, 10 juni). *Operational framework for building climate resilient health systems*. Geraadpleegd op 25 december 2023, van <https://www.who.int/publications/i/item/9789241565073>

World Health Organization. (2017, 13 juni). *Emergency Response Framework (ERF), 2nd Edition*. Geraadpleegd op 25 december 2023, van <https://www.who.int/publications/i/item/9789241512299>